REPORT TO

TTW (NSW) PTY LTD

ON

PRELIMINARY SITE INVESTIGATION (PSI)

FOR

PROPOSED NEXTDC S5 DATA CENTRE

AT

269 LANE COVE ROAD, MACQUARIE PARK, NSW

Date: 16 May 2024
Ref: E36466PRrptRev2

JKEnvironments
www.jkenvironments.com.au

T: +61 2 9888 5000
JK Environments Pty Ltd
ABN 90 633 911 403

dlcs ISO 9001 certified ISO 45001 certified ISO 14001 certified

Report prepared by:



Craig Ridley
Associate | Environmental Scientist

Report reviewed by:



Brendan Page
Principal | Environmental Scientist
CEnvP SC



For and on behalf of
JKE
PO BOX 976
NORTH RYDE BC NSW 1670

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Executive Summary

TTW (NSW) Pty Ltd ('the client') commissioned JK Environments (JKE) to undertake a Preliminary Site Investigation (PSI) for the proposed S5 Data Centre at 269 Lane Cove Road, Macquarie Park, NSW ('the site'). The purpose of the investigation is to make a preliminary assessment of site contamination. The site location is shown on Figure 1 and the investigation was confined to the site boundaries as shown on Figure 2 attached in the appendices.

This report has been prepared to support the lodgement of a State Significant Development Application (SSDA) for the proposed commercial development, with regards to Chapter 4 (Clause 4.6) of State Environmental Planning Policy (Resilience and Hazards) 2021 (formerly known as SEPP55).

The proposed development includes demolition of all existing structures and construction of two multi-storey data centre buildings. A 9-storey office building is proposed to be connected to the north of the northern datacentre building. The buildings are to be terraced into the existing slope. A plaza is proposed to the north of the buildings and landscaping is likely to be included within the setbacks. A new road is proposed in a generalised east-west direction between the data centre buildings, and a second road is proposed in a generalised north-south direction along the south-eastern boundary. Excavation to depths of approximately 9m below ground level (BGL) may be required to accommodate the development. Selected development plans provided to JKE are attached in the appendices.

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 preliminary assessment of the soil and groundwater contamination conditions. The investigation included a review of historical information, soil sampling from 34 boreholes and groundwater sampling from four groundwater monitoring wells installed at the site. The site has historically been used for agricultural purposes until the 1950s, and was subsequently used as a drive-in movie theatre and occupied by associated structures between the 1960s and 1970s. Since the 1980s, the site has been used for various commercial activities. Fuel storage (including in underground storage tanks - USTs) occurred during this time.

Potential contamination sources identified at the site included:

- Historical filling activities at the site;
- Historical and current fuel storage at the site, including USTs;
- Historical agricultural land use;
- Use of pesticides beneath the buildings and/or around the site;
- Hazardous building materials within current and former structures at the site;
- Potential use of fire-fighting foams containing per-and polyfluoroalkyl substances (PFAS); and
- Historical commercial printing/publishing activities at the site.

The investigation encountered fill and/or clay soils to depths of approximately 0.2mBGL to 5mBGL, underlain by siltstone and sandstone bedrock. The maximum depth of fill encountered was 4mBGL. Groundwater was not encountered during auger drilling for the PSI. The fill typically comprised of silty and/or gravelly sand, sandy gravel, and silty and/or sandy clay. Inclusions noted within the fill included igneous, siltstone and sandstone gravel, tile and glass fragments, slag, ash, roots and root fibres. A fibre cement fragment (FCF) was observed in the fill in BH2 at a depth of approximately 0.5-1.5mBGL, however, subsequent laboratory analysis confirmed this FCF did not contain asbestos.

The standing water level (SWL) recorded in the monitoring wells installed as part of the investigation ranged from approximately 5.15mBGL to 13.26mBGL. Groundwater levels calculated on these measurements ranged from approximately 49.7m Australian height datum (AHD) to 62.9mAHD.

During the site walkover inspection, FCF/asbestos containing material (ACM) was observed on the surface within the paved area in the central portion of the site (refer to figures attached in the appendices). The FCF/ACM was collected for laboratory testing and subsequently confirmed to contain asbestos. At the completion of the fieldworks, no visible FCF/ACM remained at the surface in the vicinity of the borehole locations.

The investigation identified fill soils impacted by asbestos (in the form of asbestos fines/fibrous asbestos - AF/FA) at concentrations above the adopted site assessment criteria (SAC) in two locations in the north of the site. Asbestos was detected at concentrations below the SAC at two locations in the central section of the site.

The investigation identified that the groundwater beneath the site was impacted by heavy metals at concentrations above the adopted SAC. The pH of the groundwater was also outside of the acceptable ranges (i.e. below the lower threshold). The low pH of the groundwater was considered likely to be a regional issue.

The investigation also identified several data gaps, which are required to be addressed.

Any remediation/management strategy will need to be outlined in a Remediation Action Plan (RAP). Potential remediation options for asbestos-impacted soils and impacted soils associated with the USTs include:

- Consolidation of impacted soils in a dedicated containment cell, or capped in-situ, and managed long-term in accordance with an Environmental Management Plan (EMP); or
- Excavation and disposal off-site at an appropriately licensed landfill facility.

Both of these options are expected to be technically achievable and are common approaches to soil remediation, with negligible potential for failure. The groundwater is considered unlikely to pose an unacceptable risk to receptors in the context of the proposed development, provided groundwater is managed appropriately if a basement is constructed and dewatering (temporary or otherwise) is required. However, further investigation is warranted.

Soil vapour and/hazardous ground gases (HGG) risks, if identified, will likely be managed via source removal (i.e. off-site disposal) and/or management via a capping/barrier system. Further investigation is required to assess whether soil vapour and/or HGG present unacceptable risks to receptors in the context of the proposed development.

Based on the results of the waste classification assessment, and at the time of reporting, the fill material is assigned a preliminary classification of **General Solid Waste (non-putrescible) containing Special Waste (asbestos)**. JKE is of the opinion that the natural soil and bedrock at the site will likely meet the definition of **VENM** for off-site disposal or re-use purposes. Further assessment is required to confirm these classifications prior to off-site disposal. Additional sampling will also be required in areas not sampled during the PSI and at point-source areas of environmental concern (AEC) locations (e.g. beneath buildings, vicinity of USTs etc). The anticipated waste quantities should also be confirmed at that time and documented in the report.

In accordance with Chapter 4 (clause 4.6) of the SEPP Resilience and Hazards 2021, the consent authority must not consent to the development unless:

- It has considered whether the land is contaminated; and
- If the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose of the planned development; and
- If the land requires remediation to be made suitable for the proposed development, it is satisfied that the land will be remediated before the use of the land for the proposed purpose.

Based on the findings of the investigation, JKE is of the opinion that the site can be made suitable for the proposed development described in Section 1.1, via remediation. The following is recommended:

- A surface walkover and 'emu-picking' of all visible FCF/ACM from the site surface should be undertaken and an asbestos clearance certificate obtained from a SafeWork NSW licensed asbestos assessor (LAA);
- Interim management of the site is to occur under an Asbestos Management Plan (AMP), until remediation occurs. The AMP is to be prepared by an LAA;
- Undertake a Detailed Site Investigation (DSI) to better assess the risks associated with the AEC/potential sources of contamination and inform preparation of a Remediation Action Plan (RAP). The DSI should address the data gaps identified in Section 10.4 of this report. A Sampling, Analysis and Quality Plan (SAQP) should be prepared for the DSI prior to commencement of the investigation;
- A RAP is to be prepared to address the contamination issues identified at the site; and
- The site is to be managed, remediated and validated in accordance with the RAP and AMP.

JKE has been advised by the client that at the time of reporting, it is not currently possible to undertake a DSI due to access constraints, including that the existing buildings are tenanted. JKE note that in any case, a DSI prepared prior to demolition would be limited and gaps would remain. Therefore, a RAP should be prepared prior to demolition and include provisions for a post-demolition data gap investigation to address the data gaps. Based on the findings of the further investigation, the RAP is to be reviewed and updated accordingly (or supplementary Remedial Works Plans can be issued). It is not expected that changes to the RAP would be material in this instance.

The conclusions and recommendations should be read in conjunction with the limitations presented in the body of this report.

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Abbreviations

Ambient Background Concentrations	**ABC**
Asphaltic Concrete	**AC**
Added Contaminant Limits	**ACL**
Asbestos Containing Material	**ACM**
Australian Drinking Water Guidelines	**ADWG**
Area of Environmental Concern	**AEC**
Asbestos Fines/Fibrous Asbestos	**AF/FA**
Aqueous Film-Forming Foam	**AFFF**
Australian Height Datum	**AHD**
Asbestos Management Plan	**AMP**
Australian Standard Leaching Procedure	**ASLP**
Acid Sulfate Soil	**ASS**
Above-Ground Storage Tank	**AST**
Building Approval	**BA**
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**
Contaminated Land Management	**CLM**
Methane	**CH_4**
Carbon Dioxide	**CO_2**
Carbon Monoxide	**CO**
Chain of Custody	**COC**
Contaminant(s) of Potential Concern	**CoPC**
Conceptual Site Model	**CSM**
Development Application	**DA**
Dissolved Oxygen	**DO**
Data Quality Indicator	**DQI**
Data Quality Objective	**DQO**
Detailed Site Investigation	**DSI**
Electrical Conductivity	**EC**
Redox Potential	**Eh**
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**
General Approval of Immobilisation	**GAI**
Groundwater Investigation Level	**GIL**
Ground-penetrating Radar	**GPR**
Hydrogen Sulphide	**H_2S**
Hazardous Ground Gas	**HGG**
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**
Licensed Asbestos Assessor	**LAA**
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**
Polycyclic Aromatic Hydrocarbons	**PAH**
Potential ASS	**PASS**
Polychlorinated Biphenyls	**PCB**
Per-and Polyfluoroalkyl Substances	**PFAS**
Perfluorohexanesulfonic Acid	**PFHxS**
Perfluorooctanoic Acid	**PFOA**
Perfluorooctanesulfonic Acid	**PFOS**
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**
State Significant Development Application	**SSDA**
Source, Pathway, Receptor	**SPR**
Specific Contamination Concentration	**SCC**
Standard Penetration Test	**SPT**
Standing Water Level	**SWL**
Trip Blank	**TB**
Toxicity Characteristic Leaching Procedure	**TCLP**
Trihalomethanes	**THM**
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**
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

TTW (NSW) Pty Ltd ('the client') commissioned JK Environments (JKE) to undertake a Preliminary Site Investigation (PSI) for the proposed S5 Data Centre at 269 Lane Cove Road, Macquarie Park, NSW ('the site'). The purpose of the investigation is to make a preliminary assessment of site contamination. The site location is shown on Figure 1 and the investigation was confined to the site boundaries as shown on Figure 2 attached in the appendices.

This report has been prepared to support the lodgement of a State Significant Development Application (SSDA) for the proposed commercial development, with regards to Chapter 4 (Clause 4.6) of State Environmental Planning Policy (Resilience and Hazards) 2021[1] (formerly known as SEPP55).

A geotechnical investigation was undertaken in conjunction with this PSI by JK Geotechnics (JKG). The results of the geotechnical investigation are presented in a separate report (Ref: 36466BFrpt)[2]. This report should be read in conjunction with the JKG report.

1.1 Proposed Development Details

The proposed development includes demolition of all existing structures and construction of two multi-storey data centre buildings. A 9-storey office building is proposed to be connected to the north of the northern datacentre building. The buildings are to be terraced into the existing slope. A plaza is proposed to the north of the buildings and landscaping is likely to be included within the setbacks. A new road is proposed in a generalised east-west direction between the data centre buildings, and a second road is proposed in a generalised north-south direction along the south-eastern boundary. Excavation to depths of approximately 9m below ground level (BGL) may be required to accommodate the development.

Selected development plans provided to JKE are attached in the appendices.

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 preliminary 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;
- 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 preliminary 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);

[1] *State Environmental Planning Policy (Resilience and Hazards) 2021* (NSW) (referred to as SEPP Resilience and Hazards 2021)

[2] JKG, (2024). *Report to TTW on Geotechnical Investigation for Proposed S5 Data Centre at 34 Waterloo Road, Macquarie Park, NSW*. (referred to as JKG report)

- Provide a preliminary waste classification for off-site disposal of soil;
- Assess whether the site is suitable or can be made suitable for the proposed development (from a contamination viewpoint); and
- Assess whether further intrusive investigation and/or remediation is required.

1.3 Scope of Work

The investigation was undertaken generally in accordance with a JKE proposal (Ref: EP58920PR) of 4 July 2023 and the consultancy agreement between the client and JKE. 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)[3], other guidelines made under or with regards to the Contaminated Land Management Act (1997)[4] and SEPP Resilience and Hazards 2021. A list of reference documents/guidelines is included in the appendices.

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

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

2 SITE INFORMATION

2.1 Site Identification

Table 2-1: Site Identification

Current Site Owner (certificate of title):	NEXTDC Limited
Site Address:	269 Lane Cove Road, Macquarie Park, NSW (also known as 34 Waterloo Road, Macquarie Park)
Lot & Deposited Plan:	Lot 3 in DP1129811
Current Land Use:	Commercial (warehouse/distribution)
Proposed Land Use:	Commercial (data storage centre)
Local Government Area:	City of Ryde
Current Zoning:	E2 – Commercial Centre
Site Area (m^2) (approx.):	22,550
RL (AHD in m) (approx.):	57-66
Geographical Location – north corner of site (decimal degrees) (approx.):	Latitude: -33.785458 Longitude: 151.128366
Site Location Plan:	Figure 1
Site Features Plan:	Figure 2
Sample Location Plan:	Figure 3

2.2 Site Location and Regional Setting

The site is located in a predominantly commercial area of Macquarie Park and is bound by Waterloo Road to the north-east and Lane Cove Road to the north-west. The site is located approximately 1km to the south-west of the Lane Cove River.

2.3 Topography

The site is located in an area of undulating topography falling towards north/north-east at approximately 2-3°. Parts of the site appear to have been levelled to account for the slope and accommodate the existing development.

2.4 Site Inspection

Walkover inspections of the site were undertaken by JKE during the course of the fieldworks between 27 November 2023 and 5 January 2024. The inspections were limited to accessible areas of the site and immediate surrounds. An internal inspection of buildings was not undertaken. Selected site photographs obtained over the course of the investigation are attached in the appendices.

At the time of the inspection, the majority of the site was occupied by two large warehouse-type buildings with associated office space. An asphaltic concrete (AC) carpark was located between the two buildings, and another AC carpark was located to the north of the northern building. The majority of the remaining area was sealed with AC and/or concrete pavement. The north-western portion of the site was occupied by a large grass-covered fill mound.

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

At the time of the inspection, the northern building was occupied by WorkArena (an office furniture supply business). The warehouse appeared to be used for the storage and distribution of office furniture. The southern building appeared to be vacant (possibly temporary closure for the holiday period), though signage indicated it was used by Foxtel/Sky News.

Former uses of the site could not be discerned from the inspection.

2.4.2 Buildings, Structures and Roads

The northern building was brick and metal construction and included office and warehouse space. A concrete loading dock was located in the north-east of the building. The building appeared to be generally in good condition based on a cursory inspection.

The southern building was of pebblecrete construction, with fibre cement in-fill panels along the western and southern facades. Warning labels on the in-fill panels indicated the fibre cement contained asbestos. The building appeared to be generally in good condition based on a cursory inspection, with no visible evidence of damage/weathering to the in-fill panels.

Electrical equipment and cooling towers were observed to the south of the southern building, adjacent to the site boundary. Detailed inspection of the towers and equipment was not undertaken.

A 1-2 storey carpark was located in the central portion of the site, between the two large buildings. The lower carpark was sealed with AC pavement, whilst the upper level was of concrete construction suspended on metal support beams. An on-grade AC paved carpark was located to the north of the northern building. AC pavement (driveways) and concrete pathways and hardstand connected the carparks and generally surrounded the buildings. The AC and concrete pavements appeared to be in fair to good condition (based on a cursory inspection), with some evidence of heaving and cracking observed. No obvious staining on pavements and surfaces were observed during the site inspection.

In the west of the site, a former tennis court was observed. The court was surrounded by a metal chain-link fence.

2.4.3 Boundary Conditions, Soil Stability and Erosion

The south-western boundary, the northern portion of the south-eastern boundary, and the southern portion of the north-western boundary were fenced by metal and/or chain-link fencing. The southern portion of the site was fenced within the site, separating the tenancies. To the south of this fence, an access driveway connected the south of the site with the property to the east. The north of the site was generally not fenced and readily accessible for pedestrian access from Waterloo Road and Lane Cove Road.

No obvious indications of erosion were observed at the site boundaries.

2.4.4 Presence of Drums/Chemical Storage and Waste

Fire-fighting equipment, including extinguishers, were stored within the fire pump room (refer to Figure 2). The fire extinguishers were carbon-dioxide (CO_2) type extinguishers, and were therefore not considered to represent a potential source of site contamination.

2.4.5 Evidence of Cut and Fill

Exposed fill soils were observed in the formed gardens across the site, along the south-western and north-western boundaries, and between the carparks within the central portion of the site. A large grass mound was observed in the north-west of the site, and retaining walls were also observed around this mound and near the northern building.

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

An underground storage tank (UST) with a metal lid was observed to the south of the southern building. The UST appeared to be abandoned in-situ (the base of the tank was filled with sand), though a hydrocarbon (diesel) odour was encountered during close inspection. The UST appeared to be a small holding tank. A possible fill point for another suspected UST was observed in the north-east of the site (see Figure 2).

A fibre cement fragment (FCF), suspected to be asbestos containing material (ACM), was encountered on the site surface within the exposed soils (garden bed) between the carpark levels in the central portion of the site (see Figure 2). The FCF appeared to be in reasonable to good condition (i.e. bonded/non-friable). The FCF was collected and forwarded for laboratory analysis (FCF-1 surface) and subsequently confirmed to contain asbestos.

JKE considered the USTs and associated infrastructure to represent potential point-sources of site contamination. The FCF/ACM was considered likely to be associated with impacted fill and may be indicative of site-wide contamination. This has been considered further in the CSM presented in Section 5.

2.4.7 Drainage and Services

Surface water run-off was expected to generally flow in a northerly direction in sympathy with the local topography, and collect within on-site stormwater drainage infrastructure. Infiltration of rainwater would also be expected within the landscaped and unpaved areas on-site.

A hydrant pumping station was located in the north-east of the site, and a fire pump room was located in the west of the site. Fire hydrants and hoses were also observed throughout the site. Substation kiosks were observed in the north-east of the site, and adjacent to the central portion of the north-western boundary.

Service pits for underground services were also identified in the south, including stormwater pits, and communication lines/cables.

2.4.8 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.

2.4.9 Landscaped Areas and Visible Signs of Plant Stress

Medium to large native and exotic trees were observed within the garden areas along the south-western and north-western boundaries and within the fill mound in the north-west of the site. The fill mound was also covered with low exotic grass cover. Low shrubs and plants were also observed within the gardens to the north of the northern building. A few large native trees were also observed adjacent to the northern portion of the south-eastern boundary. The vegetation within the site appeared to be generally healthy (based on a cursory inspection) with no obvious indications of plant stress or die-back.

2.5 Surrounding Land Use

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

- North-east: Macquarie Park Metro Station and Waterloo Road, with offices and commercial units beyond;
- North-west: Lane Cove Road, with a veterinary clinic, car display room and offices (Hyundai), and a construction site (presumably offices and/or residential apartments);
- South-east: Commercial offices, including Foxtel and Sky News; and
- South-west: A large warehouse (Chamberlain), with commercial offices, a hotel (Quest) and Epping Road beyond.

JKE did not observe any land uses in the immediate surrounds that were identified as potential contamination sources for the site.

2.6 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 site or in the immediate vicinity that could act as a preferential pathway for contamination migration.

The BYDA plans indicate that fibre optic cables and communication (Telstra) main cables extend through the site, generally within the southern areas and in the vicinity of the USTs. An electrical cottage/chamber is located in the south-eastern corner of the southern building, and the associated high voltage cables extend along the southern wall of the building and extends to the north-west beyond the site boundary. Considering

the geological conditions (discussed in Section 3.1), there is a potential for the service trenches to act as preferential pathway for contamination migration (i.e. through relatively permeable backfill). Copies of the relevant plans are attached in the appendices and the approximate locations of the underground services have been transposed onto Figure 2.

2.7 Local Meteorology

Key meteorological data for Parramatta North (Masons Drive) weather station available on the Bureau of Meteorology (BOM)[5] website has been reviewed and JKE note the following:

- The highest mean rainfall occurs in February, with a total of 128.2mm;
- The lowest mean rainfall occurs in September, with a total of 49.9mm; and
- In the week leading up to the commencement of fieldworks, a total of 20mm of rainfall was recorded.

JKE note that the Macquarie Park (Willandra Village) weather station is located closer to the site. However, at the time of reporting, the latest data online for this weather station was published in September 2023.

2.8 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); and
- The land is not located in a heritage conservation area.

[5] http://www.bom.gov.au/climate/averages/tables/cw_066124.shtml visited on 10 January 2024

3 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Geology

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 site is underlain by Ashfield Shale of the Wianamatta Group, which typically consists of black to dark grey shale and laminite. The site is located near the geological boundary with Hawkesbury Sandstone, which typically consists of medium to coarse grained quartz sandstone with minor shale and laminite lenses.

3.2 Soil Landscape Mapping

Regional soil landscape mapping in the Lotsearch report indicates the site is located within the Glenorie soil landscape. Glenorie soils are characterised by moderate erodibility with high erodibility in some cases, and localised dispersivity and salinity.

3.3 Acid Sulfate Soil (ASS) Risk and Planning

A review of the acid sulfate soil (ASS) risk map prepared by Department of Land and Water Conservation (1997)[6] indicated that the site is not located within a risk area. ASS planning information presented in the Lotsearch report indicated that the site is not located within an ASS risk planning area.

3.4 Dryland Salinity Risk and Mapping

Salinity hazard mapping information presented in the Lotsearch report indicated that the site is not located within a dryland salinity risk area.

The site is not located in the area mapped on the Salinity Potential in Western Sydney Map (2002)[7].

3.5 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 41 registered bores within the report buffer of 2km. In summary:

- Two bores were registered on-site (EMW1 and EMW2, as shown on Figure 2). The bores were registered for monitoring purposes and were located in the north of the site. The bores were drilled to depths of approximately 1m and 32mBGL respectively. No other construction or subsurface details were available;
- The majority of the bores in the surrounds were registered for monitoring purposes;
- There were no nearby bores (i.e. within 1km) registered for domestic or irrigation uses;
- The drillers log information from the closest registered bores typically identified fill and/or clay soil to depths ranging from approximately 2.1m to 5.2mBGL, underlain by shale. Sandstone bedrock was encountered beneath the shale at depths of approximately 8.4m to 15mBGL; and

[6] Department of Land and Water Conservation, (1997). *1:25,000 Acid Sulfate Soil Risk Map (Series 9130N3, Ed 2)*
[7] DIPNR, (2002). *1:100,000 Map – Salinity Potential in Western Sydney*, (referred to as Salinity Potential Map)

- The standing water level (SWL) was reported for one bore located approximately 170m to the north of the site. The SWL was reported to be at a depth of approximately 18mBGL. JKE note that the construction details recorded on the licence indicate the well was screened within the sandstone bedrock aquifer and are likely to be representative of a deeper aquifer. SWLs were not reported for the other nearby bores.

The information reviewed for the PSI indicates that the subsurface conditions at the site are likely to consist 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 as far as we are aware.

Though the local topography typically falls towards the north/north-east, considering the surrounding land features, historical mapping (discussed further in Section 4.1) and the SWLs recorded in the JKE monitoring wells, JKE anticipate groundwater to flow towards the north/north-west as shown on Figure 5 attached in the appendices.

3.6 Receiving Water Bodies

Surface water bodies were not identified in the immediate vicinity of the site. The closest down-gradient surface water body is Shrimptons Creek (a tributary of the Lane Cove River) located approximately 1km to the north-west of the site. This waterbody may be a potential receptor.

4 SITE HISTORY INFORMATION

4.1 Review of Historical Aerial Photographs and Historical Maps

Historical aerial photographs were reviewed for the investigation. The information was sourced from the Lotsearch report. JKE has reviewed the photographs and summarised relevant information in the following table:

Table 4-1: Summary of Historical Aerial Photographs

Year	Details
1930	**On-site:** A large cleared area was visible in the south of the site (possible orchard, small plants visible) with a smaller clearing in the north-west of the site. A few structures (possible house(s), sheds) were visible in the cleared areas. The perimeter and central portion of the site appeared densely vegetated with bushland. **Off-site:** Waterloo and Lane Cove Roads were visible to the north and west of the site respectively. The surrounds generally appeared to comprise of agricultural/horticultural land uses and farm housing. The land adjacent to the east of the site was densely vegetated.
1943 1951 1955	The site and surrounding features appeared generally similar to the previous photograph. By the 1951 photograph, some vegetation had been cleared within the north-western portion of the site and a few houses had been constructed on the western side of Lane Cove Road. By the 1955 photograph, the two structures in the southern cleared area were not visible.
1961	**On-site:** The majority of the vegetated areas on the site had been cleared. Trees were visible along the southern and the southern portion of the western boundaries. The southern and eastern portions of the site were occupied by a drive-in cinema and associated structures. There were two buildings in the southern corner of the site. Fences were visible to the north of these buildings and to the west of the theatre screen. The remainder of the site appeared predominantly vacant, possibly grass/low vegetation covered. **Off-site:** A car yard/service centre was located to the north of the site, beyond Waterloo Road ('Volkswagen' was visible on a warehouse roof). The drive-in cinema extended to the east and south of the site. Residential (low density, detached housing) developments were visible in the wider surrounds. Some agricultural uses (likely orchards and market gardens) were visible further north and west of the site.
1965	The site and surrounding features appeared generally similar to the previous photograph. Some commercial/industrial developments were visible to the north of the site, and to the south-east of the drive-in cinema. A suspected service station was visible to the north of the site, beyond Waterloo Road (on the western side of Lane Cove Road).
1970	**On-site:** The site appeared generally similar to the previous photograph. Minor alterations to the layout of the drive-in cinema (outside of the current 2024 site boundaries) were visible. **Off-site:** The agricultural land to the north and west of the site had predominantly been cleared. A large commercial/warehouse building was visible to the north-east of the site (beyond Waterloo Road). Additional large buildings (likely commercial) were visible in the wider surrounds to the north-west and south-east of the site. Residential properties were visible to the south/south-west of the site, beyond Epping Road.
1978	The site and surrounds appeared generally similar to the previous photograph. A large building (warehouse) was visible on previously cleared land to the north-east of the site.

Year	Details
1982	**On-site:** All previous structures on the site had been demolished and replaced by two large warehouse-type buildings (largely similar to the current 2024 configuration). Two tennis courts and grassed areas were visible along the western boundary. The remaining areas were predominantly paved and used for driveways and car parking. **Off-site:** The surrounds were predominantly used for commercial purposes. Several large buildings (commercial, warehouses) had been constructed in the immediate and wider surrounds. Several large buildings were under construction to the north/north-west of the site. Residential (detached housing) was visible in the wider surrounds to the south of the site, beyond Epping Road. Alterations had been made to the configuration of the drive-in cinema (adjacent to the east of the site) to be located outside of the current (2024) site boundary.
1986	The site and surrounding features appeared generally similar to the previous photograph. The buildings under construction to the north/north-west of the site had been completed. The drive-in cinema to the east of the site had been demolished and evidence of earthworks were visible.
1991	**On-site:** The site appeared generally similar to the previous photograph. **Off-site:** A commercial/business estate had been constructed on the vacant land to the east of the site (former drive-in cinema). The estate comprised of roads, carparks, several large buildings and grassed/garden areas. Several large buildings/warehouses to the north and north-east of the site had been demolished.
1994 2000 2007	The site and surrounding features appeared generally similar to the previous photograph. A large building had been demolished in the wider surrounds, and a playing field had been constructed approximately 200m to the east of the site. Several large buildings (warehouse/unit complexes, commercial offices) were visible to the north/north-east of the site in the 2000 photograph. The Metro station adjacent to the north-west of the site was under construction in the 2007 photograph.
2011 2016 2020 2023	The site and surrounding features appeared generally similar to the previous photograph. The Metro station had been completed and a few large commercial buildings (offices) had been constructed in the surrounds.

The historical maps from 1917 and 1936 indicate that a tributary of Shrimptons Creek was previously located approximately 150m to 200m to the north-west of the site. This historical aerial imagery indicates that the creek alignment was filled/relocated during the late 1950s/early 1960s.

4.2 Review of Historical Land Title Records

Historical land title records were reviewed for the investigation. The record search was undertaken by InfoTrack. Copies of the title records are attached in the appendices. The title records indicate the following:

- Between at least 1919 and 1955, the site was owned by individuals, including an orchardist and a company director;
- Since 1955, the site has been owned by various business entities; and
- The current proprietor acquired the site in 2022.

The historical land title records identified the site was likely used for agricultural purposes including orchards. This aligned with the aerial photographs from around this period of time. Historical agricultural land use could potentially have resulted in contamination and is considered further in the CSM presented in Section 5.

4.3 Review of Council Records

Council records were sourced under an informal access to information request and were reviewed for the investigation. A summary of the available records is attached in the appendices. The council records indicate the following:

- A Building Application (BA) was approved in 1993 for warehouses and offices (BA1993/125);
- In 1993, a BA was lodged and approved for reconstruction following fire damage. The affected area was located in the north-east of the northern building (BA282/93);
- Between 1999 and 2016, several applications were lodged and approved for internal fit-outs and alterations to the buildings, external upgrades including replacement of exterior cladding, and installation of satellite dishes;
- An application was lodged and approved in 2000 for installation of a substation and generator. The plans included a proposed 25,000L UST for bulk fuel storage (LDA2000/862);
- An application was lodged and approved in 2001 for installation of two 25,000L diesel USTs. The plans indicate the USTs were to be located approximately 13.5m setback from the southern boundary (LDA2001/150);
- In 2006, an application was lodged for a mixed-use development (for office/retail use) comprising three, 8-10 storey buildings over basement carparking (LDA2006/842); and
- In 2012, an application was approved for installation of air conditioning cooling towers and a reserve water tank (CDP2012/140).

The council records indicated the site was damaged by fire during the 1990s and that fuel storage activities (including within USTs) have occurred at the site. These activities are considered to represent potential sources of site contamination and are considered in the CSM presented in Section 5. JKE note that the USTs approved in 2001 align with the UST/storage area shown on Figure 2.

4.4 SafeWork NSW Records

SafeWork NSW records in relation to the registered storage of dangerous goods were reviewed for the investigation. Copies of relevant documents are attached in the appendices. A summary of the relevant information is provided in the following table:

Table 4-2: Summary of SafeWork NSW Records

Date	Record Number	License Details
12/09/1980	-	Approval for installation of proposed 10,000L and 15,000L USTs for petroleum storage.
22/06/1981	-	Application for licensing of 1x 2,400L AST (LPG storage) and 2x 12,000L (petroleum storage).
03/05/1995	35/018881	2x USTs (16,000L and 11,540L respectively) abandoned in-situ by filling with sand. Gilbarco certified the abandonment of the USTs.

Date	Record Number	License Details
23/08/1995	35/018881	AST (LPG) sold and removed from property. Licence not renewed.

Though minor discrepancies are noted relating to the volume of the two USTs, JKE consider this is likely associated with differences between rated and actual capacities. The records confirm that fuel storage within at least two USTs has occurred at the site and that these USTs were abandoned in-situ. JKE note that the council records (discussed in Section 4.3) indicated the abandoned USTs were located in the south of the site, to the east of the diesel USTs, in the general vicinity of the UST storage area shown on Figure 2.

4.5 NSW EPA and Department of Defence Records

A review of the NSW EPA and Department of Defence databases was undertaken for the PSI. Information from the following databases were sourced from the Lotsearch report:

- Records maintained in relation to contaminated land under Section 58 of the CLM Act 1997;
- Records of sites notified in accordance with the Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997 (2015)[8];
- Licensed activities under the Protection of the Environment Operations Act (1997)[9];
- Sites being investigated under the NSW EPA per-and polyfluoroalkyl substances (PFAS) investigation program;
- Sites being investigated by the Department of Defence for PFAS contamination; and
- Sites being managed by the Department of Defence for PFAS contamination.

The search included the site and surrounding areas in the report buffer. A summary of the information is provided below:

Table 4-3: NSW EPA and Department of Defence Records

Records	On-site	Off-site
Records under Section 58 of the CLM Act 1997	None	None
Records under the Duty to Report Contamination under Section 60 of the CLM Act 1997	None	There were four properties listed in the report buffer. The properties included a service station, other petroleum-based activities, and a landfill. The properties were located approximately 400m to 950m from the site and were either cross or down-gradient. Due to the distance and cross/down-gradient locations, the properties are not considered to represent off-site sources of contamination.
Licences under the POEO Act 1997	None	Current and historical licenses were identified for several properties within the report buffer, including: railway systems, waste storage and recovery, pharmaceutical production, road construction and the application of herbicides along waterways. However,

[8] 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)

[9] Protection of the Environment Operations Act 1997 (NSW) (referred to as POEO Act 1997)

Records	On-site	Off-site
		these activities are considered unlikely to pose a contamination risk to the site or represent and off-site source of contamination.
Records relating to the NSW EPA PFAS Investigation Program	None	None
Records relating to the Department of Defence PFAS management and investigation programs	None	None

4.6 Historical Business Directory and Additional Lotsearch Information

Historical business records and other relevant information were reviewed for the investigation. The information was sourced from the Lotsearch report and summarised in the following table:

Table 4-4: Historical Business Directory and other Records

Records	On-site	Off-site
Historical dry cleaners, motor garages and service stations	None.	There was six listed in the report buffer between 1950-1990. The properties included one dry cleaner business and five service stations. The dry cleaner business was located approximately 220m to the north-east and down-gradient of the site. Most of the service stations were located approximately 50m to 420m to the north/north-east and down-gradient of the site. The remaining service station was located approximately 490m to the south-east and cross-gradient of the site. Due to the distances and cross/down-gradient locations, the properties are not considered to represent off-site sources of contamination.
Other historical businesses that could represent potential sources of contamination	A publishing business was listed in the report from the 1980s to 1990s.	The records identified publishers, photographic equipment manufacturers/repairers, commercial printers and a film projector hire business (presumably including repairers) within the report buffer during the 1980s and 1990s. All of the businesses were located approximately 70m 150m to the north-east/north-west and down-gradient from the site. Due to the distances and down-gradient locations, the businesses are not considered to represent off-site sources of contamination.

Records	On-site	Off-site
National waste management site database	None	There were two properties in the report buffer, including a land fill and a transfer station. The properties were located approximately 480-520m to the south-east and east and cross-gradient of the site. These properties are not considered to represent off-site sources of contamination.
National liquid fuel facilities	None	There were five operational service stations listed in the report buffer. The nearest service station was located approximately 50m to the north-east and down-gradient of the site. The remaining service stations were located approximately 100m to 850m from the site. Due to the distances and/or down-gradient locations, these facilities are not considered to represent potential off-site sources of contamination.
Mapped heritage items	None	Various heritage items were mapped in the report buffer. These are not considered to have any relevance in the context of the PSI objectives.
Mapped ecological constraints	None	Various ecological items were mapped in the report buffer. These are not considered to have any relevance in the context of the PSI objectives.
Mapped naturally occurring asbestos	None	None

4.7 Summary of Site History Information

A time line summary of the historical land uses and activities is presented in the following table. The information presented in the table is based on a weight of evidence assessment of the site history documentation and observations made by JKE.

Table 4-5: Summary of Historical Land Uses / Activities

Year(s)	On-site - Potential Land Use / Activities	Off-site - Potential Land Use / Activities
1930s-1950s	Agricultural (orchards/market gardens, possibly grazing) and vacant land. Construction and demolition activities also occurred.	Agricultural (orchards/market gardens and grazing), and some low-density residential.
1960s-1970s	Drive-in cinema (eastern portion) and vacant land. Construction and demolition activities also occurred.	Low-density residential and commercial land uses, including warehouses and vehicle dealerships/repairers.
1980s- Present	Commercial land use (warehouses). Fuel storage occurred at the site. Construction and demolition activities also occurred.	Predominantly commercial land uses (offices and warehouses). Residential in the wider surrounds to the south of the site (beyond Epping Road).

4.8 Integrity of Site History Information

The majority of the site history information was obtained from government organisations as outlined in the relevant sections of this report. The veracity of the information from these sources is considered to be relatively high. A certain degree of information loss can be expected given the lack of specific land use details over time. JKE has relied upon the Lotsearch report and have not independently verified any information contained within. However, it is noted that the Lotsearch report is generated based on databases maintained by various government agencies and is expected to be reliable.

5 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 10.

5.1 Potential Contamination Sources/AEC and CoPC

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

Table 5-1: Potential (and/or known) Contamination Sources/AEC and Contaminants of Potential Concern

Source / AEC	CoPC
Fill material – The site appears to have been historically filled to achieve the existing levels. The fill may have been imported from various sources and could be contaminated. A large fill mound was observed in the north of the site. There is potential for deep filling to be present which may generate hazardous ground gases (HGG).	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), asbestos and HGG, including methane (CH_4), carbon monoxide (CO), carbon dioxide (CO_2) and hydrogen sulphide (H_2S).
Fuel storage – A fuel holding tank (UST) was identified in the south of the site (see Figure 2). Council records indicated that the UST may have been used to store diesel. The SafeWork NSW records also identified two abandoned USTs in the south of the site which were previously used to store petrol. A suspected UST was also identified in the north of the site (see Figure 2).	Lead, TRH, BTEX and PAHs.
Historical agricultural use – The site appears to have been used for grazing and market garden/orchard purposes. This 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 may also be associated with this AEC.	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.
Use of pesticides – Pesticides may have been used beneath the buildings and/or around the site.	Heavy metals and OCPs.
Hazardous Building Material – Hazardous building materials may be present as a result of former building and demolition activities. These materials may also be present in the existing buildings/ structures on site.	Asbestos, lead and PCBs.

Source / AEC	CoPC
FCF/ACM was encountered on the surface of exposed soils within the centre of the site (see Figure 2).	
Use of fire-fighting foams – The council records indicated that the northern building was damaged by fire in the 1990s. Aqueous Film-Forming Foam (AFFF) may have been used to extinguish/control the fire.	PAHs and per-and polyfluoroalkyl substances (PFAS), including perfluorooctanesulfonic acid (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexanesulfonic acid (PFHxS).
Commercial Printing/Publishing – The historical records indicate that the site was used for book publishing during the 1980s and 1990s. Leaks and spills of fluids and solvents may have occurred during this time.	Heavy metals, PFAS and volatile organic compounds (VOCs) including tetrachloroethene (also known as perchloroethylene - PCE) and the breakdown products trichloroethene (TCE), cis-1,2-dichloroethene (cis-DCE) and vinyl chloride (VC).

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*).

5.2 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 5-2: CSM

Potential mechanism for contamination	Potential mechanisms for contamination include: • Fill material – importation of impacted material, 'top-down' impacts (e.g. placement of fill, leaching from surficial material etc), or sub-surface release (e.g. impacts from buried material); • Fuel storage – 'top-down', spills (e.g. during filling of the tanks and/or dispensing activities), or sub-surface release (e.g. from leaking tank or pipework); • Historical agricultural use – 'top-down' and spills (e.g. application of pesticides, refuelling or repairing machinery, and other activities at the ground surface level); • Use of pesticides – 'top-down' and spills (e.g. during normal use, application and/or improper storage); • Use of fire-fighting foams – 'top-down', spills (e.g. during application, disposal/runoff of firefighting water) and subsurface release from leaching; • Historic printing/publishing activities – 'top-down' and spills (e.g. leaks through cracks in the pavement, during normal use and/or improper storage) • Hazardous building materials – 'top-down' (e.g. demolition resulting in surficial impacts in unpaved areas and/or beneath existing pavements).
Affected media	Soil, soil vapour, HGG and groundwater have been identified as potentially affected media.
Receptor identification	Human receptors include site users (predominantly adults), construction workers and intrusive maintenance workers. Off-site human receptors include adjacent land users, and recreational water users within Shrimptons Creek and the Lane Cove River.

	Ecological receptors include terrestrial organisms and plants within unpaved areas (including the proposed landscaped areas), and freshwater ecology in Shrimptons Creek and the Lane Cover River.
Potential exposure pathways	Potential exposure pathways relevant to the human receptors include ingestion, dermal absorption and inhalation of dust (all contaminants), HGG 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 HGG/vapours within enclosed spaces such as buildings and basements.
Potential exposure mechanisms	The following have been identified as potential exposure mechanisms for site contamination: • Vapour intrusion into the proposed building and basement (either from soil contamination or volatilisation of contaminants from groundwater); • HGG intrusion into the proposed building and basement; • 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 and those being used for recreation.
Presence of preferential pathways for contaminant movement	The fibre optics/communication and high voltage power cables and duct (see Figure 2) and associated services trench/trench backfill are potential preferential pathways for contaminant migrations throughout the site and off-site. This could occur via groundwater/seepage if present, or via soil vapour/HGG migration through the trenches and/or trench backfill.

6 SAMPLING, ANALYSIS AND QUALITY PLAN

6.1 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 1.2. 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.

6.1.1 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.

The intrusive investigation was designed to be preliminary, prior to the development of the CSM. Therefore, not all potentially affected media was sampled and analysis for all CoPC applicable to each medium did not occur.

6.1.2 Step 2 - Identify the Decisions of the Study

The objectives of the investigation are outlined in Section 1.2. 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 suitable for the proposed development, or can the site be made suitable subject to further characterisation and/or remediation?

6.1.3 Step 3 - Identify Information Inputs

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

- Site information, including site observations and site history documentation;
- Sampling of 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, fibre cement and groundwater for the CoPC identified in the CSM; and
- Field and laboratory QA/QC data.

6.1.4 Step 4 - Define the Study Boundary

The sampling was confined to the site boundaries as shown in Figure 2 and was limited vertically to a maximum borehole depth of approximately 18.8mBGL (spatial boundary). The sampling was completed between 27 November 2023 and 5 January 2024 inclusive (temporal boundary). The assessment of potential risk to adjacent land users has been made based on data collected within the site boundary.

Sampling was not undertaken within the existing building footprint due to access constraints. Sampling/analysis of HGG and soil vapour did not occur.

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

6.1.5.1 Tier 1 Screening Criteria

The laboratory data will be assessed against relevant Tier 1 screening criteria (referred to as SAC), as outlined in Section 7. 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.

For this investigation, the individual results have been assessed as either above or below the SAC. Statistical evaluation of the dataset via calculation of mean values and/or 95% upper confidence limit (UCL) values has not been undertaken due to the spatial distribution of the data and the number of samples submitted for analysis.

6.1.5.2 Field and Laboratory QA/QC

Field QA/QC included analysis of inter-laboratory duplicates, intra-laboratory duplicates, trip spike, trip blank 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).

6.1.5.3 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.

6.1.6 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.

Quantitative limits on decision errors were not established as the sample plan was not probabilistic.

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.

6.1.7 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.

6.2 Soil Sampling Plan and Methodology

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

Table 6-1: Soil Sampling Plan and Methodology

Aspect	Input
Sampling Density	Samples were collected from 34 locations (BH1 to BH14 and BH16 to BH35) as shown on the attached Figure 2. Based on the site area (22,550m^2), this number of locations corresponded to a sampling density of approximately one sample per 660m^2. Due to the judgemental sampling plan (discussed below) and access constraints, the sampling plan does not meet the requirements for hotspot identification, as outlined in the NSW EPA Sampling Design Part 1 – Application (2022)[10] contaminated land guidelines. Though we note that the total number of samples met the density presented in these guidelines for the hotspot identification method, based on the total site area.

[10] 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 judgemental sampling plan and were broadly positioned for site coverage, taking into consideration areas that were not easily accessible. A square grid overlay (approximately 20m x 20m) was prepared for the site and sample locations were selected and positioned generally on a 20m spacing, based on access constraints. Sampling did not occur in the building footprints. This sampling plan was considered suitable to make a preliminary assessment of potential risks associated with the AEC and CoPC identified in the CSM for soil and groundwater, and assess whether further investigation is warranted.
Set-out and Sampling Equipment	Sampling locations were generally set out using a differential GPS unit (with a typical accuracy of ±30mm). BH35 was set out using a tape measure from existing site features. In-situ sampling locations were checked for underground services by an external contractor prior to sampling. Samples were collected using a combination of a drill rig equipped with spiral flight augers (150mm diameter), and a hand auger. Soil samples were obtained from a Standard Penetration Test (SPT) split-spoon sampler, and/or directly from the auger.
Sample Collection and Field QA/QC	Soil samples were obtained between 27 November 2023 and 5 January 2024 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 (with the exception of PFAS) were placed in glass jars with plastic caps and Teflon seals with minimal headspace. Samples for PFAS analysis were placed in plastic containers with plastic caps (no Teflon liner). 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 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 bulk sample was collected from fill at 1m intervals, or from each distinct fill profile. The quantity of material for each sample varied based on whatever return could be achieved using the auger. The bulk sample intervals are shown on the attached borehole logs; • Each 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. Any soil clumps/nodules were disaggregated; • 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 bulk 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 7.1.

Aspect	Input
	A calibration/check of the accuracy of the scale used for weighing the fibre cement fragments was undertaken using a set of calibration weights. 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.
Decontami-nation and Sample Preservation	Sampling personnel used disposable nitrile gloves during sampling activities. Re-usable sampling equipment was decontaminated using potable water. Detergents were not utilised as in JKE's experience, they may cause interference with the analysis of PFAS. 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.

6.3 Groundwater Sampling Plan and Methodology

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

Table 6-2: Groundwater Sampling Plan and Methodology

Aspect	Input
Sampling Plan	Groundwater monitoring wells were installed in BH8 (MW8), BH18 (MW18), BH26 (MW26) and BH29 (MW29). The wells were positioned to gain a snap-shot of the groundwater conditions. Considering the topography and the location of the nearest down-gradient water body, MW18 was 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 south. MW26 and MW29 were considered to be in the down-gradient areas of the site and would be expected to provide an indication of groundwater flowing across (beneath the site) and beyond the down-gradient site boundary. MW8 was considered to be in the intermediate/cross-gradient area of the site and would be expected to provide an indication of groundwater flowing across (beneath) the site and the local surrounding conditions.
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 5.6m to 18.8mBGL. 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.

Aspect	Input
	JKE note that MW8 remained dry following installation and during the subsequent groundwater-related fieldwork.
Monitoring Well Development	The monitoring wells were developed between 4 December 2023 and 6 December 2023 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. Potable water was progressively introduced during development to assist in the reduction of silting within the base of the wells. The introduced water was pumped out of the wells. The field monitoring records and calibration data are attached in the appendices.
Groundwater Sampling	The monitoring wells were allowed to recharge for approximately six to eight days after development. Groundwater samples were obtained on 12 December 2023. 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 low flow sampling equipment, including a peristaltic pump and a bladder pump. 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. 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. Groundwater removed from the wells during development and sampling was transported to JKE in jerry cans and stored in holding drums prior to collection by a licensed waste water contractor for off-site disposal. 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. 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.

6.4 Analytical Schedule

The soil analysis typically targeted the shallow fill soils and natural soils/rock, where encountered directly beneath the pavement and were analysed for heavy metals, BTEX/TRH and PAH, PFAS and asbestos (fill soils only). Deeper fill and natural soil samples were selected for analysis of heavy metals, BTEX/TRH, PAH and in some instances, PFAS, based on the encountered site conditions, and in some instances, the initial results of the analysis of shallow fill soils.

Selected fill and natural samples were analysed for OCPs, OPPs and PCBs to provide spatial coverage and vertical distribution of the site.

All FCF/ACM encountered at the site surface and during field screening of fill soils were collected and analysed for asbestos.

At the request of the client, selected fill soil samples were also analysed for leachable concentrations of selected heavy metals, PAHs and PFAS using the Australian Standard Leaching Procedure (ASLP) test method. This method utilises de-ionised water as the leachate media and is used to estimate the potential for contaminant migration to occur as a result of water infiltration.

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 6-3: 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)	339235, 339235-A, 339695, 339695-A, 340105 and 341181
Inter-laboratory duplicates	Envirolab Services Pty Ltd VIC, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	41047, 41235, 41275 and 41490

7 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.

7.1 Soil

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

7.1.1 Human Health

- Health Investigation Levels (HILs) for a 'commercial/industrial' exposure scenario (HIL-D);
- 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 2 in The PFAS National Environmental Management Plan (NEMP) Version 2.0 2020[11];
- 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)[12]; and
- Asbestos was assessed against the HSL-D criteria. A summary of the asbestos criteria is provided in the table below:

Table 7-1: 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)[13]. The SAC include the following: • No visible asbestos at the surface/in the top 10cm of soil; • <0.04% 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): $$\textbf{\% w/w asbestos in soil} = \frac{\textbf{\% asbestos content x bonded ACM (kg)}}{\text{Soil volume (L) x soil density (kg/L)}}$$ 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 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):

[11] Heads of EPAs Australia and New Zealand (HEPA). PFAS National Environmental Management Plan Version 2.0 - January 2020 (referred to as NEMP 2020)

[12] 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*

[13] 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
	% w/w asbestos in soil = $\frac{\text{**% asbestos content x bonded ACM (g)**}}{\text{Soil weight (g)}}$

7.1.2 Environment (Ecological – terrestrial ecosystems)

- Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) for an 'commercial/industrial' exposure scenario. Though the NEPM (2013) requires only the top 2m of soil to be compared to EILs and ESLs, JKE has compared all results to the EILs and ESLs to account for potential cut/fill activities during the redevelopment of the site;
- The criterion for benzo(a)pyrene has been increased from the value presented in NEPM (2013) based on the Canadian Soil Quality Guidelines[14];
- ESLs were adopted based on the soil type;
- The ecological (indirect exposure) guidelines for soil were adopted for PFAS assessment based on Table 3 in NEMP 2020; 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)[15] as an initial screen; and
- Where the initial screen identified exceedances of the EILs, representative samples were analysed for soil pH and cation exchange capacity (CEC). Arithmetic averages were calculated based on the soil types (i.e. averages were calculated for silty gravelly/gravelly silty sand; gravelly sand; and sandy gravel). The average concentrations were then used to select the ACL values presented in Schedule B(1) of NEPM (2013). This method is considered to be adequate for the Tier 1 screening. The average concentrations are presented in Table S6 attached in the appendices.

7.1.3 Management Limits for Petroleum Hydrocarbons

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

7.1.4 Waste Classification

Data for the waste classification assessment were assessed in accordance with the Waste Classification Guidelines, Part 1: Classifying Waste (2014)[16] as outlined in the following table:

[14] 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)

[15] 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

[16] NSW EPA, (2014). *Waste Classification Guidelines, Part 1: Classifying Waste.* (referred to as Waste Classification Guidelines 2014)

Table 7-2: Waste Categories

Category	Description
General Solid Waste (non-putrescible)	• If Specific Contaminant Concentration (SCC) ≤ Contaminant Threshold (CT1) then Toxicity Characteristics Leaching Procedure (TCLP) not needed to classify the soil as general solid waste; and • If TCLP ≤ TCLP1 and SCC ≤ SCC1 then treat as general solid waste.
Restricted Solid Waste (non-putrescible)	• If SCC ≤ CT2 then TCLP not needed to classify the soil as restricted solid waste; and • If TCLP ≤ TCLP2 and SCC ≤ SCC2 then treat as restricted solid waste.
Hazardous Waste	• If SCC > CT2 then TCLP must be undertaken to classify the soil as hazardous waste; and • If TCLP > TCLP2 and/or SCC > SCC2 then treat as hazardous waste.
Virgin Excavated Natural Material (VENM)	Natural material (such as clay, gravel, sand, soil or rock fines) that meet the following: • That has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial mining or agricultural activities; • That does not contain sulfidic ores or other waste; and • Includes excavated natural material that meets such criteria for virgin excavated natural material as may be approved from time to time by a notice published in the NSW Government Gazette.

The PFAS data were assessed against the NSW EPA Addendum to the Waste Classification Guidelines (2014) – Part 1: classifying waste[17].

7.1.5 Leachability Assessment

The ASLP data has been used to assess the potential for contamination to leach from the soils as a result of water infiltration. The results have been compared to the laboratory PQLs and a factual discussion of the results has been provided.

7.2 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)[18]. 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).

7.2.1 Human Health

- The NEPM (2013) HSLs were not applicable for this project as bedrock was encountered at depths shallower than 2mBGL. 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

[17] NSW EPA, (2016). *Addendum to the Waste Classification Guidelines (2014) – Part 1: classifying waste*

[18] 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 2021)[19] 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)[20] for petroleum hydrocarbons. We have conservatively adopted the value of 100µg/L for TRH F1 and F2;
  - USEPA Regional screening levels for naphthalene (threshold value for tap water) (updated 2023); and
  - The use of the laboratory PQLs for other contaminants where there were no Australian guidelines.

- The ADWG 2011 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). These have been deemed as 'recreational' SAC; and
- The recreational water quality guideline value was adopted for PFAS assessment based on Table 1 in NEMP 2020.

7.2.2 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)[21]. 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 (interim marine or freshwater) water quality guidelines were adopted for PFAS assessment based on NEMP 2020, based on 99% protection to account for bioaccumulation.

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

[20] 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)

[21] 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)

8 RESULTS

8.1 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.

8.2 Subsurface Conditions

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

Table 8-1: Summary of Subsurface Conditions

Profile	Description
Pavement	AC pavement was encountered at the surface in BH1 to BH14, BH16 to BH23, and BH31 to BH34. The AC pavement ranged from approximately 10mm to 50mm in thickness. Concrete pavement was encountered at the surface in BH25 to BH27, and ranged from approximately 100mm to 680mm in thickness.
Fill	With the exception of BH26, fill was encountered at the surface or beneath the pavement in all boreholes and extended to depths of approximately 0.3m to 4mBGL. BH3m BH23, BH30 and BH35 were terminated in the fill at maximum depths of approximately 0.1m to 2mBGL. The fill typically comprised silty and/or gravelly sand, and silty clay with varying proportions of sand and gravel. The fill contained inclusions of sandstone cobbles, igneous, ironstone and sandstone gravel, slag, ash, demolition rubble (tile, metal, fibre cement, glass, plastic and wood fragments), roots and root fibres. No stained or odorous fill soils were encountered during the investigation.
Natural Soil	Residual silty clay soils were encountered beneath the fill in BH1, BH2, BH4 to BH6, BH8, BH9, BH11, BH14, BH21, BH24, BH25, BH28 and BH34 at depths of approximately 0.1m to 2mBGL. BH1, BH2, BH4 and BH28 were terminated in residual soils at maximum depths of approximately 2m to 4mBGL. No stained or odorous soils were encountered during the investigation.
Bedrock	Extremely weathered siltstone was encountered beneath the pavement in BH26 at a depth of approximately 0.68mBGL. Siltstone and sandstone bedrock was encountered beneath the fill and/or residual soils in BH5 to BH14, BH16 to BH22, BH24, BH25, BH27, BH29 and BH31 to BH34 at depths of approximately 0.1m to 5mBGL, and extended to the terminal depths of the boreholes.
Groundwater	Groundwater seepage was not encountered in the boreholes during auger drilling. All boreholes remained dry on completion of auger drilling and a short time after. Potable water is introduced into the bores during the rock coring process (completed for the JKG geotechnical investigation). The introduction of water inhibits meaningful water observations during rock coring.

8.3 Field Screening

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

Table 8-2: Summary of Field Screening

Aspect	Details
PID Screening of Soil Samples for VOCs	PID soil sample headspace readings are presented in attached report tables and the COC documents attached in the appendices. The results ranged from 0ppm to 4.5ppm equivalent isobutylene. These results indicate generally low concentrations of PID detectable VOCs in the samples which aligned with other observations of no staining or odours.
Bulk Screening for Asbestos	The bulk field screening results are summarised in the attached report Table S5 attached in the appendices. All results were below the SAC. There was no visible FCF or other suspected asbestos materials observed in any of the bulk samples.
Groundwater Depth & Flow	Groundwater seepage was not encountered in boreholes during auger drilling. The remaining boreholes were dry during and a short time after completion of auger drilling. SWLs measured in the monitoring wells installed at the site ranged from 5.15mBGL to 13.26mBGL. Groundwater RLs calculated on these measurements ranged from approximately 49.7mAHD to 62.9mAHD. The groundwater RLs indicate that excavation for the possible basement in the southern building may intercept groundwater. A contour plot was prepared for the groundwater levels as shown on Figure 5 attached in the appendices. Groundwater flow generally occurs in a down gradient direction perpendicular to the groundwater elevation contours. The contour plot indicates that groundwater generally flows towards the north and north-west which is consistent with expectations based on the topography and downgradient waterbodies (existing and former).
Groundwater Field Parameters	Field measurements recorded during sampling were as follows: - pH ranged from 4.3 to 5.69; - EC ranged from 1,943µS/cm to 5,760µS/cm; - Eh ranged from -71.7mV to -1.7mV; and - DO ranged from 3.5ppm to 276.5ppm. JKE note that the DO probe did not achieve adequate calibration. Therefore, the DO readings were not considered likely to be representative of the groundwater conditions. The PID readings in the monitoring well headspace recorded during sampling ranged from 1ppm in MW18 to 2.9ppm in MW29.
LNAPLs petroleum hydrocarbons	Phase separated product (i.e. LNAPL) was not detected using the interphase probe during groundwater sampling.

8.4 Soil Laboratory Results

The soil laboratory results were assessed against the SAC presented in Section 7.1. Individual SAC are shown in the report tables attached in the appendices. A summary of the results is presented below:

8.4.1 Human Health and Environmental (Ecological) Assessment

Table 8-3: Summary of Soil Laboratory Results – Human Health and Environmental (Ecological)

Analyte	N	Max. (mg/kg)	N> Human Health SAC	N> Ecological SAC	Comments
Arsenic	64	35	0	0	-
Cadmium	64	2	0	NSL	
Chromium (total)	64	41	0	0	-
Copper	64	96	0	0	-
Lead	64	110	0	0	-
Mercury	64	0.2	0	NSL	-
Nickel	64	100	0	0	-
Zinc	64	99	0	0	-
Total PAHs	64	21	0	NSL	-
Benzo(a)pyrene	64	1.6	NSL	0	-
Carcinogenic PAHs (as BaP TEQ)	64	2.4	0	NSL	-
Naphthalene	64	<1	0	NSL	-
DDT+DDE+DDD	40	<0.1	0	NSL	-
DDT	40	<0.1	NSL	0	-
Aldrin and dieldrin	40	<0.1	0	NSL	-
Chlordane	40	<0.1	0	NSL	-
Heptachlor	40	<0.1	0	NSL	-
Chlorpyrifos (OPP)	40	<0.1	0	NSL	-

Analyte	N	Max. (mg/kg)	N> Human Health SAC	N> Ecological SAC	Comments
PCBs	40	<0.1	0	NSL	-
TRH F1	64	<25	0	0	-
TRH F2	64	63	0	0	-
TRH F3	64	470	0	0	-
TRH F4	64	790	0	0	-
Benzene	64	<0.2	0	0	-
Toluene	64	<0.5	0	0	-
Ethylbenzene	64	<1	0	0	-
Xylenes	64	<1	0	0	-
PFOS	59	7.8	NSL	0	-
PFOS + PFHxS	59	8.3	0	NSL	-
PFOA	59	0.5	0	0	-
Asbestos (in soil) (%w/w)	58	ACM <0.01%w/w AF/FA 0.0182%w/w	0 2	NA	Asbestos, in the form of AF/FA was recorded at concentrations above the human health SAC in two fill soil samples collected from BH1 (0.03-0.4m) and BH2 (0.02-0.4m). Asbestos, in the form of ACM was recorded at concentrations below the SAC in the fill soil samples collected from BH8 (0.03-0.4m) and BH9 (0.035-0.08m).
Asbestos in fibre cement	2	Detected	1	NSL	The surficial fragment (FCF1-surface) was confirmed to contain asbestos. JKE note that the fragment was removed from the site for analysis. The FCF sample collected from BH2 (0.5-1.5m) did not contain asbestos.

Notes:

N: Total number (primary samples)

NSL: No set limit

NL: Not limiting

8.4.2 Waste Classification Assessment

The laboratory results were assessed against the criteria presented in Section 7.1.4. The results are presented in the report tables attached in the appendices. A summary of the results is presented in the following table:

Table 8-4: Summary of Soil Laboratory Results Compared to CT and SCC Criteria

Analyte	N	N > CT Criteria	N > SCC Criteria	Comments
Arsenic	64	0	0	-
Cadmium	64	0	0	-
Chromium	64	0	0	-
Copper	64	NSL	NSL	-
Lead	64	0	0	All primary results were below the CT1 criterion of 100mg/kg. One laboratory duplicate sample of the fill sample collected from BH29 (3-3.45m) exceeded the CT1 criterion. The maximum lead concentration was 110mg/kg.
Mercury	64	0	0	-
Nickel	64	20	0	Nickel concentrations above the CT1 criterion of 40mg/kg were recorded in the fill samples collected from BH3 (0.01-0.1m), BH4 (0.02-0.3m), BH5 (0.03-0.2m), BH6 (0.025-0.4m), BH7 (0.05-0.1m), BH11 (0.03-0.3m), BH12 (0.05-0.23m), BH14 (0.02-0.12m), BH16 (0.01-0.2m), BH17 (0.05-0.15m), BH18 (0.01-0.15), BH19 (0.02-0.4m), BH20 (0.02-0.3m), BH21 (0.04-0.15m), BH22 (0.1-0.15m), BH23 (0.02-0.3m), BH31 (0.03-0.1m), BH32 (0.03-0.3m), BH33 (0.04-0.14m), BH34 (0.03-0.2m). Nickel concentrations above the CT1 criterion were also recorded in several field and laboratory duplicate samples. The maximum nickel concentration was 100mg/kg.
Zinc	64	NSL	NSL	-
TRH (C_6-C_9)	64	0	0	-
TRH (C_{10}-C_{36})	64	0	0	-
BTEX	64	0	0	-
Total PAHs	64	0	0	-
Benzo(a)pyrene	64	3	0	Benzo(a)pyrene concentrations were recorded above the CT1 criterion of 0.8mg/kg in the fill samples collected from BH8 (0.03-0.4m), BH9 (0.035-0.08m) and BH10 (0.5-0.95m).

Analyte	N	N > CT Criteria	N > SCC Criteria	Comments
				Benzo(a)pyrene concentrations above the CT1 criterion were also recorded in the field and laboratory duplicate samples for BH8 (0.03-0.4m). The maximum benzo(a)pyrene concentration was 1.6mg/kg.
OCPs & OPPs	40	0	0	-
PCBs	40	0	0	-
PFOS + PFHxS	59	NSL	0	-
PFOA	59	NSL	0	-
Asbestos	58 (soil) 2 FCF	-	-	Asbestos was detected in four fill soil samples collected from BH1 (0.03-0.4m), BH2 (0.02-0.4m), BH8 (0.03-0.4m) and BH9 (0.035-0.08m). Asbestos was also detected in the FCF sample (FCF1-surface) collected from the surface of the site. Due to the confirmed presence of asbestos in and on soil, the fill soils are classified as special waste (asbestos).

N: Total number (primary samples)

NSL: No set limit

Table 8-5: Summary of Soil Laboratory Results Compared to TCLP (waste) Criteria

Analyte	N	N > TCLP (waste) Criteria	Comments
Arsenic	59	0	All TCLP results were below the laboratory PQL of 0.05mg/L.
Cadmium	59	0	All TCLP results were below the laboratory PQL of 0.01mg/L.
Chromium	59	0	Selected fill soil samples were analysed for TCLP chromium. The maximum TCLP chromium result was 0.02mg/L.
Copper	44	NSL	Selected fill soil samples were analysed for TCLP copper. The maximum TCLP copper result was 0.42mg/L.
Lead	59	0	Selected fill soil samples were analysed for TCLP lead. The maximum TCLP lead result was 0.08mg/L.
Mercury	59	0	All TCLP results were below the laboratory PQL of 0.0005mg/L.
Nickel	59	0	Selected fill soil samples were analysed for TCLP nickel. The maximum TCLP nickel result was 0.3mg/L.
Zinc	44	NSL	Selected fill soil samples were analysed for TCLP copper. The maximum TCLP copper result was 0.2mg/L.
Benzo(a)pyrene	59	0	All TCLP results were below the laboratory PQL of 0.0001mg/L.

Analyte	N	N > TCLP (waste) Criteria	Comments
PFOS + PFHxS	50	0	Selected fill soil samples were analysed for TCLP PFOS + PFHxS. The maximum TCLP PFOS + PFHxS result was 0.42µg/L.
PFOA	50	0	Selected fill soil samples were analysed for TCLP PFOA. The maximum TCLP PFOA result was 0.03µg/L.

N: Total number (primary samples)

8.4.3 Leachability Analysis

The laboratory ASLP results have been compared to the laboratory PQLs and presented factually. The results are presented in the report tables attached in the appendices. A summary of the results is presented in the following table:

Table 8-6: Summary of Soil Leachability Laboratory Results

Analyte	N	Max. (µg/L)	Comments
Arsenic	59	14	The ASLP arsenic results ranged from below the laboratory PQL of 1µg/L to 14µg/L.
Cadmium	59	0.4	The ASLP cadmium results ranged from below the laboratory PQL of 0.1µg/L to 0.4µg/L.
Chromium	59	88	The ASLP chromium results ranged from below the laboratory PQL of 1µg/L to 88µg/L.
Copper	59	34	The ASLP copper results ranged from below the laboratory PQL of 1µg/L to 34µg/L.
Lead	59	55	The ASLP lead results ranged from below the laboratory PQL of 1µg/L to 55µg/L.
Mercury	59	<0.05	All ASLP mercury results were below the laboratory PQL of 0.05µg/L.
Nickel	59	15	The ASLP nickel results ranged from below the laboratory PQL of 1µg/L to 15µg/L.
Zinc	59	71	The ASLP zinc results ranged from below the laboratory PQL of 1µg/L to 71µg/L.
Benzo(a)pyrene	59	<0.1	All ASLP benzo(a)pyrene results were below the laboratory PQL of 0.1µg/L.
PFOS + PFHxS	50	0.35	The ASLP PFOS + PFHxS results ranged from below the laboratory PQL of 0.01µg/L to 0.35µg/L.
PFOA	50	0.03	The ASLP PFOA results ranged from below the laboratory PQL of 0.01µg/L to 0.03µg/L.

N: Total number (primary samples)

8.5 Groundwater Laboratory Results

The groundwater laboratory results were assessed against the SAC presented in Section 7.2. Individual SAC are shown in the report tables attached in the appendices. A summary of the results is presented below:

Table 8-7: Summary of Groundwater Laboratory Results – Human Health and Environmental (Ecological)

Analyte	N ^	Max. (µg/L)	N> Human Health SAC	N> Ecological SAC	Comments
Arsenic	3	<1	0	0	-
Cadmium	3	0.8	0	1	A cadmium concentration above the ecological SAC of 0.2µg/L was recorded in the primary (and field duplicate) groundwater sample collected from MW26.
Chromium (total)	3	1	0	0	-
Copper	3	190	0	2	Copper concentrations above the ecological SAC of 1.4µg/L were recorded in the primary (and duplicate) groundwater samples collected from MW18 and MW26.
Lead	3	8	0	1	A lead concentration above the ecological SAC of 3.4µg/L was recorded in the primary (and field duplicate) groundwater sample collected from MW26.
Mercury	3	<0.05	0	0	-
Nickel	3	250	1	3	Nickel concentrations above the ecological SAC of 11µg/L were recorded in all primary and duplicate groundwater samples. A nickel concentration above the human health (recreational) SAC of 200µg/L was recorded in the primary (and field duplicate) sample collected from MW26.
Zinc	3	1,100	0	3	Zinc concentrations above the ecological SAC of 8µg/L were recorded in all primary (and duplicate) groundwater samples.
Total PAHs	3	<0.1	0	0	-
Benzo(a)pyrene	3	<0.1	0	0	-
Naphthalene	3	<0.1	0	0	-

Analyte	N ^	Max. (µg/L)	N> Human Health SAC	N> Ecological SAC	Comments
TRH F1	3	<10	0	NSL	-
TRH F2	3	<50	0	NSL	-
TRH F3	3	<100	NSL	NSL	-
TRH F4	3	<100	NSL	NSL	-
Benzene	3	<1	0	0	-
Toluene	3	<1	0	0	-
Ethylbenzene	3	<1	0	0	-
m+p-Xylene	3	<2	0	0	-
o-Xylene	3	<1	0	0	-
Total Xylenes	3	<2	0	0	-
Total VOCs Chloroform Bromodichloro methane	3	10 10 1	NSL 0 0	NSL 0 0	-
PFOS	3	<0.0002	NSL	0	-
PFOS + PFHxS	3	0.0002	0	NSL	-
PFOA	3	0.0003	0	0	-
pH	3	pH 5 (Min) pH 6.3 (Max)	3	3	The pH of all groundwater samples analysed were below the lower threshold of the human health (recreational) and ecological SAC range of pH 6.5-8.5.
EC	3	4,000 µS/cm	NSL	NSL	The EC results ranged from 1,200µS/cm to 4,000µS/cm.

Notes:

^: Primary samples

N: Total number

NSL: No set limit

NL: Not limiting

9 PRELIMINARY WASTE CLASSIFICATION ASSESSMENT

9.1 Preliminary Waste Classification of Fill

Based on the results of the waste classification assessment, and at the time of reporting, the fill material is assigned a preliminary classification of **General Solid Waste (non-putrescible) containing Special Waste (asbestos)**. Further assessment is required to confirm the extent of special waste prior to off-site disposal. Additional sampling will also be required in areas not sampled during the PSI and at point source AEC locations (e.g. beneath buildings, vicinity of USTs etc). The anticipated waste quantities should also be confirmed at that time and documented in the report.

9.2 Preliminary Classification of Natural Soil and Bedrock

Based on the scope of work undertaken for this assessment, and at the time of reporting, JKE is of the opinion that the natural soil and bedrock at the site will likely meet the definition of **VENM** for off-site disposal or re-use purposes. Further assessment is required to confirm this classification prior to off-site disposal of the waste. The anticipated waste quantities should also be confirmed at that time and documented in the report.

10 DISCUSSION

10.1 Contamination Sources/AEC and Potential for Site Contamination

Based on the scope of work undertaken for this investigation, JKE identified the following potential contamination sources/AEC:

- Historical filling activities at the site;
- Historical and current fuel storage at the site, including USTs;
- Historical agricultural land use;
- Use of pesticides beneath the buildings and/or around the site;
- Hazardous building materials within current and former structures at the site;
- Potential use of PFAS-containing fire-fighting foams; and
- Historical commercial printing/publishing activities at the site.

Considering the above, and based on a qualitative assessment of various lines of evidence as discussed throughout this report, JKE is of the opinion that there is a potential for site contamination. The preliminary soil and groundwater data collected for the investigation is discussed further in the following subsection, as part of the Tier 1 risk assessment.

10.2 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.

10.2.1 Soil

10.2.1.1 Asbestos

Asbestos, in the form of AF/FA, was identified in the shallow fill soils in BH1 and BH2 at concentrations above the human health SAC. BH1 and BH2 were located in the northern portion of the site, as shown on the on Figure 4 attached in the appendices. Asbestos, in the form of bonded (non-friable) FCF/ACM was identified in surficial fill soils (and therefore above the nominated human health SAC) in an area of exposed soil between the central carparks, as shown on Figure 4 attached in the appendices. The source of the asbestos is considered likely to be associated with impacted fill historically imported to the site, and/or historic demolition and disposal activities.

BH1 and BH2 were located within the northern carpark and were sealed with AC pavement. As the vicinity of these locations is currently sealed with pavement, inhibiting access to the impacted fill soils, a complete SPR linkage does not exist in the current configuration. A complete SPR linkage could be realised once the pavements are removed (i.e. during demolition/redevelopment). Remediation will be required to address the potential risk.

The bonded (non-friable) FCF/ACM collected from the site surface (FCF-1) was located within an area of exposed soils between two carpark levels in the central portion of the site. The site is currently tenanted and the area between the carparks is readily accessible to site users and visitors. As such, the soils in this area may be disturbed. On this basis, a complete SPR linkage could be realised and the asbestos is considered to pose a potential risk to human health if the soil/asbestos is disturbed. However, we note that asbestos fibres bound within a fibre cement matrix are not likely to mobilise readily to air during typical site use, therefore we consider it unlikely that exposure to unacceptable concentrations of airborne respirable asbestos fibres would have occurred from the FCF that was collected during fieldwork. Notwithstanding, remediation will be required to address the potential risk. Interim measures should be undertaken to mitigate potential risk to the current site users and visitors.

Asbestos, in the form of bonded (non-friable) FCF/ACM was also identified in the shallow fill soils in BH8 and BH9, at concentrations below the human health SAC. BH8 and BH9 were located in the central carpark area, as shown on Figure 4 attached in the appendices. The source of the FCF/ACM was considered likely to be associated with historical demolition and/or impacted fill historically imported to the site. As the vicinity of these boreholes were sealed with AC pavement, a complete SPR linkage does not currently exist. However, the potential for exposure to occur following removal of the pavement and/or soil disturbance (i.e. during demolition) should be managed.

On completion of all boreholes, a walkover inspection of all sampling locations and their immediate vicinity was undertaken by JKE. No visible FCF/ACM remained at the surface on the completion of reinstating the borehole locations.

JKE recommend preparing an Asbestos Management Plan (AMP) to outline the management strategy for addressing the risks posed by AF/FA and FCM/ACM in soils. The AMP should be prepared by a SafeWork NSW Licensed Asbestos Assessor (LAA).

10.2.1.2 Other CoPC in soil

All remaining CoPC in soil were below the relevant SAC. All BTEX, TRH F1, OCP, OPP and PCB results were below the laboratory PQLs.

10.2.1.3 Leachability Discussion

The ASLP analysis identified generally low leachable concentrations of heavy metals and PFAS from the analysed fill soil and rock samples. The results indicated a generally low potential for heavy metals and PFAS to leach from the soils and migrate to deeper soils and/or the groundwater. This was further supported by the typically lower analyte concentrations recorded in the deeper fill and underlying natural soil/rock samples, and the results of the groundwater analysis, discussed in Section 10.2.2. It is also noted that a majority of the site is surfaced with hardstand or covered by buildings, and all fill was above the observed groundwater levels. Therefore, potential leaching mechanisms which could mobilise contamination from the fill soils and into the deeper soil or groundwater are limited.

Even though a few samples reported appreciable concentrations of heavy metals and PFAS in the ASLP analysis which suggested that there was a potential for these contaminants to leach from the soils, we note

that the ASLP test method involves actively tumbling the soils in solution for an extended period of time and this is not reflective of the leaching mechanisms at the site. Notably in relation to PFAS, this is supported by the fact that appreciable concentrations of PFAS were not detected in groundwater, even though ASLP leachate concentrations for PFAS in some soil samples were orders of magnitude greater than the groundwater SAC for PFAS compounds. Further discussion relating to heavy metals in groundwater is provided below.
JKE note that the leachable concentrations of mercury and benzo(a)pyrene (a PAH compound) were below the laboratory PQLs.

10.2.2 Groundwater

10.2.2.1 Heavy Metals

Cadmium and lead concentrations above the ecological SAC were detected in MW26, copper concentrations above the ecological SAC were detected in MW18 and MW26, and nickel and zinc concentrations above the ecological SAC were detected in all groundwater samples. The nickel concentration recorded in the groundwater sample collected from MW26 was also above the recreational SAC. MW18 was located in the south-east and up-gradient area of the site, MW26 was located in the south-west and down-gradient area of the site and MW29 was located in the north-west and down-gradient area of the site, as shown on Figure 5 attached in the appendices.

The concentrations of heavy metals recorded within the soil samples collected from these locations were generally consistent with the expected ambient conditions. As discussed in Section 10.2.1.3, the leachate analysis undertaken on the fill soils and rock samples indicated that the fill soils and rock at the site were unlikely to be the source of the heavy metals in the groundwater.

On this basis, it is considered likely that the concentrations of heavy metals may be, at least in part, associated with leaks/spills from potable water supply infrastructure, and are likely to be reflective of general background conditions in the region. It is also possible that the heavy metals in the groundwater may also be associated with historical printing/publishing activities undertaken at the site, although there is no clear evidence supporting this.

Considering multiple lines of evidence, the concentrations recorded are considered unlikely to pose an unacceptable risk to on-site receptors in the context of the proposed development provided and groundwater is managed appropriately if a basement is constructed and dewatering (temporary or otherwise) is required. However, further investigation is warranted.

All other heavy metal results were below the respective SAC.

10.2.2.2 Physical Parameters

The pH of all of the groundwater samples were outside of the acceptable ranges for the ecological and recreational SAC. All of the results were below the lower acceptable threshold. The pH of the groundwater was considered likely to be a regional issue and did not pose an unacceptable risk to on-site receptors in the context of the proposed development.

10.2.2.3 Other CoPC in Groundwater

All remaining CoPC in groundwater were below the relevant SAC. All BTEX, TRH and PAH results were below the laboratory PQLs.

Low concentrations of trihalomethanes (THM), specifically chloroform and/or bromodichloromethane, were recorded in the groundwater samples. The total THM concentrations were reported to be up to 10µg/L and well below the total and individual SAC. Given that the PAH and TRH/BTEX results were all below the laboratory PQLs, in conjunction with low PID readings from the monitoring wells, the THM concentrations are unlikely to be associated with historic site activities. Considering multiple lines of evidence, the THM is concentrations are most likely attributable to leaking/spills of potable water supply infrastructure in the area. JKE note that THMs are breakdown products from the chlorination process and are common in potable water at low concentrations (the Australian drinking water guideline for total trihalomethanes is 250µg/L).

10.3 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 10.1.

> *Are any results above the SAC?*

Yes, as discussed in Section 8.

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

Yes. Potential risks associated with exposure to asbestos were identified. Other potential risks exist in the context of the AEC and CoPC that were not investigated under the PSI scope.

> *Is remediation required?*

Yes. Based on the existing data, remediation is required to address the potential risks to human health posed by asbestos in the form of AF/FA. Further investigation is also required to better assess the potential risks posed to human health and ecological receptors, and to inform the preparation of a Remediation Action Plan (RAP).

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

JKE is of the opinion that the site can be made suitable for the proposed development via remediation. A Detailed (Stage 2) Site Investigation (DSI) is required to better assess the risks associated with the potential contamination sources/AEC and the identified CoPC, and to inform the preparation of a RAP.

10.4 Data Gaps

An assessment of data gaps is provided in the following table:

Table 10-1: Data Gap Assessment

Data Gap	Assessment
Building footprints not assessed.	The sampling locations were positioned outside of the building footprints. The fill and soil conditions beneath the building footprints are currently unknown. Recommendations for additional soil sampling beneath the building footprints are included in the report to address this data gap.
Asbestos quantification undertaken using boreholes.	Asbestos quantification was undertaken from boreholes (150mm nominal diameter). Though acceptable, the WA DoH (2021) guidance recommends the use of test pits where possible. The WA DoH (2021) guidance also recommends that where a site is known to be impacted by asbestos, quantification sampling should be conducted at twice the recommended minimum sampling density. Additional sampling is recommended to quantify the extent of asbestos impacts at the site. Test pits should be used where possible for the additional asbestos quantification sampling.
Groundwater assessment limited in scope.	The investigation identified USTs within the south of the site, and a possible UST within the north of the site. Due to access constraints, no groundwater monitoring wells were located in close proximity and/or down-gradient of the USTs. It is possible that leaks/spills from the UST may have occurred and migrated into the groundwater. As the monitoring wells were not targeted to the immediate vicinity and/or down-gradient of the USTs, there is potential that groundwater contamination resulting from the USTs may not have been captured by this investigation. Further, heavy metals were recorded in most of the groundwater samples at concentrations which warrant further investigation. Additional groundwater monitoring wells should be installed in close proximity and down-gradient of the USTs once these areas are accessible. A ground-penetrating radar (GPR) survey and/or other methods should also be implemented to confirm the presence of the potential UST in the north of the site. Recommendations for additional groundwater assessment are included in the report to address this data gap.
Soil vapour risks not assessed.	VOCs, including chlorinated compounds, were identified as CoPC associated with historical on-site uses (printing/publishing). Risks from these CoPC must be assessed via a soil vapour investigation. A soil vapour investigation is recommended to address this data gap.
Potential for HGG to be generated not assessed.	The investigation identified areas of deeper filling, up to approximately 4mBGL. The fill contained various quantities of organic material and demolition waste. There is potential for decomposition of organic material to occur and for HGG to be generated during this process. Additional investigation is recommended to address this data gap.

10.5 Potential Remediation & Management Options

Further investigation of the soil, soil vapour, groundwater and HGG contamination conditions is required. The below discussion is based on the available date at the time of reporting. The further investigation(s) will inform the feasibility of the below remediation/management options. Any remediation/management strategy will need to be outlined in a RAP.

Based on the findings of this investigation, the primary concerns identified in relation to soil were the presence of asbestos in fill soils and at the surface, and potential hydrocarbon and/or metal contamination associated with the USTs. The surficial FCF/ACM impacts can by managed in the short term by 'emu-picking', followed by a clearance inspection and certificate by a LAA, and then suitable site/asbestos management.

In the context of remediation, asbestos-impacted soils and/or impacted soils associated with the USTs may be remediated by:

- Consolidation of impacted soils in a dedicated containment cell, or capped in-situ, and managed long-term in accordance with an Environmental Management Plan (EMP); or
- Excavation and disposal off-site at an appropriately licensed landfill facility.

Both of these options are technically achievable and are common approaches to soil remediation with negligible potential for failure. However, contingency measures would need to be included within the RAP.

The groundwater is considered unlikely to pose an unacceptable risk to receptors in the context of the proposed development, provided groundwater is managed appropriately if a basement is constructed and dewatering (temporary or otherwise) is required. However, further investigation is warranted.

Soil vapour and/HGG risks, if identified, will likely be managed via source removal (i.e. off-site disposal) and/or management via a capping/barrier system. Further investigation is required to assess whether soil vapour and/or HGG present unacceptable risks to receptors in the context of the proposed development.

11 CONCLUSIONS AND RECOMMENDATIONS

The investigation included a review of historical information, soil sampling from 34 boreholes and groundwater sampling from four groundwater monitoring wells installed at the site. The site has historically been used for agricultural purposes until the 1950s, and was subsequently used as a drive-in movie theatre and occupied by associated structures between the 1960s and 1970s. Since the 1980s, the site has been used for various commercial activities. Fuel storage (including in USTs) occurred during this time.

The investigation encountered fill and/or clay soils to depths of approximately 0.2m to 5mBGL, underlain by siltstone and sandstone bedrock. The maximum depth of fill encountered was 4mBGL. Groundwater was not encountered during auger drilling for the PSI. The fill typically comprised of silty and/or gravelly sand, sandy gravel, and silty and/or sandy clay. Inclusions noted within the fill included igneous, siltstone and sandstone gravel, tile and glass fragments, slag, ash, roots and root fibres. FCF was observed in the fill in BH2 at a depth of approximately 0.5-1.5mBGL, however, subsequent laboratory analysis confirmed this FCF did not contain asbestos.

The SWLs recorded in the monitoring wells installed as part of the investigation ranged from approximately 5.15m to 13.26mBGL. Groundwater RLs calculated on these measurements ranged from approximately 49.7mAHD to 62.9mAHD.

During the site walkover inspection, FCF/ACM was observed on the surface within the paved area in the central portion of the site (refer to figures attached in the appendices). The FCF/ACM was collected for laboratory testing and subsequently confirmed to contain asbestos. At the completion of the fieldworks, no visible FCF/ACM remained at the surface in the vicinity of the borehole locations.

The investigation identified fill soils impacted by asbestos (in the form of AF/FA) at concentrations above the adopted SAC in two locations in the north of the site. Asbestos was detected at concentrations below the SAC at two locations in the central section of the site.

The investigation identified that the groundwater beneath the site was impacted by heavy metals at concentrations above the adopted SAC. The pH of the groundwater was also outside of the acceptable ranges (i.e. below the lower threshold). The low pH of the groundwater was considered likely to be a regional issue.

The investigation also identified several data gaps, which are required to be addressed.

In accordance with Chapter 4 (clause 4.6) of the SEPP Resilience and Hazards 2021, the consent authority must not consent to the development unless:

- It has considered whether the land is contaminated; and
- If the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose of the planned development; and
- If the land requires remediation to be made suitable for the proposed development, it is satisfied that the land will be remediated before the use of the land for the proposed purpose.

Based on the findings of the investigation, JKE is of the opinion that the site can be made suitable for the proposed development described in Section 1.1, via remediation. The following is recommended:

- A surface walkover and 'emu-picking' of all visible FCF/ACM from the site surface should be undertaken and an asbestos clearance certificate obtained from an LAA;
- Interim management of the site is to occur under an AMP, until remediation occurs. The AMP is to be prepared by an LAA;
- Undertake a DSI to better assess the risks associated with the AEC/potential sources of contamination and inform preparation of a RAP. The DSI should address the data gaps identified in Section 10.4 of this report. A SAQP should be prepared for the DSI prior to commencement of the investigation;
- A RAP is to be prepared to address the contamination issues identified at the site; and
- The site is to be managed, remediated and validated in accordance with the RAP and AMP.

JKE has been advised by the client that at the time of reporting, it is not currently possible to undertake a DSI due to access constraints, including that the existing buildings are tenanted. JKE note that in any case, a DSI prepared prior to demolition would be limited and gaps would remain. Therefore, a RAP should be prepared prior to demolition and include provisions for a post-demolition data gap investigation to address the data gaps. Based on the findings of the further investigation, the RAP is to be reviewed and updated accordingly (or supplementary Remedial Works Plans can be issued). It is not expected that changes to the RAP would be material in this instance.

At this stage, JKE consider there is no requirement to notify the NSW EPA under the NSW EPA Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997 (2015)[22]. The duty to report should be reconsidered following completion of each stage of additional work recommended above.

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

[22] 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)

12 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 land use. 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

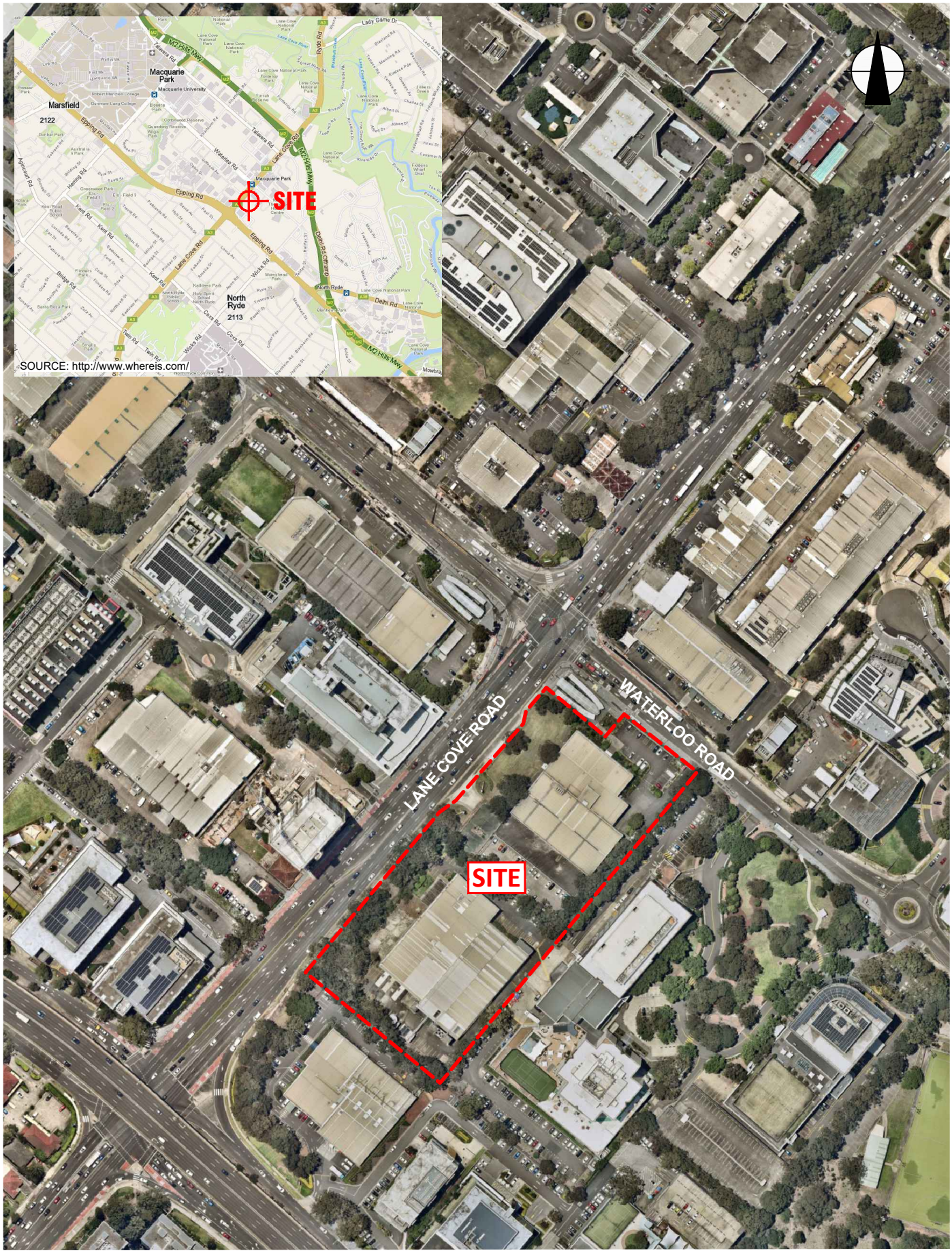
Borehole and test pit logs are prepared by environmental scientists, engineers or geologists based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these should not be re-drawn for inclusion in site remediation or other 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 LOCATION PLAN**

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

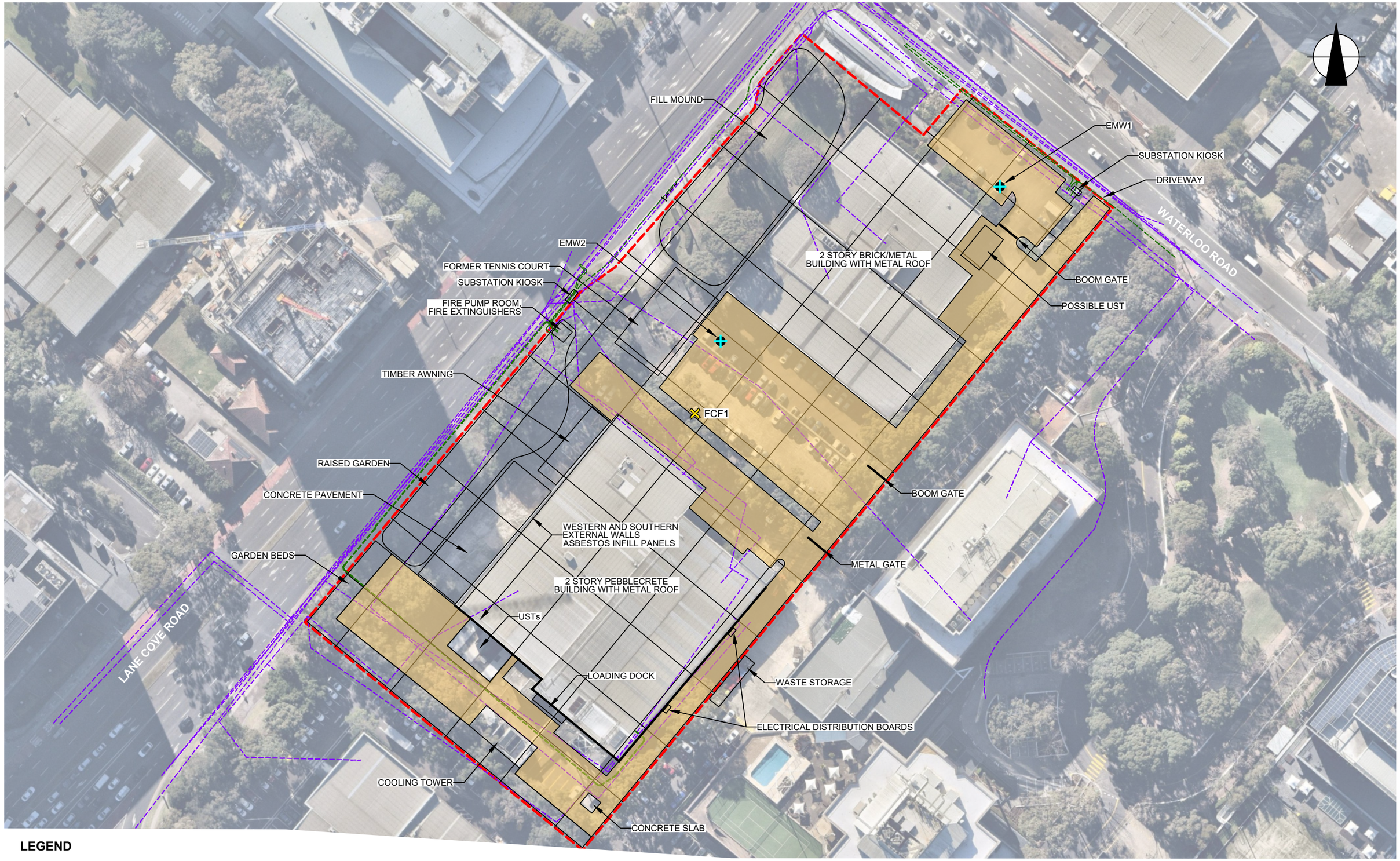
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Figure No: 1

JKEnvironments

PLOT DATE: 12/01/2024 12:07:08 PM DWG FILE: K:\SC EIS JOBS\36000'S\E36466PR MACQUARIE PARK\CAD\E36466PR.DWG

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LEGEND

- APPROXIMATE SITE BOUNDARY
- CONCRETE AND ASPHALT HARDSTANDS
- EXISTING MONITORING WELL LOCATION
- FCF(Surface) — FIBRE CEMENT FRAGMENT LOCATION, NUMBER AND DEPTH (Surface/m)
- APPROXIMATE ALIGNMENT OF FIBRE OPTICS/COMMUNICATION LINES
- APPROXIMATE ALIGNMENT OF AUSGRID POWER CABLES

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 10 20 30 40 50

SCALE 1:1000 @A3 METRES

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

Title: **SITE FEATURES PLAN**

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

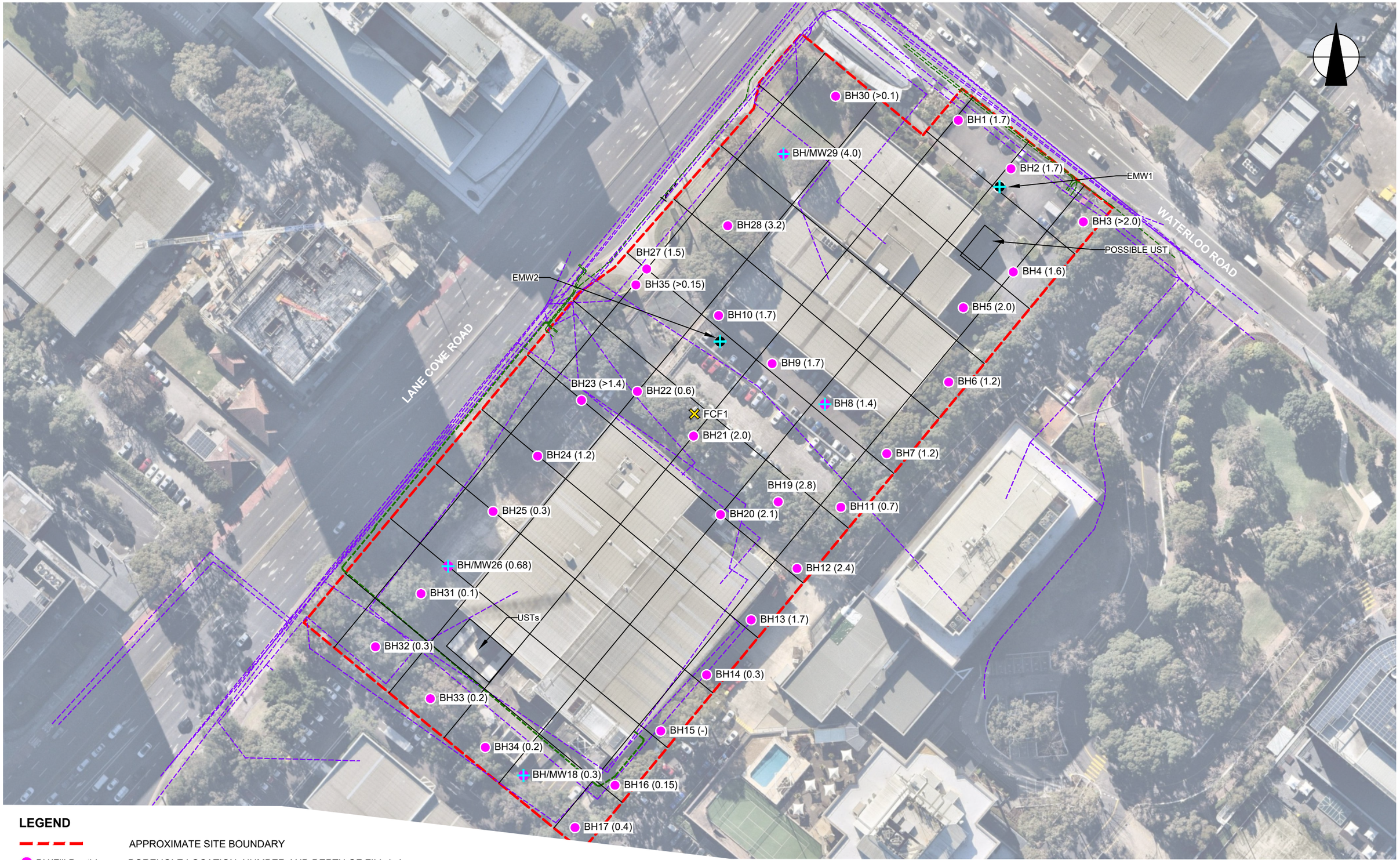
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Figure No: 2

JKEnvironments

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LEGEND

APPROXIMATE SITE BOUNDARY	
BH(Fill Depth)	BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m)
BH/MW(Fill Depth)	BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
FCF(Surface)	FIBRE CEMENT FRAGMENT LOCATION, NUMBER AND DEPTH (Surface/m)
	EXISTING MONITORING WELL LOCATION
APPROXIMATE ALIGNMENT OF FIBRE OPTICS/COMMUNICATION LINES	
APPROXIMATE ALIGNMENT OF AUSGRID POWER CABLES	

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

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

Title: **SAMPLE LOCATION PLAN**

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

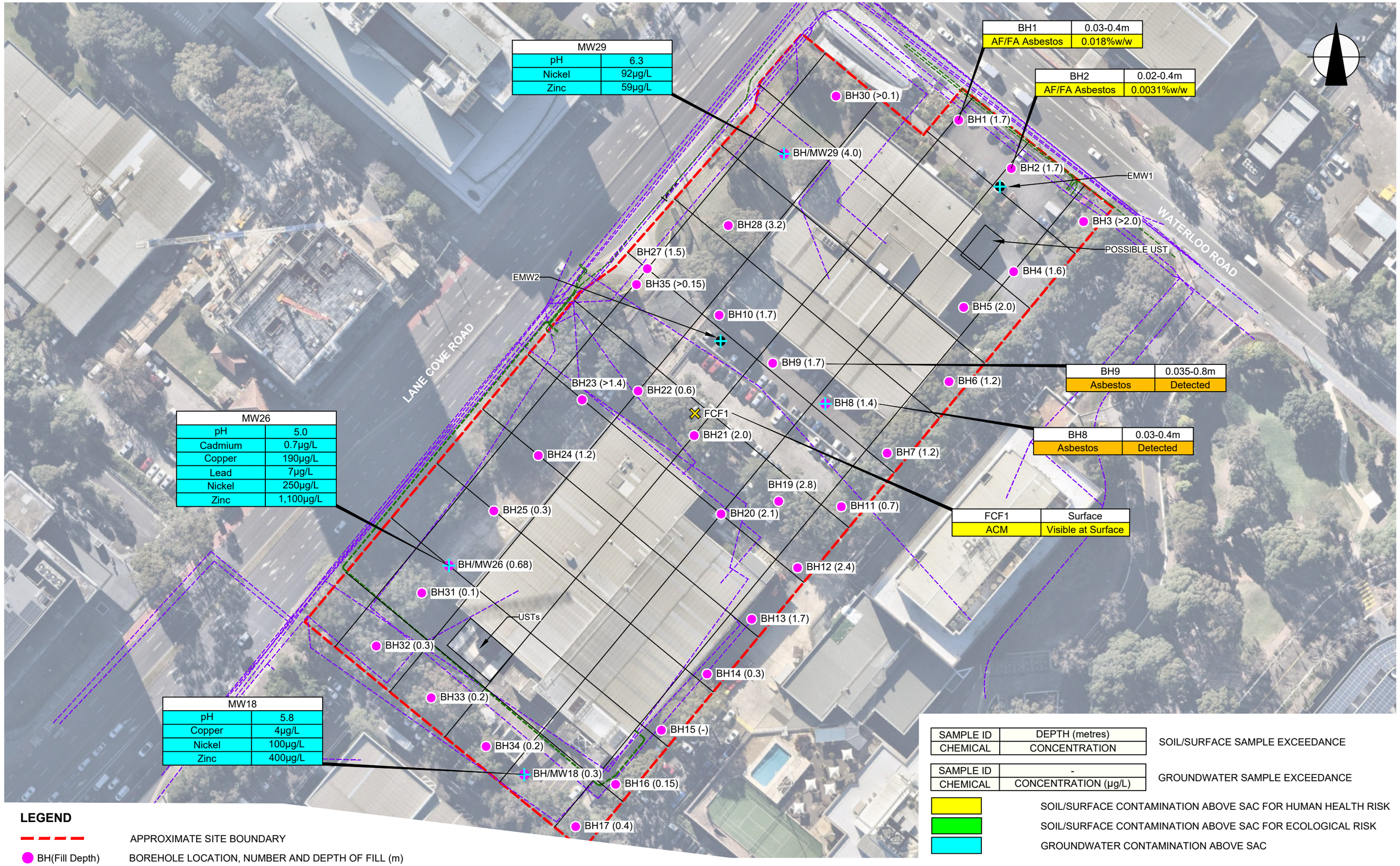
Project No: E36466PR

Figure No: 3

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SAMPLE ID	DEPTH (metres)
CHEMICAL	CONCENTRATION

SOIL/SURFACE SAMPLE EXCEEDANCE

SAMPLE ID	-
CHEMICAL	CONCENTRATION (µg/L)

GROUNDWATER SAMPLE EXCEEDANCE

SOIL/SURFACE CONTAMINATION ABOVE SAC FOR HUMAN HEALTH RISK

SOIL/SURFACE CONTAMINATION ABOVE SAC FOR ECOLOGICAL RISK

GROUNDWATER CONTAMINATION ABOVE SAC

LEGEND

- APPROXIMATE SITE BOUNDARY
- BH(Fill Depth) — BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m)
- BH/MW(Fill Depth) — BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- FCF(Surface) — FIBRE CEMENT FRAGMENT LOCATION, NUMBER AND DEPTH (Surface/m)
- EXISTING MONITORING WELL LOCATION
- APPROXIMATE ALIGNMENT OF FIBRE OPTICS/COMMUNICATION LINES
- APPROXIMATE ALIGNMENT OF AUSGRID POWER CABLES

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 10 20 30 40 50

SCALE 1:1000 @A3 METRES

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

Title: **SAC EXCEEDANCE PLAN**

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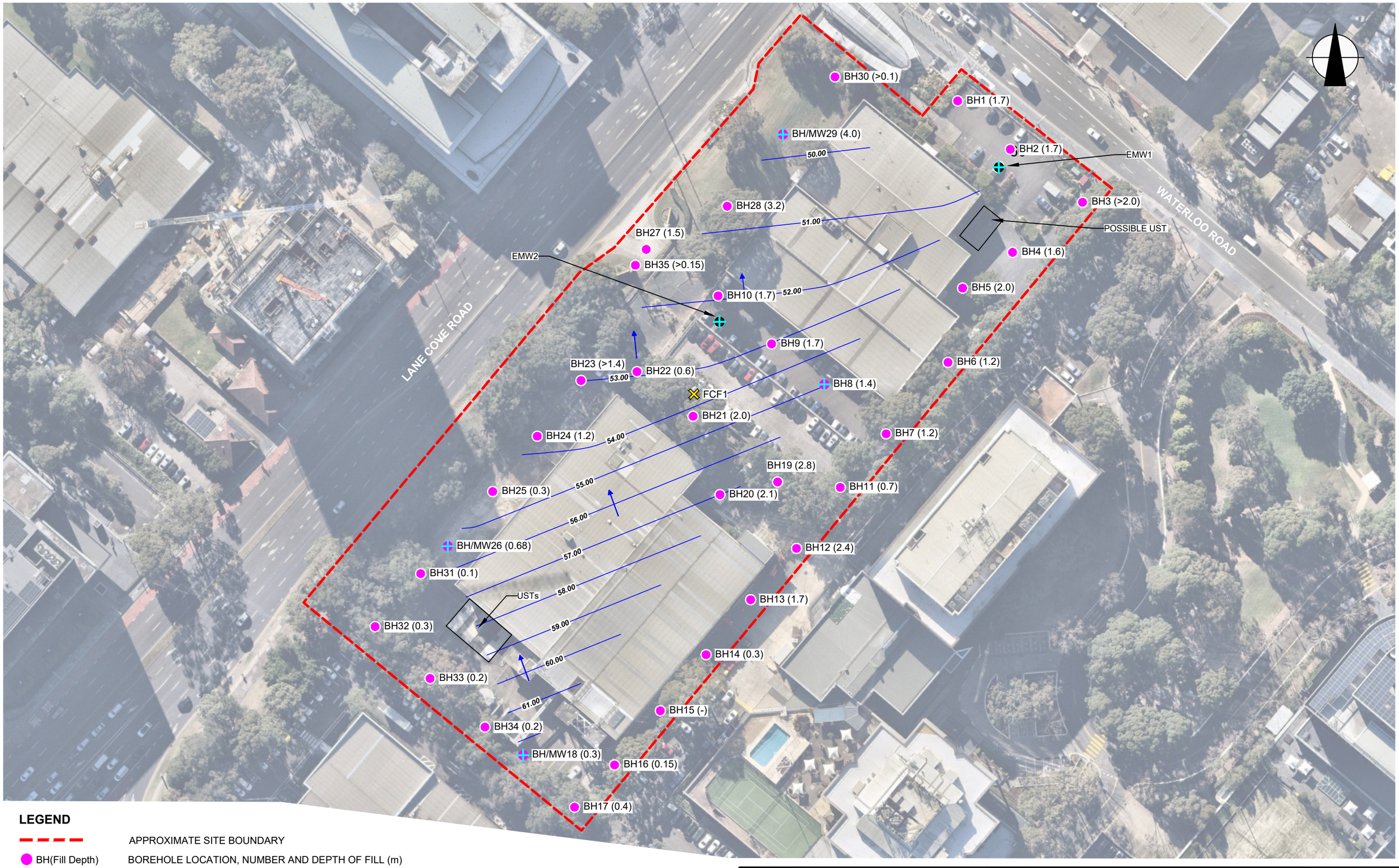
Project No: E36466PR

Figure No: 4

JKEnvironments

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LEGEND

APPROXIMATE SITE BOUNDARY	
BH(Fill Depth)	BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m)
BH/MW(Fill Depth)	BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
FCF(Surface)	FIBRE CEMENT FRAGMENT LOCATION, NUMBER AND DEPTH (Surface/m)
	EXISTING MONITORING WELL LOCATION
54.00	GROUNDWATER CONTOUR INTERVALS (m)
	INFERRED GROUNDWATER FLOW DIRECTION

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 10 20 30 40 50

SCALE 1:1000 @A3 METRES

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

Title: **GROUNDWATER CONTOUR PLOT**

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Project No: E36466PR

Figure No: 5

JKEnvironments

PLOT DATE: 31/01/2024 12:26:36 PM DWG FILE: K:\SC EIS JOBS\36000\SIE36466PR MACQUARIE PARK\CAD\E36466PR.DWG

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Appendix B: Site Information and Site History

Selected Site Photographs



Photograph 1: Northern Building entrance



Photograph 2: Northern building



Photograph 3: Suspected UST in north of site



Photograph 4: Fill mound in north-west of site



Photograph 5: Disused tennis court



Photograph 6: Fire pump room



Photograph 7: Central carpark



Photograph 8: Central carpark



Photograph 9: Generator platforms and holding (day) tank



Photograph 10: Diesel holding (day) tank – (abandoned)

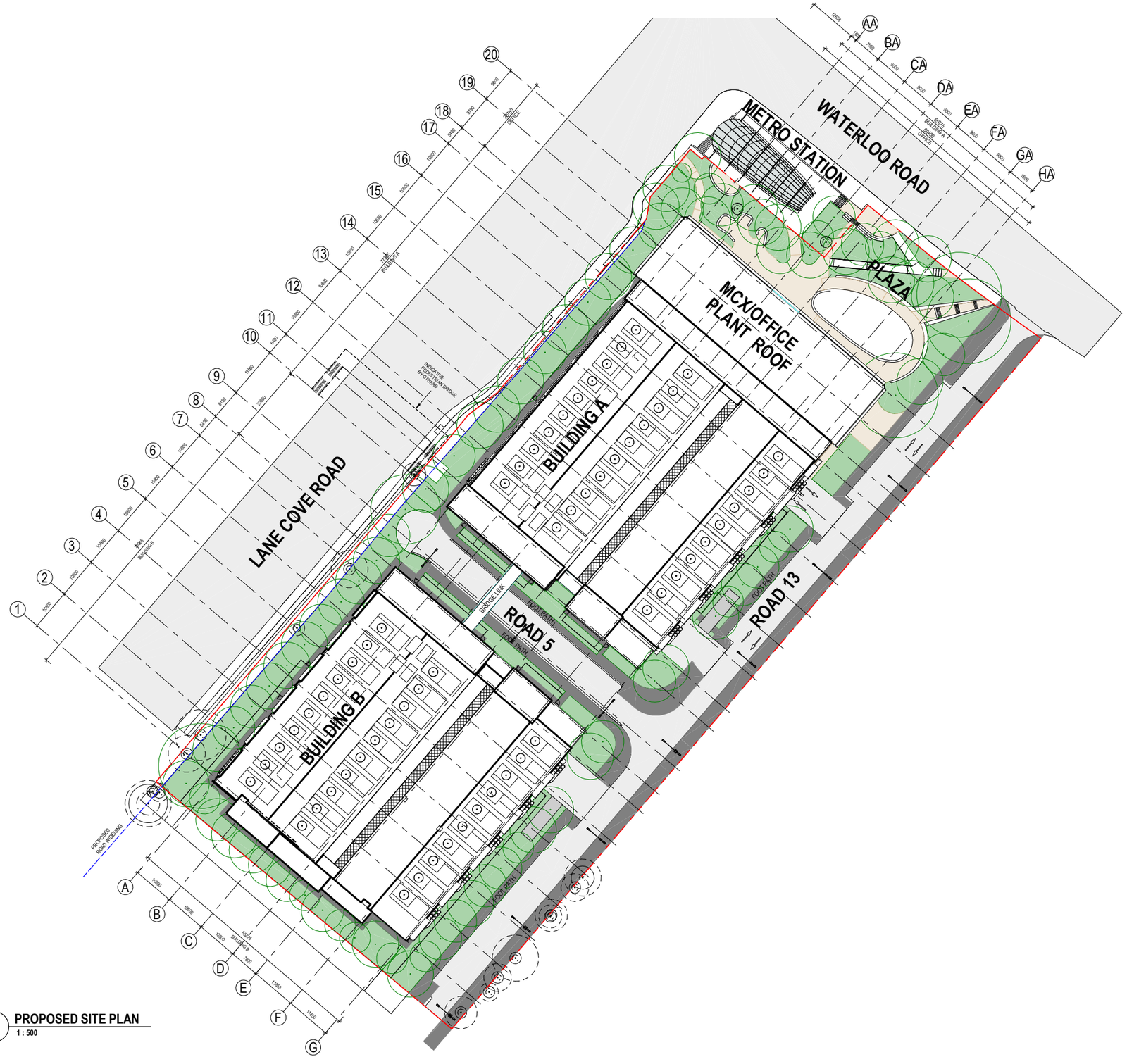


Photograph 11: Surficial FCF impact (FCF-1)



Photograph 12: Surficial FCF impact (FCF-1)

Proposed Development Plans



1 **PROPOSED SITE PLAN**
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24/02/16	C	SSDA DRAFT ISSUE	HDR		HDR
23/12/07	B	PRELIMINARY ISSUE	HDR		HDR
23/11/08	A	For Coordination	HDR		HDR

PRINCIPAL CONSULTANTS

Architect HDR

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Structural TTW

PRINCIPAL CONTRACTOR

CLIENT

NEXTDC

NEXTDC
GPO Box 3219
Brisbane QLD 4001
T: +61 7 3177 4777

PROJECT ARCHITECT

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+61 2 9956 2666 | hdrinc.com
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Document Author Project Number

10374547

Key Plan

Site:	Stage:	NEXTDC Project Number:

Project Address:

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Project Name:

SHIRAZ 5

Drawing title

PROPOSED SITE PLAN

Drawing Status:

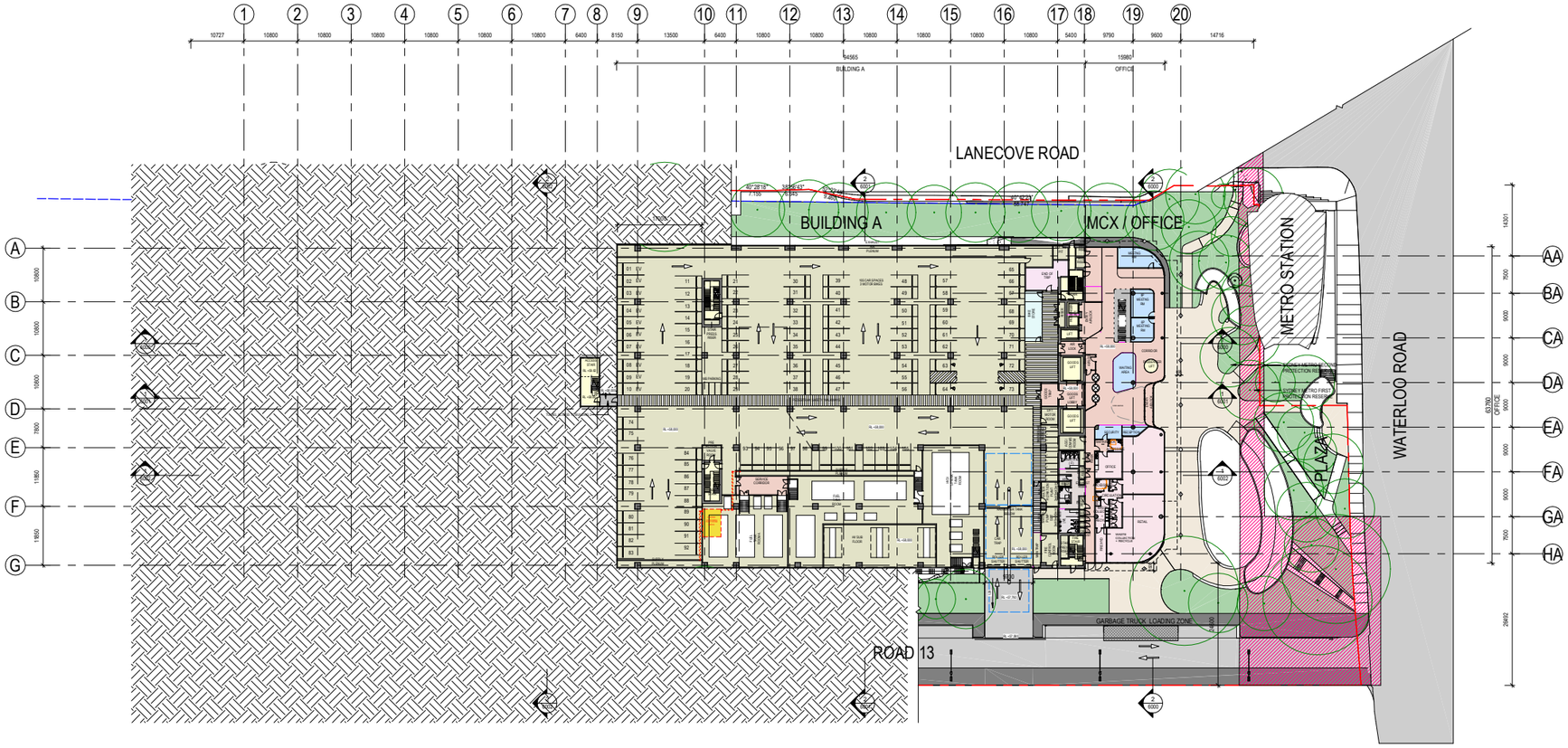
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23/12/07	B	PRELIMINARY ISSUE	HDR		HDR
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NEXTDC
GPO Box 3219
Brisbane QLD 4001
T: +61 7 3177 4777

PROJECT ARCHITECT

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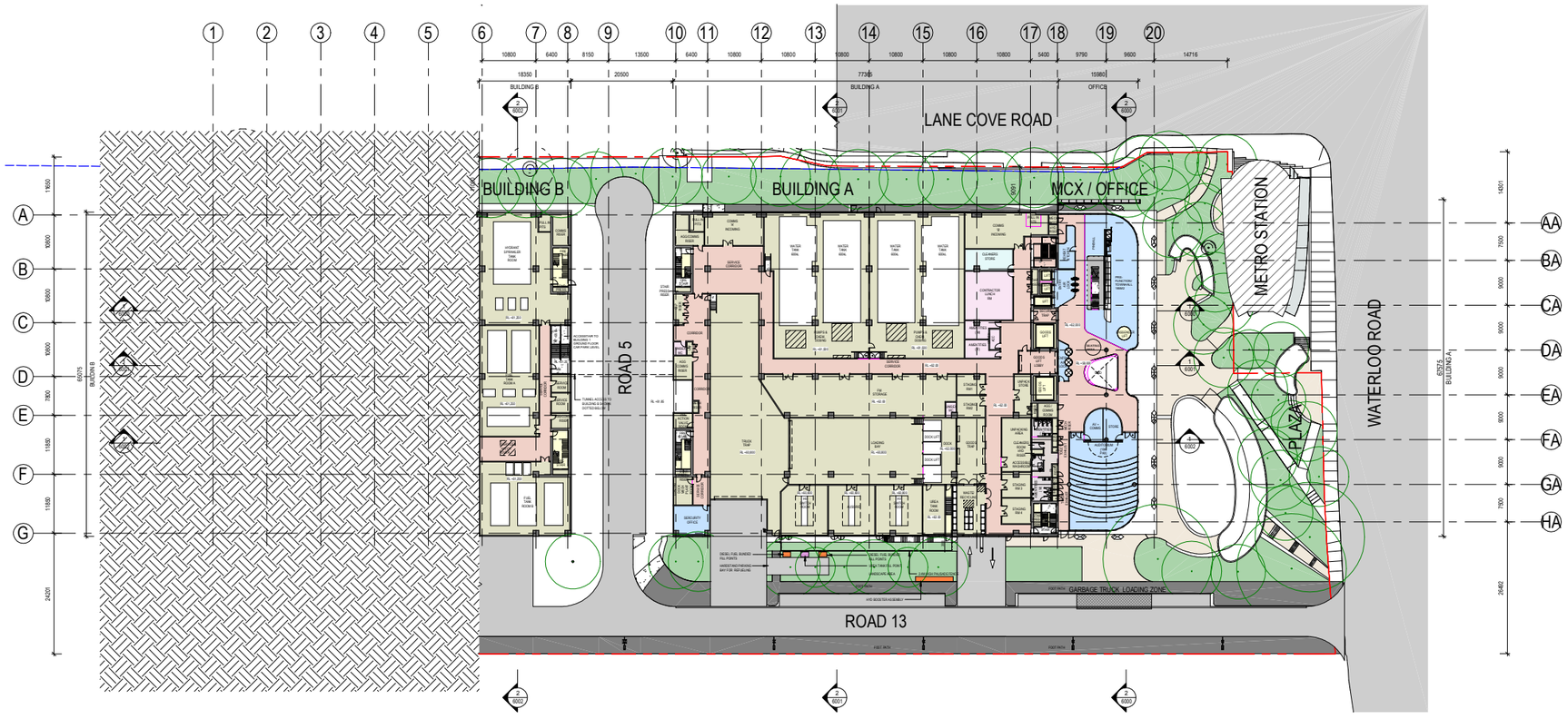
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23/12/07	B	PRELIMINARY ISSUE	HDR		HDR
23/11/30	A	For Coordination	HDR		HDR

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CLIENT

NEXTDC
GPO Box 3219
Brisbane QLD 4001
T: +61 7 3177 4777

PROJECT ARCHITECT

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Drawing title
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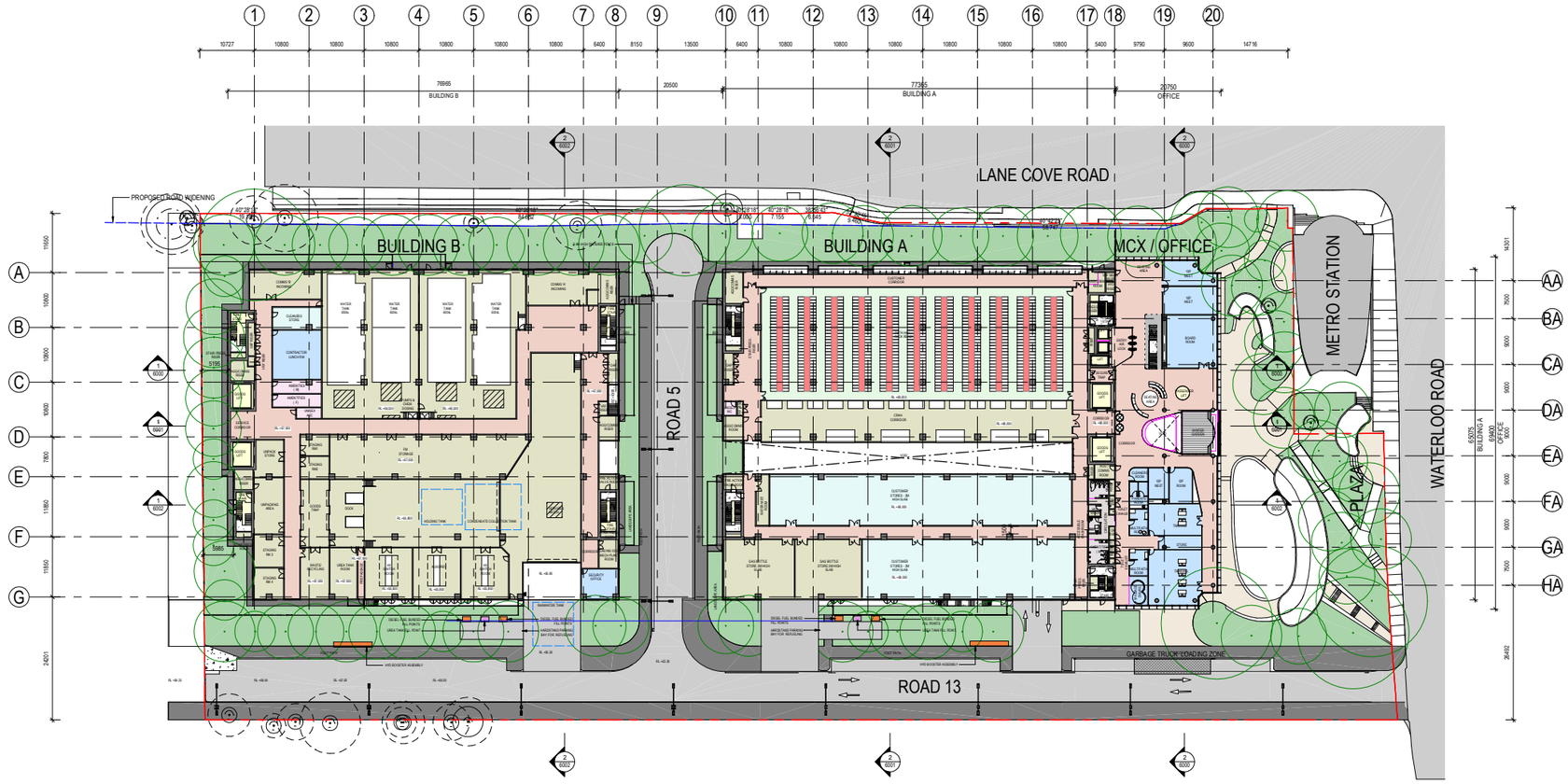
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23/12/07	B	PRELIMINARY ISSUE	HDR	HDR	
23/11/30	A	For Coordination	HDR	HDR	

NOTE:
1. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH ASSOCIATED SPECIFICATION
2. DO NOT SCALE FROM DRAWINGS
3. CONFIRM ALL MEASUREMENTS ON SITE
4. CHECK ON SITE PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES
5. ENSURE COORDINATION WITH OTHER TRADES ON SITE

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PRINCIPAL CONTRACTOR

Principal Contractor

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NEXTDC

NEXTDC
GPO Box 3219
Brisbane QLD 4001
T: +61 7 3177 4777

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Key Plan

Site	Stage	NEXTDC Project Number

Project Address
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Macquarie Park, Sydney,
NSW 2113

Project Name
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Drawing Title
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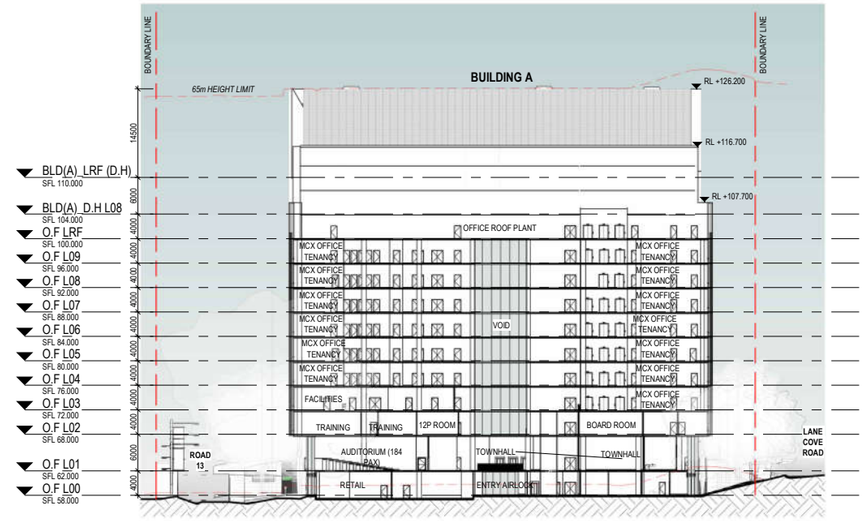
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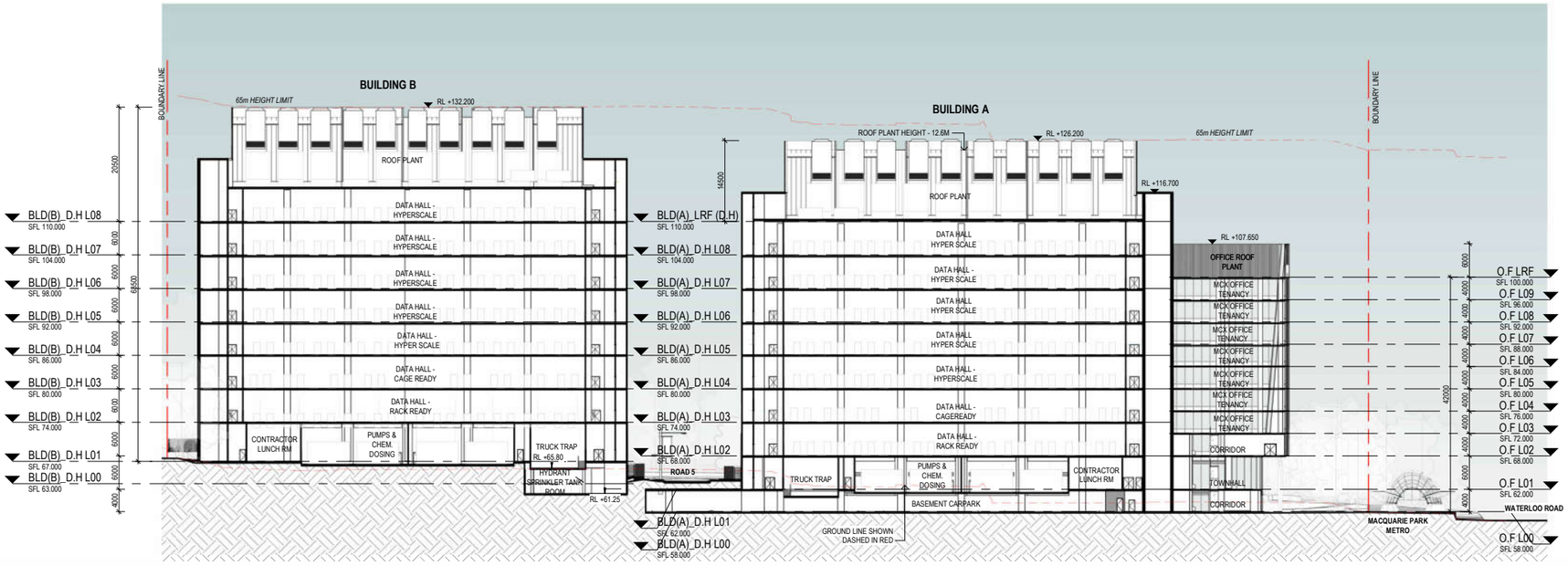
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2 SITE SECTION A_BLDG A OFFICE

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1 OVERALL SECTION 1

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24/02/13	B	FOR INFORMATION	HDR		HDR
24/02/02	A	FOR INFORMATION	HDR		HDR

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Architect HDR

Services ARUP

Structural TTW

PRINCIPAL CONTRACTOR

CLIENT

NEXTDC
GPO Box 3219
Brisbane QLD 4001
T: +61 7 3177 4777

PROJECT ARCHITECT

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+61 2 9956 2666 | hdrinc.com
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Document Author Project Number

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Key Plan

Site:	Stage:	NEXTDC Project Number:

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Project Name:

SHIRAZ 5

Drawing title

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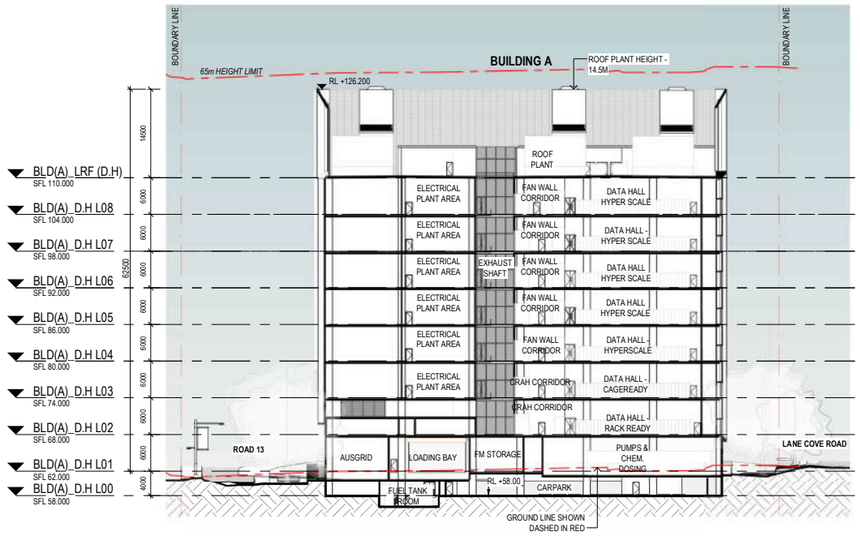
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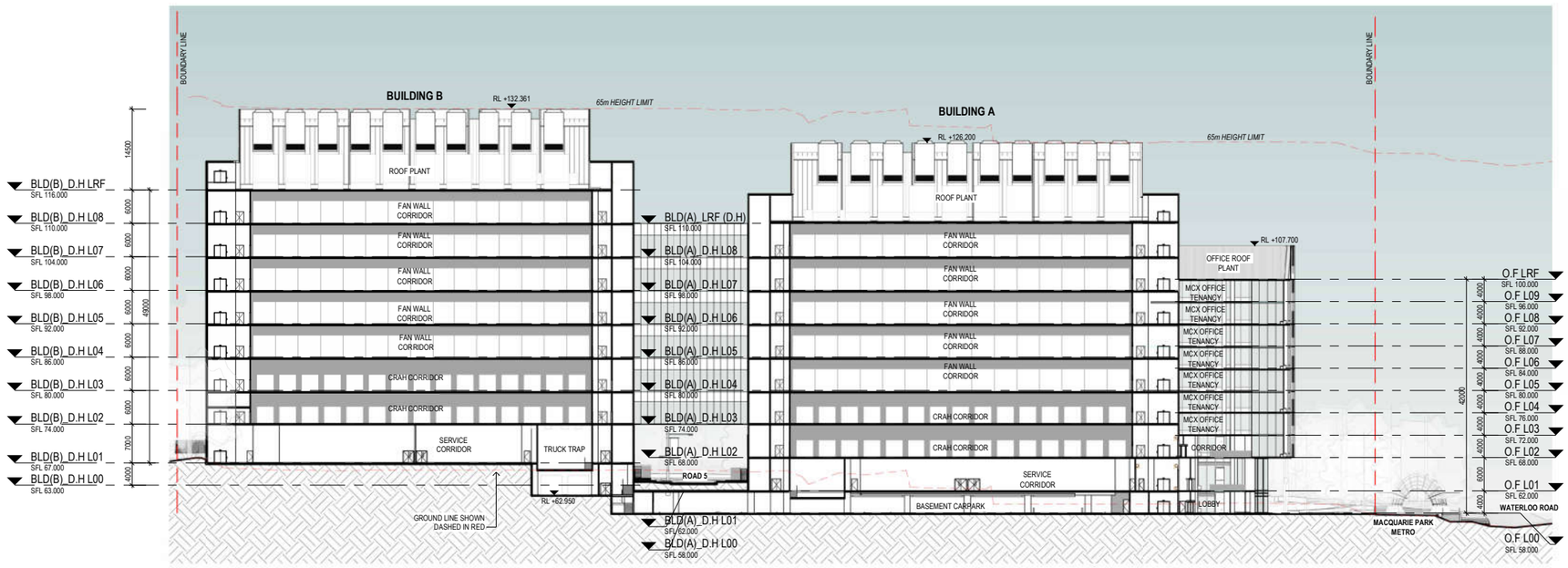
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24/02/13	B	FOR INFORMATION	HDR		HDR
24/02/02	A	FOR INFORMATION	HDR		HDR

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Document Author Project Number

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Project Address:

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MASTER PLAN - SECTIONS

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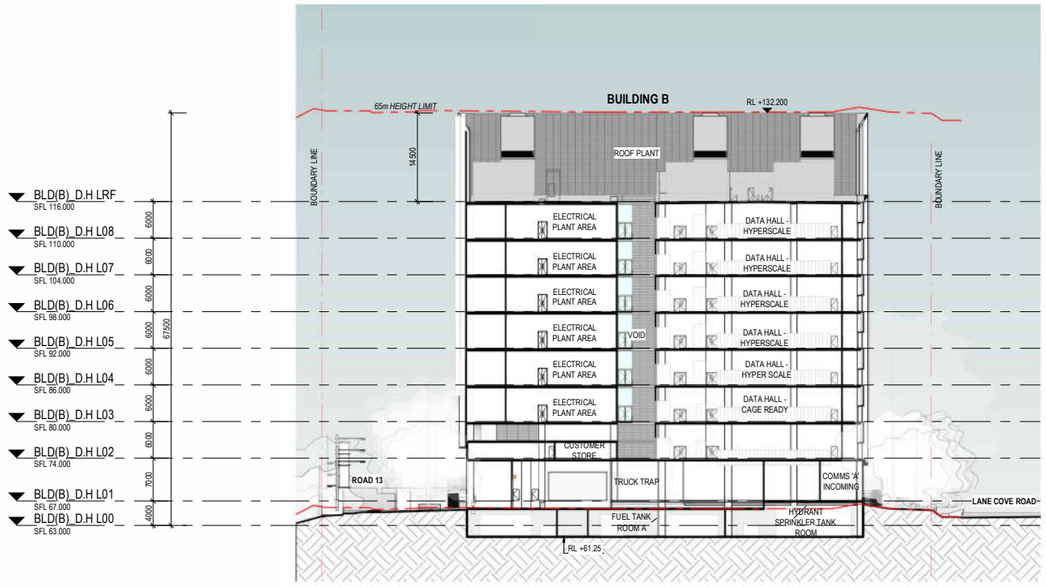
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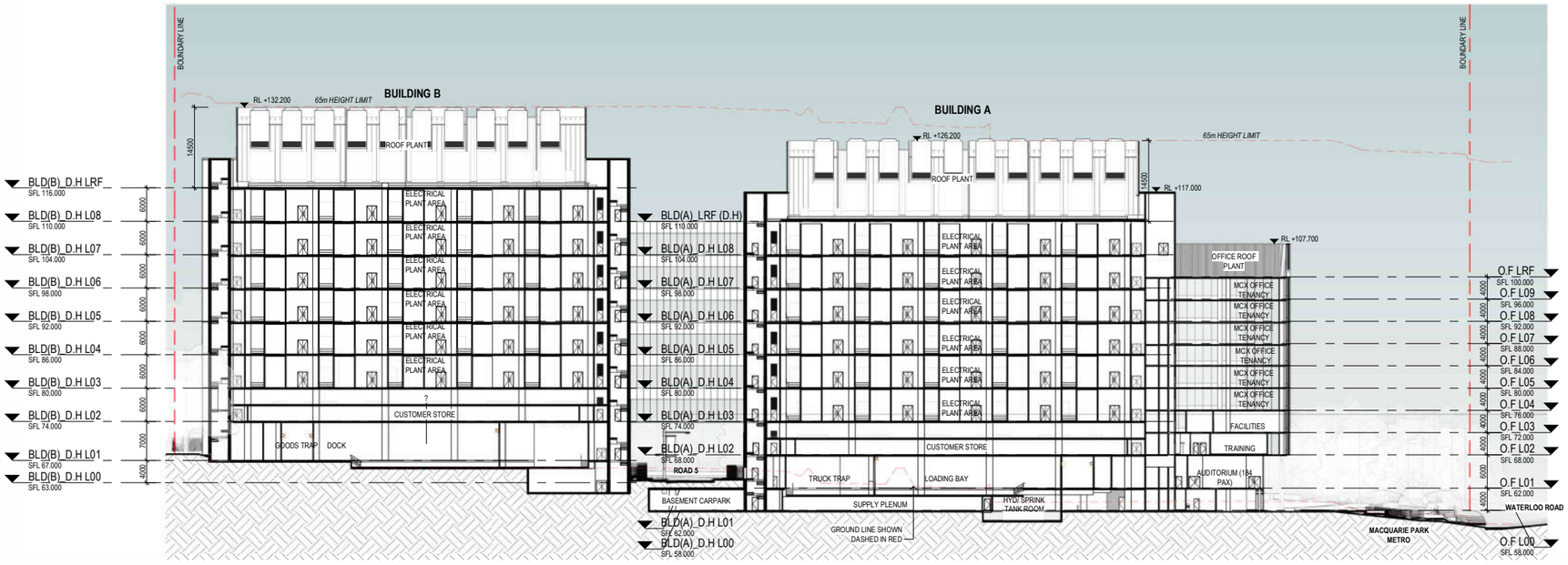
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23/02/2024 5:03:44 PM



2 SITE SECTION A_BLDG B

1 : 500



1 OVERALL SECTION 3

1 : 500

DATE	No.	REVISION HISTORY	DRW	CHK	QA
24/02/23	D	SSDA DRAFT ISSUE	HDR		HDR
24/02/16	C	SSDA DRAFT ISSUE	HDR		HDR
24/02/13	B	FOR INFORMATION	HDR		HDR
24/02/02	A	FOR INFORMATION	HDR		HDR

PRINCIPAL CONSULTANTS

Architect HDR

Services ARUP

Structural TTW

PRINCIPAL CONTRACTOR

CLIENT

NEXTDC
GPO Box 3219
Brisbane QLD 4001
T: +61 7 3177 4777

PROJECT ARCHITECT

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

Document Author Project Number

10374547

Key Plan

Site:	Stage:	NEXTDC Project Number:

Project Address:

269 Lane Cove Rd, Macquarie Park, Sydney, NSW 2113

Project Name:

SHIRAZ 5

Drawing title

MASTER PLAN - SECTIONS

Drawing Status:

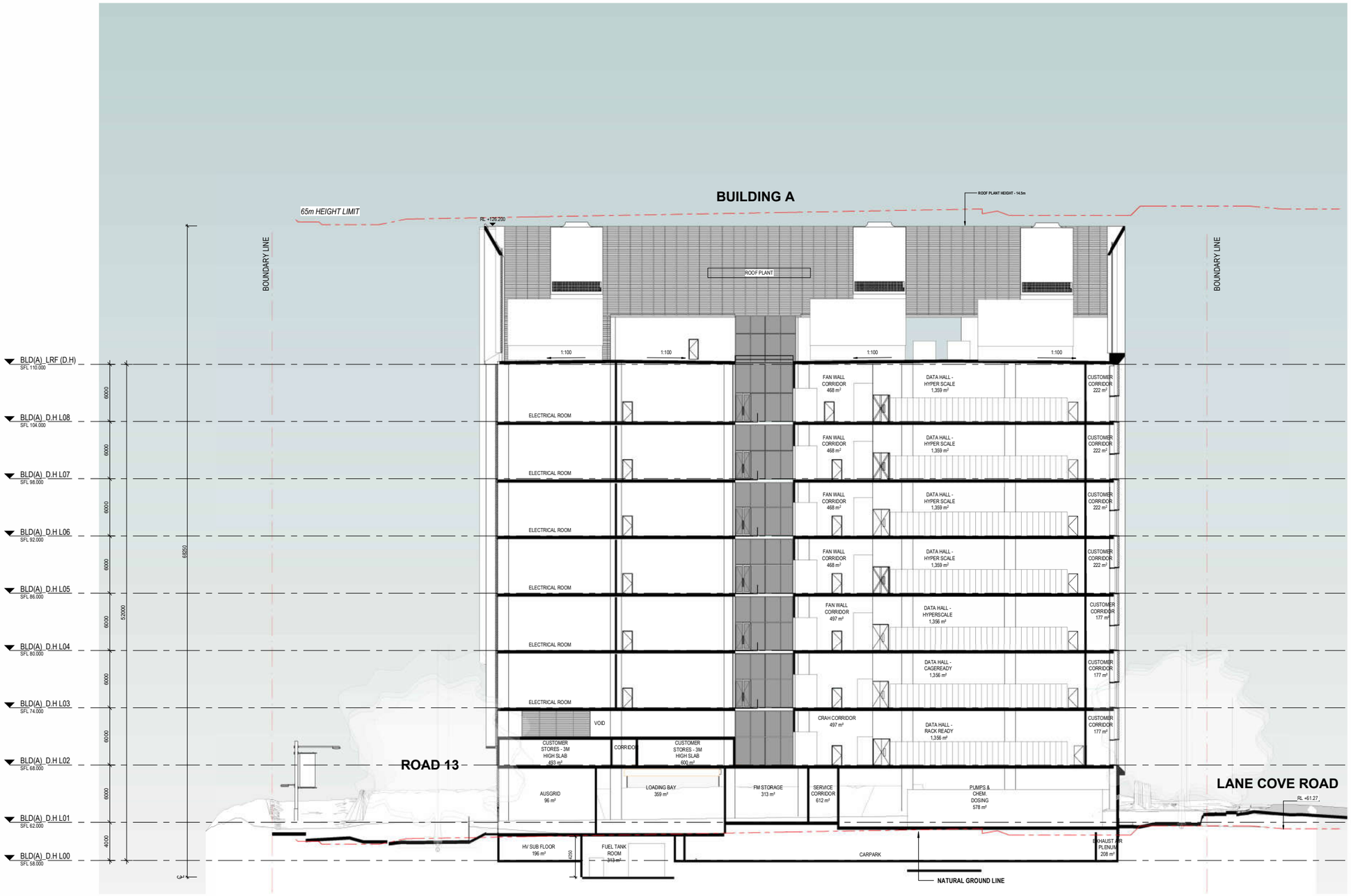
STATE SIGNIFICANT DEVELOPMENT APPLICATION (SSDA)

Drawn	Date
Author	24/02/23
CHK	Date
Checker	24/02/23

Scale:	Sheet:	File Name:
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Drawing Number	Rev
ARC-NXT-DRG-00000-6002	D

23/02/2024 5:54:19 PM



1 **BUILDING A - SECTION 1**
1 : 200

DATE	No.	REVISION HISTORY	DRW	CHK	QA
24/02/23	C	SSDA DRAFT ISSUE	HDR		HDR
23/12/07	B	PRELIMINARY ISSUE	HDR		HDR
23/11/08	A	For Coordination	HDR		HDR

PRINCIPAL CONSULTANTS

Architect HDR

Services ARUP

Structural TTW

PRINCIPAL CONTRACTOR

CLIENT

NEXTDC
GPO Box 3219
Brisbane QLD 4001
T: +61 7 3177 4777

PROJECT ARCHITECT

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

Document Author Project Number
10374547

Key Plan

Site: | Stage: | NEXTDC Project Number:

Project Address:
269 Lane Cove Rd, Macquarie Park, Sydney, NSW 2113

Project Name:
SHIRAZ 5

Drawing title
BUILDING A - SECTION A

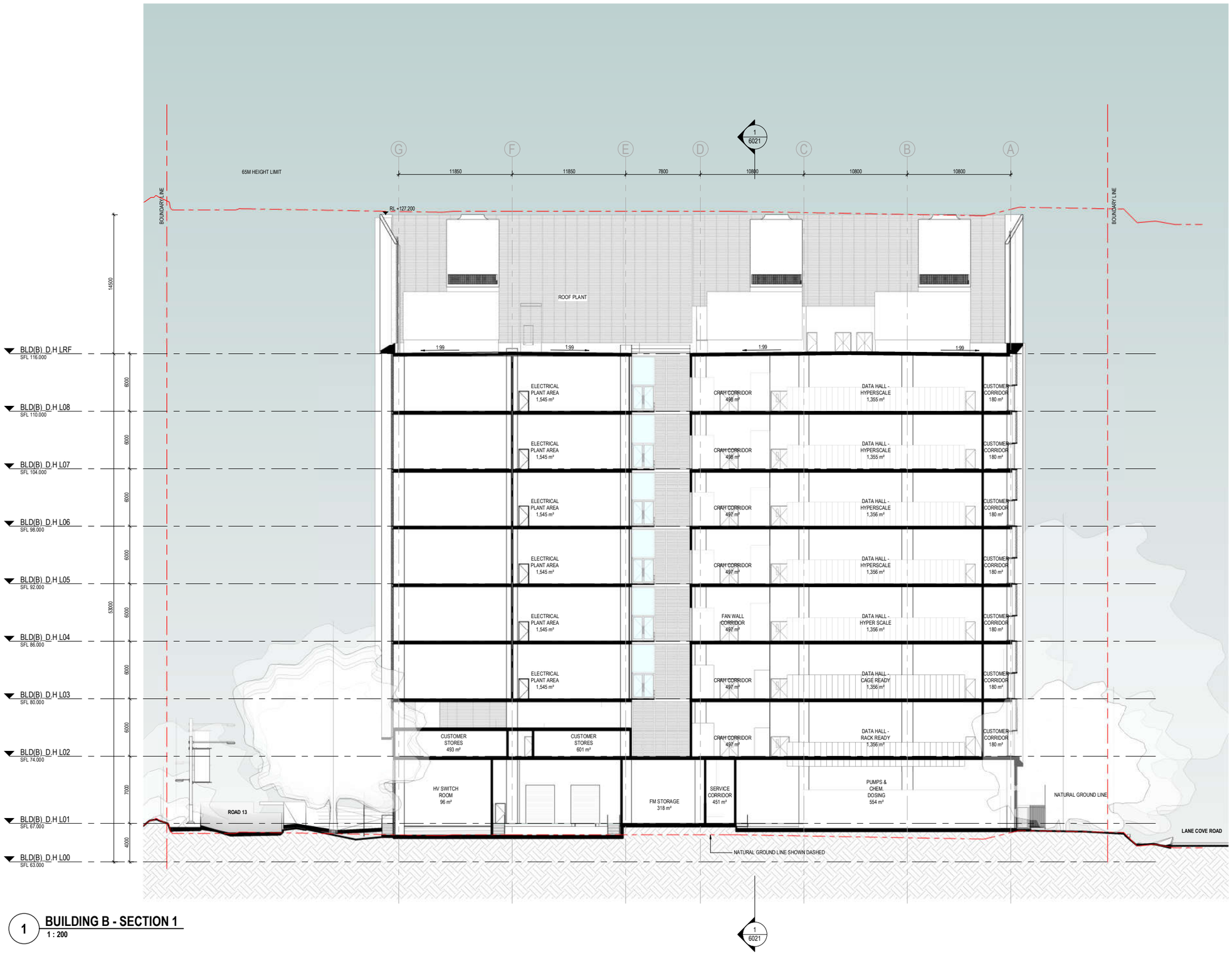
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STATE SIGNIFICANT DEVELOPMENT APPLICATION (SSDA)

Drawn	Author	Date	24/02/23
CHK	Checker	Date	24/02/23

Scale:	Sheet:	File Name:
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Drawing Number	Rev
ARC-NXT-DRG-A0101-6010	C

23/02/2024 7:07:51 PM



1 BUILDING B - SECTION 1

1 : 200

DATE	No.	REVISION HISTORY	DRW	CHK	QA
24/02/23	B	SSDA DRAFT ISSUE	HDR		HDR
23/12/07	A	PRELIMINARY ISSUE	HDR		HDR

PRINCIPAL CONSULTANTS

Architect HDR

Services ARUP

Structural TTW

PRINCIPAL CONTRACTOR

CLIENT

NEXTDC
GPO Box 3219
Brisbane QLD 4001
T: +61 7 3177 4777

PROJECT ARCHITECT

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HDR Pty. Limited ABN 76 158 075 220 trading as HDR

Document Author Project Number

10374547

Key Plan

Site:	Stage:	NEXTDC Project Number:
S5		

Project Address:

269 Lane Cove Rd, Macquarie Park, Sydney, NSW 2113

Project Name:

NEXT DC DATA CENTRE

Drawing title

BUILDING B - SECTION 1

Drawing Status:

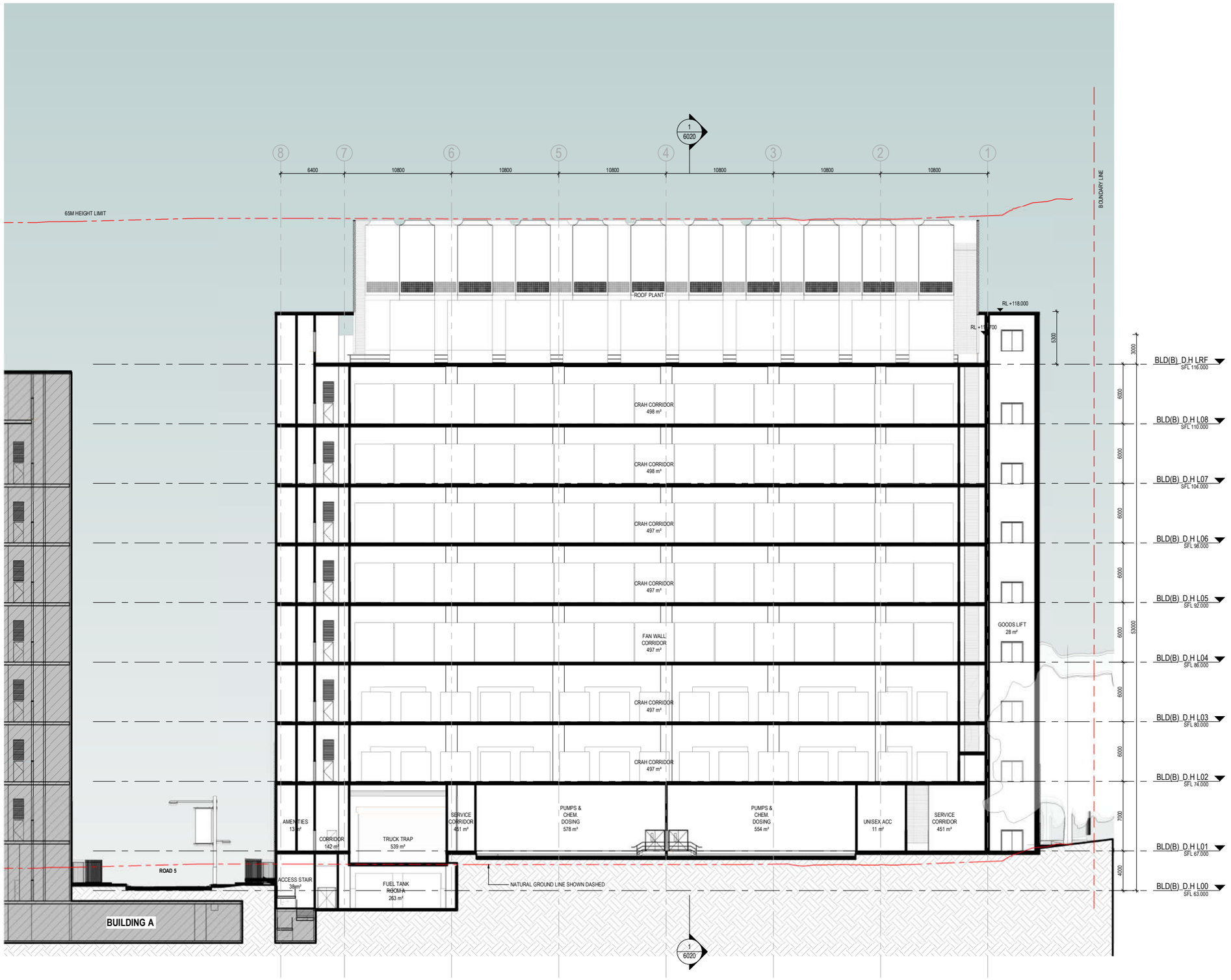
PRELIMINARY

Drawn	Date
HS	24/02/23
CHK	Date
Checker	24/02/23

Scale:	Sheet:	File Name:
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Drawing Number	Rev
ARC-NXT-DRG-B0201-6020	B

23/02/2024 5:26:51 PM



1 BUILDING B - SECTION B

1 : 200

DATE	No.	REVISION HISTORY	DRW	CHK	QA
24/02/23	B	SSDA DRAFT ISSUE	HDR		HDR
23/12/07	A	PRELIMINARY ISSUE	HDR		HDR

PRINCIPAL CONSULTANTS

Architect HDR

Services ARUP

Structural TTW

PRINCIPAL CONTRACTOR

CLIENT

NEXTDC
GPO Box 3219
Brisbane QLD 4001
T: +61 7 3177 4777

PROJECT ARCHITECT

Level 24, 25 Martin Place, Sydney NSW, 2000, Australia
+61 2 9956 2666 | hdrinc.com
HDR Pty. Limited ABN 76 158 075 220 trading as HDR

Document Author Project Number

10374547

Key Plan

Site:	Stage:	NEXTDC Project Number:
S5		

Project Address:

269 Lane Cove Rd, Macquarie Park, Sydney, NSW 2113

Project Name:

NEXT DC DATA CENTRE

Drawing title

BUILDING B - SECTION 2

Drawing Status:

PRELIMINARY

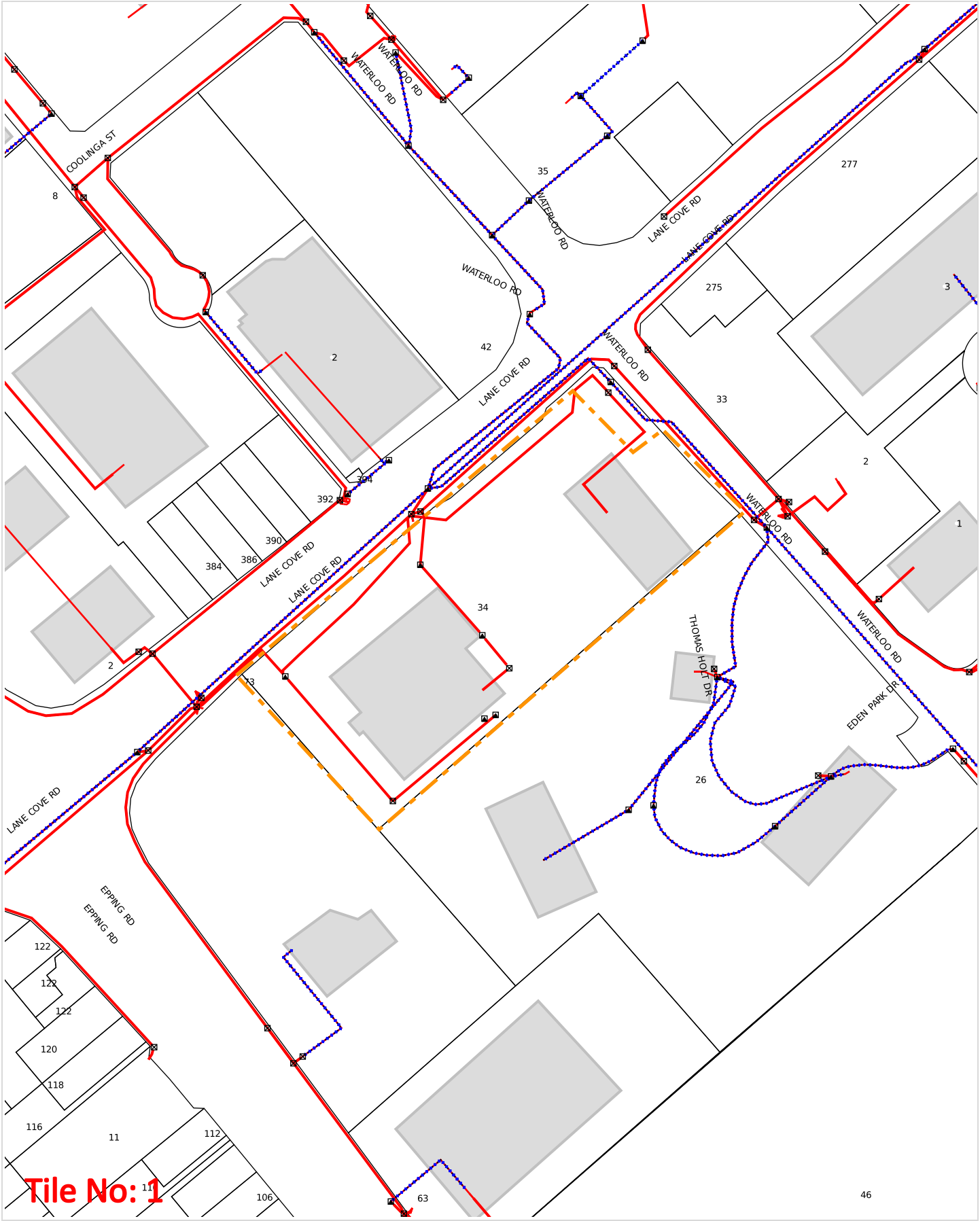
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Author	24/02/23
CHK	Date
Checker	24/02/23

Scale:	Sheet:	File Name:
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Drawing Number	Rev
ARC-NXT-DRG-B0201-6021	B

23/02/2024 5:27:02 PM

Selected BYDA Plans

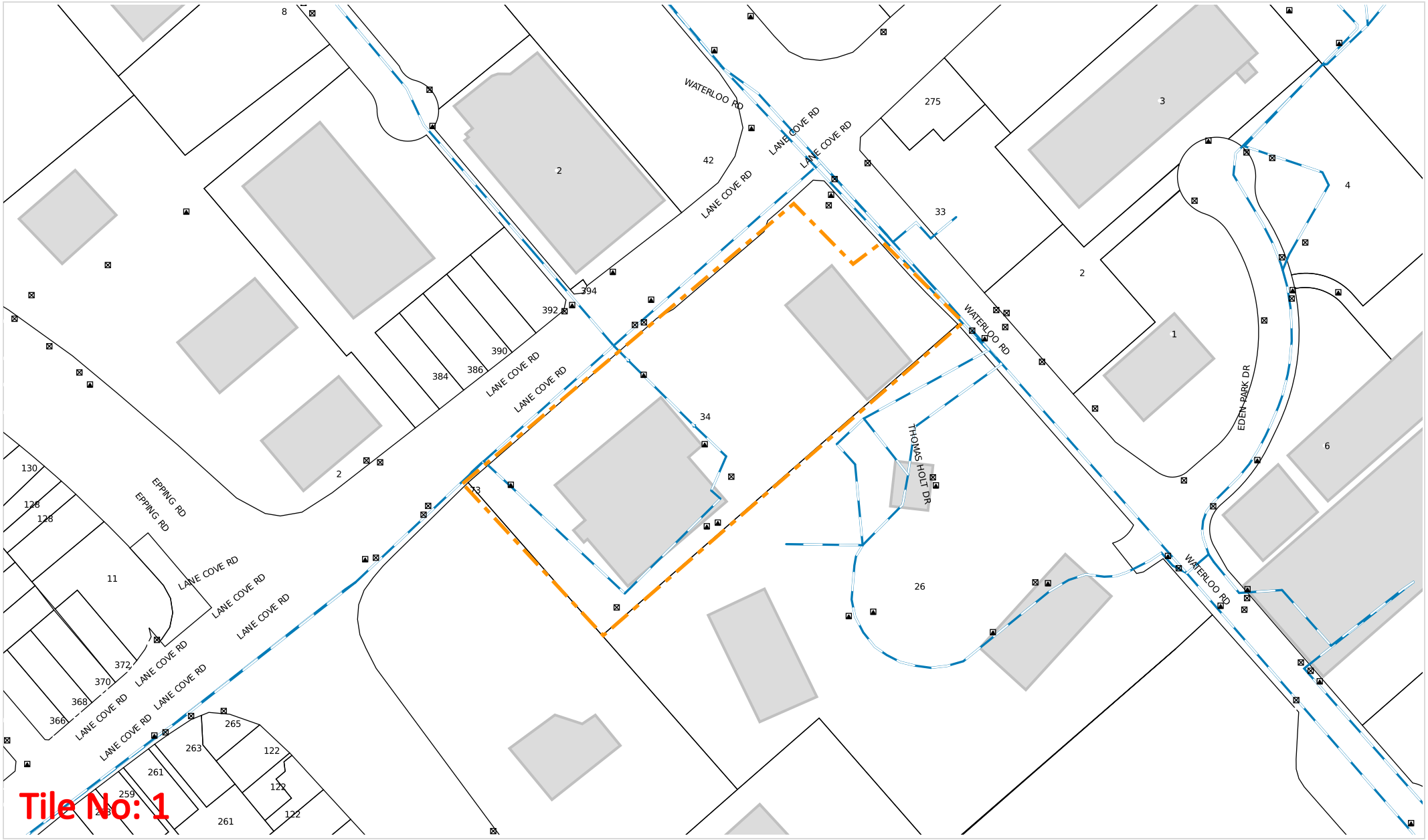


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Sequence Number: 232292721

Date Generated: 17 Nov 2023

For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208



Uecomm Underground Cable

Scale: 1:2500

Printed on: 17 Nov 2023

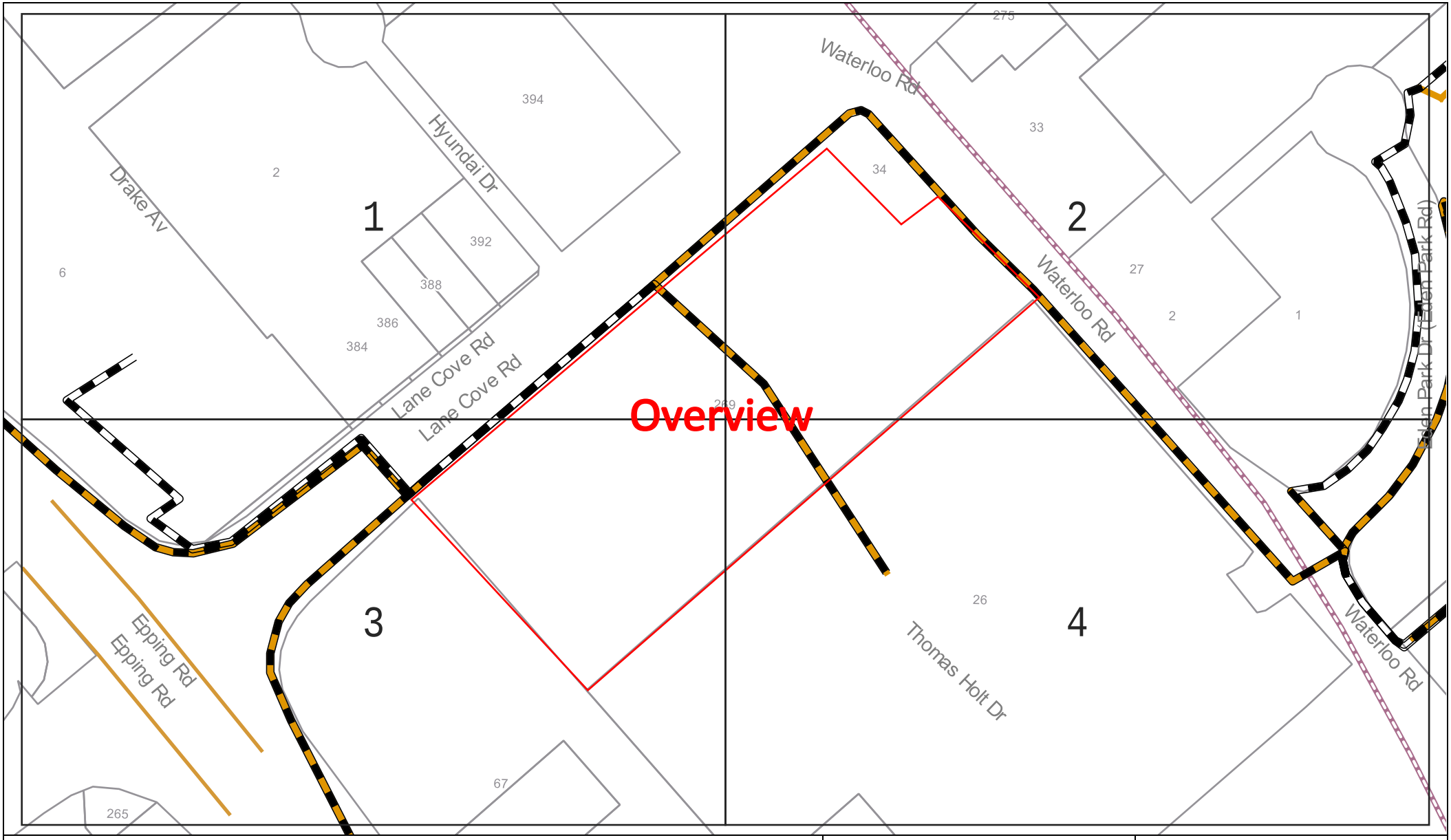
Sequence Number: 232292721

Location: 269 Lane Cove Road, Macquarie Park, NSW 2113

Job Location
Line
Point
Area

Undergound Asset
Uecomm

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Sequence Number: 232292725

Date: 17/11/2023

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nextgen GROUP

LEGEND

Digsite

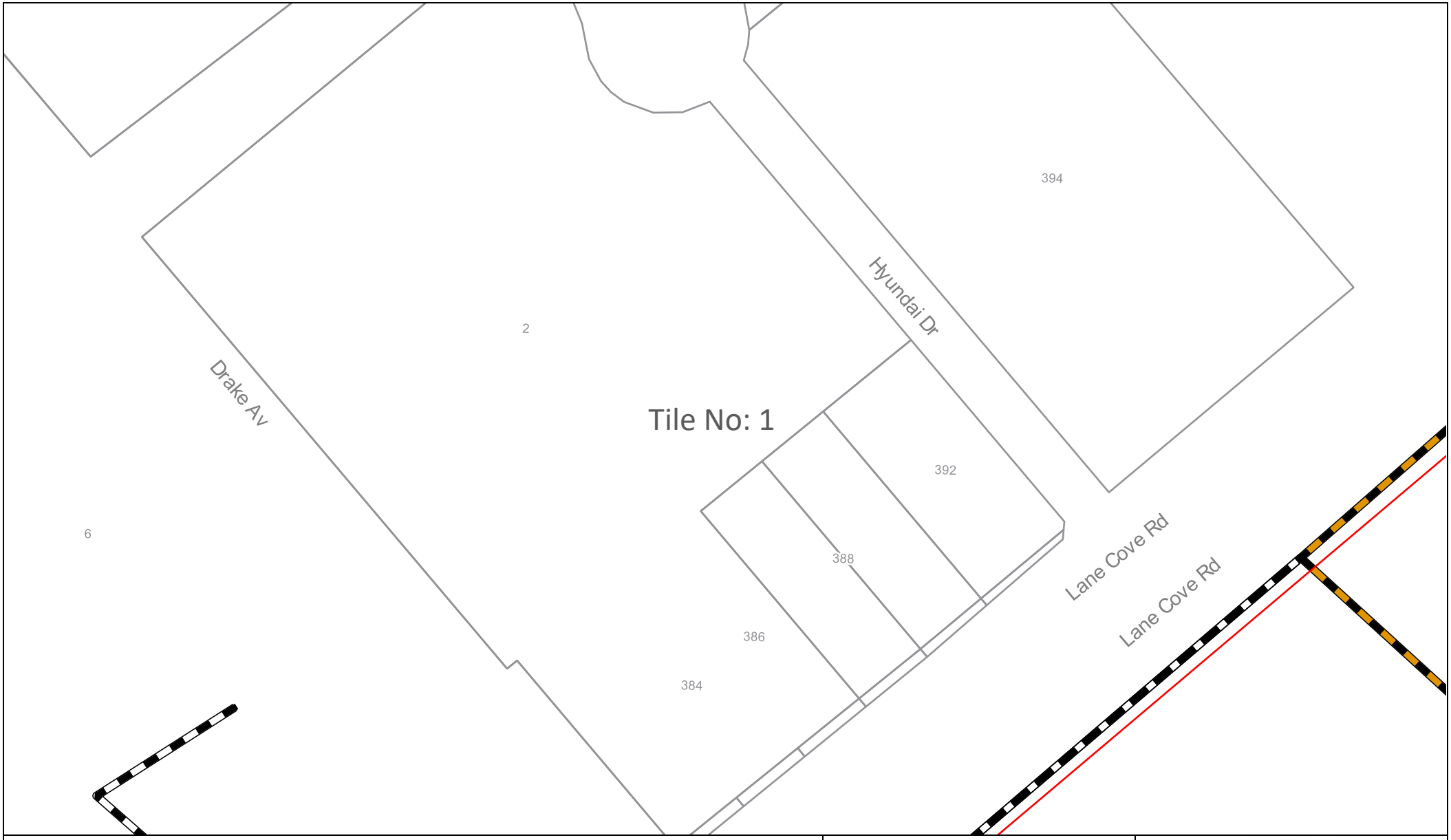
Area

Assets

Cable

3rd Party Duct

Marker Post



Sequence Number: 232292725

Date: 17/11/2023

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Digsite

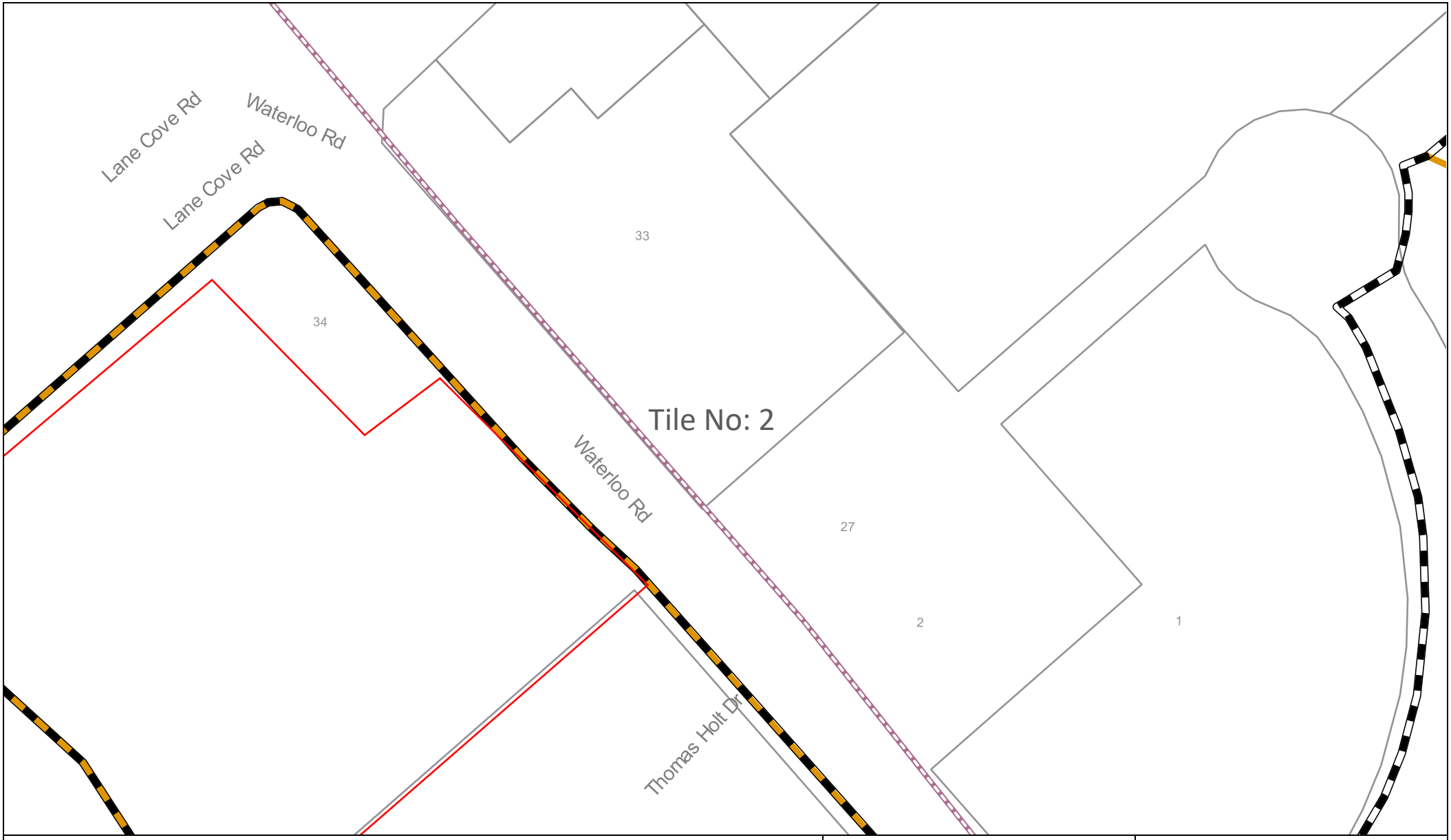
Area

Assets

Cable

3rd Party Duct

Marker Post



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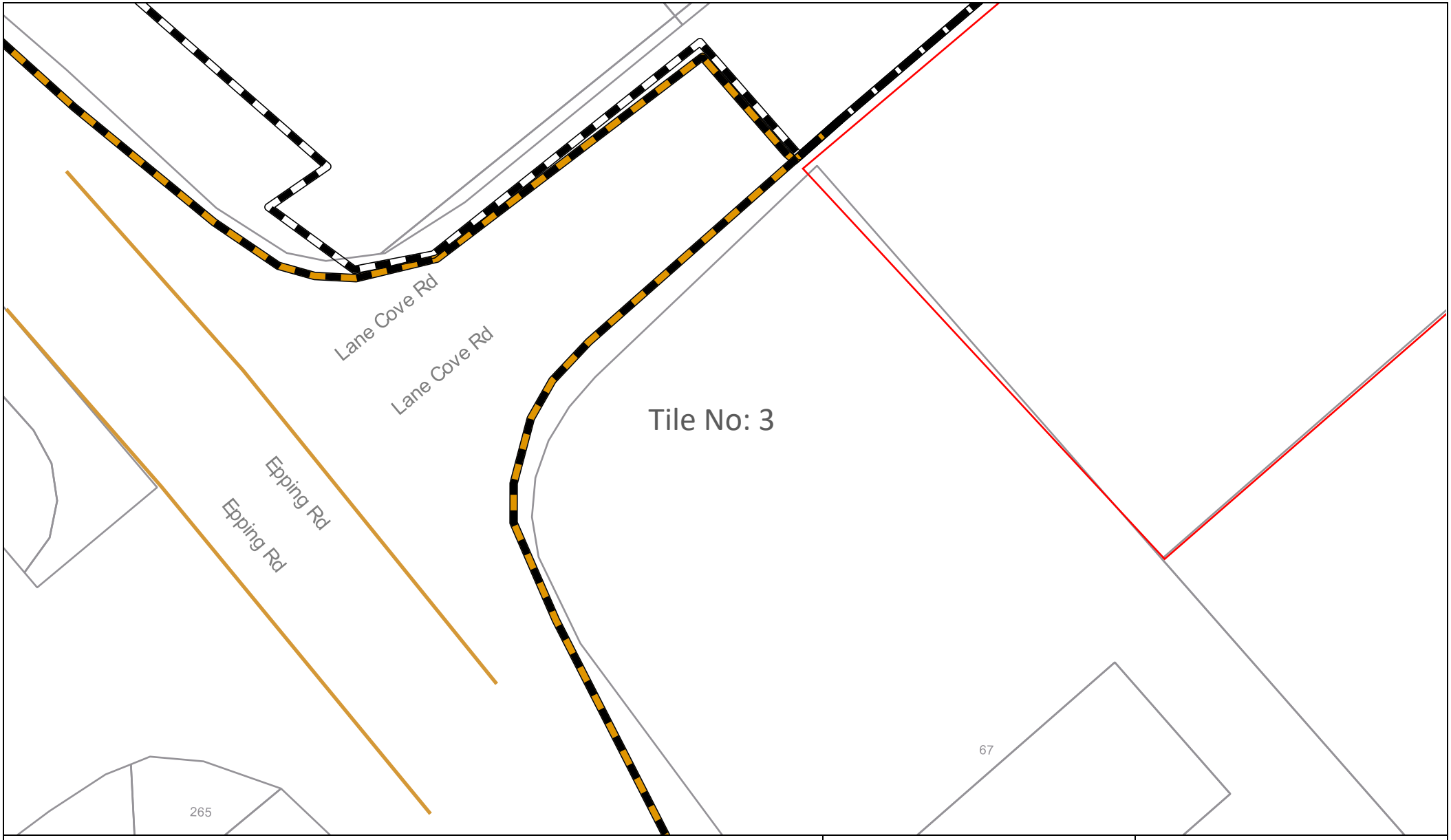
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nextgen GROUP

LEGEND

Digsite	Assets
Area	Cable
	3rd Party Duct
	Marker Post



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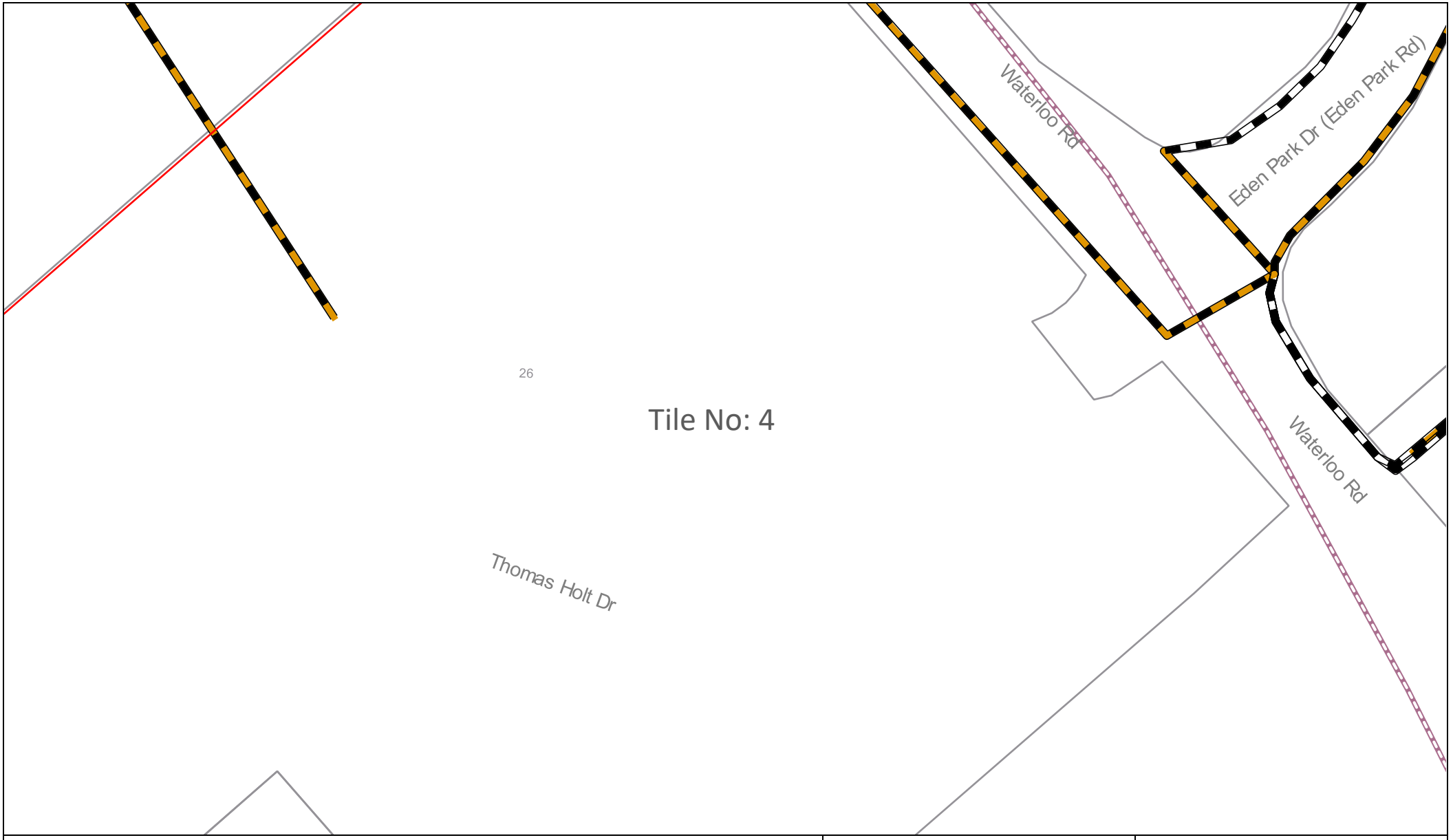
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nextgen GROUP

LEGEND

Digsite	Assets
Area	Cable
	3rd Party Duct
	Marker Post



Sequence Number: 232292725

Date: 17/11/2023

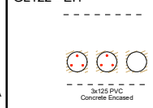
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LEGEND

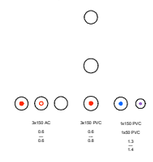
Digsite	Assets
Area	Cable
	3rd Party Duct
	Marker Post

GL122 - EI1



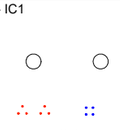
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PY744 - DC1



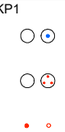
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PY744 - IC1



Ref: B10

PY744 - KP1



Ref: B9

PY74441

PY74442

XCH014081

XCH015061

FBKUN130673

WATERLOO

LANE COVE RD

XCH014151

XCH014742

140.0 m from Waterloo Rd

PY74432

PY74434

PY74444

GL12212

GL12221

GL12222

GL12221

JOINT DETAIL REPORT

No.	Ref No.	PVCer	Joint Location
Map: GL122			
115	SN123-054	/1.10	2.4m from BLD wall 11.0m NE of Building SW wall
116	SN123-054	/1.10	2.8m from BLD wall 11.0m NE of Building SW wall
Map: PY744			
86	SN91-08	/0.70	3.5 N SUB 7.0 W SUB 5.5423
91	SN91-08	/0.70	3.0 N SUB 7.0 W SUB 5.5423
92	N007-0722	1.30/0.60	1.7 W OF SUB 5423 NW EXT BOY
93	N007-0722	0.90/0.60	0.0 EXT OF SUB 5423 E BOY
568	N007-0722	0.30/0.50	0.7 W OF SUB 5423 NW EXT BOY
593	UN09-2481	0.60/0.75	78M E LANE COVE ROAD

WARNING

Ausgrid plans show the position of assets at the time of installation and may not account for subsequent changes to road alignments, fences or buildings. The plans show no more than the presence or absence of Ausgrid assets in the street.
Persons working near electricity networks must exercise care and will be held responsible for any damage caused.
You must excavate by hand or use vacuum excavation to establish the location of Ausgrid underground cables and associated assets.
Underground: Working near a cable may result in electric shock even if no contact is made. Any work in the vicinity of any cable should only be performed using safe work methods developed in accordance with the recommendations contained in the Code of Practice for Excavation and Safework's NSW Guide for Work Near Underground Assets
as well as recommendations of Ausgrid's Network Standard NS156.
Overhead: Do not excavate near poles or towers until the stability of the foundation has been assessed by Ausgrid. Cables or earth conductors may be present close to substations, poles or towers.
Workers must maintain safe approach distances and follow applicable Safework NSW Codes of Practice.
NOTE: 1. You must keep Ausgrid plans on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret the plans. 2. This information includes data from the NSW Digital Cadastral Database by Land and Property Information (c) 2016, used under Creative Commons Licence Version 3.0.

GMLA0

Distribution - 232292726

INFORMATION ON THIS PLAN ONLY VALID FOR 30 DAYS FROM ISSUE DATE

Page 1 of 1

17 Nov 2023

1:356

0 21 metres

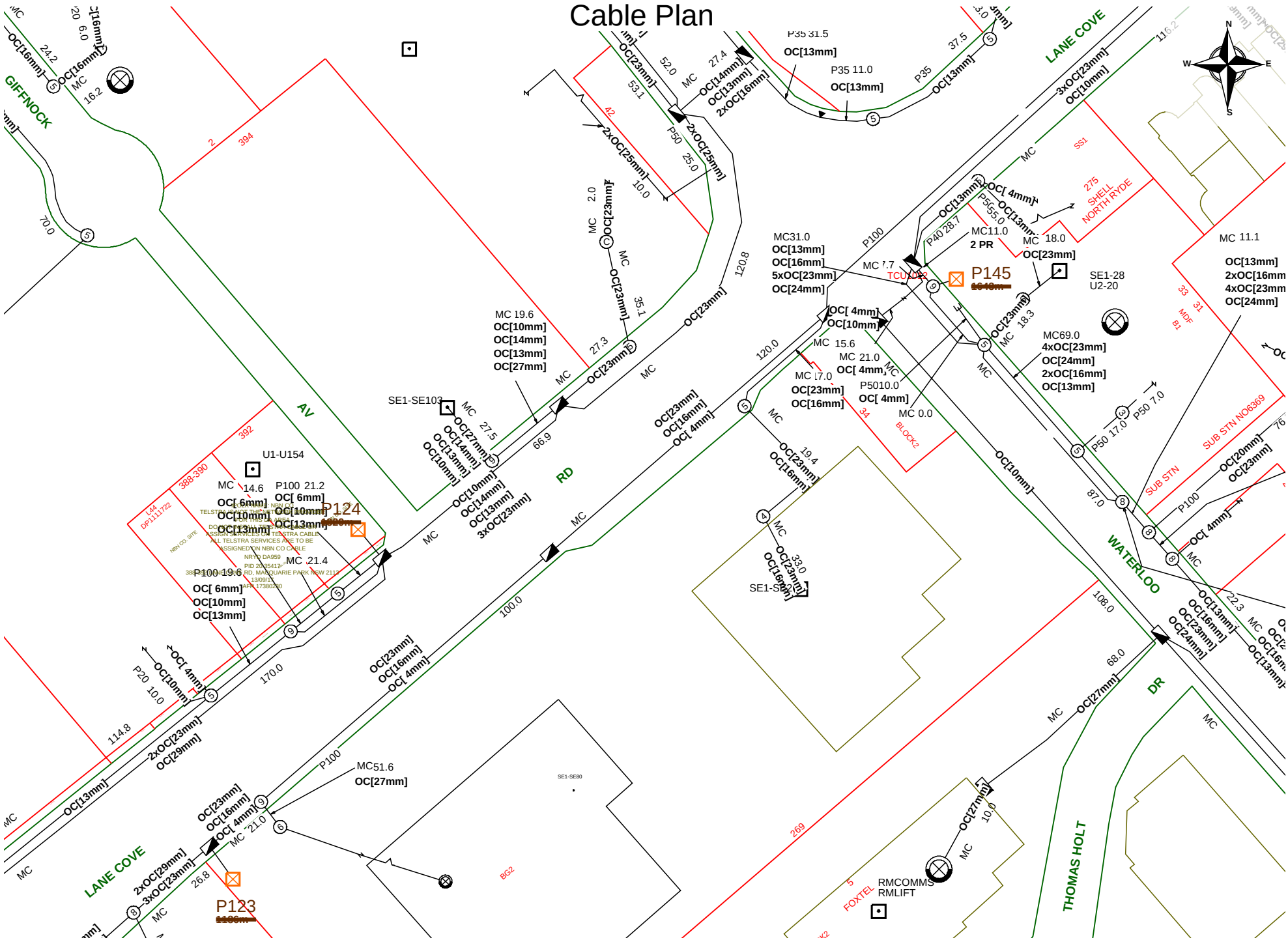
PY74432	PY74441	PY74442
PY74434	PY74443	PY74444
GL12212	GL12221	GL12222

BG GRID

Ausgrid

A0 MOCS_std_plot

Cable Plan



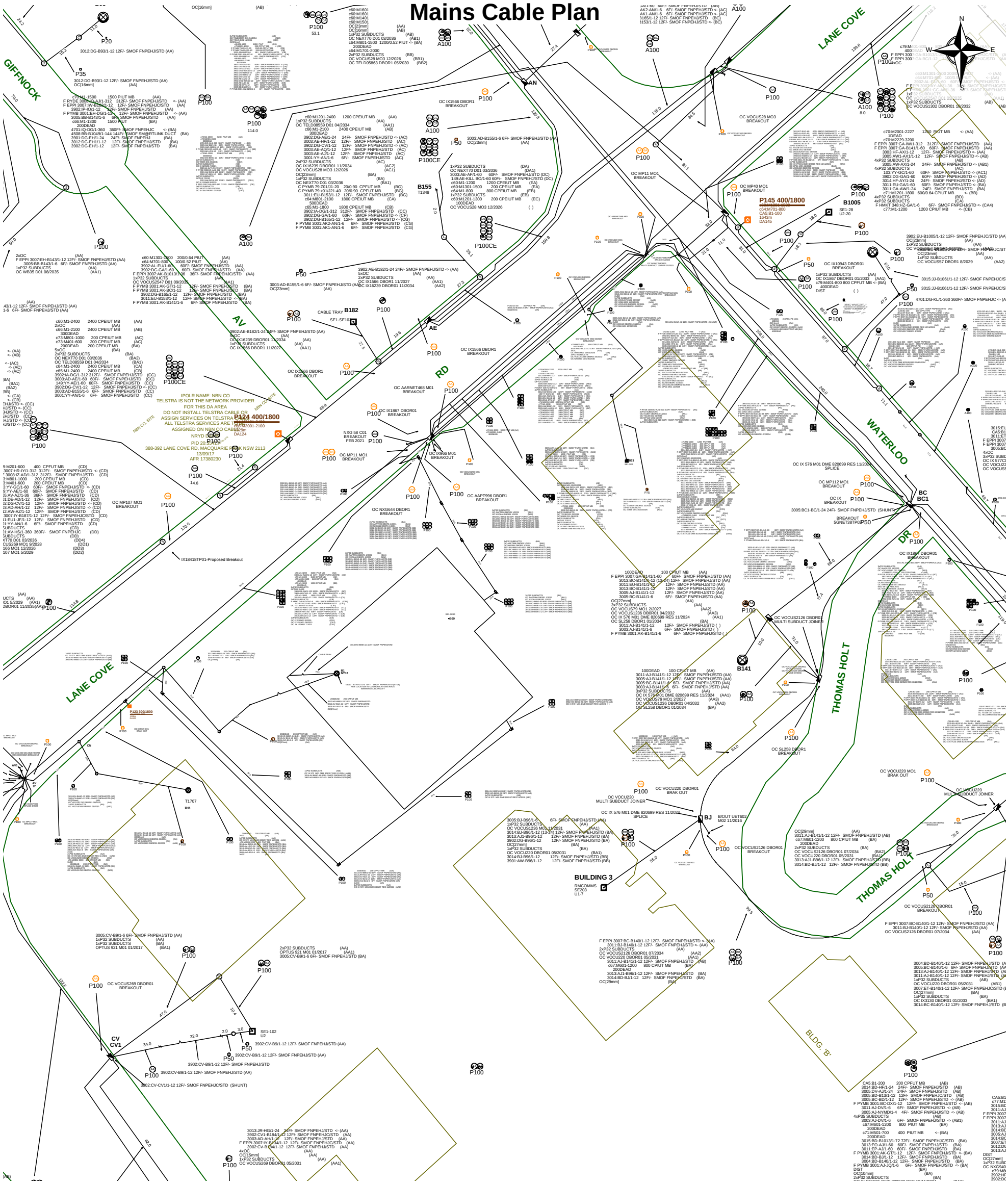
Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 232292738
TELSTRA LIMITED A.C.N. 086 174 781	CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.
Generated On 17/11/2023 15:10:54	

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

Mains Cable Plan


GIFFNOCK
LANE COVE
AV
RD
AN
AE
CN
CV
CV1
BJ
BUILDING 3
THOMAS HOLT
WATERLOO
DR
BC
BC1
P20
P35
P100
P50
A100
P100CE
B182
B155
B141
B1005
P145 400/1800
P224 400/1800
P123 300/1800
IPOLR NAME: NBN CO
TELSTRA IS NOT THE NETWORK PROVIDER FOR THIS DA AREA
DO NOT INSTALL TELSTRA CABLE OR ASSIGN SERVICES ON TELSTRA POLES
ALL TELSTRA SERVICES ARE TO BE
ASSIGNED ON NBN CO CABLES
NRYD DA124
PID 20-58-3-3
388-392 LANE COVE RD, MACQUARIE PARK NSW 2113
13/09/17
AFR 17380230
NBN CO. SITE
IX18418TP01-Proposed Breakout
OC VOCUS269 DBOR01 BREAKOUT
OC MP107 MO1 BREAKOUT
OC MP11 MO1 BREAKOUT
OC MP40 MO1 BREAKOUT
OC MP112 MO1 BREAKOUT
OC MP12 MO1 BREAKOUT
OC MP127 MO1 BREAKOUT
OC MP11 MO1 BREAKOUT
OC MP1 MO1 BREAKOUT
OC MP13 MO1 BREAKOUT
OC MP MO1 BREAKOUT
OC MP MO1 BREAKOUT
OC MP

Lotsearch Environmental Risk and Planning Report

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 08 Dec 2023 09:36:57

Reference: LS050942 EP

Address: 34 Waterloo Road, Macquarie Park, NSW 2113

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

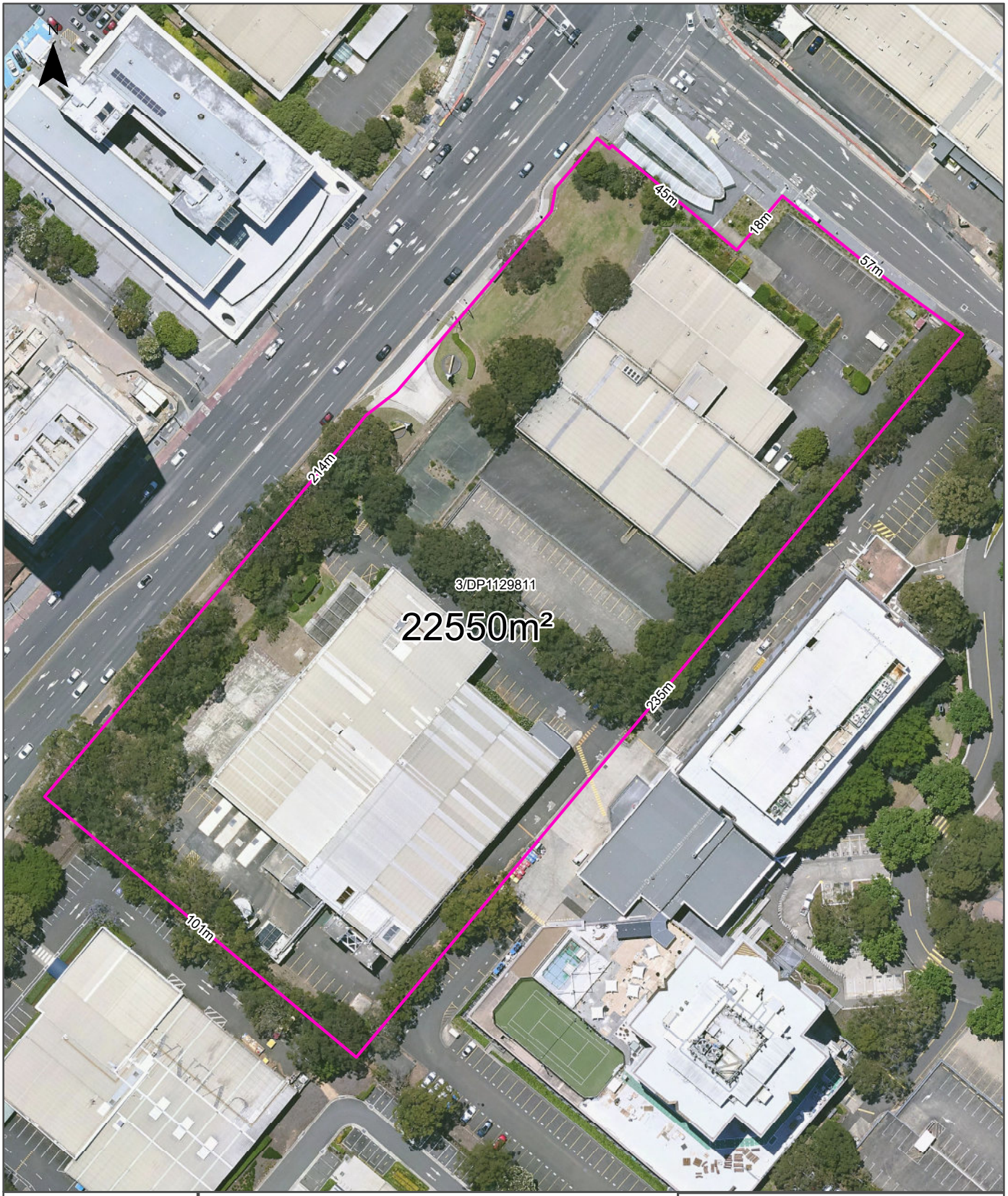
Datasets contained within this report, detailing their source and data currency:

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	14/09/2023	14/09/2023	Quarterly	-	-	-	-
Topographic Data	NSW Department of Customer Service - Spatial Services	22/08/2022	22/08/2022	Annually	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	27/11/2023	09/11/2023	Monthly	1000m	0	0	4
Contaminated Land Records of Notice	Environment Protection Authority	27/11/2023	27/11/2023	Monthly	1000m	0	0	0
Former Gasworks	Environment Protection Authority	16/10/2023	14/07/2021	Quarterly	1000m	0	0	0
Notices under the POEO Act 1997	Environment Protection Authority	01/12/2023	01/12/2023	Monthly	1000m	0	1	2
National Waste Management Facilities Database	Geoscience Australia	26/05/2022	07/03/2017	Annually	1000m	0	0	2
National Liquid Fuel Facilities	Geoscience Australia	20/09/2023	07/09/2020	Annually	1000m	0	2	8
EPA PFAS Investigation Program	Environment Protection Authority	28/11/2023	21/11/2023	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	28/11/2023	28/11/2023	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	28/11/2023	28/11/2023	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	28/11/2023	28/11/2023	Monthly	2000m	0	0	0
Defence Controlled Areas	Department of Defence	10/10/2023	10/10/2023	Quarterly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	19/10/2023	02/09/2022	Quarterly	2000m	0	0	0
National Unexploded Ordnance (UXO)	Department of Defence	10/10/2023	10/10/2023	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	13/11/2023	15/12/2022	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	28/11/2023	28/11/2023	Monthly	1000m	0	2	11
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	28/11/2023	28/11/2023	Monthly	1000m	0	1	3
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	28/11/2023	28/11/2023	Monthly	1000m	0	4	13
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	30	264	303
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	93	94
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	9	64
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	58	87
Points of Interest	NSW Department of Customer Service - Spatial Services	13/11/2023	13/11/2023	Quarterly	1000m	0	1	40
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	13/11/2023	13/11/2023	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	13/11/2023	13/11/2023	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Customer Service - Spatial Services	19/10/2023	19/10/2023	Quarterly	1000m	0	0	1
State Forest	Forestry Corporation of NSW	16/08/2022	14/08/2022	Annually	1000m	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	16/02/2023	31/12/2022	Annually	1000m	0	0	1
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	29/08/2022	19/08/2019	None planned	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 2018	NSW Department of Planning, Industry and Environment	09/05/2023	23/02/2018	Annually	1000m	0	0	0
National Groundwater Information System (NGIS) Boreholes	Bureau of Meteorology; Water NSW	18/04/2023	13/07/2022	Annually	2000m	2	4	41
NSW Seamless Geology Single Layer: Rock Units	Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	1	2	2
NSW Seamless Geology – Single Layer: Trendlines	Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	0	0	0
NSW Seamless Geology – Single Layer: Geological Boundaries and Faults	Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	0	0	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Annually	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	None planned	1000m	1	1	2
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	18/08/2022	27/07/2020	Annually	1000m	1	2	5
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	02/11/2023	01/09/2023	Monthly	500m	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	None planned	1000m	1	1	2
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	Annually	1000m	0	0	0
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	16/10/2023	16/10/2023	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Industry	29/11/2023	29/11/2023	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Industry	29/11/2023	29/11/2023	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	29/11/2023	29/11/2023	Monthly	1000m	9	9	9
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	02/11/2023		Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	02/11/2023	20/10/2023	Monthly	1000m	1	3	48
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	20/10/2023	13/04/2022	Annually	1000m	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	20/10/2023	13/04/2022	Annually	1000m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	06/09/2023	03/03/2023	Quarterly	1000m	0	0	0
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	10/10/2023	22/09/2023	Monthly	1000m	0	0	3
Bush Fire Prone Land	NSW Rural Fire Service	27/11/2023	20/11/2023	Monthly	1000m	0	0	3
NSW Native Vegetation Type Map	NSW Department of Planning and Environment	26/05/2023	12/12/2022	Quarterly	1000m	1	1	8
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	09/05/2023	01/11/2022	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	0	3
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	0	4
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	29/11/2023	29/11/2023	Weekly	10000m	-	-	-

Site Diagram

34 Waterloo Road, Macquarie Park, NSW 2113



Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 22550m²

Total Perimeter: 671m

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 Meters

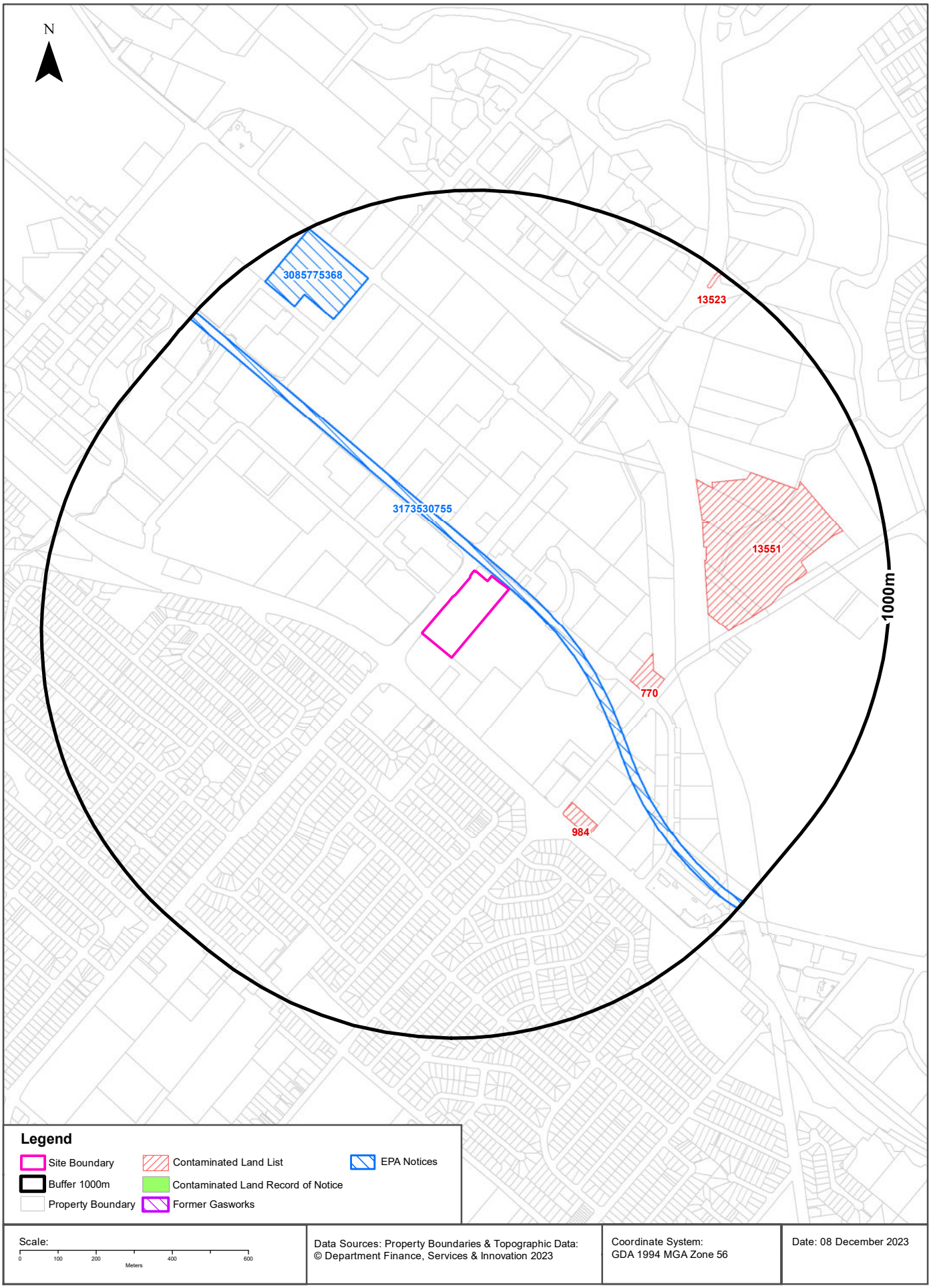
Data Source Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 08 December 2023

Contaminated Land

34 Waterloo Road, Macquarie Park, NSW 2113



Contaminated Land

34 Waterloo Road, Macquarie Park, NSW 2113

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
770	1-7 Waterloo Road, Macquarie Park	1-7 Waterloo Road	Macquarie Park	Other Petroleum	Regulation under CLM Act not required	Current EPA List	Premise Match	397m	East
984	Caltex North Ryde Service Station	41-43 Epping Road	Macquarie Park	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	492m	South East
13551	Porters Creek Depot - Proposed Operations Centre Site	160 Wicks Road	MACQUARIE PARK	Landfill	Regulation under CLM Act not required	Current EPA List	Premise Match	516m	East
13523	De Burghs Cycleway - Lane Cove National Park	Riverside Drive	MACQUARIE PARK	Other Petroleum	Regulation under CLM Act not required	Current EPA List	Network of Features	947m	North East

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.

EPA site management class	Explanation
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

34 Waterloo Road, Macquarie Park, NSW 2113

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

Contaminated Land

34 Waterloo Road, Macquarie Park, NSW 2113

EPA Notices

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

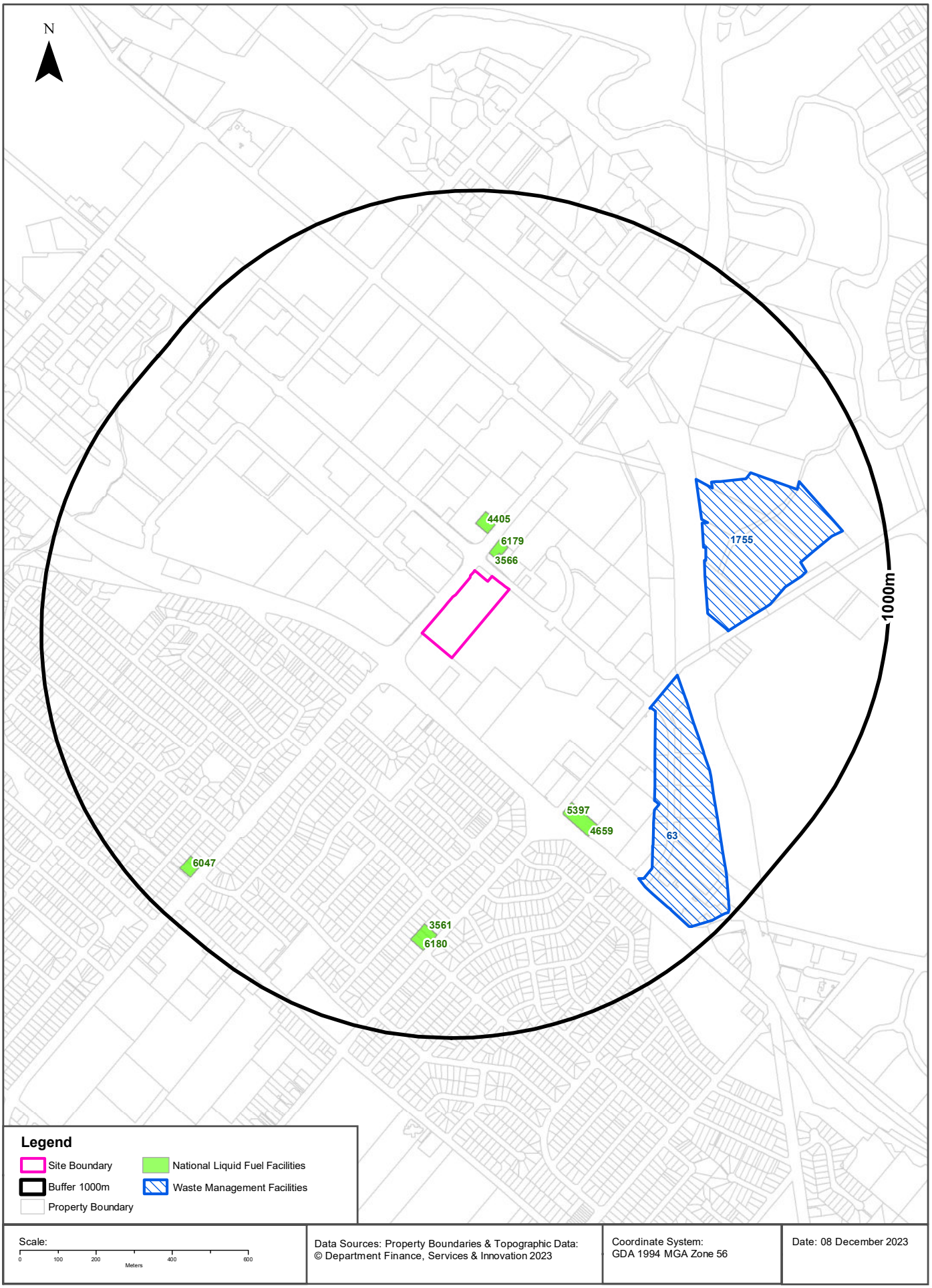
Number	Type	Name	Address	Status	Issued Date	Act	Offence	Offence Date	Loc Conf	Dist	Dir
3173530755	Penalty Notice	SYDNEY TRAINS	SYDNEY TRAINS, HAYMARKET, NSW 1238	Issued	10/11/2021	Protection of the Environment Operations Act 1997 - 64(1)	Contravene condition of licence - Corporation	31/05/2021	Network of Features	3m	North East
3085775368	Penalty Notice	ASTRAZENECA PTY LTD	47 TALAVERA ROAD, NORTH RYDE, NSW 2113	Issued	24/10/2014	Protection of the Environment Operations Act 1997 - 64(1)	Contravene any condition of licence - not noise - corporation	31/05/2014	Premise Match	759m	North West

NSW EPA Notice Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Waste Management & Liquid Fuel Facilities

34 Waterloo Road, Macquarie Park, NSW 2113



Waste Management & Liquid Fuel Facilities

34 Waterloo Road, Macquarie Park, NSW 2113

National Waste Management Site Database

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

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist	Direction
63	WSN Environmental Solutions	Belrose Waste and Recycling Centre	129 Wicks Road	North Ryde	Landfill	Operational			Original information on waste management site collected by WMAA in 2008 via survey	Premise Match	484 m	South East
1755	City Of Ryde	City of Ryde Council Porters Creek Depot	160 Wicks Road	Macquarie Park	Transfer Station			Operational		Premise Match	516 m	East

Waste Management Facilities Data Source: Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

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
3566	Shell	Coles Express North Ryde	275 Lane Cove Road	Macquarie Park	Petrol Station	Operational		25/07/2011	Premise Match	48m	North East
6179	COLES EXPRESS	COLES EXPRESS NORTH RYDE	275 LANE COVE ROAD	NORTH RYDE	PETROL STATION	OPERATIONAL			Premise Match	48m	North East
4405	7-ELEVEN	7-ELEVEN NORTH RYDE	400 LANE COVE ROAD	NORTH RYDE	PETROL STATION	Operational		13/07/2012	Premise Match	103m	North
4659	Caltex	Caltex Woolworths North Ryde	41-43 Epping Road	Macquarie Park	Petrol Station	Operational		25/07/2011	Premise Match	492m	South East
5397	AMPOL	AMPOL WOOLWORTHS METRO NORTH RYDE	41-43 EPPING ROAD CORNER WICKS ROAD	NORTH RYDE	PETROL STATION	OPERATIONAL			Premise Match	492m	South East
3561	Shell	Coles Express North Ryde Wicks	96-100 Wicks Road	North Ryde	Petrol Station	Operational		25/07/2011	Premise Match	704m	South
6180	COLES EXPRESS	COLES EXPRESS NORTH RYDE	96 WICKS ROAD	NORTH RYDE	PETROL STATION	OPERATIONAL			Premise Match	704m	South
6047	INDEPENDENT	CALVI PETROL STATION	320 LANE COVE ROAD	NORTH RYDE	PETROL STATION	OPERATIONAL			Premise Match	842m	South West

National Liquid Fuel Facilities Data Source: Geoscience Australia
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PFAS Investigation & Management Programs

34 Waterloo Road, Macquarie Park, NSW 2113

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

34 Waterloo Road, Macquarie Park, NSW 2113

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

34 Waterloo Road, Macquarie Park, NSW 2113

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

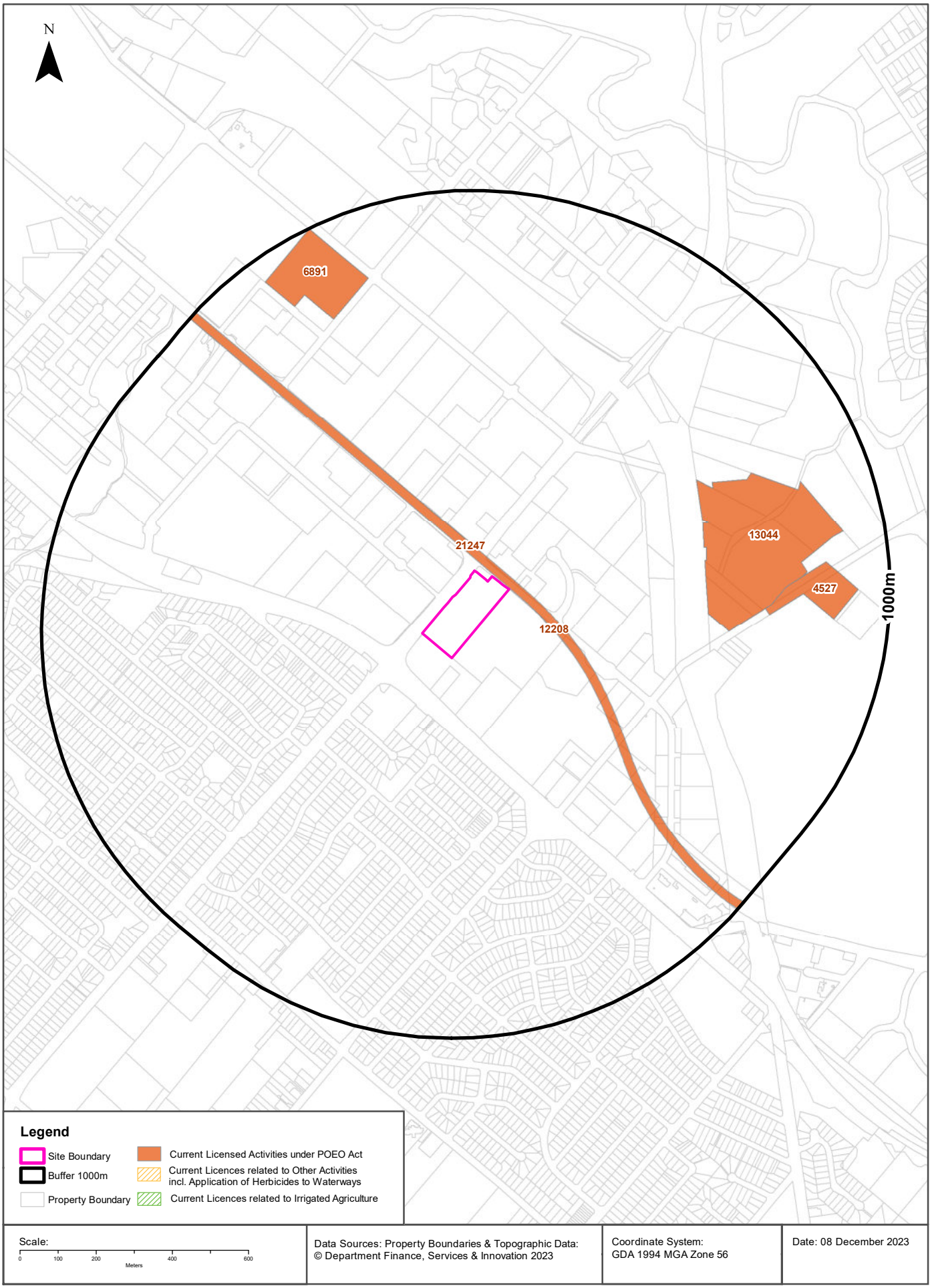
Sites within the dataset buffer:

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

34 Waterloo Road, Macquarie Park, NSW 2113



EPA Activities

34 Waterloo Road, Macquarie Park, NSW 2113

Licensed Activities under the POEO Act 1997

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

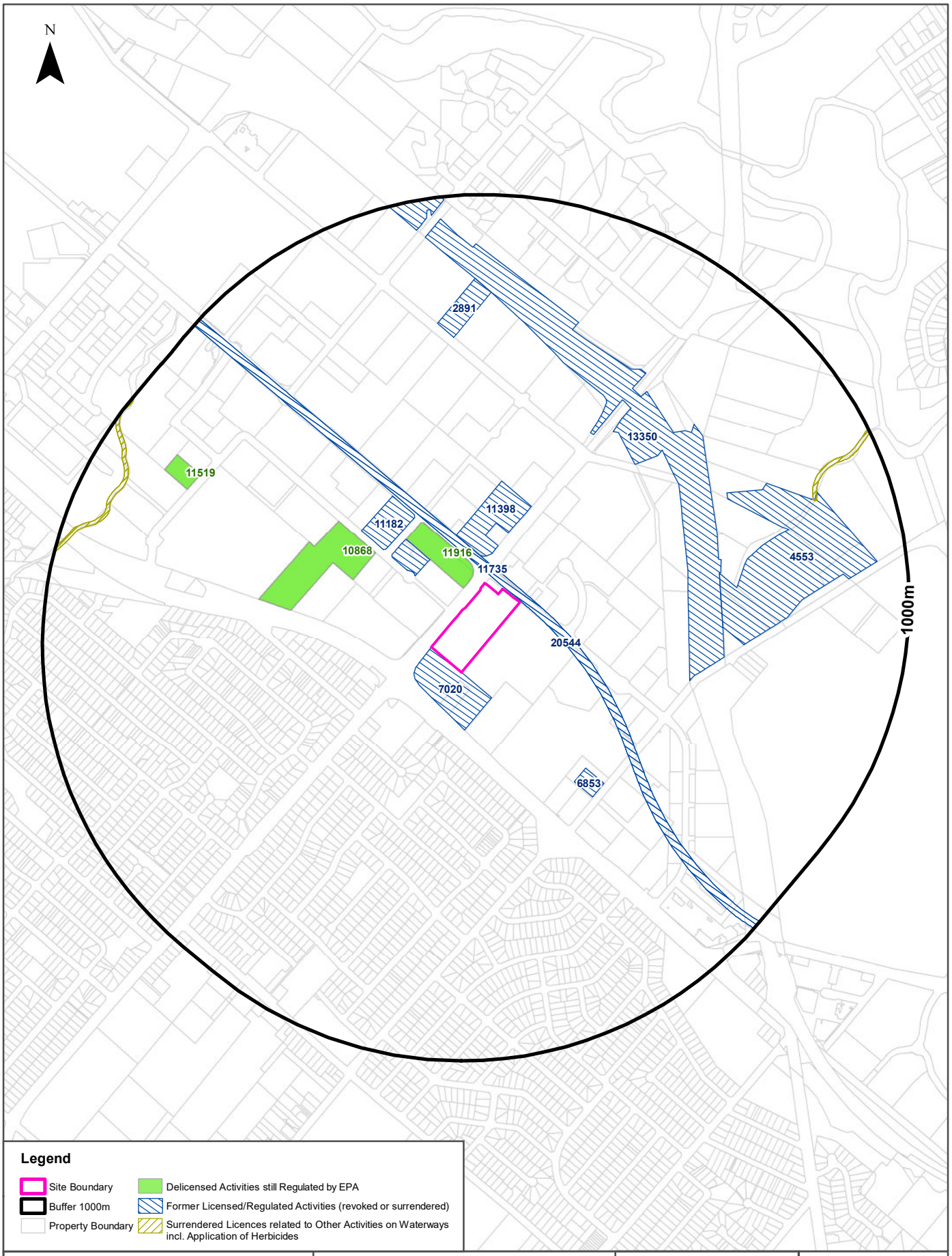
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
12208	SYDNEY TRAINS		SYDNEY TRAINS, HAYMARKET, NSW 1238		Railway systems activities	Network of Features	3m	North East
21247	Metro Trains Sydney Pty Ltd		SYDNEY METRO, ROUSE HILL, NSW 2155		Railway systems activities	Network of Features	3m	North East
13044	CITY OF RYDE	City of Ryde Council Porters Creek Depot	160 Wicks Road	MACQUARIE PARK	Waste storage - other types of waste	Premise Match	516m	East
13044	CITY OF RYDE	City of Ryde Council Porters Creek Depot	160 Wicks Road	MACQUARIE PARK	Recovery of general waste	Premise Match	516m	East
4527	CLEANAWAY PTY LTD	RYDE RESOURCE RECOVERY CENTRE	145 WICKS ROAD	NORTH RYDE	Recovery of general waste	Premise Match	673m	East
4527	CLEANAWAY PTY LTD	RYDE RESOURCE RECOVERY CENTRE	145 WICKS ROAD	NORTH RYDE	Waste storage - waste tyres	Premise Match	673m	East
4527	CLEANAWAY PTY LTD	RYDE RESOURCE RECOVERY CENTRE	145 WICKS ROAD	NORTH RYDE	Waste storage - other types of waste	Premise Match	673m	East
4527	CLEANAWAY PTY LTD	RYDE RESOURCE RECOVERY CENTRE	145 WICKS ROAD	NORTH RYDE	Non-thermal treatment of general waste	Premise Match	673m	East
4527	CLEANAWAY PTY LTD	RYDE RESOURCE RECOVERY CENTRE	145 WICKS ROAD	NORTH RYDE	Composting	Premise Match	673m	East
4527	CLEANAWAY PTY LTD	RYDE RESOURCE RECOVERY CENTRE	145 WICKS ROAD	NORTH RYDE	Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Premise Match	673m	East
6891	ASTRAZENECA PTY LTD	ASTRAZENECA PTY LTD	47 TALAVERA ROAD, NORTH RYDE, NSW 2113	NORTH RYDE	Pharmaceutical and veterinary products production	Premise Match	759m	North West

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

34 Waterloo Road, Macquarie Park, NSW 2113



EPA Activities

34 Waterloo Road, Macquarie Park, NSW 2113

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
11916	MAN DIESEL AUSTRALIA PTY LTD	MAN B&W DIESEL AUSTRALIA PTY LTD	36-42 WATERLOO ROAD	MACQUARIE PARK	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	35m	North West
10868	DOUGLASS HANLY MOIR PATHOLOGY PTY LIMITED	DOUGLASS HANLY MOIR PATHOLOGY	95 Epping Rd	NORTH RYDE	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	266m	West
11519	SPECIALIST DIAGNOSTIC SERVICES PTY LIMITED	SDS Pathology	10 Lyon Park Road	NORTH RYDE	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	741m	North West

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:

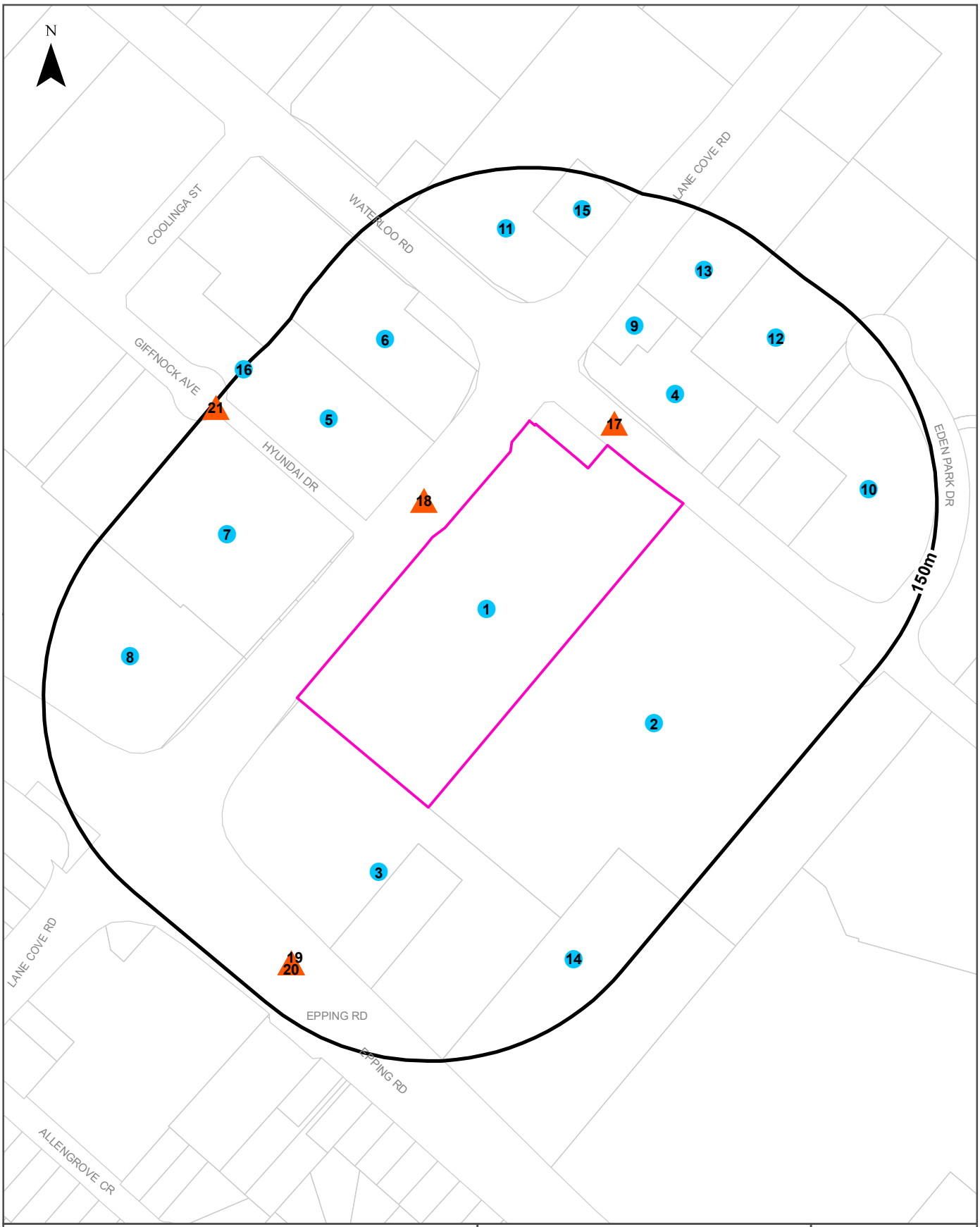
Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
7020	AB MAURI TECHNOLOGY & DEVELOPMENT PTY LIMITED	67 EPPING ROAD, NORTH RYDE, NSW 2113	Surrendered	15/08/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	0m	South
20544	JOHN HOLLAND 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	Premise Match	3m	North East
11735	HOCHTIEF AG	-, MACQUARIE PARK, NSW 2113	Surrendered	04/09/2002	Railway systems activities	Network of Features	3m	North East
11398	PROTEOME SYSTEMS LIMITED	1/35-41 Waterloo Road, NORTH RYDE, NSW 2113	Surrendered	11/04/2001	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	70m	North
11182	CONTRACT PHARMACEUTICAL SERVICES OF AUSTRALIA PTY LIMITED	1 Giffnock Avenue & 44 Waterloo Road, NORTH RYDE, NSW 2113	Surrendered	02/11/2000	Hazardous, Industrial or Group A Waste Generation or Storage; Pharmaceutical and veterinary products production	Premise Match	149m	North West
6853	NOVOGEN LIMITED	140 WICKS ROAD, NORTH RYDE, NSW 2113	Surrendered	27/09/2000	Pharmaceutical and veterinary products production; Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	403m	South East
13350	CPB CONTRACTORS PTY LIMITED	M2 Motorway, Windsor Road, BAULKHAM HILLS, NSW 2153	Surrendered	23/12/2010	Road construction	Road Match	432m	North East

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4553	CITY OF RYDE	WICKS ROAD, NORTH RYDE, NSW 2113	Surrendered	22/12/2000	Waste disposal by application to land	Premise Match	516m	East
2891	GILBARCO AUSTRALIA LIMITED	12-38 TALAVERA ROAD, NORTH RYDE, NSW 2113	Surrendered	22/09/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	638m	North
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	799m	North West
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	799m	North West
5030	CITY OF RYDE	AREAS REQUIRING MOSQUITO TREATMENT WITHIN THE LGA OF RYDE CITY COUNCIL - RYDE NSW 2112	Surrendered	11/08/2000	Miscellaneous licensed discharge to waters (at any time) - Pesticide application in areas requiring mosquito treatment	Network of Features	799m	North West
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	799m	North West

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

Historical Business Directories

34 Waterloo Road, Macquarie Park, NSW 2113



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: 08 December 2023

Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018
Property Boundaries © NSW Department Finance, Services & Innovation 2023

Historical Business Directories

34 Waterloo Road, Macquarie Park, NSW 2113

Business Directory Records 1950-1991
Premise or Road Intersection Matches

Universal Business Directory records 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
1	Publishers	Butterworths Pty. Ltd., 271 Lane Cove Rd North Ryde 2113	59808	1991	Premise Match	0m	On-site
	Electronic Components Mfrs &/or Imps &/or Dists	Phillips Components Pty. Limited, 34 Waterloo Rd., North Ryde 2113	42846	1991	Premise Match	0m	On-site
	Battery Mfrs &/or Dists	Tecnico Electronics, 34 Waterloo Rd, North Ryde 2113	35804	1991	Premise Match	0m	On-site
	Electric Circuit Breakers Mfrs &/or Dists	Tecnico Electronics, 34 Waterloo Rd., North Ryde 2113	41963	1991	Premise Match	0m	On-site
	Electric Components Mfrs &/or Imps &/or Dists	Tecnico Electronics, 34 Waterloo Rd., North Ryde 2113	41979	1991	Premise Match	0m	On-site
	Electric Motor Mfrs &/or Imps &/or Dists	Tecnico Electronics, 34 Waterloo Rd., North Ryde 2113	42196	1991	Premise Match	0m	On-site
	Instrument Industrial Mfrs &/or Imps &/or Dists	Tecnico Electronics, 34 Waterloo Rd., North Ryde. 2113	49233	1991	Premise Match	0m	On-site
	Instrument Measuring Mfrs &/or Imps &/or Dists	Tecnico Electronics, 34 Waterloo Rd., North Ryde. 2113	49283	1991	Premise Match	0m	On-site
	Instrument Scientific Mfrs &/or Imps &/or Dists	Tecnico Electronics, 34 Waterloo Rd., North Ryde. 2113	49350	1991	Premise Match	0m	On-site
	CARBON PAPER MFRS. &/OR DISTS.	Adler Business Machined Pty. Limited, 34 Waterloo Rd., North Ryde. 2113	12259	1986	Premise Match	0m	On-site
	ACCOUNTING MACHINE MFRS. &/OR IMPS. &/OR DISTS.	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113	1214	1986	Premise Match	0m	On-site
	DATA PROCESSING EQUIPMENT MFRS. &/OR DISTS. &/ OR HIRERS.	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113	21259	1986	Premise Match	0m	On-site
	OFFICE EQUIPMENT &/OR SUPPLIES MFRS. &/OR IMPS. &/OR W/SALERS.	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113	70185	1986	Premise Match	0m	On-site
	PAPER SHREDDERS & GUILLOTINES IMPS. &/OR DISTS.	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113	72203	1986	Premise Match	0m	On-site
	TYPEWRITER MFRS. &/OR IMPS. &/OR DISTS.	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	96174	1986	Premise Match	0m	On-site
	WORD PROCESSING EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	99968	1986	Premise Match	0m	On-site
	DICTATING MACHINES MFRS. &/OR IMPS. &/OR DISTS.	Adler Business Machines Pty. Limited. 34 Waterloo Rd., North Ryde. 2113	23952	1986	Premise Match	0m	On-site
	ADDING & CALCULATING MACHINE MFRS. &/OR IMPS. &/OR DISTS.	Adler Business Machines Pty. Limited., 34 Waterloo Rd., North Ryde. 2113	1282	1986	Premise Match	0m	On-site
	OFFICE EQUIPMENT MFRS.&/OR DISTS. (O0400)	Adler Business Machines Pty, Limited, 34 Waterloo Rd., North Ryde. 2113.	61283	1982	Premise Match	0m	On-site
	TYPEWRITER MFRS.&/OR IMPS.&/OR DISTS. (T8650)	Adler Business Machines Pty, Limited, 34 Waterloo Rd., North Ryde. 2113.	82502	1982	Premise Match	0m	On-site
	ACCOUNTING MACHINE MFRS.&/OR IMPS. &/OR DISTS. (A0460)	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	1065	1982	Premise Match	0m	On-site
	ADDING & CALCULATING MACHINE MFRS. &/OR IMPS. &/OR DISTS. (A0970)	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	1138	1982	Premise Match	0m	On-site
	CARBON PAPER MFRS. &/OR DISTS. (C1505)	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	13142	1982	Premise Match	0m	On-site

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	DATA PROCESSING EQUIPMENT MFRS. &/OR DISTS. &/OR HIRERS.(D1050)	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	18999	1982	Premise Match	0m	On-site
	DICTATING MACHINES IMPS. &/OR DISTS. (D2750)	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	21368	1982	Premise Match	0m	On-site
	OFFICE SUPPLIES &/OR EQUIPMENT-RETAIL. (O0800)	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	61419	1982	Premise Match	0m	On-site
	PAPER SHREDDERS &GUILLOTINES IMPS. &/OR DISTS.(P1548)	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	62978	1982	Premise Match	0m	On-site
	TYPEWRITER DEALERS &/OR REPAIRERS. (T8525)	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	82466	1982	Premise Match	0m	On-site
	TYPEWRITER SUPPLIES. (T8750)	Adler Business Machines Pty. Limited, 34 Waterloo Rd., North Ryde. 2113.	82536	1982	Premise Match	0m	On-site
	PUBLISHERS. (P9240)	Butterworths Pty. Ltd., 271 Lane Cove Rd., North Ryde. 2113.	67784	1982	Premise Match	0m	On-site
2	Photographic Equipment &/or Supplies Mfrs. &/or Imps. &/or Dists.	Canon Australia Pty. Ltd., Unit 1, Thomas Holt Dr., North Ryde 2113	97087	1991	Premise Match	0m	South East
	Banks	Chase- AMP Bank, Chase Centre, Thomas Holt Dr, North Ryde 2113	35519	1991	Premise Match	0m	South East
	THEATRES - DRIVE-IN. (T3600)	North Ryde Skyline Drive-In Theatre (G.U.O.), Waterloo Rd., North Ryde. 2113.	79956	1982	Premise Match	0m	South East
	PICTURE THEATRES. (P4420)	North Ryde Skyline Drive-In, Waterloo Rd., North Ryde. 2113.	64187	1982	Premise Match	0m	South East
	PICTURE THEATRES.	North Ryde Skyline Drive-In, Waterloo Rd., North Ryde. 2113	57107	1978	Premise Match	0m	South East
	PICTURE THEATRES.	North Ryde Skyline Drive-In., 271 Lane Cove Rd., North Ryde. 2113	67262	1975	Premise Match	0m	South East
	PICTURE THEATRES (P364)	North Ryde Skyline Drive-In., 271 Lane Cove & Waterloo Rds., North Ryde	348883	1970	Premise Match	0m	South East
	Picture Theatres (Suburban)	North Ryde Skyline Drive-In., 271 Lane Cove & Waterloo Rds., North Ryde	133246	1965	Premise Match	0m	South East
	PICTURE THEATRES	North Ryde Skyline Drive-In, 271 Lane Cove & Waterloo Rds., North Ryde	358501	1961	Premise Match	0m	South East
	PICTURE THEATRES	Skyline Drive In, Lane Cove & Waterloo Rds., North Ryde	358545	1961	Premise Match	0m	South East
3	Cosmetic Mfrs &/or W/Salers	Emmo Juvena Pty. Ltd., 75 Epping Rd., North Ryde 2113	40890	1991	Premise Match	0m	South
	COSMETIC MFRS. &/OR W/SALERS.	Emmo Juvena Pty. Ltd., 75 Epping Rd., North Ryde. 2113	20518	1986	Premise Match	0m	South
4	Hairdressers &/or Beauty Salon Supplies	Wella Australia., 33 Waterloo Rd., North Ryde. 2113	48119	1991	Premise Match	20m	North East
5	ELECTRIC FURNACE MFRS. &/OR DISTS.	Anax, 394 Lane Cove Rd., North Ryde. 2113	26255	1986	Premise Match	36m	North West
	HOSPITAL EQUIPMENT &/OR SUPPLIES MFRS. &/OR IMPS. &/OR DISTS.	Anax, 394 Lane Cove Rd., North Ryde. 2113	46241	1986	Premise Match	36m	North West
	INSTRUMENT-SCIENTIFIC ¬MFRS. &/OR IMPS. &/OR DISTS.	Anax, 394 Lane Cove Rd., North Ryde. 2113	48473	1986	Premise Match	36m	North West
	X-RAY & ELECTRO MEDICAL APPARATUS MFRS. &/OR DISTS.	Anax, 394 Lane Cove Rd., North Ryde. 2113	100123	1986	Premise Match	36m	North West
	SCIENTIFIC APPARATUS MFRS. &/OR IMPS. &/OR DISTS.	Anax, 394 Lane Cove Rd., North Ryde. 2113.	85022	1986	Premise Match	36m	North West
	SURGICAL INSTRUMENTS MFRS. &/OR SPECIALISTS.	Anax, 394 Lane Cove Rd., North Ryde. 2113.	89810	1986	Premise Match	36m	North West
	ELECTRONIC EQUIPMENT MFRS. &/OR DISTS.	Soilcrete Aust., 394 Lane Cove Rd., North Ryde. 2113	28010	1986	Premise Match	36m	North West
	CHEMICAL MFRS. &/OR IMPS.&/OR DISTS. (C3855)	Anax, & Div. of Oakbridge Industries Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113.	14340	1982	Premise Match	36m	North West

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5	SURGICAL INSTRUMENTS MFRS.&/OR SPECIALISTS. (S8025)	Anax, & Div. of Oakbridge Industries Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113.	77666	1982	Premise Match	36m	North West
	BALANCES - LABORATORY MFRS.&/OR IMPS. &/OR DISTS. (B0640)	Anax, A Div. of Oakbridge Industries Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113.	4679	1982	Premise Match	36m	North West
	HOSPITAL SUPPLIES &EQUIPMENT MFRS. &/OR DISTS.(H6110)	Anax, A Div. of Oakbridge Industries Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113.	40340	1982	Premise Match	36m	North West
	INSTRUMENTS - INDUSTRIAL - MFRS. &/OR DISTS. (I2900)	Anax, A Div. of Oakbridge Industries Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113.	42154	1982	Premise Match	36m	North West
	INSTRUMENTS - SCIENTIFIC MFRS.&/OR DISTS. &/OR IMPS. (I3350)	Anax, A Div. of Oakbridge Industries Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113.	42356	1982	Premise Match	36m	North West
	SCIENTIFIC APPARATUS MFRS.&/OR DISTS. (S1530)	Anax, A Div. of Oakbridge Industries Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113.	73591	1982	Premise Match	36m	North West
	X-RAY & ELECTRO MEDICAL APPARATUS MFRS. &/OR DISTS.(X0200)	Anax, A Div. of Oakbridge Industries Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113.	85522	1982	Premise Match	36m	North West
	ELECTRIC FURNACE MFRS. &/OR DISTS. (E1500)	Anax, A Div. of Oakbridge Industris Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113.	24693	1982	Premise Match	36m	North West
	BALANCES-LABORATORY MFRS. &/OR IMPS. &/OR DISTS.	Anax Pty. Ltd, 394 Lane Cove Rd, North Ryde. 2113	4326	1978	Premise Match	36m	North West
	INSTRUMENTS-INDUSTRIAL-MFRS. &/OR DISTS.	Anax Pty. Ltd, 394 Lane Cove Rd, North Ryde. 2113	37486	1978	Premise Match	36m	North West
	INSTRUMENTS-SCIENTIFIC MFRS. &/OR DISTS. &/OR IMPS.	Anax Pty. Ltd., 394 Lane Cove Rd, North Ryde. 2113	37694	1978	Premise Match	36m	North West
	X-RAY & ELECTRO MEDICAL APPARATUS MFRS. &/OR DISTS.	Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde 2113	75382	1978	Premise Match	36m	North West
	CHEMICAL MFRS. &/OR DISTS. &/OR IMPS.	Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	12480	1978	Premise Match	36m	North West
	ELECTRIC FURNACE MFRS. &/OR DISTS.	Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	21671	1978	Premise Match	36m	North West
	HOSPITAL SUPPLIES & EQUIPMENT MFRS. &/OR DISTS.	Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	35764	1978	Premise Match	36m	North West
	SCIENTIFIC APPARATUS MFRS. &/OR DISTS.	Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	65114	1978	Premise Match	36m	North West
	SURGICAL INSTRUMENTS MFRS. &/OR SPECIALISTS.	Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	68809	1978	Premise Match	36m	North West
	INSTRUMENTS-SCIENTIFIC MFRS- &/OR DISTS. &/OR IMPS.	Anax Pty. Ltd., 394 Lane Cove Road., North Ryde. 2113	44576	1975	Premise Match	36m	North West
	SURGICAL INSTRUMENTS MFRS. &/OR SPECIALISTS.	Anax Pty. Ltd., 394 Lane Cove Road., North Ryde. 2113.	81356	1975	Premise Match	36m	North West
	SCIENTIFIC APPARATUS MFRS &/OR DISTS	D.H.A. Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde 2113	76075	1975	Premise Match	36m	North West
	CHEMICAL MFRS. &/OR DISTS. &/OR IMPS	D.H.A. Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	14490	1975	Premise Match	36m	North West
	ELECTRIC FURNACE MFRS. &/OR DISTS.	D.H.A. Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	25223	1975	Premise Match	36m	North West
	HOSPITAL SUPPLIES & EQUIPMENT MFRS. &/OR DISTS.	D.H.A. Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	42473	1975	Premise Match	36m	North West
	INSTRUMENTS – INDUSTRIAL MFRS. &/OR DISTS	D.H.A. Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	44385	1975	Premise Match	36m	North West
	INSTRUMENTS-SCIENTIFIC MFRS- &/OR DISTS. &/OR IMPS.	D.H.A. Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	44598	1975	Premise Match	36m	North West
	X-RAY & ELECTRO MEDICAL APPARATUS MFRS. &/OR DISTS.	D.H.A. Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113	88014	1975	Premise Match	36m	North West

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5	SURGICAL INSTRUMENTS MFRS. &/OR SPECIALISTS.	D.H.A. Anax Pty. Ltd., 394 Lane Cove Rd., North Ryde. 2113.	81360	1975	Premise Match	36m	North West
	BALANCES-LABORATORY MFRS. &/OR IMPS. &/OR DISTS.	D.H.A. Anex Pty. Ltd., 394 Lane Cove Rd, North Ryde. 2113	4206	1975	Premise Match	36m	North West
6	Electronic Equipment Mfrs &/or Dists	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde 2113	42940	1991	Premise Match	37m	North
	DATA PROCESSING EQUIPMENT MFRS. &/OR DISTS. &/ OR HIRERS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	21292	1986	Premise Match	37m	North
	ELECTRIC CLOCK MFRS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	26102	1986	Premise Match	37m	North
	ELECTRIC TOOLS-PORTABLE-MFRS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	26882	1986	Premise Match	37m	North
	ELECTRICAL ACCESSORIES MFRS. &/OR W/SALERS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	26952	1986	Premise Match	37m	North
	ELECTRONIC COMPONENTS MFRS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	27827	1986	Premise Match	37m	North
	ELECTRONIC EQUIPMENT MFRS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	27926	1986	Premise Match	37m	North
	INSTRUMENT CASE MFRS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	48153	1986	Premise Match	37m	North
	INSTRUMENT-AIRCRAFT-MFRS. &/OR IMPS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	48188	1986	Premise Match	37m	North
	INSTRUMENT-AUTOMOTIVE ¬MFRS. &/OR IMPS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	48199	1986	Premise Match	37m	North
	INSTRUMENT-ELECTRIC-MFRS. &/OR IMPS, &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	48217	1986	Premise Match	37m	North
	INSTRUMENT-MARINE-MFRS. &/OR IMPS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	48329	1986	Premise Match	37m	North
	INSTRUMENT-OPTICAL-MFRS. &/OR IMPS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	48422	1986	Premise Match	37m	North
	INSTRUMENT-PRECISION-MFRS. &/OR IMPS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	48431	1986	Premise Match	37m	North
	INSTRUMENT-SCIENTIFIC ¬MFRS. &/OR IMPS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	48481	1986	Premise Match	37m	North
	MAIL ORDER SPECIALISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	52214	1986	Premise Match	37m	North
	MARINE RADIO EQUIPMENT MFRS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	52925	1986	Premise Match	37m	North
	MODEL AIRCRAFT MFRS. &/OR SUPPLIERS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	60489	1986	Premise Match	37m	North
	MOTOR CAR RADIO AERIAL , MFRS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	61836	1986	Premise Match	37m	North
	MOTOR CAR RADIO MFRS. &/OR IMPS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113	61843	1986	Premise Match	37m	North
	RADIO &/OR TELEVISION COMPONENT PARTS DEALERS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113.	78684	1986	Premise Match	37m	North
	RADIO &/OR TELEVISION COMPONENT PARTS, MFRS. &/OR IMPS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113.	78694	1986	Premise Match	37m	North
	RADIO &/OR TELEVISION MFRS, &/OR IMPS. &/OR W/SALERS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113.	78709	1986	Premise Match	37m	North
	RADIO LOUDSPEAKER MFRS. &/OR DISTS,.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113.	78666	1986	Premise Match	37m	North
	RADIO TRANSMITTER MFRS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113.	78833	1986	Premise Match	37m	North
	TRANSFORMER &/OR TRANSFORMER EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	Dick Smith Group of Companies, 396 Lane Cove Rd., North Ryde. 2113.	95039	1986	Premise Match	37m	North

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6	RADIO PRODUCTION UNITS.	Dick Smith Group of Companies. 396 Lane Cove Rd., North Ryde. 2113.	78676	1986	Premise Match	37m	North
	TRANSFORMER &/OR TRANSFORMER EQUIPMENT MFRS.&/OR IMPS. &/OR DISTS. (T7160)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd, North Ryde. 2113.	81605	1982	Premise Match	37m	North
	BOOKSELLERS - RETAIL. (B4475)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	7823	1982	Premise Match	37m	North
	DATA PROCESSING EQUIPMENT MFRS. &/OR DISTS. &/OR HIRERS.(D1050)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	19036	1982	Premise Match	37m	North
	ELECTRIC CABLE - FLEXIBLE &/OR WIRE - MFRS. &/OR DISTS. (E0960)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	24544	1982	Premise Match	37m	North
	ELECTRIC CLOCK MFRS. &/OR DISTS. (E1110)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	24593	1982	Premise Match	37m	North
	ELECTRIC TOOLS - PORTABLE - MFRS. &/OR DISTS. (E2970)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	25278	1982	Premise Match	37m	North
	ELECTRICAL ACCESSORIES MFRS.&/OR W/SALERS. (E3170)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	25330	1982	Premise Match	37m	North
	ELECTRICAL APPLIANCES - REPAIRS &/OR SERVICE AGENTS.(E3210)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	25354	1982	Premise Match	37m	North
	ELECTRICAL SUPPLIES &/OR APPLIANCES - RETAIL. (E3840)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	25720	1982	Premise Match	37m	North
	ELECTRONIC COMPONENTS MFRS.&/OR DISTS. (E4587)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	26078	1982	Premise Match	37m	North
	ELECTRONIC EQUIPMENT MFRS.&/OR DISTS. (E4770)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	26143	1982	Premise Match	37m	North
	ELECTRONIC EQUIPMENT REPAIRS&/OR SERVICING. (E4785)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	26248	1982	Premise Match	37m	North
	HARDWARE MERCHANTS - RETAIL (H2050)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	39089	1982	Premise Match	37m	North
	HI-FIDELITY EQUIPMENT SALES & /OR SERVICE. (H3897)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	39937	1982	Premise Match	37m	North
	HOBBY &/OR HANDICRAFT SUPPLIES. (H4250)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	40153	1982	Premise Match	37m	North
	INSTRUMENT CASE MFRS. (I2500)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42056	1982	Premise Match	37m	North
	INSTRUMENT REPAIRERS. (I2600)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42070	1982	Premise Match	37m	North
	INSTRUMENTS - AIRCRAFT SPECIALISTS. (I2700)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42095	1982	Premise Match	37m	North
	INSTRUMENTS - AUTOMOTIVE SPECIALISTS. (I2750)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42105	1982	Premise Match	37m	North
	INSTRUMENTS - ELECTRIC - MFRS.&/OR DISTS. (I2840)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42126	1982	Premise Match	37m	North
	INSTRUMENTS - INDUSTRIAL - MFRS. &/OR DISTS. (I2900)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42168	1982	Premise Match	37m	North
	INSTRUMENTS - MEASURING - MFRS. &/OR IMPS. &/OR DISTS.-(I3100)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42236	1982	Premise Match	37m	North
	INSTRUMENTS - OPTICAL - MFRS.&/OR DISTS. (I3210)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42309	1982	Premise Match	37m	North
	INSTRUMENTS - PRECISION MFRS.&/OR DISTS. (I3250)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42324	1982	Premise Match	37m	North
	INSTRUMENTS - SCIENTIFIC MFRS.&/OR DISTS. &/OR IMPS. (I3350)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42369	1982	Premise Match	37m	North
	INSTRUMENTS - SURVEYING GEODETIC &/OR GEOPHYSICAL DISTS. (I3400)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42429	1982	Premise Match	37m	North
	INSTRUMENTS-NAUTICAL DISTS.-(I3150)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42299	1982	Premise Match	37m	North

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
6	INSULATING MATERIALS MFRS.&/OR DISTS. &/OR SUPPLIERS.(I3660)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	42457	1982	Premise Match	37m	North
	MAIL ORDER SPECIALISTS. (M0460)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	45927	1982	Premise Match	37m	North
	MARINE RADIO EQUIPMENTMFRS. (M1180)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	46571	1982	Premise Match	37m	North
	MOTOR CAR RADIO AERIAL MFRS.(M5600)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	54584	1982	Premise Match	37m	North
	MOTOR CAR RADIO MFRS. &/OR DISTS. (M5620)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	54587	1982	Premise Match	37m	North
	PRINTED CIRCUIT MFRS. (P8260)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	65862	1982	Premise Match	37m	North
	RADIO &/OR RADIOGRAM MFRS.(R0700)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	68182	1982	Premise Match	37m	North
	RADIO &/OR TELEVISION COMPONENT PARTS DEALERS.(R1015)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	68201	1982	Premise Match	37m	North
	RADIO &/OR TELEVISION COMPONENT PARTS MFRS. 8,/OR DISTS. (R1050)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	68214	1982	Premise Match	37m	North
	RADIO LOUDSPEAKER MFRS. &/OR DISTS. (R0560)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	68170	1982	Premise Match	37m	North
	RADIO PRODUCTION UNITS. (R0665)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	68179	1982	Premise Match	37m	North
	RADIO TRANSMITTER MFRS. (R1400)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	68384	1982	Premise Match	37m	North
	RECTIFIER MFRS. (R3150)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	70105	1982	Premise Match	37m	North
	RESISTOR MFRS. (R5075)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	70367	1982	Premise Match	37m	North
	SOLDERING IRON - ELECTRIC MFRS. (S4440)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	75258	1982	Premise Match	37m	North
	TRANSISTOR MFRS. &/OR DISTS.(T7175)	Dick Smith Electronics Pty. Ltd., 396 Lane Cove Rd., North Ryde. 2113.	81638	1982	Premise Match	37m	North
7	Locomotive Mfrs &/or Imps &/or Dists	GEC Australia Ltd, 2 Giffnock Ave., North Ryde. 2113	50923	1991	Premise Match	37m	West
	MIXED BUSINESSES.	Diggers Stall, 390 Lane Cove Rd., North Ryde. 2113	59972	1986	Premise Match	37m	West
	SANDWICH &/OR LUNCHEON SHOPS.	Diggers Stall, 390 Lane Cove Rd., North Ryde. 2113	84338	1986	Premise Match	37m	West
	ELECTRIC LOCOMOTIVE MFRS. &/OR IMPS.	GEC Australia Limited, 2 Giffnock Ave., North Ryde. 2113	26508	1986	Premise Match	37m	West
	MATERIAL HANDLING EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	GEC Australia Limited, 2 Giffnock Ave., North Ryde. 2113	53088	1986	Premise Match	37m	West
	MINING MACHINERY &/OR EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	GEC Australia Limited, 2 Giffnock Ave., North Ryde. 2113	59644	1986	Premise Match	37m	West
	TELEPHONE EXCHANGE & ASSOCIATED EQUIPMENT MANUFACTURERS.	GEC Australia Limited, 2 Giffnock Ave., North Ryde. 2113.	92552	1986	Premise Match	37m	West
	X-RAY & ELECTRO MEDICAL APPARATUS MFRS. &/OR DISTS.	GEC Australia Limited, 2 Giffnock Ave., North Ryde. 2113.	100125	1986	Premise Match	37m	West
	X-RAY MEDICAL &/OR INDUSTRIAL APPARATUS MFRS. &/OR DISTS.	GEC Australia Limited, 2 Giffnock Ave., North Ryde. 2113.	100137	1986	Premise Match	37m	West
	ENGINEERS – ELECTRICAL.	GEC Australia Limited, 2 Giffnock Ave., North Ryde., 2113	29171	1986	Premise Match	37m	West
	VETERINARY SURGEONS.	North Ryde Veterinary Hospital, 384 Lane Cove Rd. North Ryde. 2113.	97383	1986	Premise Match	37m	West
	VETERINARY SURGEONS.	Ryde Veterinary Services, 384 Lane Cove Rd. North Ryde. 2113.	97402	1986	Premise Match	37m	West
	ELECTRIC LOCOMOTIVE MFRS.&/OR IMPS. (E2160)	GEC Australia Ltd, 2 Giffnock Ave., North Ryde. 2113.	24930	1982	Premise Match	37m	West
	ENGINEERS - ELECTRICAL. (E6780)	GEC Australia Ltd., 2 Giffnock Ave., North Ryde. 2113.	27301	1982	Premise Match	37m	West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
7	MATERIAL HANDLING EQUIPMENT MFRS. IMPS. &/OR DISTS. (M1500)	GEC Australia Ltd., 2 Giffnock Ave., North Ryde. 2113.	46710	1982	Premise Match	37m	West
	MINING MACHINERY &/OR EQUIPMENT IMPS. &/OR DISTS.&/OR MFRS. (M3960)	GEC Australia Ltd., 2 Giffnock Ave., North Ryde. 2113.	52733	1982	Premise Match	37m	West
	TELEPHONE EXCHANGE & ASSOCIATED EQUIPMENT MANUFACTURERS. (T1610)	GEC Australia Ltd., 2 Giffnock Ave., North Ryde. 2113.	79365	1982	Premise Match	37m	West
	X-RAY & ELECTRO MEDICAL APPARATUS MFRS. &/OR DISTS.(X0200)	GEC Australia Ltd., 2 Giffnock Ave., North Ryde. 2113.	85528	1982	Premise Match	37m	West
	X-RAY MEDICAL &/OR INDUSTRIAL APPARATUS MFRS. &/OR DISTS.(X0255)	GEC Australia Ltd., 2 Giffnock Ave., North Ryde. 2113.	85540	1982	Premise Match	37m	West
	VETERINARY SURGEONS. (V2000)	Pski, H 384 Lane Cove Rd., North Ryde. 2113.	83525	1982	Premise Match	37m	West
	ASPHALT & ASPHALTERS. (A7950)	Scotts Sealing Service Pty. Ltd., 2 Giffnock Ave., North Ryde. 2113.	3579	1982	Premise Match	37m	West
	VETERINARY SURGEONS.	Lennox, J., 384 Lane Cove Rd., North Ryde.2113	73602	1978	Premise Match	37m	West
	MIXED BUSINESSES.	Digger's Stall., 390 Lane Cove Rd. North., North Ryde. 2113	54761	1975	Premise Match	37m	West
	VETERINARY SURGEONS.	Sleeman, D. M., 384 Lane Cove Rd., North Ryde. 2113	86286	1975	Premise Match	37m	West
	MIXED BUSINESSES (M408)	Diggers Stall., 390 Lane Cove Rd., North, North Ryde	332480	1970	Premise Match	37m	West
	VETERINARY HOSPITALS (V125)	Sleeman, D.M., 384 Lane Cove Rd., North Ryde	372583	1970	Premise Match	37m	West
8	Market Research Services	A.C. Nielson Aust Pty Ltd, 85 Epping Rd., North Ryde 2113	51301	1991	Premise Match	40m	West
	ASPHALT & ASPHALTERS. (A7950)	Scotts Sealing Service Pty. Ltd., 85 Epping Rd., North Ryde. 2113.	3580	1982	Premise Match	40m	West
	EARTH MOVING MACHINERYHIRERS. (E0270)	Scotts Sealing Service Pty. Ltd., 85 Epping Rd., North Ryde. 2113.	24374	1982	Premise Match	40m	West
	ROADMAKING CONTRACTORS.(R5915)	Scotts Sealing Service Pty. Ltd., 85 Epping Rd., North Ryde. 2113.	72228	1982	Premise Match	40m	West
	ASPHALT & ASPHALTERS.	Scotts Sealing Service Pty. Ltd., 85 Epping Rd., North Ryde. 2113	3405	1978	Premise Match	40m	West
	EARTH MOVING MACHINERY HIRERS.	Scotts Sealing Service Pty. Ltd., 85 Epping Rd., North Ryde. 2113	21424	1978	Premise Match	40m	West
	ROADMAKING CONTRACTORS.	Scotts Sealing Service Pty. Ltd., 85 Epping Rd., North Ryde. 2113	63816	1978	Premise Match	40m	West
	ASPHALT & ASPHALTERS.	Scott's Sealing Service Pty. Ltd., 85 Epping Rd., North Ryde. 2113	3127	1975	Premise Match	40m	West
	EARTH MOVING MACHINERY HIRERS.	Scott's Sealing Service Pty. Ltd., 85 Epping Rd., North Ryde. 2113	24891	1975	Premise Match	40m	West
	ROADMAKING CONTRACTORS	Scott's Sealing Service Pty. Ltd., 85 Epping Rd., North Ryde. 2113	74534	1975	Premise Match	40m	West
	ROAD-MAKING CONTRACTORS (R360)	Scott's sealing Service, 85 Epping Highway, North Ryde	357724	1970	Premise Match	40m	West
	Road - Making Contractors	Scott's Sealing Service., 85 Epping Highway., North Ryde	140743	1965	Premise Match	40m	West
	CARRIERS & CARTAGE CONTRACTORS	Scott, T., 85 Epping Highway., North Ryde	285305	1961	Premise Match	40m	West
	ROAD-MAKING CONTRACTORS	Scott's Sealing Service, 85 Epping Highway, North Ryde	246532	1961	Premise Match	40m	West
9	Motor Garages & Service Stations	North Ryde Auto Port, 275A Lane Cove Rd., North Ryde 2113	97823	1991	Premise Match	48m	North East
	MOTOR GARAGES & SERVICE STATIONS.	North Ryde Auto Port, 275A Lane Cove Rd., North Ryde. 2113	65191	1986	Premise Match	48m	North East
10	COSMETIC MFRS. &/OR W/SALERS.	Wella Products Pty. Ltd., 29 Waterloo Rd., Macquarie Park. 2113	20556	1986	Premise Match	67m	East
	HAIRDRESSERS SUPPLIES.	Wella Products Pty. Ltd., 29 Waterloo Rd., Macquarie Park. 2113	44275	1986	Premise Match	67m	East
	COSMETIC MFRS. &/OR W/SALERS. (C8415)	Wella Products Pty Ltd., 29 Waterloo Rd., North Ryde. 2113.	18252	1982	Premise Match	67m	East

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10	HAIRDRESSERS SUPPLIES. (H0710)	Wella Products Pty. Ltd., 29 Waterloo Rd., North Ryde. 2113.	38874	1982	Premise Match	67m	East
	COSMETIC MFRS &/OR W/SALERS	Wella (Aust.) Pty. Ltd., 29 Waterloo Rd., North Ryde. 2113	19130	1975	Premise Match	67m	East
	HAIRDRESSERS SUPPLIES.	Wella (Aust.) Pty. Ltd., 29 Waterloo Rd., North Ryde. 2113	41034	1975	Premise Match	67m	East
11	Computer Hardware Mfrs &/or Imps &/or Dists	Apple Computer Australia Pty. Ltd., 2/37 Waterloo Rd., North Ryde 2113	40028	1991	Premise Match	70m	North
	Communication Systems Mfrs &/or Imps &/or Dists	Megadata Pty. Ltd., 2/37 Waterloo Rd., North Ryde 2113	39763	1991	Premise Match	70m	North
	Communication Systems Mfrs &/or Imps &/or Dists	Megadata Pty. Ltd., 2/37 Waterloo Rd., North Ryde 2113	39764	1991	Premise Match	70m	North
	Water Cooling Equipment Mfrs &/or Dists	NEI John Thompson (Aust), 39 Waterloo Rd North Ryde 2113	65953	1991	Premise Match	70m	North
	WATER TREATMENT EQUIPMENT MFRS. &/OR DISTS.	NEI John Thompson (Aust.), 39 Waterloo Rd., North Ryde. 2113.	98434	1986	Premise Match	70m	North
12	Video Equipment Mfrs &/or Dists	Akai, Unit 11, Eden Park 31 Waterloo Rd North Ryde 2113	65752	1991	Premise Match	72m	North East
	Yarn Mfrs &/or Imps	Alltex International Yarns Pty Ltd, Unit 6 Eden Park Est 31 Waterloo Rd North Ryde 2113	66529	1991	Premise Match	72m	North East
	Computer Equipment Maintenance & Service	Bull HN Information Systems Australia Pty. Ltd., Unit 2/31 Waterloo Rd., North Ryde 2113	39975	1991	Premise Match	72m	North East
	Computer Hardware Mfrs &/or Imps &/or Dists	Bull HN Information Systems Australia Pty. Ltd., Unit 2/31 Waterloo Rd., North Ryde 2113	40034	1991	Premise Match	72m	North East
	Publishers	Collins Agnus Robertson Aust, Unit 4 Eden Park Ind Est 31 Waterloo Rd North Ryde 2113	59815	1991	Premise Match	72m	North East
	Booksellers Wholesale	Collins Agnus Robertson Aust, Unit 4, Eden Park Ind Est., 31 Waterloo Rd., North Ryde 2113	36461	1991	Premise Match	72m	North East
	Battery Dry Cell Mfrs &/or Dists	Duracell Australia Pty Ltd, Unit 8, Eden Park Estate, 31 Waterloo Rd, North Ryde 2113	35764	1991	Premise Match	72m	North East
	Battery Mfrs &/or Dists	Duracell Australia Pty Ltd, Unit 8, Eden Park Estate, 31 Waterloo Rd, North Ryde 2113	35779	1991	Premise Match	72m	North East
	Computer Accessories &/or Supplies	Honeywell Bull Australia Pty. Ltd., Unit 5, Eden Park Ind. Est., 31 Waterloo Rd., North Ryde 2113	39822	1991	Premise Match	72m	North East
	Chain Saw Mfrs &/or Imps &/or Dists	Husqvarna Forest & Garden Pty. Ltd., Unit 1, Eden Park Ind. Est, 31 Waterloo Rd., North Ryde 2113	38768	1991	Premise Match	72m	North East
	Pen Fountain &/or Ballpoint &/or Mfrs &/or Imps Dists	Pentel (Aust) Pty. Ltd., Unit 6, Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113	56960	1991	Premise Match	72m	North East
	Optical Supplies &/or Equipment Mfrs &/or W/Salers	Polaroid Australia Pty. Ltd., Unit 3 Eden Park Ind Est 31 Waterloo Rd North Ryde 2113	56261	1991	Premise Match	72m	North East
	Video Cassette Mfrs &/or Dists	Polaroid, Eden Park Estate, 31 Waterloo Rd North Ryde 2113	65749	1991	Premise Match	72m	North East
	Brokers General	Powell Duffryn International Pty. Ltd., 31 Waterloo Rd, North Ryde 2113	36701	1991	Premise Match	72m	North East
	Printed Circuit Mfrs &/or Dists	Precision Graphics Pty. Ltd., Unit 15 Eden Park Ind. Est., 31 Waterloo Rd., Macquarie Park. 2113	58639	1991	Premise Match	72m	North East
	PUBLISHERS.	Angus & Robertson Publishers, Unit 4 Eden Park Ind. Est,	78167	1986	Premise Match	72m	North East
	BOOKSELLERS-WHOLESALE.	Angus & Robertson Publishers, Unit 4 Eden Park Ind. Est, 31 Waterloo Rd., Macquarie Park. 2113	7268	1986	Premise Match	72m	North East
	PUBLISHERS.	Angus & Robertson Publishers, Unit 4 Eden Park Ind. Est, 31 Waterloo Rd., Macquarie Park. 2113	78168	1986	Premise Match	72m	North East

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12	PUMP MFRS. &/OR DISTS.	Hamworthy Engineering Australia (Pty.) Ltd., Unit 14 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113.	78483	1986	Premise Match	72m	North East
	COMPUTER EQUIPMENT MAINTENANCE & SERVICE.	Honeywell Information Systems, Unit 5 Eden Park Ind. Est, 31 Waterloo Rd., Macquarie Park. 2113	19355	1986	Premise Match	72m	North East
	DATA PROCESSING EQUIPMENT MFRS. &/OR DISTS. &/ OR HIRERS.	Honeywell Information Systems, Unit 5 Eden Park Ind. Est., 31 Waterloo Rd., Macquarie Park. 2113	21312	1986	Premise Match	72m	North East
	DISH WASHING MACHINES MFRS, &/OR DISTS.	Husqvarna Pty. Ltd., Unit 1 Eden Park Industrial Est., 31 Waterloo Rd., Macquarie Park. 2113	24211	1986	Premise Match	72m	North East
	SEWING MACHINE SALES &/OR SERVICE.	Husqvarna Pty. Ltd., Unit 1 Eden Park Industrial Est., 31 Waterloo Rd., Macquarie Park. 2113	85843	1986	Premise Match	72m	North East
	CHAIN SAWS MFRS. &/OR DISTS.	Husqvarna Pty. Ltd., Unit 1 Eden Park Industrial Est., 31 Waterloo Rd., Macquarie Park.2113	13465	1986	Premise Match	72m	North East
	PEN - FOUNTAIN &/OR BALL POINT - MFRS. &/OR IMPS. &/OR DISTS.	Pentel (Aust.) Pty. Ltd., Unit 10 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113	72445	1986	Premise Match	72m	North East
	COSMETIC MFRS. SUPPLIERS.	Plough (Aust.) Pty. Ltd., Unit 7 Eden Park Ind. Est, 31 Waterloo Rd., Macquarie Park. 2113	20497	1986	Premise Match	72m	North East
	OPTICAL SUPPLIES MFRS. &/OR W/SALERS.	Polaroid Australia Pty. Ltd., Unit 3 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113	70764	1986	Premise Match	72m	North East
	PHOTOGRAPHIC EQUIPMENT &/OR SUPPLIES - W/SALERS &/OR DEALERS.	Polaroid Australia Pty. Ltd., Unit 3 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113	73354	1986	Premise Match	72m	North East
	BOOKSELLERS - WHOLESALE.(B4545)	Angus & Robertson Publishers, Unit 4 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113.	8059	1982	Premise Match	72m	North East
	PUBLISHERS. (P9240)	Angus & Robertson Publishers, Unit 4 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113.	67749	1982	Premise Match	72m	North East
	ENGINEERS-FURNACES &/OR COMBUSTION. (E7080)	Ham worthy Engineering (Australia) Pty. Ltd., Eden Pk. Ind. Estate, 31 Waterloo Rd., North Ryde. 2113.	27743	1982	Premise Match	72m	North East
	PROPELLER MFRS. &/OR DISTS.(P9040)	Hamworthy Engineering (Australia) Pty. Ltd., Eden P.K.Ind.Estate, 31 Waterloo Rd., North Ryde. 2113.	67086	1982	Premise Match	72m	North East
	ENGINEERS-HOTWATER HEATING &/OR VENTILATING. (E7230)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk. Ind. Estate, 31 Waterloo Rd., North Ryde. 2113.	28549	1982	Premise Match	72m	North East
	PUMP MFRS. &/OR DISTS. (P9420)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk. Ind. Estate, 31 Waterloo Rd., North Ryde. 2113.	68021	1982	Premise Match	72m	North East
	STEARIC &/OR OLEIC ACID MFRS.(S5895)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk. Ind. Estate, 31 Waterloo Rd., North Ryde. 2113.	76780	1982	Premise Match	72m	North East
	GEAR BOX MFRS. &/OR DISTS.(G2200)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk.Ind.Estate, 31 Waterloo Rd., North Ryde. 2113.	35920	1982	Premise Match	72m	North East
	AIR COMPRESSOR MFRS.&/OR DISTS. (A3330)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk.Ind.Estate, 31 Waterloo Rd., North Ryde. 2113.	1814	1982	Premise Match	72m	North East
	AXLE &/OR AXLE SHAFT MFRS.(A9030)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk.Ind.Estate, 31 Waterloo Rd., North Ryde. 2113.	4274	1982	Premise Match	72m	North East
	BOILER PLANT MFRS. &/OR IMPS.&/OR DISTS. (B3980)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk.Ind.Estate, 31 Waterloo Rd., North Ryde. 2113.	7412	1982	Premise Match	72m	North East
	GAS BURNERS - INDUSTRIAL-MFRS. &/OR DISTS. (G1010)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk.Ind.Estate, 31 Waterloo Rd., North Ryde. 2113.	35824	1982	Premise Match	72m	North East
	HEATING SYSTEMS. (H3550)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk.Ind.Estate, 31 Waterloo Rd., North Ryde. 2113.	39901	1982	Premise Match	72m	North East

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12	OIL BURNER MFRS. &/OR SUPPLIERS. (O1150)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk.Ind.Estate, 31 Waterloo Rd., North Ryde. 2113.	61545	1982	Premise Match	72m	North East
	HOT WATER SYSTEMS-INDUSTRIAL. (H6750)	Hamworthy Engineering (Australia) Pty. Ltd., Eden Pk.Ind.Estate., 31 Waterloo Rd., North Ryde. 2113.	40462	1982	Premise Match	72m	North East
	COMPUTER MAINTENANCE. * (C6517)	HONEYWELL INFORMATION SYSTEMS Unit 5, Eden Park Industrial Estate, 31 Waterloo Road, North Ryde. 2113	17461	1982	Premise Match	72m	North East
	DATA PROCESSING EQUIPMENT MFRS. &/OR DISTS. &/OR HIRERS.(D1050)	Honeywell Information Systems, Unit 5, Eden Park Ind. Est, 31 Waterloo Rd., North Ryde. 2113.	19050	1982	Premise Match	72m	North East
	DATA PROCESSING EQUIPMENT MAINTENANCE & SERVICE. (D1035)	Honeywell Information Systems, Unit 5, Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113.	18989	1982	Premise Match	72m	North East
	TOY IMPS. &/OR W/SALERS. (T6225)	LEGO Australia Pty. Ltd., Unit 8 Eden Park Ind. Est, 31Waterloo Rd., North Ryde. 2113.	81283	1982	Premise Match	72m	North East
	SCHOOL SUPPLIES MFRS.&/OR DISTS. (S1290)	LEGO Australia Pty. Ltd., Unit 8 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113.	73312	1982	Premise Match	72m	North East
	TOY MFRS. &/OR DISTS. (T6250)	LEGO Australia Pty. Ltd., Unit 8 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113.	81331	1982	Premise Match	72m	North East
	PENS - FOUNTAIN &/OR BALL POINT MFRS. &/OR IMPS. &/OR DISTS. (P2620)	Pentel (Aust.) Pty. Ltd., 31 Waterloo Rd., North Ryde. 2113.	63217	1982	Premise Match	72m	North East
	OPTICAL SUPPLIES MFRS. &/OR W/SALERS. (O3350)	Polaroid Australia Pty. Ltd., Eden Pk. Ind. Estate, 31 Waterloo Rd., North Ryde. 2113.	61765	1982	Premise Match	72m	North East
	PHOTOGRAPHIC DEVELOPING,PRINTING &/OR COLOURING SERVICES. (P3780)	Polaroid Australia Pty. Ltd., Eden Pk. Ind. Estate, 31 Waterloo Rd., North Ryde. 2113.	63699	1982	Premise Match	72m	North East
	PHOTOGRAPHIC EQUIPMENT - MFRS. &/OR DISTS. (P3820)	Polaroid Australia Pty. Ltd., Eden Pk. Ind. Estate, 31 Waterloo Rd., North Ryde. 2113.	63807	1982	Premise Match	72m	North East
	PHOTOGRAPHIC EQUIPMENT DEALERS	Polaroid Australia Pty. Ltd., Eden Pk. ind. Estate, 31 Waterloo Rd., North Ryde. 2113.	63766	1982	Premise Match	72m	North East
	PHOTOGRAPHIC SUPPLIES. (P3940)	Polaroid Australia Pty. Ltd., Eden Pk. Ind. Estate, 31 Waterloo Rd., North Ryde. 2113.	63887	1982	Premise Match	72m	North East
	DISH WASHING MACHINES MFRS.&/OR DISTS. (D4050)	Simpson Limited, Unit 6 Eden Park Ind. Est, 31 Waterloo Rd., North Ryde. 2113.	21639	1982	Premise Match	72m	North East
	RANGES - ELECTRIC - MFRS. &/OR IMPS. &/OR DISTS. (R1960)	Simpson Limited, Unit 6 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113.	68502	1982	Premise Match	72m	North East
	WASHING MACHINE MFRS. &/OR DISTS. (W0880)	Simpson Limited, Unit 6 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113.	83795	1982	Premise Match	72m	North East
	WASHING MACHINE SALES &/ORSERVICE. (W0960)	Simpson Limited, Unit 6 Eden Park Ind. Est., 31 Waterloo Rd., North Ryde. 2113.	83815	1982	Premise Match	72m	North East
	AIR COMPRESSOR MFRS.&/OR DISTS.	Hamworthy Engineering Australia (Pty.) Ltd. Eden Park Industrial Estate, 31 Waterloo Road, North Ryde. 2113	1771	1978	Premise Match	72m	North East
13	Hospital Equipment &/or Supplies Mfrs &/or Imps &/or Dists	Domedica Pty Ltd, 2/277 Lane Cove Rd., North Ryde. 2113	48611	1991	Premise Match	85m	North East
	Printers Lithographic (Offset)	Ink Exress Printing., Unit 1A/277 Lane Cove Rd., North Ryde. 2113	59173	1991	Premise Match	85m	North East
14	INSTRUMENT-SCIENTIFIC ¬MFRS. &/OR IMPS. &/OR DISTS.	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113	48472	1986	Premise Match	102m	South
	LABORATORY APPARATUS &/OR EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113	50824	1986	Premise Match	102m	South

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14	SCIENTIFIC APPARATUS MFRS. &/OR IMPS. &/OR DISTS.	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113.	85021	1986	Premise Match	102m	South
	LABORATORY APPARATUS &/OR EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	Selbys Scientific Ltd., 61 Epping Rd., North Ryde. 2113	50858	1986	Premise Match	102m	South
	SCIENTIFIC APPARATUS MFRS. &/OR IMPS. &/OR DISTS.	Selbys Scientific Ltd., 61 Epping Rd., North Ryde. 2113.	85063	1986	Premise Match	102m	South
	GLASS - LABORATORY APPARATUS MFRS. (G4050)	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113.	36756	1982	Premise Match	102m	South
	GLASS BENDERS &/OR BLOWERS. (G3550)	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113.	36722	1982	Premise Match	102m	South
	INSTRUMENTS - SCIENTIFIC MFRS.&/OR DISTS. &/OR IMPS. (I3350)	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113.	42355	1982	Premise Match	102m	South
	SCIENTIFIC APPARATUS MFRS.&/OR DISTS. (S1530)	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113.	73590	1982	Premise Match	102m	South
	GLASS - LABORATORY APPARATUS MFRS. (G4050)	Selbys Scientific Ltd., 61 Epping Rd., North Ryde. 2113.	36761	1982	Premise Match	102m	South
	SCIENTIFIC APPARATUS MFRS.&/OR DISTS. (S1530)	Selbys Scientific Ltd., 61 Epping Rd., North Ryde. 2113.	73625	1982	Premise Match	102m	South
	GLASS BENDERS &/OR BLOWERS.	Analite Pty, Ltd., 61 Epping Rd., North Ryde. 2113	33020	1978	Premise Match	102m	South
	GLASS-LABORATORY APPARATUS MFRS.	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113	33047	1978	Premise Match	102m	South
	INSTRUMENTS-SCIENTIFIC MFRS. &/OR DISTS. &/OR IMPS.	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113	37693	1978	Premise Match	102m	South
	SCIENTIFIC APPARATUS MFRS. &/OR DISTS.	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113	65113	1978	Premise Match	102m	South
	GLASS-LABORATORY APPARATUS MFRS.	Selbys Scientific Ltd., 61 Epping Rd., North Ryde. 2113	33051	1978	Premise Match	102m	South
	SCIENTIFIC APPARATUS MFRS. &/OR DISTS.	Selbys Scientific Ltd., 61 Epping Rd., North Ryde. 2113	65137	1978	Premise Match	102m	South
	SCIENTIFIC APPARATUS MFRS &/OR DISTS	Analite Pty. Ltd., 61 Epping Rd., North Ryde 2113	76070	1975	Premise Match	102m	South
	INSTRUMENTS-SCIENTIFIC MFRS- &/OR DISTS. &/OR IMPS.	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113	44586	1975	Premise Match	102m	South
	GLASS-LABORATORY APPARATUS MFRS.	Analite Pty. Ltd., 61 Epping Rd., North Ryde. 2113.	38416	1975	Premise Match	102m	South
	GLASS BENDERS &/OR BLOWERS.	Anallte Pty. Ltd., 61 Epping Rd., North Ryde. 2113.	38391	1975	Premise Match	102m	South
	SCIENTIFIC APPARATUS MFRS &/OR DISTS	Selby H. B. & Co. Pty. Ltd., 61 Epping Rd., North Ryde 2113	76095	1975	Premise Match	102m	South
	GLASS-LABORATORY APPARATUS MFRS.	Selby, H. B. & Co. Pty. Ltd., 61 Epping Rd., North Ryde. 2113.	38421	1975	Premise Match	102m	South
	GLASS BENDERS/BLOWERS (G200)	Analite Pty. Ltd., 61 Epping Rd., North Ryde	311067	1970	Premise Match	102m	South
	GLASS LABORATORY APPARATUS MANUFACTURERS (G245)	Analite Pty. Ltd., 61 Epping Rd., North Ryde	311122	1970	Premise Match	102m	South
	INSTRUMENTS-SCIENTIFIC-IMPORTERS, MANUFACTURERS &/OR DISTRIBUTORS	Analite Pty. Ltd., 61 Epping Rd., North Ryde	319693	1970	Premise Match	102m	South
	SCIENTIFIC APPARATUS MFRS. &/OR DISTRIBUTORS (S155)	Aralite Pty. Ltd., 61 Epping Rd., North Ryde	359768	1970	Premise Match	102m	South
	INSTRUMENT REPAIRERS (I360)	Selby, H. B. & Co. Pty. Ltd., 61 Epping Rd., North Ryde, 2113	319359	1970	Premise Match	102m	South
	INSTRUMENTS - INDUSTRIAL - MFRS. &/OR DISTRIBUTORS	Selby, H. B. & Co. Pty. Ltd., 61 Epping Rd., North Ryde, 2113	319602	1970	Premise Match	102m	South
	INSTRUMENTS - MEASURING - MFRS &/OR IMPS. &/OR DISTS.	Selby, H. B. & Co. Pty. Ltd., 61 Epping Rd., North Ryde, 2113	319432	1970	Premise Match	102m	South

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
14	SCHOOL SUPPLIES-MFRS. &/OR DISTRIBUTORS (S131)	Selby, H. B. & Co. Pty. Ltd., 61 Epping Rd., North Ryde. 2113	359478	1970	Premise Match	102m	South
	SCIENTIFIC APPARATUS MFRS. &/OR DISTRIBUTORS (S155)	Selby, H. B. & Co. Pty. Ltd., 61 Epping Rd., North Ryde. 2113	359803	1970	Premise Match	102m	South
	STERILISER MANUFACTURERS (S748)	Selby, H.B. & Co. Pty. Ltd., 61 Epping Rd., North Ryde, 2113	365816	1970	Premise Match	102m	South
	CHEMICAL IMPORTERS &/OR DISTRIBUTORS (C265)	Selby, HB & Co. Pty. Ltd., 61 Epping Rd., North Ryde, 2113	279274	1970	Premise Match	102m	South
	CHEMICALS-TECHNICAL-SUPPLIERS (C274)	Selby, HB & Co. Pty. Ltd., 61 Epping Rd., North Ryde, 2113	279619	1970	Premise Match	102m	South
15	Motor Garages & Service Stations	Mobil North Ryde Service Station, 400 Lane Cove Rd., North Ryde 2113	97873	1991	Premise Match	103m	North
	MOTOR GARAGES & SERVICE STATIONS.	Mobil North Ryde Service Station, 400 Lane Cove Rd., North Ryde. 2113	65112	1986	Premise Match	103m	North
16	FILM DISTS. &/OR EXCHANGES.	Samuelson Film Service Pty. Ltd., 1 Giffnock Ave., North Ryde. 2113	32497	1986	Premise Match	149m	North West
	FILM PROJECTOR HIRERS.	Samuelson Film Service Pty. Ltd., 1 Giffnock Ave., North Ryde. 2113	32629	1986	Premise Match	149m	North West

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Business Directory Records 1950-1991
Road or Area Matches

Universal Business Directory records 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
17	PRINTED CIRCUIT MFRS	Electri-Board Designs Pty. Ltd., Unit 15 Eden Park Ind. Est., Waterloo Rd., Macquarie Park. 2113	75862	1986	Road Match	0m
	PRINTED CIRCUIT MFRS	Precision Graphics Pty. Ltd., Unit 15 Eden Park Ind. Est., Waterloo Rd., Macquarie Park. 2113	75867	1986	Road Match	0m
	FURNITURE-GENERAL-MFRS. &/OR WHOLESALERS	Fairyland Mfrg. Pty. Ltd., Waterloo Rd., North Ryde	317493	1961	Road Match	0m
	UPHOLSTERERS	Fairyland Mfrg. Pty. Ltd., Waterloo Rd., North Ryde	260456	1961	Road Match	0m
	PLUMBERS, GASFITTERS & DRAINLAYERS	Faulkner, W., Waterloo Rd. NORTH RYDE	359806	1961	Road Match	0m
	NURSERYMEN	General Nurseries, Waterloo Rd., North Ryde	354078	1961	Road Match	0m
	ELECTRICAL CONTRACTORS-LICENSED	Goodsell, H. T., Waterloo Rd. Eastwood	301972	1961	Road Match	0m
	JOINERY MANUFACTURERS	I.D.L. Wood Products Pty. Limited, Waterloo Rd., North Ryde	329890	1961	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Rando, J., Waterloo Rd., North Ryde	285235	1961	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Rando, J., Waterloo Rd., North Ryde	19631	1950	Road Match	0m
18	MOTOR GARAGES &/OR ENGINEERS.	North Ryde Auto Port., 247 Lane Cove Rd., North Ryde. 2113	59328	1975	Road Match	0m
	TYRE DEALERS, RETREADERS &/OR VULCANIZERS,	North Ryde Auto Port., 247 Lane Cove Rd., North Ryde. 2113	85607	1975	Road Match	0m
	MOTOR CAR/TRUCK DEALERS-NEW/USED (M520)	House of David Eden Park Service Station (The)., 247 Lane Cove Rd., North Ryde	336019	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS(M6S6)	North Ryde Auto Port., Lane Cove Rd., NORTH RYDE	338339	1970	Road Match	0m
	Fruiterers & Greengrocers	Dinki-Di Kiosk (The), Lane Cove Rd. North, North Ryde	91168	1965	Road Match	0m
	Mixed Businesses	Dom's (J. Dominello), Lane Cove Rd. North, North Ryde	117119	1965	Road Match	0m
	Mixed Businesses	Eden Park Picnic Grounds (House of David), Lane Cove Rd. North, North Ryde	117172	1965	Road Match	0m
	Mixed Businesses	Hammell's Original Diggers' Stall., Lane Cove Rd. North., North Ryde	117456	1965	Road Match	0m
	Motor Car/Truck Dealers - New/Used	House of David Eden Park Service Station (The), 247 Lane Cove Rd., North Ryde	120694	1965	Road Match	0m
	FRUITERERS/GREENGROCERS	Dinki-Di Kiosk (The), Lane Cove Rd. North, North Ryde	315293	1961	Road Match	0m
	MIXED BUSINESS	Eden Park Picnic Grounds (House of David), Lane Cove Rd. North, North Ryde	340814	1961	Road Match	0m
19	NURSERYMEN.	Greenslopes Nursery, Epping Rd., North Ryde. 2113	70022	1986	Road Match	92m
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Perram & Harris Pty Ltd., 179 Epping Rd., Eastwood. 2122	66644	1986	Road Match	92m
	TELEVISION STATIONS.	United Telecasters Sydney Ltd., Epping Rd., North Ryde. 2113.	92774	1986	Road Match	92m
	NURSERYMEN (N1700)	Greenslopes Nursery, Epping Rd., North Ryde. 2113.	61164	1982	Road Match	92m
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Perram & Harris Pty. Ltd., 179 Epping Rd., Eastwood 2122.	58608	1982	Road Match	92m
	TELEVISION STATIONS. (T2275)	United Telecasters Sydney Ltd., Epping Rd., North Ryde. 2113.	79540	1982	Road Match	92m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
19	NURSERYMEN.	Greenslopes Nursery, Epping Rd, North Ryde 2113	54429	1978	Road Match	92m
	MOTOR PAINTERS.	Perram & Harris Pty. Ltd., 179 Epping Rd., Eastwood. 2122	51609	1978	Road Match	92m
	MOTOR PANEL BEATERS	Perram & Harris Pty. Ltd., 179 Epping Rd., Eastwood. 2122	52274	1978	Road Match	92m
	TELEVISION STATIONS.	United Telecasters Sydney Ltd., Epping Rd., North Ryde. 2113	70074	1978	Road Match	92m
	RESEARCH LABORATORIES.	Bread Research institute of Australia., Epping Rd., North Ryde. 2113	73500	1975	Road Match	92m
	NURSERYMEN	Green slopes Nursery., Epping Rd., North Ryde. 2113	64226	1975	Road Match	92m
	MOTOR PAINTERS.	Perram & Harris., 179 Epping Rd., Eastwood. 2122	60354	1975	Road Match	92m
	MOTOR PANEL BEATERS.	Perram & Harris., 179 Epping Rd., Eastwood. 2122	61040	1975	Road Match	92m
	GROCERS-RETAIL	Red "S" Supermarket., Epping Rd., North Ryde. 2113	39797	1975	Road Match	92m
	TELEVISION STATIONS.	United Telecasters Sydney Ltd., Epping Rd., North Ryde. 2113	82524	1975	Road Match	92m
	FISH MERCHANTS-RETAIL (F245)	Bouquet, F., Epping Rd., North Ryde	303333	1970	Road Match	92m
	RESEARCH LABORATORIES (R300)	Bread Research Institute of Australia, Epping Rd., North Ryde	356768	1970	Road Match	92m
	ASSOCIATIONS & SOCIETIES (A612)	Bread Research Institute of Australia., Epping Rd., North Ryde	262747	1970	Road Match	92m
	FRUITERERS/GREENGROCERS (F640)	Brooklyn Fruit Stall, Shrimptons Ck., Epping Rd., N.Ryde	306721	1970	Road Match	92m
	TELEVISION STATIONS (T157)	Channel 10 Studios, Epping Rd., North Ryde	367723	1970	Road Match	92m
	NURSERYMEN (N190)	Greenslopes Nursery., Epping Rd., North Ryde	344488	1970	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	Pollard, H. Service Station., 179 Epping Rd., EASTWOOD	341401	1970	Road Match	92m
	Fish Merchants - Retail	Bouquet, F., Epping Rd., North Ryde	86705	1965	Road Match	92m
	Research Laboratories	Bread Research Institute of Australia, Epping Rd., North Ryde	140286	1965	Road Match	92m
	Associations & Societies	Bread Research institute of Australia., Epping Rd., North Ryde	47663	1965	Road Match	92m
	Fruiterers & Greengrocers	Brooklyn Fruit Stall, Shrimptons Ck., Epping Rd., N. Ryde	90931	1965	Road Match	92m
	Cement Garden Ornament Mfrs.	Dionello, Albino, 175 Epping Rd., Eastwood	63751	1965	Road Match	92m
	Pottery Manufacturers/Distributors	Dionello, Albino., 171 Epping Rd., Eastwood	135347	1965	Road Match	92m
	Nurserymen	Greenslopes Nursery, Epping Highway., North Ryde	129105	1965	Road Match	92m
	Motor Service Stations - Petrol, Oil, Etc.	Perram & Harris, 179 Epping Rd. Eastwood	125664	1965	Road Match	92m
	Motor Painters	Perram & Harris, 179 Epping Rd., Eastwood	124162	1965	Road Match	92m
	Motor Panel Beaters	Perram & Harris, 179 Epping Rd., Eastwood	124924	1965	Road Match	92m
	Welders - Electric &/or Oxy	Perram & Harris., 179 Epping Rd., Eastwood	156735	1965	Road Match	92m
	Motor Service Stations - Petrol, Oil, Etc.	Pollard, H. Service Station, 179 Epping Rd. Eastwood	125665	1965	Road Match	92m
	Business Agents &/or Brokers	Rubal & Residential Realty Pty. Ltd., 173 Epping Rd., Eastwood	57665	1965	Road Match	92m
	Real Estate Agents/Valuers	Rural & Residental Realty Pty. Ltd., 173 Epping Rd. Eastwood	139208	1965	Road Match	92m
	STOCK/STATION AGENTS	Rural & Residential Realty Pty. Ltd., 173 Epping Rd., Eastwood	148916	1965	Road Match	92m
	POULTRY DEALERS-W'SALE	Bouguet, S. F., Epping Rd., North Ryde	361512	1961	Road Match	92m
	FISH MERCHANTS-RETAIL	Bouquet, F., Epping Rd., North Ryde	310902	1961	Road Match	92m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
19	ASSOCIATIONS & SOCIETIES	Bread Research Institute of Australia, Epping Rd., North Ryde	269113	1961	Road Match	92m
	RESEARCH LABORATORIES	Bread Research Institute of Australia, Epping Rd., North Ryde	245883	1961	Road Match	92m
	HATCHERIES	Briton, W. W., Epping Rd., North Ryde	323867	1961	Road Match	92m
	FRUITERERS/GREENGROCERS	Brooklyn Fruit Stall, Shrimptons Ck., Epping Rd., N. Ryde	315092	1961	Road Match	92m
	FURNITURE-GENERAL-MFRS. &/OR WHOLESALERS	Dionello, A., 173 Epping Rd., Eastwood	317480	1961	Road Match	92m
	NURSERYMEN	Dionello, A., 173 Epping Rd., Eastwood	354051	1961	Road Match	92m
	CELLULOSE PAPER IMPORTERS &/OR WHOLESALERS	Dionello, Albino, 171 Epping Rd., Eastwood	286193	1961	Road Match	92m
	CEMENT GARDEN ORNAMENT MFRS.	Dionello, Albino, 171 Epping Rd., Eastwood	286204	1961	Road Match	92m
	POTTERY MFRS./DISTS	Dionello, Albino, 171 Epping Rd., Eastwood	361370	1961	Road Match	92m
	NURSERYMEN	Greenslopes Nursery, Epping Highway, North Ryde	354085	1961	Road Match	92m
	MOTOR GARAGES & ENGINEERS	Morris, S. Grime & Co. Pty. Ltd., 179 Epping Rd. EASTWOOD	347744	1961	Road Match	92m
	MOTOR PAINTERS	Morris, S. Grime Pty. Ltd., 179 Epping Rd., Eastwood	349024	1961	Road Match	92m
	MOTOR PANEL BEATERS	Morris, S. Grime Pty. Ltd., 179 Epping Rd., Eastwood	349793	1961	Road Match	92m
	WELDERS-ELECTRIC &/OR OXY	Morris, S. Grime Pty. Ltd., 179 Epping Rd., Eastwood	262314	1961	Road Match	92m
	MOTOR PANEL BEATERS	Pearson, J. & B., Epping Rd., Eastwood	349852	1961	Road Match	92m
	MOTOR GARAGES & ENGINEERS	Pearson, J. & B., Epping Rd. EASTWOOD	347883	1961	Road Match	92m
	WELDERS-ELECTRIC &/OR OXY	Pearson, J. & B., Epping Rd., Eastwood	262372	1961	Road Match	92m
	MOTOR GARAGES & ENGINEERS	Rotary Hoe Garage, Epping Rd. EASTWOOD	348066	1961	Road Match	92m
	TIMBER MERCHANTS	Short, R. A. (Junr.), Epping Rd., North Ryde	257509	1961	Road Match	92m
	CLEARING CONTRACTORS	Short, R. A., Epping Rd., North Ryde	288891	1961	Road Match	92m
	NURSERYMEN	Young, T. W., 90-95 Epping Rd., North Ryde	354247	1961	Road Match	92m
	POULTRY DEALERS-RETAIL	Bouquet, S. F., Epping Rd., North Ryde	93738	1950	Road Match	92m
	HATCHERIES	Briton, W. W., Epping Rd., North Ryde	61771	1950	Road Match	92m
	POULTRY FARMERS	Briton, W. W., Epping Rd., North Ryde	93891	1950	Road Match	92m
	HATCHERIES	Gordon Vale Stud Farm and Hatchery, Epping Rd., North Ryde	61785	1950	Road Match	92m
	POULTRY FARMERS	Gordon Vale Stud Farm and Hatchery, Epping Rd., North Ryde	94034	1950	Road Match	92m
	NURSERYMEN	Lacherdis, B., Epping Rd., Eastwood	89174	1950	Road Match	92m
	TIMBER MERCHANTS	Short, R. A. (Junr.), Epping Rd., North Ryde	78290	1950	Road Match	92m
	FENCING CONTRACTORS' SUPPLIERS	Short, R. A. (Junr.), Epping, Rd., North Ryde	43736	1950	Road Match	92m
20	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	Dobble's Service Station., Epping Rd., NORTH RYDE	340851	1970	Road Match	92m
	Motor Service Stations - Petrol, Oil, Etc.	Dobble's Service Station, Epping Rd. North Ryde	125972	1965	Road Match	92m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Dobble's Service Station, Epping Rd., North Ryde	350533	1961	Road Match	92m
21	Dog/Cat Boarding Kennels	A1 Kennels, Giffnock Ave., North Ryde	74643	1965	Road Match	144m

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Dry Cleaners, Motor Garages & Service Stations

34 Waterloo Road, Macquarie Park, NSW 2113



Legend

- Site Boundary
- Buffer 500m
- 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: 0 100 200 300 400 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 08 December 2023

Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018
Property Boundaries © NSW Department Finance, Services & Innovation 2023

Historical Business Directories

34 Waterloo Road, Macquarie Park, NSW 2113

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
1	MOTOR GARAGES & SERVICE STATIONS.	North Ryde Auto Port, 275A Lane Cove Rd., North Ryde. 2113	19193	1993	Premise Match	48m	North East
	Motor Garages & Service Stations	North Ryde Auto Port, 275A Lane Cove Rd., North Ryde 2113	97823	1991	Premise Match	48m	North East
	MOTOR GARAGES & SERVICE STATIONS.	North Ryde Auto Port, 275A Lane Cove Rd., North Ryde. 2113	11934	1990	Premise Match	48m	North East
	MOTOR GARAGE & SERVICE STATIONS.	North Ryde Auto Port, 275A Lane Cove Rd., North Ryde. 2113	5343	1989	Premise Match	48m	North East
	MOTOR GARAGES & SERVICE STATIONS.	North Ryde Auto Port, 275A Lane Cove Rd., North Ryde. 2113	59715	1988	Premise Match	48m	North East
	MOTOR GARAGES & SERVICE STATIONS.	North Ryde Auto Port, 275A Lane Cove Rd., North Ryde. 2113	65191	1986	Premise Match	48m	North East
	MOTOR GARAGES & SERVICE STATIONS.	North Ryde Auto Port, 275A Lane Cove Rd., North Ryde. 2113	45294	1985	Premise Match	48m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	North Ryde Auto Port, 275A Lane Cove Rd., North Ryde. 2113	33871	1984	Premise Match	48m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	North Ryde Auto Port., 275A Lane Cove Rd., North Ryde 2113	15222	1983	Premise Match	48m	North East
2	MOTOR GARAGES & SERVICE STATIONS.	Mobil North Ryde Service Station, 400 Lane Cove Rd., North Ryde. 2113	19144	1993	Premise Match	103m	North
	Motor Garages & Service Stations	Mobil North Ryde Service Station, 400 Lane Cove Rd., North Ryde 2113	97873	1991	Premise Match	103m	North
	MOTOR GARAGES & SERVICE STATIONS.	Mobil North Ryde Service Station, 400 Lane Cove Rd., North Ryde. 2113	11870	1990	Premise Match	103m	North
	MOTOR GARAGE & SERVICE STATIONS.	Mobil North Ryde Service Station, 400 Lane Cove Rd., North Ryde. 2113	5283	1989	Premise Match	103m	North
	MOTOR GARAGES & SERVICE STATIONS.	Mobil North Ryde Service Station, 400 Lane Cove Rd., North Ryde. 2113	59646	1988	Premise Match	103m	North
	MOTOR GARAGES & SERVICE STATIONS.	Mobil North Ryde Service Station, 400 Lane Cove Rd., North Ryde. 2113	65112	1986	Premise Match	103m	North
	MOTOR GARAGES & SERVICE STATIONS.	Mobil North Ryde Service Station, 400 Lane Cove Rd., North Ryde. 2113	45218	1985	Premise Match	103m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Mobil North Ryde Service Station, 400 Lane Cove Rd., North Ryde. 2113	33796	1984	Premise Match	103m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Mobil North Ryde Service Station., 400 Lane Cove Rd., North Ryde 2113	15147	1983	Premise Match	103m	North
3	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	North Ryde Auto Port, 295A Lane Cove Rd., North Ryde. 2113.	57302	1982	Premise Match	219m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	North Ryde Auto Port., 295A Lane Cove Rd., North Ryde 2113	3855	1981	Premise Match	219m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	North Ryde Auto Port., 295A Lane Cove Rd., North Ryde. 2113	58600	1980	Premise Match	219m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	North Ryde Auto Port., 295A Lane Cove Rd., North Ryde. 2113.	46089	1979	Premise Match	219m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	North Ryde Auto Port, 295A Lane Cove Rd., North Ryde. 2113	50596	1978	Premise Match	219m	North East
	DRY CLEANERS, PRESSERS &/OR DYERS.	House Of David Supermarket., 279 Lane Cove Rd. North, North Ryde 2113	23555	1976	Premise Match	219m	North East
	DRY CLEANERS, PRESSERS &/OR DYERS.	House of David Supermarket, 279 Lane Cove Rd., North, North Ryde. 2113	24080	1975	Premise Match	219m	North East
	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	House of David Eden Park Service Station (The)., 297 Lane Cove Rd., NORTH RYDE	341217	1970	Premise Match	219m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	House of David, Edan Park Service Station (The)., 297 Lane Cove Rd., NORTH RYDE	338021	1970	Premise Match	219m	North East
	MOTOR GARAGES & ENGINEERS.	House Of David Eden Park Service Station (The)., 297 Lane Cove Rd North Ryde	46940	1969	Premise Match	219m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	House Of David Eden Park Service Station (The)., 297 Lane Cove Rd North Ryde	50552	1969	Premise Match	219m	North East
	MOTOR GARAGES & ENGINEERS	House Of David Eden Park Service Station (The)., 297 Lane Cove Rd North Ryde	26254	1968	Premise Match	219m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	House Of David Eden Park Service Station (The)., 297 Lane Cove Rd North Ryde	32579	1968	Premise Match	219m	North East
	MOTOR GARAGES & ENGINEERS.	House Of David Eden Park Service Station (The)., 297 Lane Cove Rd North Ryde	10756	1967	Premise Match	219m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	House of David Eden Park Service Station (The)., 297 Lane Cove Rd., North Ryde	16038	1967	Premise Match	219m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	House Of David Eden Park Service Station (The)., 297 Lane Cove Rd North Ryde	1609	1966	Premise Match	219m	North East
	MOTOR GARAGES & ENGINEERS.	House Of David Eden Past Service Station (The)., 297 Lane Cove Rd North Ryde	60493	1966	Premise Match	219m	North East
	Motor Service Stations - Petrol, Oil, Etc.	House of David Eden Park Service Station (The), 297 Lane Cove Rd. North Ryde	125973	1965	Premise Match	219m	North East
	Motor Garages & Engineers	House of David, Eden Park Service Station (The), 297 Lane Cove Rd. North Ryde	123133	1965	Premise Match	219m	North East
	MOTOR GARAGES & ENGINEERS	House Of David Eden Park Service Station (The)., 297 Lane Cove Rd North Ryde	48411	1964	Premise Match	219m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	House Of David Eden Park Service Station (The)., 297 Lane Cove Rd North Ryde	52247	1964	Premise Match	219m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Eden Park Service Station., 279 Lane Cove Rd North Ryde	38496	1962	Premise Match	219m	North East
	MOTOR GARAGES & ENGINEERS.	Eden Park Service Station., 297 Lane Cove Rd North Ryde	33118	1962	Premise Match	219m	North East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	House Of David (The)., 279 Lane Cove Rd North Ryde	38497	1962	Premise Match	219m	North East
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Eden Park Service Station, 279 Lane Cove Rd. NORTH RYDE	350554	1961	Premise Match	219m	North East
	MOTOR GARAGES & ENGINEERS	Eden Park Service Station, 297 Lane Cove Rd. NORTH RYDE	347086	1961	Premise Match	219m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	House of David (The), 279 Lane Cove Rd. NORTH RYDE	350710	1961	Premise Match	219m	North East
4	MOTOR GARAGES & ENGINEERS(M6S6)	Dockray, T. G., 424 Lane Cove Rd., NORTH RYDE	337684	1970	Premise Match	424m	North East
	MOTOR GARAGES & ENGINEERS.	Dockray T. G., 424 Lane Cove Rd North Ryde	46937	1969	Premise Match	424m	North East
	MOTOR GARAGES & ENGINEERS	Dockray T. G., 424 Lane Cove Rd North Ryde	26251	1968	Premise Match	424m	North East
	MOTOR GARAGES & ENGINEERS.	Dockray T. G., 424 Lane Cove Rd North Ryde	10753	1967	Premise Match	424m	North East
	MOTOR GARAGES & ENGINEERS.	Dockray T. G., 424 Lane Cove Rd North Ryde	60490	1966	Premise Match	424m	North East
	Motor Garages & Engineers	Dockray, T. G., 424 Lane Cove Rd. North Ryde	123130	1965	Premise Match	424m	North East
	MOTOR GARAGES & ENGINEERS	Dockray T. G., 424 Lane Cove Rd North Ryde	48408	1964	Premise Match	424m	North East
	MOTOR GARAGES & ENGINEERS.	Dockray T. G., 424 Lane Cove Rd North Ryde	33117	1962	Premise Match	424m	North East
5	MOTOR GARAGES & ENGINEERS(M6S6)	Robin Hood Service Station, Wicks Rd. NORTH RYDE	338524	1970	Premise Match	492m	South East
	MOTOR GARAGES & ENGINEERS	Robin Hood Service Station., Cnr Wicks Rd & Epping Hghwy., North Ryde	26255	1968	Premise Match	492m	South East
	MOTOR GARAGES & ENGINEERS.	Robin Hood Service Station., North Ryde Cnr Wicks Rd & Epping Highway North Ryde	10757	1967	Premise Match	492m	South East
	MOTOR GARAGES & ENGINEERS.	Robin Hood Service Station., North Ryde Cnr Wicks Rd & Epping Highway North Ryde	60494	1966	Premise Match	492m	South East
	Motor Garages & Engineers	Robin Hood Service Station North Ryde, Cnr. Wicks Rd. & Epping Highway. North Ryde	123134	1965	Premise Match	492m	South East
	Motor Service Stations - Petrol, Oil, Etc.	Robinhood Service Station, Epping Rd. North Ryde	125974	1965	Premise Match	492m	South East
	MOTOR GARAGES & ENGINEERS	Robin Hood Service Station North Ryde, Cnr. Wicks Rd. & Epping Hghwy., North Ryde	48412	1964	Premise Match	492m	South East
	MOTOR GARAGES & ENGINEERS.	Robin Hood Service Station., North Ryde Cnr Wicks Rd & Epping Hghwy., North Ryde	33121	1962	Premise Match	492m	South East
	MOTOR GARAGES & ENGINEERS.	Robin Hood Service Station., North Ryde Cnr Wicks Rd & Epping Hghwy., North Ryde	33116	1962	Premise Match	492m	South East
	MOTOR GARAGES & ENGINEERS	Robin Hood Service Station, Epping Rd. NORTH RYDE	348041	1961	Premise Match	492m	South East
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Robinhood Service Station, Epping Rd. NORTH RYDE	351033	1961	Premise Match	492m	South East

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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
6	MOTOR GARAGES &/OR ENGINEERS.	North Ryde Auto Port., 247 Lane Cove Rd., North Ryde. 2113	59328	1975	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	North Ryde Auto Port., Lane Cove Rd North Ryde	12759	1972	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	North Ryde Auto Port., Lane Cove Rd North Ryde	62435	1971	Road Match	0m
	MOTOR GARAGES & ENGINEERS(M6S6)	North Ryde Auto Port., Lane Cove Rd., NORTH RYDE	338339	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL,. OIL, ETC.	Eden Park Service Station., Lane Cove Rd North Ryde	24419	1959	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL,. OIL, ETC.	House Of David (The)., Lane Cove Rd North Ryde	24420	1959	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Eden Park Service Station., Lane Cove Rd North Ryde	9504	1958	Road Match	0m
7	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Perram Harris Pty. Ltd., 179 Epping Rd., Eastwood. 2122	33942	1984	Road Match	92m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Perram & Harris Pty. Ltd., 179 Epping Rd., Eastwood 2122	21388	1983	Road Match	92m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Pollard H. Service Station., 179 Epping Rd., Eastwood 2122	34738	1976	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Pollard H. Service Station., 179 Epping Rd Eastwood	16652	1972	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Pollard H. Service Station., 179 Epping Rd Eastwood	2124	1971	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	Dobble's Service Station., Epping Rd., NORTH RYDE	340851	1970	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	Pollard, H. Service Station., 179 Epping Rd., EASTWOOD	341401	1970	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Dobbie's Service Station., Epping Rd North Ryde	50549	1969	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Perram & Harris., 179 Epping Rd Eastwood	47753	1969	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Pollard H. Service Station., 179 Epping Rd Eastwood	47754	1969	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Dobbie's Service Station., Epping Rd North Ryde	32576	1968	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Perram & Harris., 179 Epping Rd Eastwood	31189	1968	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Pollard H. Service Station., 179 Epping Rd Eastwood	31190	1968	Road Match	92m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
7	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Robinhood Service Station., Epping Rd North Ryde	32580	1968	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Dobbie's Service Station., Epping Rd North Ryde	16035	1967	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Perram & Harris., 179 Epping Rd Eastwood	15666	1967	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Pollard H. Service Station., 179 Epping Rd Eastwood	15667	1967	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Robinhood Service Station., Epping Rd., North Ryde	16039	1967	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Dobbie's Service Station., Epping Rd North Ryde	1607	1966	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Perram & Harris., 179 Epping Rd Eastwood	1241	1966	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Pollard H. Service Station., 179 Epping Rd Eastwood	1242	1966	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Robinhood Service Station., Epping Rd North Ryde	1610	1966	Road Match	92m
	Motor Service Stations - Petrol, Oil, Etc.	Dobble's Service Station, Epping Rd. North Ryde	125972	1965	Road Match	92m
	Motor Service Stations - Petrol, Oil, Etc.	Perram & Harris, 179 Epping Rd. Eastwood	125664	1965	Road Match	92m
	Motor Service Stations - Petrol, Oil, Etc.	Pollard, H. Service Station, 179 Epping Rd. Eastwood	125665	1965	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Dobbie's Service Station., Epping Rd North Ryde	52246	1964	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Pollard H. Service Station., 179 Epping Rd Eastwood	51954	1964	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Robinhood Service Station., Epping Rd North Ryde	52248	1964	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Dobbie's Service Station., Epping Rd North Ryde	38495	1962	Road Match	92m
	MOTOR GARAGES & ENGINEERS.	Morris S. Grime & Co. Pty. Ltd., 179 Epping Rd Eastwood	29354	1962	Road Match	92m
	MOTOR GARAGES & ENGINEERS.	Pearson J. & B., Epping Rd Eastwood	29356	1962	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Robinhood Service Station., Epping Rd North Ryde	38498	1962	Road Match	92m
	MOTOR GARAGES & ENGINEERS.	Rotary Hoe Garage., Epping Rd Eastwood	29358	1962	Road Match	92m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Dobble's Service Station, Epping Rd., North Ryde	350533	1961	Road Match	92m
	MOTOR GARAGES & ENGINEERS	Morris, S. Grime & Co. Pty. Ltd., 179 Epping Rd. EASTWOOD	347744	1961	Road Match	92m
	MOTOR GARAGES & ENGINEERS	Pearson, J. & B., Epping Rd. EASTWOOD	347883	1961	Road Match	92m
	MOTOR GARAGES & ENGINEERS	Rotary Hoe Garage, Epping Rd. EASTWOOD	348066	1961	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL,. OIL, ETC.	Dobbie's Service Station., Epping Rd North Ryde	24418	1959	Road Match	92m
	MOTOR GARAGES & ENGINEERS.	Morris S. Grime & Co. Pty. Ltd., 179 Epping Rd Eastwood	14032	1959	Road Match	92m
	MOTOR GARAGES & ENGINEERS.	Pearson J. & B., Epping Rd Eastwood	14034	1959	Road Match	92m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
7	MOTOR GARAGES & ENGINEERS.	Rotary Hoe Garage., Epping Rd Eastwood	14036	1959	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Dobbie's Service Station., Epping Rd North Ryde	9493	1958	Road Match	92m
	MOTOR GARAGE/ENGINEERS.	Pearson J. & B., Epping Rd Eastwood	4734	1958	Road Match	92m
	MOTOR GARAGE/ENGINEERS.	Rotary Hoe Garage., Epping Rd Eastwood	4899	1958	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Dobbie's Service Station., Epping Rd North Ryde	61876	1956	Road Match	92m
	MOTOR GARAGES &/OR ENGINEERS.	Pearson J. & B., Epping Rd Eastwood	61272	1956	Road Match	92m
	MOTOR GARAGES &/OR ENGINEERS.	Rotary Hoe Garage., Epping Rd Eastwood	61425	1956	Road Match	92m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Dobbie's Service Station., Epping Rd North Ryde	54449	1954	Road Match	92m
	MOTOR GARAGES &/OR ENGINEERS.	Pearson J. & B., Epping Rd Eastwood	49834	1954	Road Match	92m
	MOTOR GARAGES &/OR ENGINEERS.	Rotary Hoe Garage., Epping Rd Eastwood	54041	1954	Road Match	92m
	MOTOR GARAGES &/OR ENGINEERS.	Rotary Hoe Garage., Epping Rd Eastwood	40622	1953	Road Match	92m
8	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Mobil North Ryde Service Station, Lane Cove Rd., North Ryde. 2113.	57226	1982	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Mobil North Ryde Service Station., Lane Cove Rd., North Ryde 2113	3792	1981	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Mobil North Ryde Service Station., Lane Cove Rd., North Ryde. 2113	58525	1980	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Mobil North Ryde., Lane Cove Rd., North Ryde. 2113.	45994	1979	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Geniales Service Station, Lane Cove Rd., North Ryde. 2113	50091	1978	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Geniales Service Station., Lane Cove Rd., North Ryde 2113	30075	1976	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	North Ryde Auto Port., 247 Lane Cove Rd., North Ryde 2113	30592	1976	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS.	Geniales Service Station., Lane Cove Rd., North Ryde. 2113	58917	1975	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS.	Eden Park Service Station (The)., 247 Lane Cove Rd North Ryde	12757	1972	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS.	Geniale's. Service Station., Lane Cove Rd North Ryde	12758	1972	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS.	Eden Park Service Station (The)., 247 Lane Cove Rd North Ryde	62433	1971	Road Match	193m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Eden Park Service Station (The)., 247 Lane Cove Rd North Ryde	2434	1971	Road Match	193m
	MOTOR GARAGES &/OR ENGINEERS.	Geniale's Service Station., Lane Cove Rd., North Ryde	62434	1971	Road Match	193m
	MOTOR GARAGES & ENGINEERS(M6S6)	Geniale's Service Station., Lane Cove Rd., NORTH RYDE	337856	1970	Road Match	193m
	MOTOR GARAGES & ENGINEERS.	Geniale's Service Station., Lane Cove Rd North Ryde	46939	1969	Road Match	193m
	MOTOR GARAGES & ENGINEERS	Geniale's Service Station., Lane Cove Rd North Ryde	26253	1968	Road Match	193m
	MOTOR GARAGES & ENGINEERS.	Geniale's Service Station., Lane Cove Rd North Ryde	10755	1967	Road Match	193m
	MOTOR GARAGES & ENGINEERS.	Geniale's Service Station., Lane Cove Rd North Ryde	60492	1966	Road Match	193m
	Motor Garages & Engineers	Geniale's Service Station, Lane Cove Rd. North Ryde	123132	1965	Road Match	193m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
8	MOTOR GARAGES & ENGINEERS	Glenaile's Service Station., Lane Cove Rd., North Ryde	48410	1964	Road Match	193m
	MOTOR GARAGES & ENGINEERS.	Gleniale's Service Station., Lane Cove Rd North Ryde	33120	1962	Road Match	193m
	MOTOR GARAGES & ENGINEERS.	Total Service Station., Lane Cove Rd North Ryde	33122	1962	Road Match	193m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Total Service Station., Lane Cove Rd North Ryde	38499	1962	Road Match	193m
	MOTOR GARAGES & ENGINEERS	Geniale's Service Station, Lane Cove Rd., North Ryde	347211	1961	Road Match	193m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Geniale's Service Station, Lane Cove Rd., North Ryde	350600	1961	Road Match	193m
	MOTOR SERVICE STATIONS-PETROL,. OIL, ETC.	Geniale J., Lane Cove Rd North Ryde	24421	1959	Road Match	193m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Geniale J., Lane Cove Rd North Ryde	9609	1958	Road Match	193m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Eden Park Service Station., Lane Cove Rd North N Ryde	61885	1956	Road Match	193m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Jeniale J., Lane Cove Rd North., North Ryde	61967	1956	Road Match	193m

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Aerial Imagery 2023

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Aerial Imagery 2020

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Aerial Imagery 2016

34 Waterloo Road, Macquarie Park, NSW 2113



Aerial Imagery 2011

34 Waterloo Road, Macquarie Park, NSW 2113



Aerial Imagery 2007

34 Waterloo Road, Macquarie Park, NSW 2113



Scale:
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Meters

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Aerial Imagery 2000

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Aerial Imagery 1994

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Aerial Imagery 1991

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Aerial Imagery 1986

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Aerial Imagery 1982

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Aerial Imagery 1978

34 Waterloo Road, Macquarie Park, NSW 2113



Scale:
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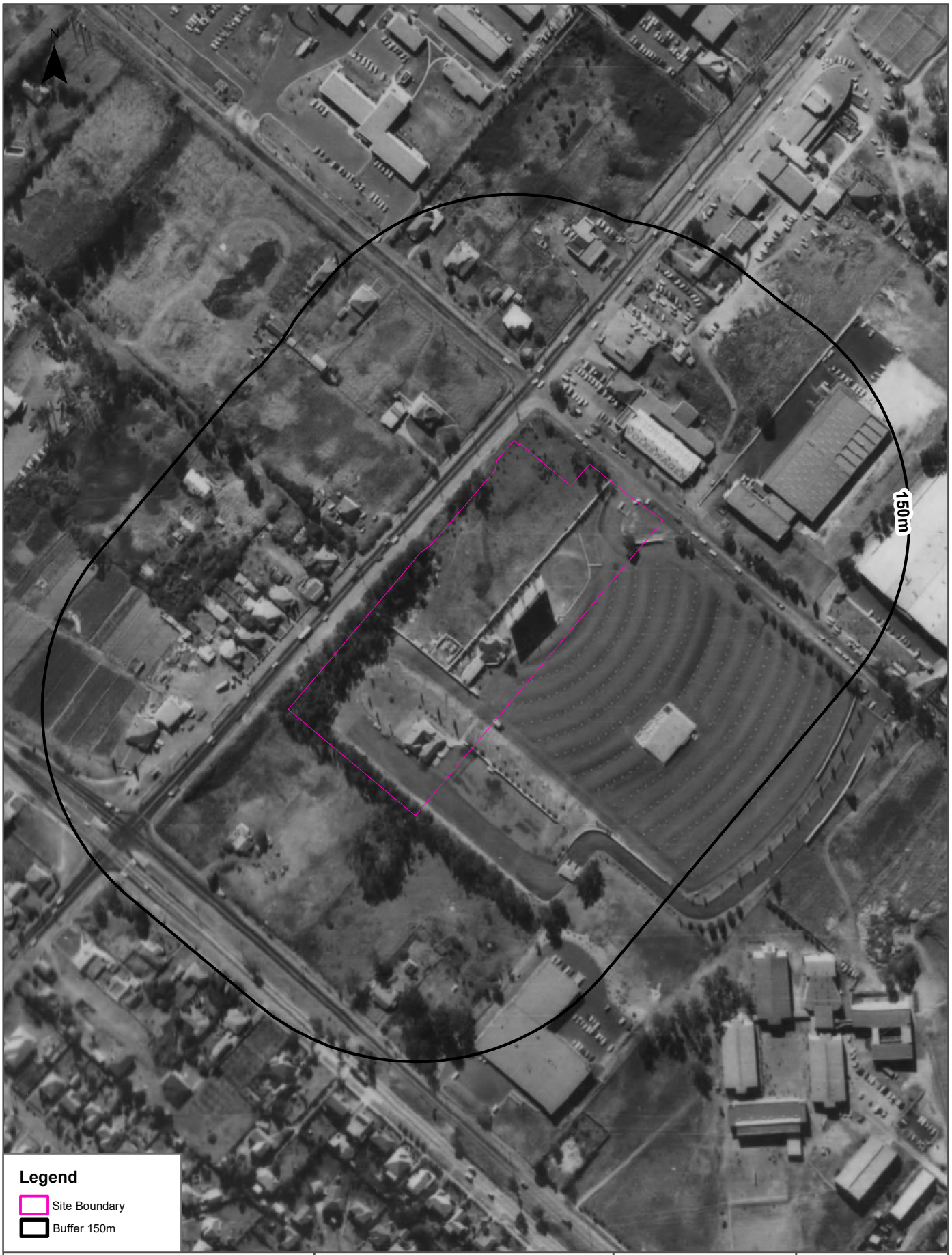
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GDA 1994 MGA Zone 56

Date: 08 December 2023

Aerial Imagery 1970

34 Waterloo Road, Macquarie Park, NSW 2113



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Aerial Imagery 1965

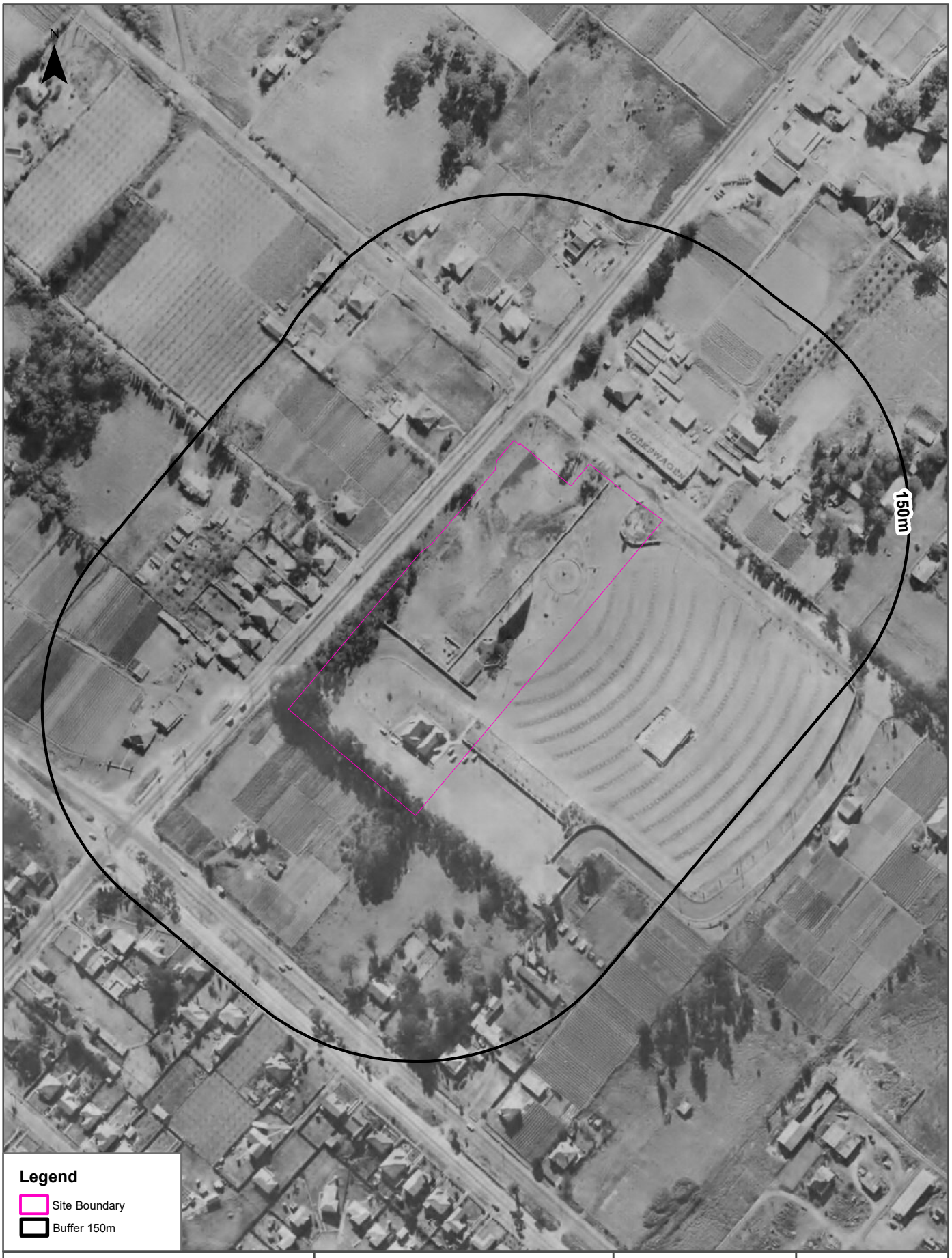
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Aerial Imagery 1961

34 Waterloo Road, Macquarie Park, NSW 2113



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Aerial Imagery 1955, 1956

34 Waterloo Road, Macquarie Park, NSW 2113



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Aerial Imagery 1951

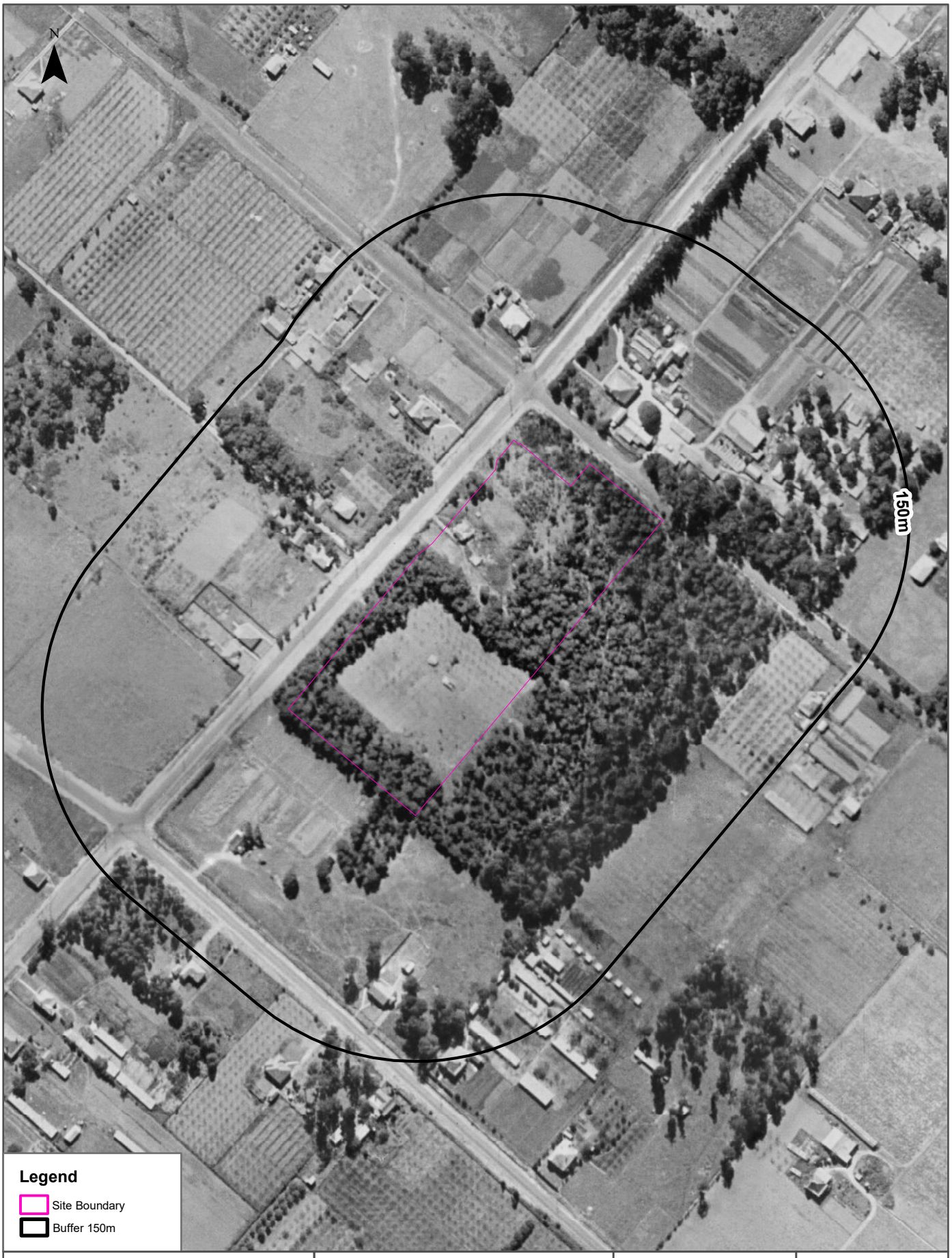
34 Waterloo Road, Macquarie Park, NSW 2113



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Aerial Imagery 1943

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Aerial Imagery 1930

34 Waterloo Road, Macquarie Park, NSW 2113

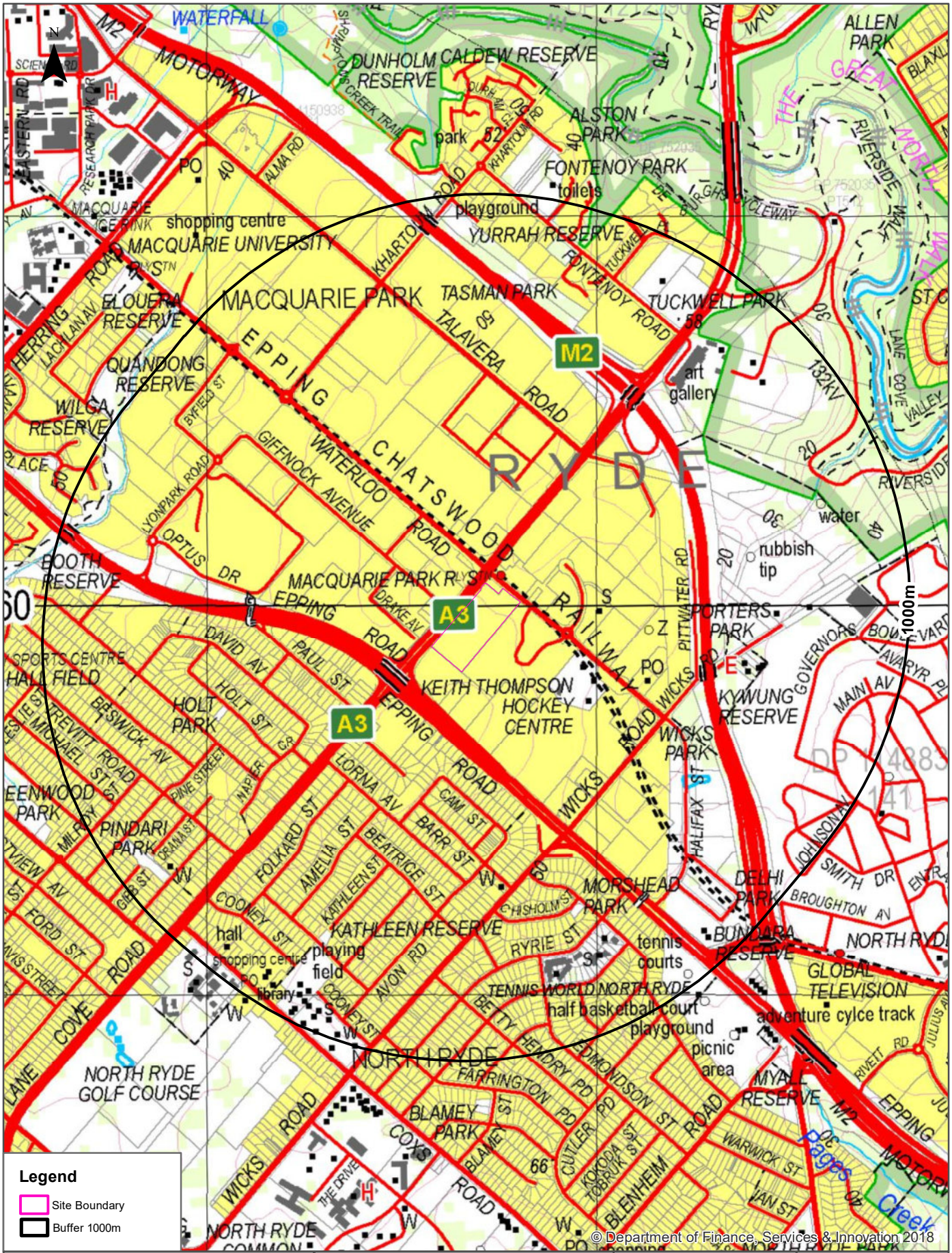


Scale:	Data Sources: Aerial Imagery: © Geoscience Australia	Coordinate System: GDA 1994 MGA Zone 56	Date: 08 December 2023

0 30 60 90 120 Meters

Topographic Map 2015

34 Waterloo Road, Macquarie Park, NSW 2113



Scale: 0 150 300 450 600 Meters

Data Sources: Topographic Map Data © NSW Land and Property Information

Coordinate System: GDA 1994 MGA Zone 56

Date: 08 December 2023

Historical Map 1975

34 Waterloo Road, Macquarie Park, NSW 2113



Historical Map c.1936

34 Waterloo Road, Macquarie Park, NSW 2113



Legend

- Site Boundary
- Buffer 1000m

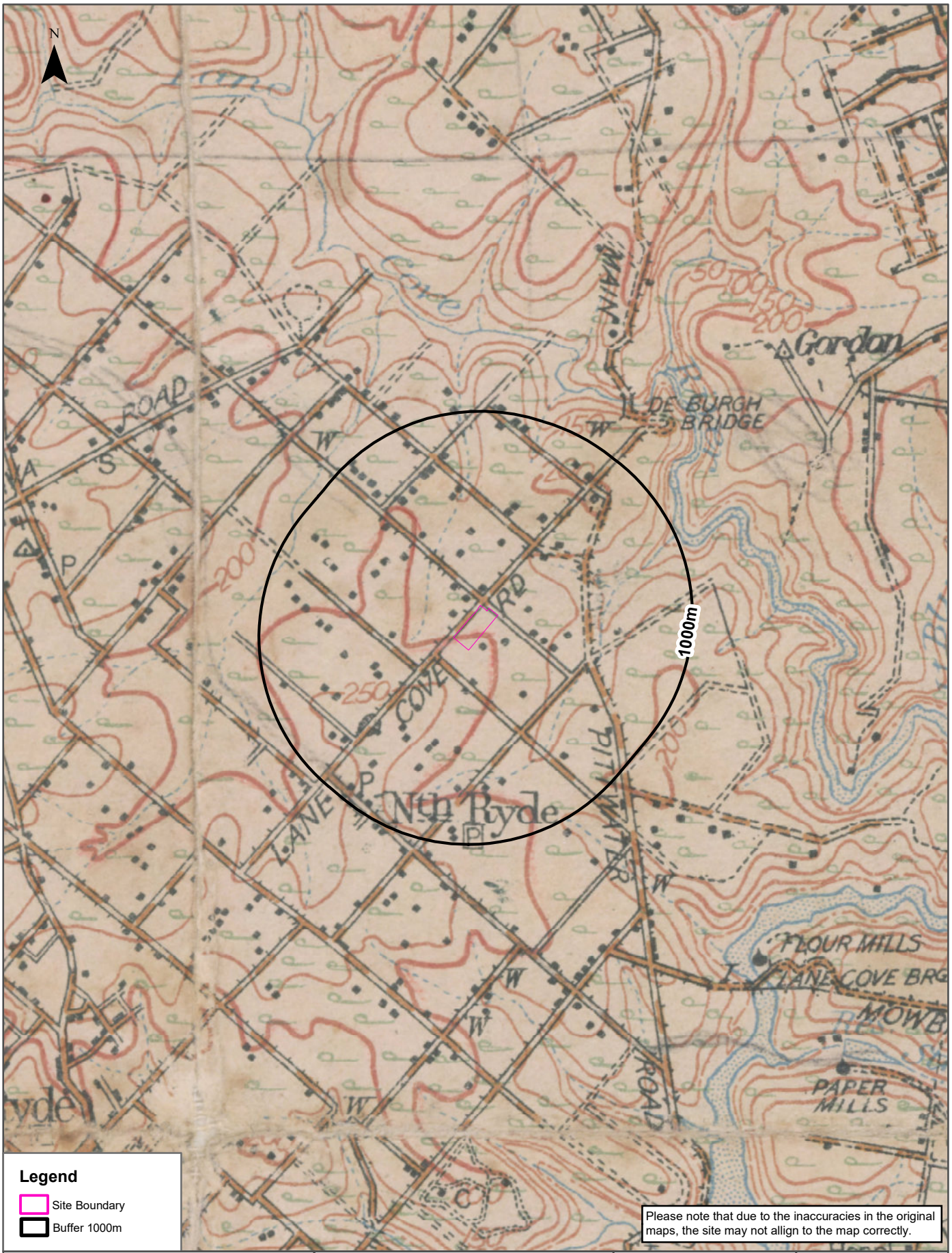
Please note that due to the inaccuracies in the original maps, the site may not allign to the map correctly.

Scale:	Data Sources: Australia 1:63360 Produced by Australian Section Imperial General Staff	Coordinate System: GDA 1994 MGA Zone 56	Date: 08 December 2023

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Historical Map c.1917

34 Waterloo Road, Macquarie Park, NSW 2113



Scale: 0 310 620 930 1,240 Meters

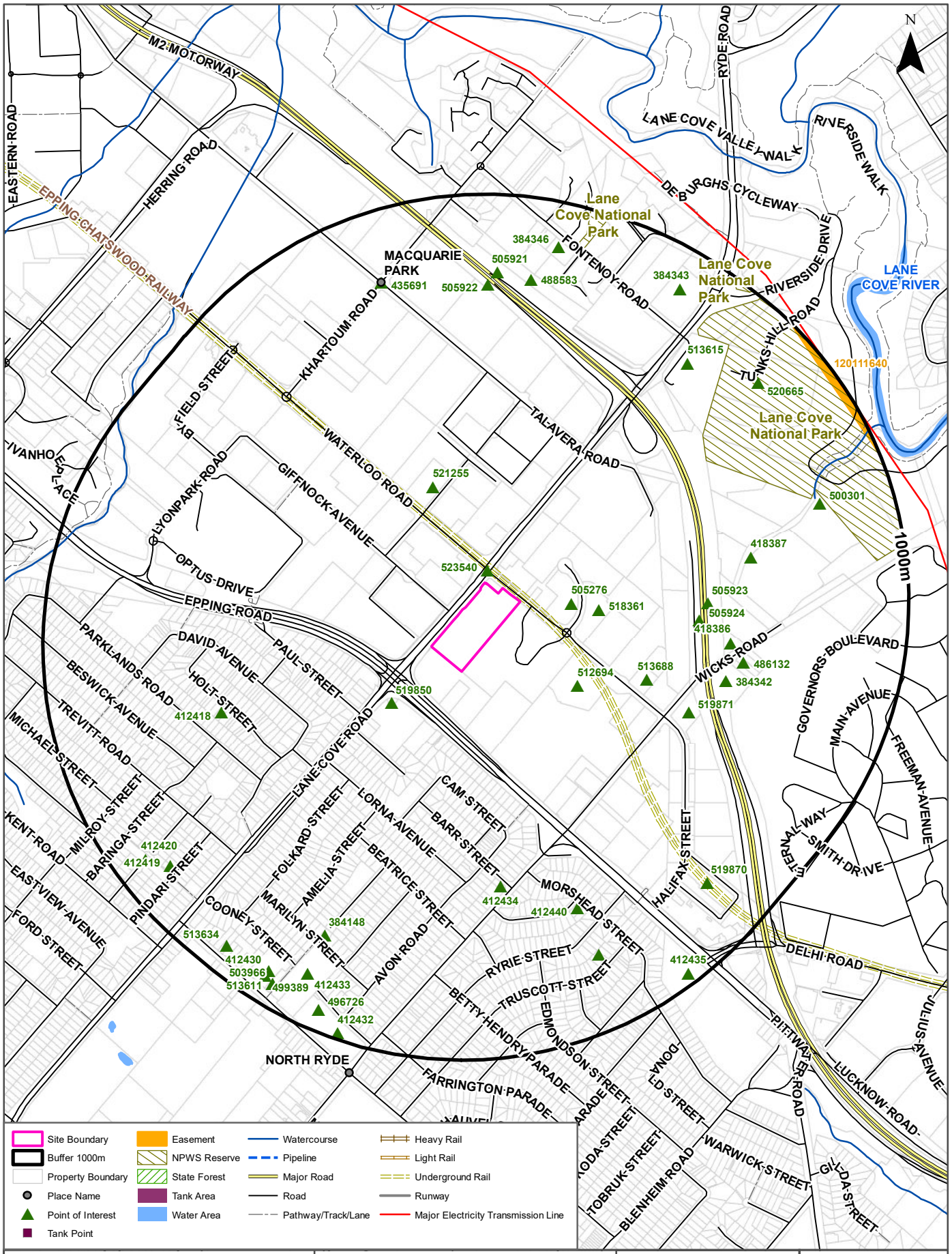
Data Sources: Australia 1:63360
Produced by Australian Section Imperial General Staff

Coordinate System:
GDA 1994 MGA Zone 56

Date: 08 December 2023

Topographic Features

34 Waterloo Road, Macquarie Park, NSW 2113



Scale: 0 100 200 400 600 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2023

Coordinate System: GDA 1994 MGA Zone 56

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Topographic Features

34 Waterloo Road, Macquarie Park, NSW 2113

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
523540	Railway Station	MACQUARIE PARK RAILWAY STATION	33m	North
505276	Transport Interchange	MACQUARIE PARK BUS INTERCHANGE	131m	East
519850	Park	NIMBIN RESERVE	177m	South West
518361	Primary School	CA MONTESSORI CHILDREN'S CENTRE	203m	East
512694	Sports Field	KEITH THOMPSON HOCKEY CENTRE	252m	South East
521255	Park	CATHERINE HAMLIN PARK	280m	North
513688	Post Office	MACQUARIE PARK POST BUSINESS CENTRE	383m	East
505924	Roadside Emergency Telephone	40	463m	East
505923	Roadside Emergency Telephone	39	483m	East
519871	Park	TIRRIWAN RESERVE	518m	East
418386	Park	PORTERS PARK	551m	East
412434	Place Of Worship	SALVATION ARMY CHURCH	562m	South
384342	Park	KYWUNG RESERVE	567m	East
412418	Park	HOLT PARK	567m	West
486132	SES Facility	RYDE SES	596m	East
418387	Rubbish Depot	RYDE RESOURCE RECOVERY CENTRE	604m	East
412440	Park	MORSHEAD PARK	678m	South
513615	Art Gallery	ART GALLERY NORTH RYDE	748m	North East
384148	Park	KATHLEEN RESERVE	764m	South West
505922	Roadside Emergency Telephone	38	768m	North
488583	Park	TASMAN PARK	789m	North
505921	Roadside Emergency Telephone	37	799m	North
498599	Primary School	TRUSCOTT STREET PUBLIC SCHOOL	809m	South
500301	Filtration Plant	WATER	811m	East
435691	Suburb	MACQUARIE PARK	817m	North
520665	Picnic Area	TUNKS HILL PICNIC AREA	832m	North East
519870	Park	CAMPBELLS COMMON	833m	South East
412433	Sports Field	PLAYING FIELD	872m	South West
412419	Place Of Worship	NORTH RYDE CHRISTIAN CHURCH	877m	South West
384346	Park	YURRAH RESERVE	886m	North
384343	Park	TUCKWELL PARK	895m	North East

Map Id	Feature Type	Label	Distance	Direction
412430	Shopping Centre	COXS ROAD SHOPPING CENTRE	916m	South West
412420	Park	PINDARI PARK	918m	South West
513634	Community Facility	1ST NORTH RYDE SCOUT HALL	929m	South West
499389	Post Office	NORTH RYDE POST OFFICE	932m	South West
513611	Community Facility	NORTH RYDE SCHOOL OF ARTS COMMUNITY CENTRE	939m	South West
503966	Library	NORTH RYDE LIBRARY	939m	South West
496726	Primary School	HOLY SPIRIT CATHOLIC PRIMARY SCHOOL	945m	South
412435	Sports Court	TENNIS COURTS	971m	South East
412432	Place Of Worship	CATHOLIC CHURCH	984m	South

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Topographic Features

34 Waterloo Road, Macquarie Park, NSW 2113

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
120111640	Primary	Undefined		978m	North East

Easements Data Source: © Land and Property Information (2015)
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Topographic Features

34 Waterloo Road, Macquarie Park, NSW 2113

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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National Parks and Wildlife Service Reserves

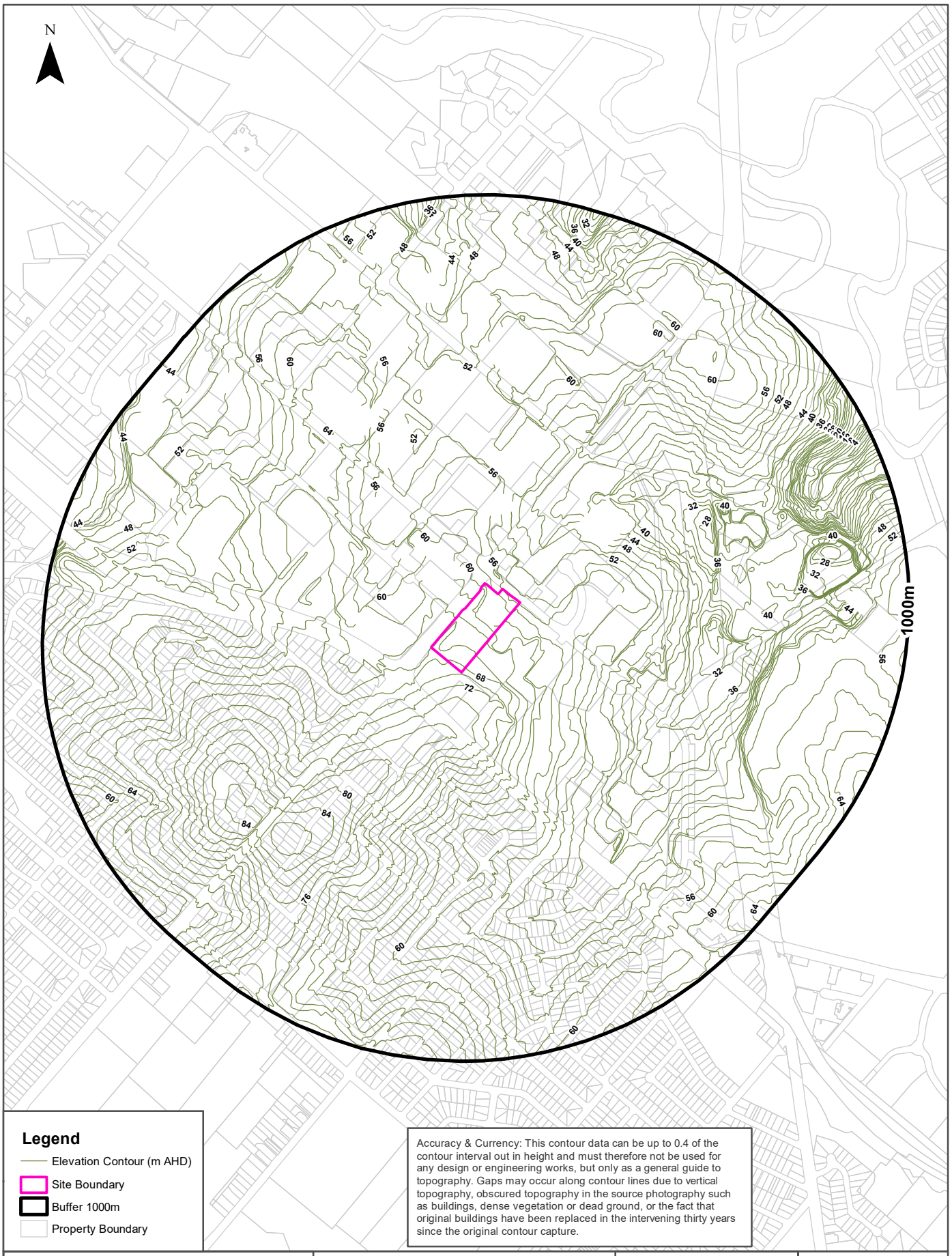
What NPWS Reserves exist within the dataset buffer?

Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N0083	NATIONAL PARK	Lane Cove National Park	24/04/1992	601m	North East

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

34 Waterloo Road, Macquarie Park, NSW 2113



Hydrogeology & Groundwater

34 Waterloo Road, Macquarie Park, NSW 2113

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)
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Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

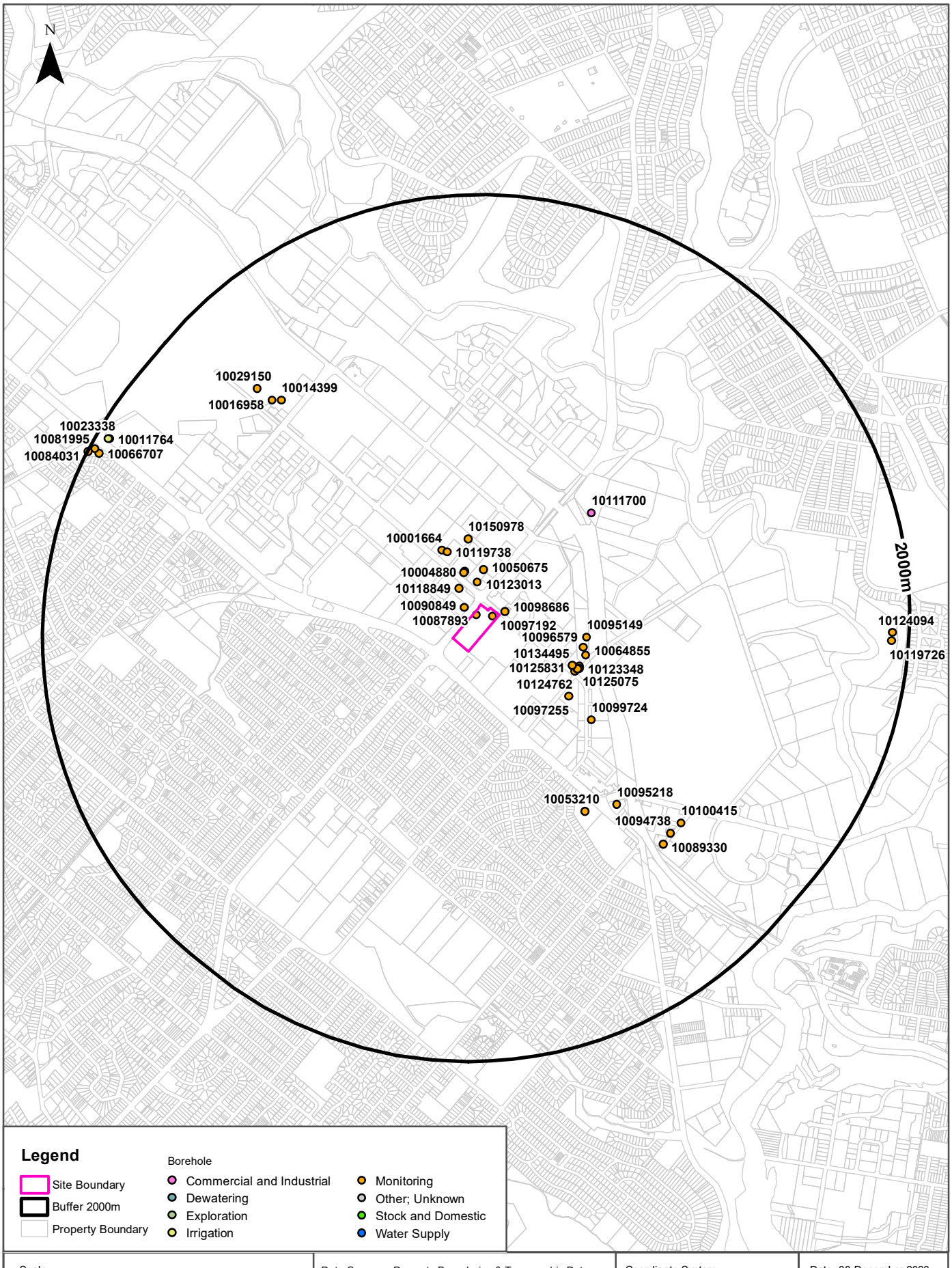
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

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

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018 Data Source : NSW Department of Primary Industries

Groundwater Boreholes

34 Waterloo Road, Macquarie Park, NSW 2113



Hydrogeology & Groundwater

34 Waterloo Road, Macquarie Park, NSW 2113

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
10087893	GW109611	Monitoring	Unknown	18/12/2001	1.00		AHD				0m	On-site
10097192	GW109610	Monitoring	Unknown	09/12/2001	32.00		AHD				0m	On-site
10098686	GW109613	Monitoring	Unknown	09/03/2000	41.80		AHD				31m	North East
10090849	GW109612	Monitoring	Unknown	18/12/2001	1.15		AHD				54m	North West
10123013	GW110172	Monitoring	Unknown	09/03/2000	36.00		AHD				111m	North
10118849	GW110171	Monitoring	Unknown	08/02/2000	36.10		AHD				131m	North West
10050675	GW109837	Monitoring	Unknown	21/12/2002	36.60		AHD			18.00	172m	North
10119183	GW110170	Monitoring	Unknown	31/01/2000	43.00		AHD				176m	North
10004880	GW114903	Monitoring	Functional	29/01/2015	9.00		AHD				180m	North
10119738	GW110169	Monitoring	Unknown	09/09/2002	6.50		AHD				303m	North
10001664	GW114904	Monitoring	Functional	29/01/2015	9.00		AHD				324m	North West
10150978	GW114905	Monitoring	Functional	29/01/2015	10.50		AHD				326m	North
10134495	GW113463	Monitoring	Functional	02/02/2010	6.00		AHD				435m	East
10125831	GW113464	Monitoring	Functional	13/01/2014	3.40		AHD				438m	East
10096579	GW109860	Monitoring	Unknown	24/02/2009	2.50		AHD				439m	East
10095149	GW109861	Monitoring	Unknown	24/02/2009	3.00		AHD				440m	East
10125397	GW113465	Monitoring	Functional	02/02/2010	3.00		AHD				463m	South East
10125688	GW113459	Monitoring	Unknown	02/02/2010	5.30		AHD				463m	East
10124762	GW113466	Monitoring	Functional	02/02/2010	6.00		AHD				464m	South East
10125876	GW113460	Monitoring	Functional	02/02/2010	2.50		AHD				465m	East
10123348	GW113462	Monitoring	Functional	02/02/2010	6.00		AHD				466m	East
10064855	GW109859	Monitoring	Unknown	24/02/2009	3.00		AHD				467m	East
10125075	GW113461	Monitoring	Functional	13/01/2014	1.80		AHD				470m	East
10097255	GW109362	Monitoring	Unknown	22/09/2008	26.40		AHD				515m	South East
10111700	GW107998	Commercial and Industrial	Unknown	05/10/2004	180.00		AHD	2080	0.170	38.00	668m	North East
10099724	GW109363	Monitoring	Unknown	22/09/2008	41.83		AHD				676m	South East
10053210	GW111742	Monitoring	Functional	26/03/2012	11.00		AHD			6.10	965m	South East
10095218	GW109365	Monitoring	Unknown	25/09/2008	20.15		AHD				1041m	South East
10094738	GW112647	Monitoring	Functional	01/05/2012	13.00		AHD			5.65	1328m	South East
10100415	GW112646	Monitoring	Functional	30/04/2012	10.00		AHD			3.65	1333m	South East

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
10089330	GW112648	Monitoring	Functional	01/05/2012	11.30		AHD			10.59	1337m	South East
10014399	GW109695	Monitoring	Unknown	18/01/2000	44.30		AHD				1391m	North West
10016958	GW109694	Monitoring	Unknown	12/12/2001	46.40		AHD				1422m	North West
10029150	GW109696	Monitoring	Unknown	27/01/2000	35.50		AHD				1515m	North West
10119726	GW111804	Monitoring	Functional	01/06/2009	7.00		AHD			5.50	1918m	East
10124094	GW111805	Monitoring	Functional	01/06/2009	12.00		AHD			9.50	1919m	East
10011764	GW011296	Irrigation	Unknown	01/09/1953	67.00		AHD	501-1000 ppm			1934m	North West
10023338	GW016863	Irrigation	Unknown	01/01/1958	45.70		AHD	0-500 ppm			1939m	North West
10066707	GW112640	Monitoring	Functional	05/08/2009	8.00		AHD				1944m	North West
10081995	GW112642	Monitoring	Functional	05/08/2009	8.00		AHD				1971m	North West
10084031	GW112641	Monitoring	Functional	05/08/2009	8.00		AHD				1996m	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

Hydrogeology & Groundwater

34 Waterloo Road, Macquarie Park, NSW 2113

Driller's Logs

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

NGIS Bore ID	Drillers Log	Distance	Direction
10123013	0.00m-0.10m SILTY SAND, BROWN,FINE GRAINED WITH ROOT,FIBRE 0.10m-0.40m FILL,(GRAVELLY SAND)BROWN,FINE TO MEDIUM GRAINED 0.40m-0.80m FILL,GRAVELLY SILTY CLAY,BROWN/GREY,MEDIUM PLASTICITY 0.80m-1.40m SILTY CLAY RED BROWN,MEDIUM TO HIGH PLASTICITY,IRONSTONE 1.40m-2.75m SILTY CLAY.RED. BROWN GREY,TRACES OF IRONSTONE/GRAVEL 2.75m-3.20m CORE LOSS 0.45m 3.20m-3.75m SHALE,LIGHT GREY/RED-BROWN WITH BABNDS OF IRONSTAINED SHALE 3.75m-8.30m SHALE,DARK GREY/BROW, IRONSTAINED 8.30m-13.30m SHALE,DARK GREY 13.30m-16.75m SHALE,DARK GREY,WITH FINE GRAINED LIGHT-GREY SANDSTONE 16.75m-20.20m SANDSTONE LIGHT GREY,FINE GRAINED,SHALE LAMINATIONS 20.20m-22.40m SANDSTONE L/GREY,FINE GRAINED 22.40m-27.90m SANDSTONE L/GREY,MEDIUM GRAINED 27.90m-30.10m SANDSTONE,L/GREY,MEDIUM COARSE GRAINED,GRAINED SHALE GRAVELS 30.10m-36.00m SANDSTONE LIGHT GREY,FINE TO MEDIUM GRAINED	111m	North
10118849	0.00m-1.00m FILL,SANDY CLAYEY GRAVEL,BROWN,FINE TO COARSE 1.00m-2.30m SILTY CLAY,LIGHT GREY AND BROWN,HIGH PLASTICITY. 2.30m-3.40m SHALE,GREY AND BROWN,FINE TO COARSE GRAINED IRONSTONE,GRAVEL BANDS 3.40m-4.65m SHALE,DARK GREY AND BROWN ,VERY LOW STRENGH 4.65m-5.75m SHALE DARK GREY AND BROWN 5.75m-6.20m CORE LOSS (5.75m-6.2m) 6.20m-8.50m SHALE DARK GREY 8.50m-9.20m CORE LOOS (8.5m-9.2m) 9.20m-10.90m SHALE DRK GREY 10.90m-12.50m CORE LOSS (10.9m-12.5m) 12.50m-13.00m SHALE DARK GREY 13.00m-15.30m SHALE DARK GREY WITH LIGHT GRAINED SANDSTONE 15.30m-18.00m SHALE AND SANDSTONE 18.00m-22.40m SANDSTONE L/GREY,FINE GRAINED 22.40m-35.70m SANDSTONE L/GREY,MEDIUM GRAINED 35.70m-36.10m SANDSTONE L/GREY,FINE GRAINED	131m	North West
10050675	0.00m-3.60m FILL 3.60m-4.80m CLAY 4.80m-8.40m SHALE 8.40m-18.00m FINE SANDSTONE 18.00m-36.60m COARSE SANDSTONE	172m	North
10119183	0.00m-0.10m ASPHALTIC CONCRETE,(30mm thick) 0.10m-0.25m FILL,SANDY GRAVEL,MEDIUM GRAINED 0.25m-5.25m SILTY CLAY,RED/BROWN AND GREY,MEDIUM-HIGH PLASTICITY,IRONSTONE 5.25m-6.50m SHALE,DARK GREY 6.50m-15.00m SHALE,DARK GREY 15.00m-21.20m SHALE AND SANDSTONE,SHALE DRK GREY,SANDSTONE L/GREY 21.20m-25.85m SANDSTONE L/GREY,FINE GRAINED,LAMINATED,SHALE 25.85m-39.50m SANDSTONE L/GREY,FINE TO MEDIUM GRAINED 39.50m-42.20m SANDSTONE,L/GREY,MEDIUM GRAINED 42.20m-43.00m SANDSTONE L/GREY,FINE TO MEDIUM GRAINED,MEDIUM BEDDED	176m	North
10004880	0.00m-0.30m FILL, SANDY GRAVEL, BLACK 0.30m-2.10m CLAY AND WEATHERED SHALE,RED,ORANGE,SOFT 2.10m-9.00m SHALE, RED AND GREY,SOFT	180m	North
10119738	0.00m-0.10m GRASS 0.10m-1.80m TOPSOIL,SILT,SAND,FINE,MEDIUM GRAINED,BROWN,DRY,FIRM 1.80m-3.00m SILTY CLAY,LOW PLASTICITY,GREY WITH ORANGE/RED MOTTLE,SOME IRONSTONE GRAVEL 3.00m-6.50m WEATHERED SHALE,BROWN,DRY,HARD, NO IRONSTONE GRAVEL	303m	North
10001664	0.00m-1.80m FILL, GRAVELLY CLAY,BROWN FIRM 1.80m-2.00m IRONSTONE 2.00m-2.80m CLAY,GREY RED AND WHITE FIRM 2.80m-3.00m IRONSTONE 3.00m-3.20m CLAY GREY RED AND WHITE, FIRM 3.20m-3.40m IRONSTONE 3.40m-9.00m CLAY AND SHLAE,RED AND ORANGE, HARD	324m	North West
10150978	0.00m-0.30m FILL, SANDY GRAVEL,BLACK 0.30m-2.20m CLAY AND SHALE ORANGE AND BROWN,SOFT 2.20m-10.50m SHALE GREY SOFT	326m	North
10096579	0.00m-2.50m ROAD BASE,SILTY SAND, DARK,YELLOW,DARK BROWN,SANDY CLAY	439m	East

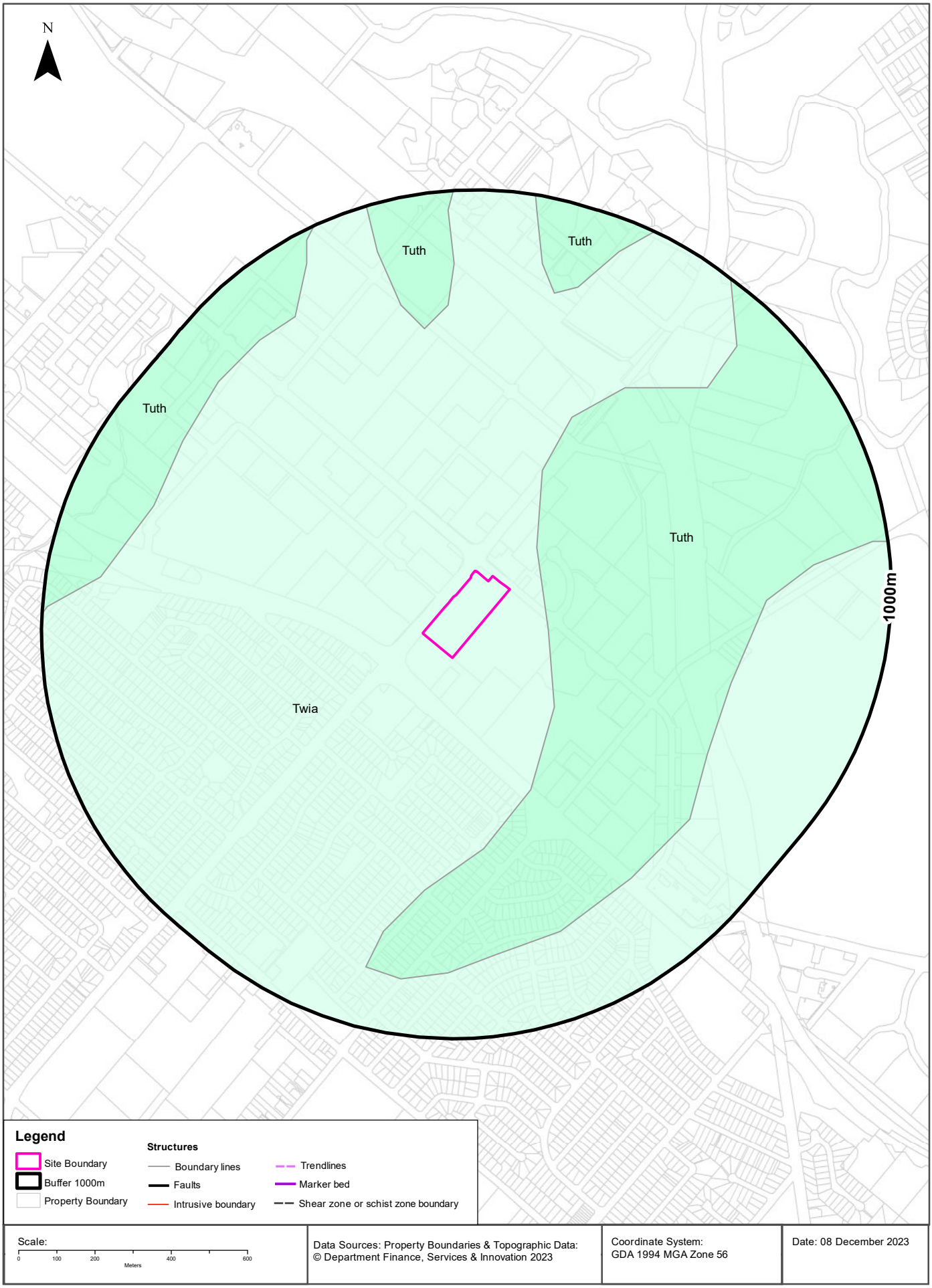
NGIS Bore ID	Drillers Log	Distance	Direction
10095149	0.00m-3.00m ROAD BASE,SAND,DARK GREY,CLAYEY SAND,WHITE,LOW MOISTURE CONTENT.	440m	East
10064855	0.00m-3.00m ROAD BASE,SANDY CLAY,SANDSTONE INCLUSIONS	467m	East
10097255	0.00m-1.00m CLAYEY SILT,SUBANGULAR GRAVEL 1.00m-1.50m SILTY CLAY,GREY,ORANGE 1.50m-3.30m SANDSTONE BROWN ,FINE GRAVEL 3.30m-12.10m SANDSTONE,RED BROWN 12.10m-17.50m SANDSTONE GREY,SILSTONE 17.50m-17.95m SANDSTONE DARK GREY 17.95m-26.40m SANDSTONE DARK GREY,FINE COIARSE GRAINED	515m	South East
10111700	0.00m-1.00m FILL 1.00m-6.50m SANDSTONE L/BROWN 6.50m-8.00m SHALE 8.00m-108.70m SANDSTONE GREY 108.70m-109.00m SANDSTONE FINE QUARTZ 109.00m-153.00m SANDSTONE GREY 153.00m-158.00m SANDSTONE D/GREY 158.00m-160.00m SANDSTONE FINE QUARTZ 160.00m-180.00m SANDSTONE GREY	668m	North East
10099724	0.00m-0.11m REINFORCED CONCRETE 0.11m-1.50m GRAVELLY CLAYEY SAND,SANDSTONE,GRAVEL 1.50m-2.40m SANDY CLAY,GREY M/PLASTICITY 2.40m-3.00m CLAYEY SAND ORANGE BROWN,TRACE SANDSTONE,GRAVEL 3.00m-3.87m SANDSTONE ORANGE MED.COARSE GRAINED,QUARTZ 3.87m-4.31m SANDSTONE M/GRAINED 4.31m-5.76m SANDSTONE L/GREY,LAMINATIONS 5.76m-7.38m SANDSTONE,ORANGE,M/COARSE 7.38m-8.80m SANDSTONE VERY L/BROWN 8.80m-9.80m SANDSTONE L/ORANGE MED.GRAINED,SOME QUARTZ 9.80m-10.10m SANDSTONE,L/GREY M/GRAINED 10.10m-11.00m SANDSTONE L/GREY,M/GRAINED,THIN BEDDINGS 11.00m-11.38m SANDSTONE,L/GREY,M/GRAINED,LAMINATIONS 11.38m-16.02m SANDSTONE,L/GREY M/GRAINED,THICK BEDDING 16.02m-16.37m SANDSTONE,L/GREY,M/GRAINED,LAMIMATIONS 16.37m-20.45m SANDSTONE,L/GREY,M/GRAINED,M/BEDDING 20.45m-24.40m SANDSTONE,L/BROWN/GREY,M/COARSE GRAINED 24.40m-25.70m SANDSTONE GREY,M/GRAINED 25.70m-26.18m SANDSTONE GREY M/COARSE GRAINED,LAMINATIONS 26.18m-27.03m SANDSTONE GREY,FINE M/GRAINED,LAMINATIONS 27.03m-27.43m SANDSTONE,L/GREY,M/GRAINED 27.43m-28.83m SANDSTONE GREY,L/GREY,F/MEDIUM GRAINED 28.83m-30.80m SANDSTONE,GREY M/GRAINED,LAMINATIONS 30.80m-31.40m SANDSTONE L/GREY,VERY THIN BEDDING 31.40m-31.75m SANDSTONE,GREY FINE MEDIUM,LAMINATIONS 31.75m-34.60m SANDSTONE L/GREY BROWN WITH GREY LAMINATIONS 34.60m-35.61m SANDSTONE L/GREY,FINE M/GRAINED 35.61m-36.92m SANDSTONE GREY,FINE MEDIUM GRAINED THIN M/BEDDING 36.92m-38.10m SANDSSTONE,L/GREY,VERY THIN BEDDING 38.10m-41.83m SANDSTONE,L/GREY,M/GRAINED,POORLY-WELL LAMINATIONS	676m	South East
10053210	0.00m-0.03m ASPHALT / CONCRETE 0.03m-0.10m FILLIG GREY,SOME CLAY 0.10m-0.50m CLAY SHALEY BROWN AND GREY,SOFT TO FIRM 0.50m-2.70m SHALE/SILTSTONE,GREY AND BROWN 2.70m-3.92m SILTSTONE ,LIGHT GREY AND RED BROWN 3.92m-11.00m SANDSTONE,LIGHT GREY,FINE TO MEDIUM GRAINED	965m	South East
10095218	0.00m-6.10m SILTY SAND,MED TO COARSE GRAINED 6.10m-6.60m SANDSTONE,MED GREY,PALE GREY 6.60m-9.60m SANDSTONE,MED TO COARSE GRAINED,CARBONACEOUS INCL. 9.60m-10.70m SANDSTONE MED GRAINED 10.70m-11.20m SANDSTONE,PALE GREY 11.20m-12.30m SANDSTONE,MED GRAINED,PALE GREY 12.30m-14.30m SANDSTONE,TRACE OF CARBONACOUS INCLUSION 14.30m-14.70m SANDSTONE,PALE GREY 14.70m-17.40m SANDSTONE,MED TO COARSE GRAINED,PALE GREY 17.40m-20.15m SANDSTONE,MED GRAINED,,SILTSTONE LAMINATION.	1041m	South East
10094738	0.00m-0.05m ASPHALT 0.05m-0.15m ROADBASE 0.15m-0.30m FILL 0.30m-1.30m SHALE 1.30m-1.85m SHALE LOW STRENGTH 1.85m-3.18m SHALE 3.18m-4.40m SILTSTONE 4.40m-5.30m SANDSTONE 5.30m-5.80m SHALE 5.80m-6.06m SHALE WEATHERED 6.06m-6.86m SANDSTONE 6.86m-7.00m SHALE 7.00m-8.00m SANDSTONE 8.00m-13.00m SANDSTONE L/STRENGTH	1328m	South East

NGIS Bore ID	Drillers Log	Distance	Direction
10100415	0.00m-0.05m ASPHALT 0.05m-0.10m ROAD BASE 0.10m-0.40m FILLING BROWN 0.40m-1.26m SHALE LOW STRENGTH 1.26m-2.00m SILTSTONE 2.00m-3.95m SANDSTONE 3.95m-7.05m SANDSTONE LOW TO MED. STRENGTH 7.05m-10.00m SANDSTONE	1333m	South East
10089330	0.00m-0.07m ASPHALT 0.07m-0.10m ROADBASE 0.10m-0.30m FILL 0.30m-0.45m FILLING BROWN 0.45m-0.55m CLAY SOFT TO FIRM 0.55m-0.70m SHALE L/STRENGTH 0.70m-0.90m SANDSTONE 0.90m-1.79m SANDSTONE M/STRENGTH 1.79m-2.06m SILTSTONE 2.06m-2.27m SILTSTONE M/STRENGTH 2.27m-3.06m SANDSTONE 3.06m-10.35m SANDSTONE, H/STRENGTH 10.35m-10.98m SANDSTONE WEATHERED,FRACTURED 10.98m-11.50m SANDSTONE H/STRENGTH,WEATHERED TO FRESH	1337m	South East
10119726	0.00m-0.20m SILT / GRAVEL 0.20m-1.00m CLAY,MINOR SILT 1.00m-2.00m SANDSTONE MINOR SAND 2.00m-4.00m SANDSTONE,MINOR SAND,DARK BROWN 4.00m-5.00m SANDSTONE,MINOR SAND,MOIST L/BROWN 5.00m-6.00m SANDSTONE,MINOR SAND MOIST TO WET 6.00m-7.00m SANDSTONE,MINOR SAND,WET L/BROWN	1918m	East
10124094	0.00m-1.00m NATURAL SILT L/PLASTICITY,D/BROWN 1.00m-3.00m SANDSTONE,FINE,DRY,L/BROWN 3.00m-7.00m SANDSTONE FINE,MOIST,L/BROWN 7.00m-12.00m SANDSTONE,FINE,MOIST,L/BROWN	1919m	East
10011764	0.00m-58.21m Sandstone 58.21m-65.22m Shale Water Supply 65.22m-67.05m Sandstone	1934m	North West
10023338	0.00m-2.43m Clay Hard Sandy 2.43m-3.96m Sandstone 3.96m-5.79m Sandstone Yellow 5.79m-7.31m Sandstone White 7.31m-15.24m Sandstone Yellow 15.24m-17.67m Shale Sandy Water Supply 17.67m-24.99m Sandstone Yellow 24.99m-26.51m Shale Sandy Water Supply 26.51m-45.72m Sandstone White Silty	1939m	North West
10066707	0.00m-2.00m FILL 2.00m-6.00m SAND 6.00m-8.00m SHALE	1944m	North West
10081995	0.00m-2.00m FILL 2.00m-6.00m SAND 6.00m-8.00m SHALE	1971m	North West
10084031	0.00m-2.00m FILL 2.00m-6.00m SAND 6.00m-8.00m SHALE	1996m	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

34 Waterloo Road, Macquarie Park, NSW 2113



Geology

34 Waterloo Road, Macquarie Park, NSW 2113

Geological Units

What are the Geological Units within the dataset buffer?

Unit Code	Unit Name	Description	Unit Stratigraphy	Age	Dominant Lithology	Distance
Twia	Ashfield Shale	Black to light grey shale and laminite.	\Wianamatta Group\ \Ashfield Shale\\	Middle Triassic (base) to Middle Triassic (top)	Shale	0m
Tuth	Hawkesbury Sandstone	Medium- to coarse-grained quartz sandstone with minor shale and laminite lenses.	\Ungrouped Triassic units\\Hawkesbury Sandstone\\	Anisian (base) to Anisian (top)	Sandstone	85m

Linear Geological Structures

What are the Dyke, Sill, Fracture, Lineament and Vein trendlines within the dataset buffer?

Map ID	Feature Description	Map Sheet Name	Distance
No Features			

What are the Faults, Shear zones or Schist zones, Intrusive boundaries & Marker beds within the dataset buffer?

Map ID	Boundary Type	Description	Map Sheet Name	Distance
No Features				

Geological Data Source: Statewide Seamless Geology v2.1, Department of Regional NSW
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Naturally Occurring Asbestos Potential

34 Waterloo Road, Macquarie Park, NSW 2113

Naturally Occurring Asbestos Potential

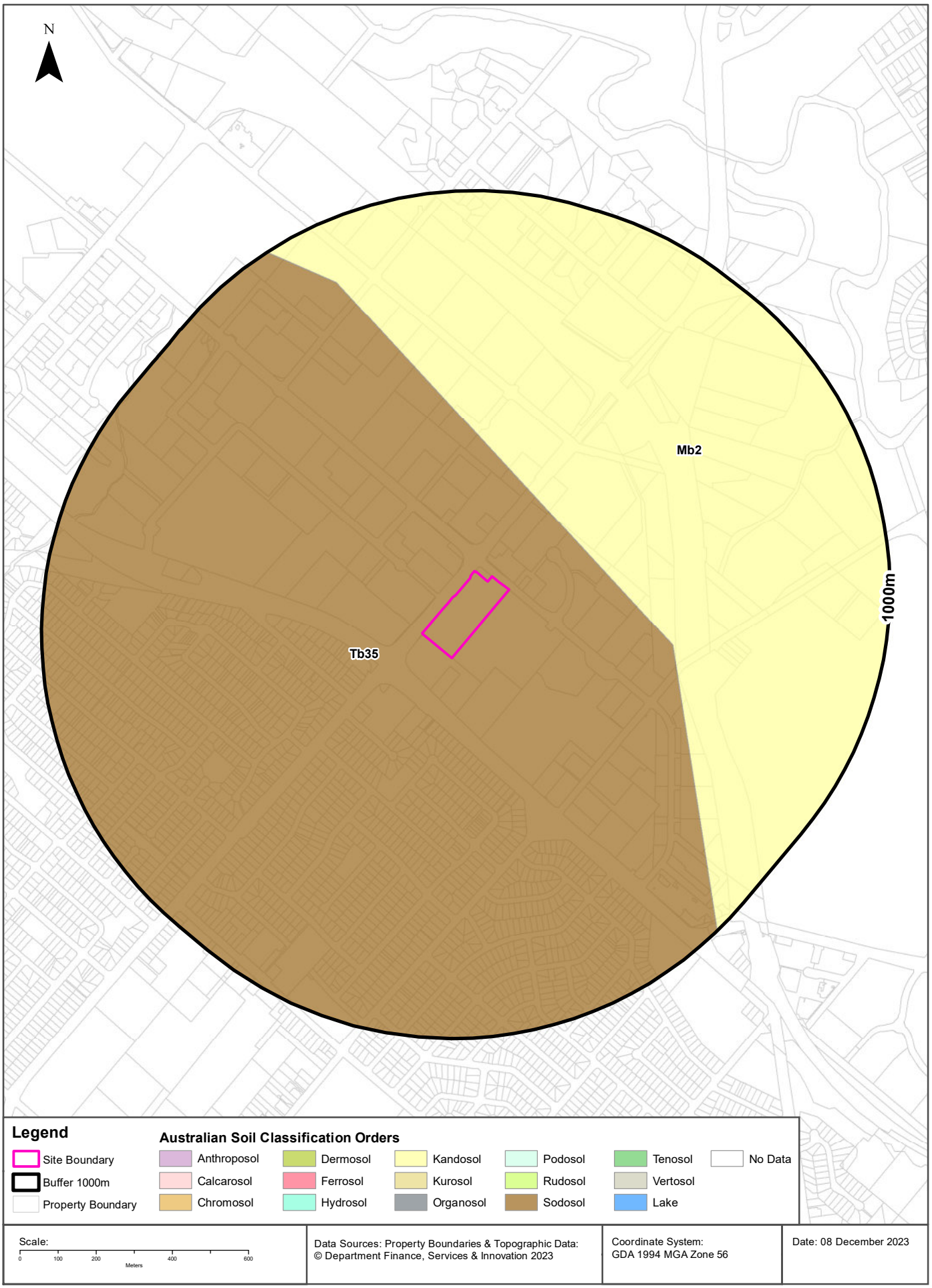
Naturally Occurring Asbestos Potential within the dataset buffer:

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: © State of New South Wales through NSW Department of Industry, Resources & Energy

Atlas of Australian Soils

34 Waterloo Road, Macquarie Park, NSW 2113



Soils

34 Waterloo Road, Macquarie Park, NSW 2113

Atlas of Australian Soils

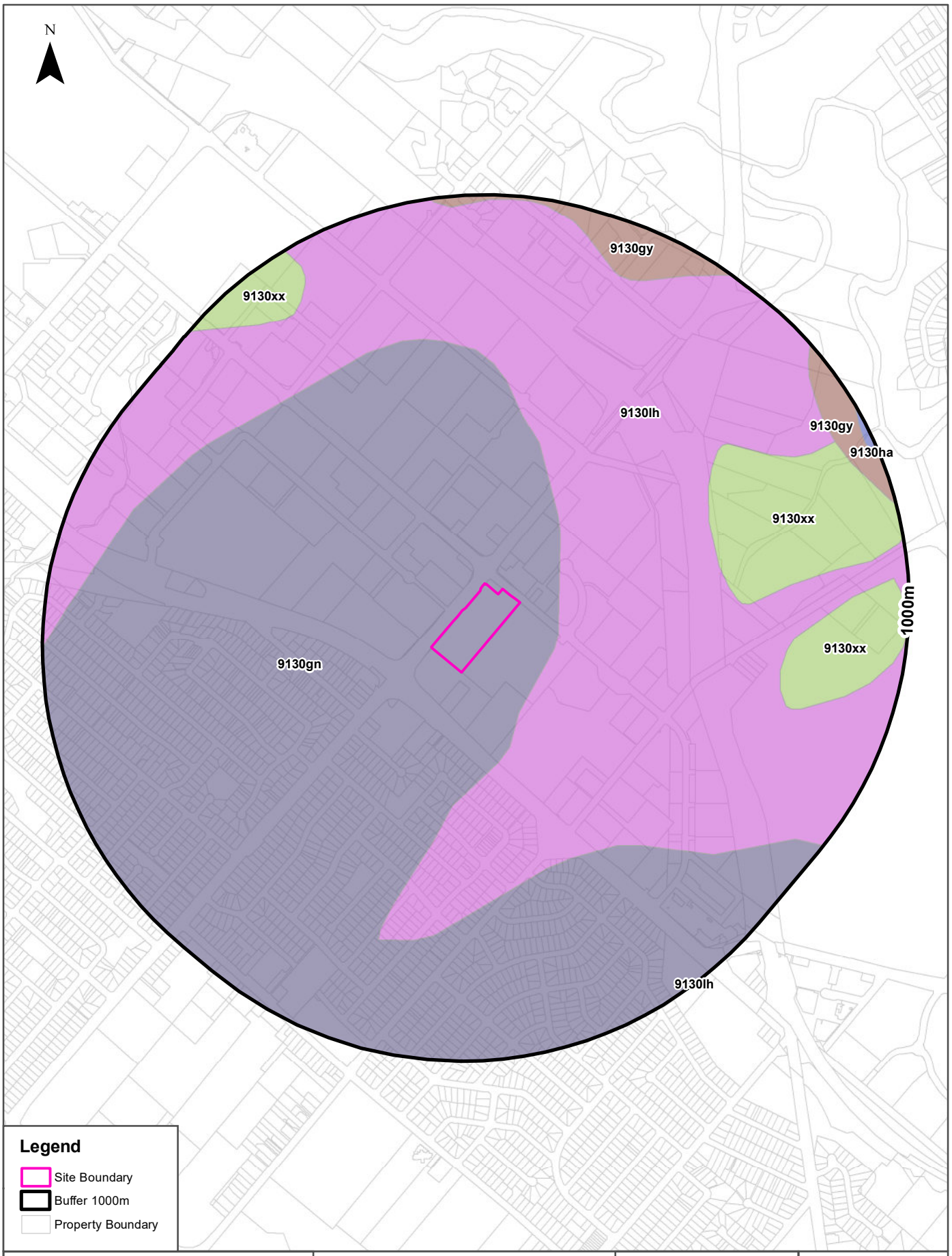
Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Tb35	Sodosol	Dissected plateau remnants--flat to undulating ridge tops with moderate to steep side slopes: chief soils are hard acidic yellow and yellow mottled soils (Dy3.41), (Dy2.21), and (Dy2.41) and hard acidic red soils (Dr2.21); many shallow profiles occur and profile thickness varies considerably over short distances. Associated are: (Gn3.54), (Gn3.14), and possibly other (Gn3) soils; (Db1.2) soils on some ridges; (Dy5.81) soils in areas transitional to unit Mb2; soils common to unit Mb2; and eroded lateritic remnants. Small areas of other soils are likely. Flat ferruginous shale or sandstone fragments are common on and/or in and/or below the soils of this unit.	0m	On-site
Mb2	Kandosol	Dissected sandstone plateau of moderate to strong relief with sandstone pillars, ledges, and slabs-- level to undulating ridges, irregularly benched slopes, steep ridges, cliffs, canyons, narrow sandy valleys: chief soils are (i) on areas of gentle to moderate relief, acid yellow leached earths (Gn2.74) and (Gn2.34) and acid leached yellow earths (Gn2.24)-sometimes these soils contain ironstone gravel; and (ii) on, or adjacent to, areas of strong relief, siliceous sands (Uc1.2), leached sands (Uc2.12) and (Uc2.2), and shallow forms of the above (Gn2) soils. Associated are: (i) on flat to gently undulating remnants of the original plateau surface, leached sands (Uc2.3), siliceous sands (Uc1.2), sandy earths (Uc5.22), and (Gn2) soils as for (i) above (these areas are in part comparable with unit Cb29); (ii) on flat ironstone gravelly remnants of the original plateau surface, (Gn2) soils as for unit Mb5(i); (iii) on gently undulating ridges where interbedded shales are exposed, shallow, often stony (Dy3.41), (Dr2.21), and related soils similar to unit Tb35; (iv) narrow valleys of (Uc2.3) soils flanked by moderate slopes of (Dy3.41) soils; (v) escarpments of steep hills with shallow (Dy) and (Dr) soils between sandstone pillars; and (vi) shallow (Um) soils, such as (Um6.21) on steep hills of basic rocks. As mapped, minor areas of units Mg20, Mm1, and Mw8 are included. Data are limited.	216m	North East

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

34 Waterloo Road, Macquarie Park, NSW 2113



Soils

34 Waterloo Road, Macquarie Park, NSW 2113

Soil Landscapes of Central and Eastern NSW

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

Soil Code	Name	Distance	Direction
9130gn	Glenorie	0m	On-site
9130lh	Lucas Heights	98m	North East
9130xx	Disturbed Terrain	519m	East
9130gy	Gymea	860m	North East
9130ha	Hawkesbury	976m	North East

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

34 Waterloo Road, Macquarie Park, NSW 2113

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		

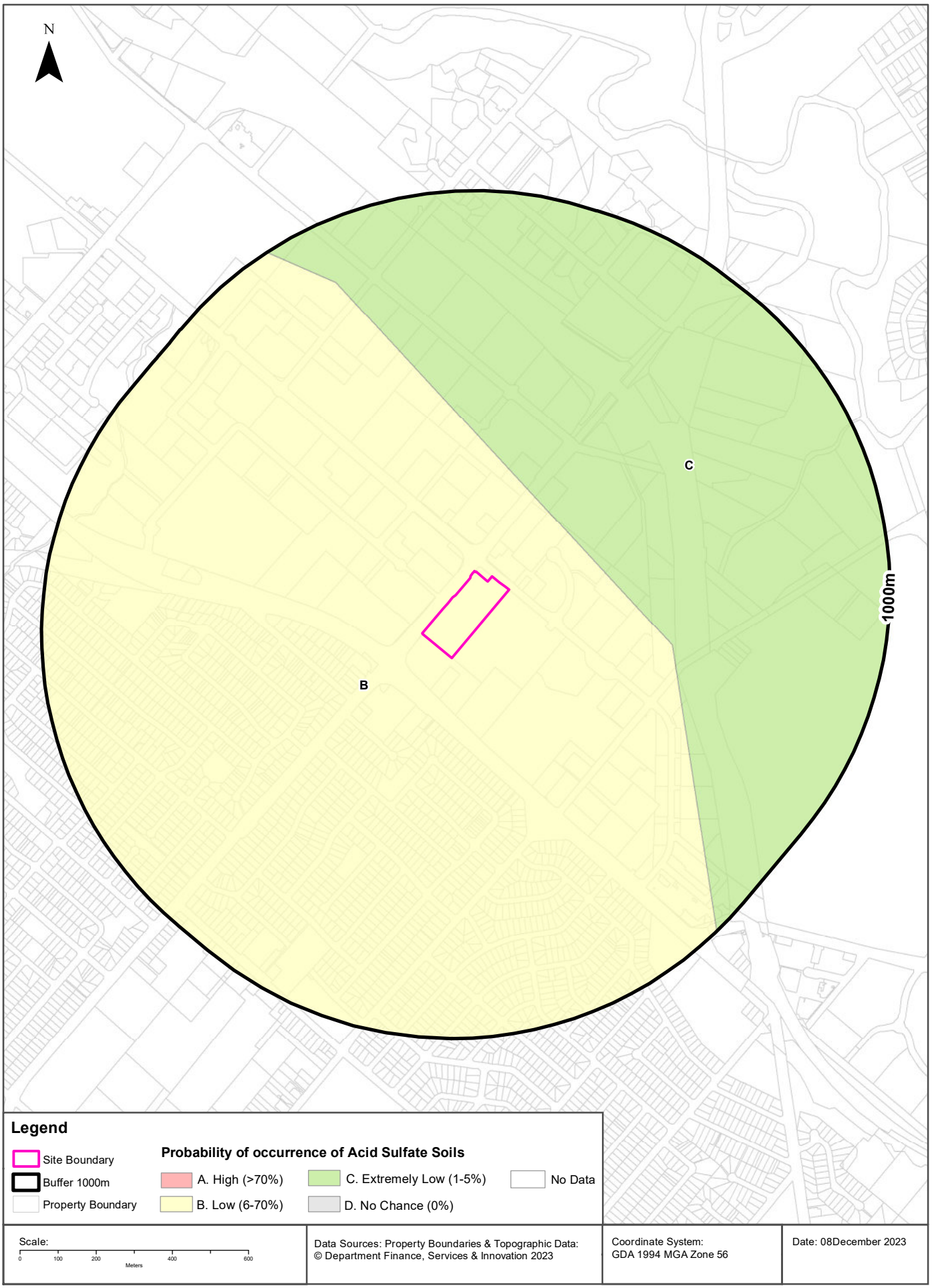
If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	EPI Name	Distance	Direction
N/A				

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Atlas of Australian Acid Sulfate Soils

34 Waterloo Road, Macquarie Park, NSW 2113



Acid Sulfate Soils

34 Waterloo Road, Macquarie Park, NSW 2113

Atlas of Australian Acid Sulfate Soils

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

Class	Description	Distance	Direction
B	Low Probability of occurrence. 6-70% chance of occurrence.	0m	On-site
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	214m	North East

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

34 Waterloo Road, Macquarie Park, NSW 2113

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

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

No

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A		

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.

Mining

34 Waterloo Road, Macquarie Park, NSW 2113

Mining Subsidence Districts

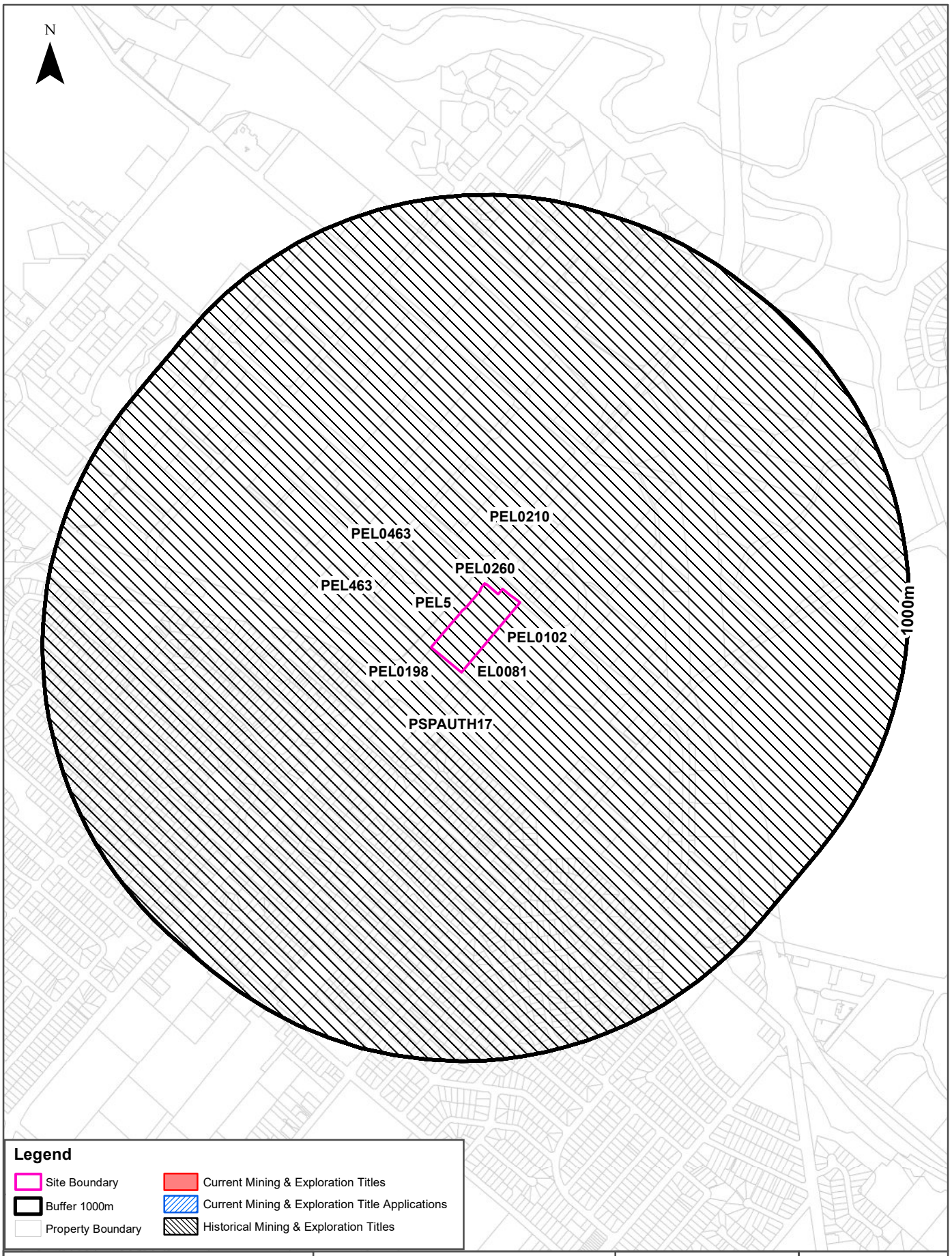
Mining Subsidence Districts within the dataset buffer:

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

34 Waterloo Road, Macquarie Park, NSW 2113



Mining

34 Waterloo Road, Macquarie Park, NSW 2113

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: © State of New South Wales through NSW Department of Industry

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: © State of New South Wales through NSW Department of Industry

Mining

34 Waterloo Road, Macquarie Park, NSW 2113

Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PEL0102	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
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	On-site
PEL0463	DART ENERGY (APOLLO) PTY LTD	20091010	20150603	PETROLEUM	Petroleum	0m	On-site
PEL463	DART ENERGY (APOLLO) PTY LTD	20081022	20130227	MINERALS		0m	On-site
PEL5	AGL UPSTREAM INVESTMENTS PTY LIMITED	19931111	20011210	MINERALS		0m	On-site
PEL0198	JOHN STREVENS (TERRIGAL) NL			PETROLEUM	Petroleum	0m	On-site
PSPAUTH17	MACQUARIE ENERGY PTY LTD	20070803	20080703	PETROLEUM	Petroleum	0m	On-site
EL0081	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	19670201	19680201	MINERALS		0m	On-site

Historical Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

State Environmental Planning Policy

34 Waterloo Road, Macquarie Park, NSW 2113

State Significant Precincts

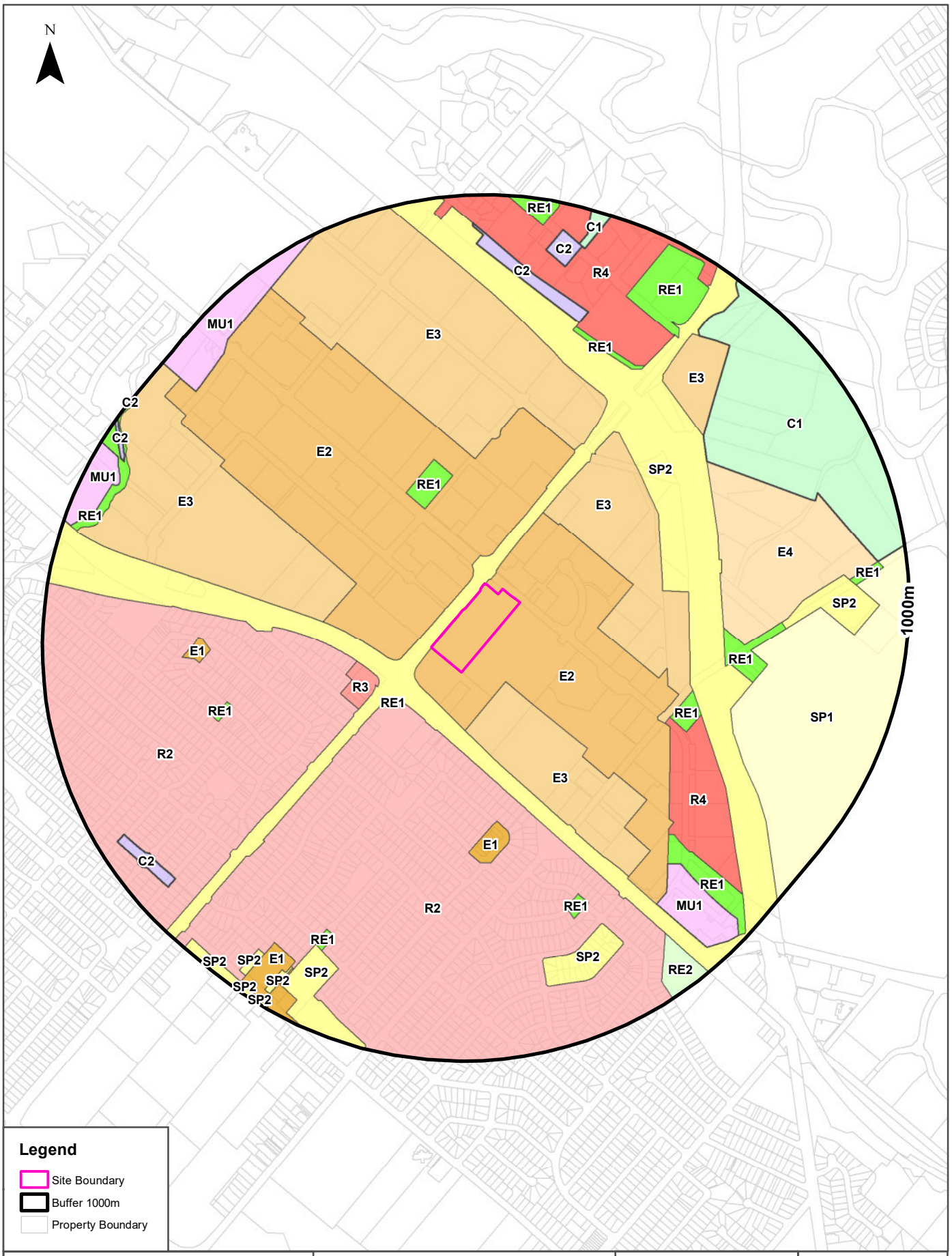
What SEPP State Significant Precincts exist within the dataset buffer?

Map Id	Precinct	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
N/A	No records in buffer							

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EPI Planning Zones

34 Waterloo Road, Macquarie Park, NSW 2113



Environmental Planning Instrument

34 Waterloo Road, Macquarie Park, NSW 2113

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
E2	Commercial Centre		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	0m	On-site
SP2	Infrastructure	Classified Road	Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	0m	North
E2	Commercial Centre		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	35m	North West
E3	Productivity Support		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	102m	South East
R2	Low Density Residential		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	154m	South
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	157m	South West
R3	Medium Density Residential		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	159m	South West
R2	Low Density Residential		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	195m	West
E3	Productivity Support		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	207m	North East
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	248m	North
E3	Productivity Support		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	254m	West
E3	Productivity Support		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	322m	North
E1	Local Centre		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	393m	South
R4	High Density Residential		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	483m	South East
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	483m	East
E4	General Industrial		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	516m	East
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	525m	East
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	535m	West
E1	Local Centre		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	569m	West
C1	National Parks and Nature Reserves		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	601m	North East

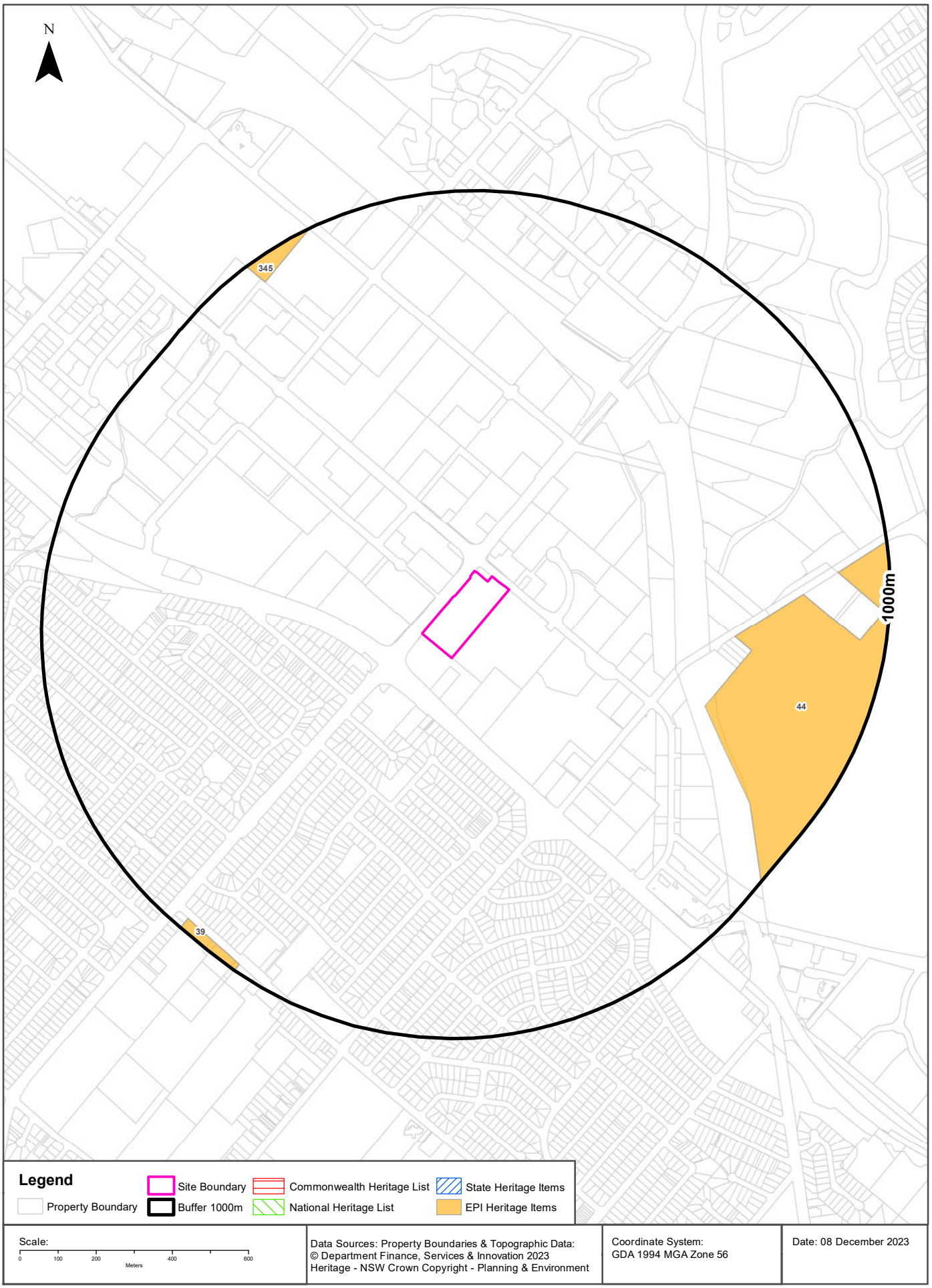
Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP1	Special Activities	Cemetery	Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	604m	East
E3	Productivity Support		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	635m	North East
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	642m	South
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	655m	North East
R4	High Density Residential		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	668m	North
SP2	Infrastructure	Waste Transfer Station	Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	673m	East
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	675m	South East
C2	Environmental Conservation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	713m	North
MU1	Mixed Use		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	722m	South East
SP2	Infrastructure	Educational Establishment	Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	739m	South
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	745m	South West
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	783m	North East
SP2	Infrastructure	Educational Establishment & Place of Worship	Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	792m	South West
C2	Environmental Conservation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	841m	North
E1	Local Centre		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	844m	South West
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	847m	East
RE2	Private Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	850m	South East
SP2	Infrastructure	Community Facility	Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	873m	South West
SP2	Infrastructure	Place of Public Worship	Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	882m	South West
MU1	Mixed Use		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	887m	North West
C2	Environmental Conservation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	888m	South West
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	890m	West
C1	National Parks and Nature Reserves		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	899m	North
C2	Environmental Conservation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	924m	North West

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	933m	North
SP2	Infrastructure	Educational Establishment	Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	969m	South West
SP2	Infrastructure	Place of Public Worship	Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	979m	South West
SP2	Infrastructure	Car Park	Ryde Local Environmental Plan 2014	21/04/2023	26/04/2023	26/04/2023	Map Amendment No 2	988m	South West

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Heritage Items

34 Waterloo Road, Macquarie Park, NSW 2113



Heritage

34 Waterloo Road, Macquarie Park, NSW 2113

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
N/A	No records in buffer							

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
N/A	No records in buffer							

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Environmental Planning Instrument - Heritage

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

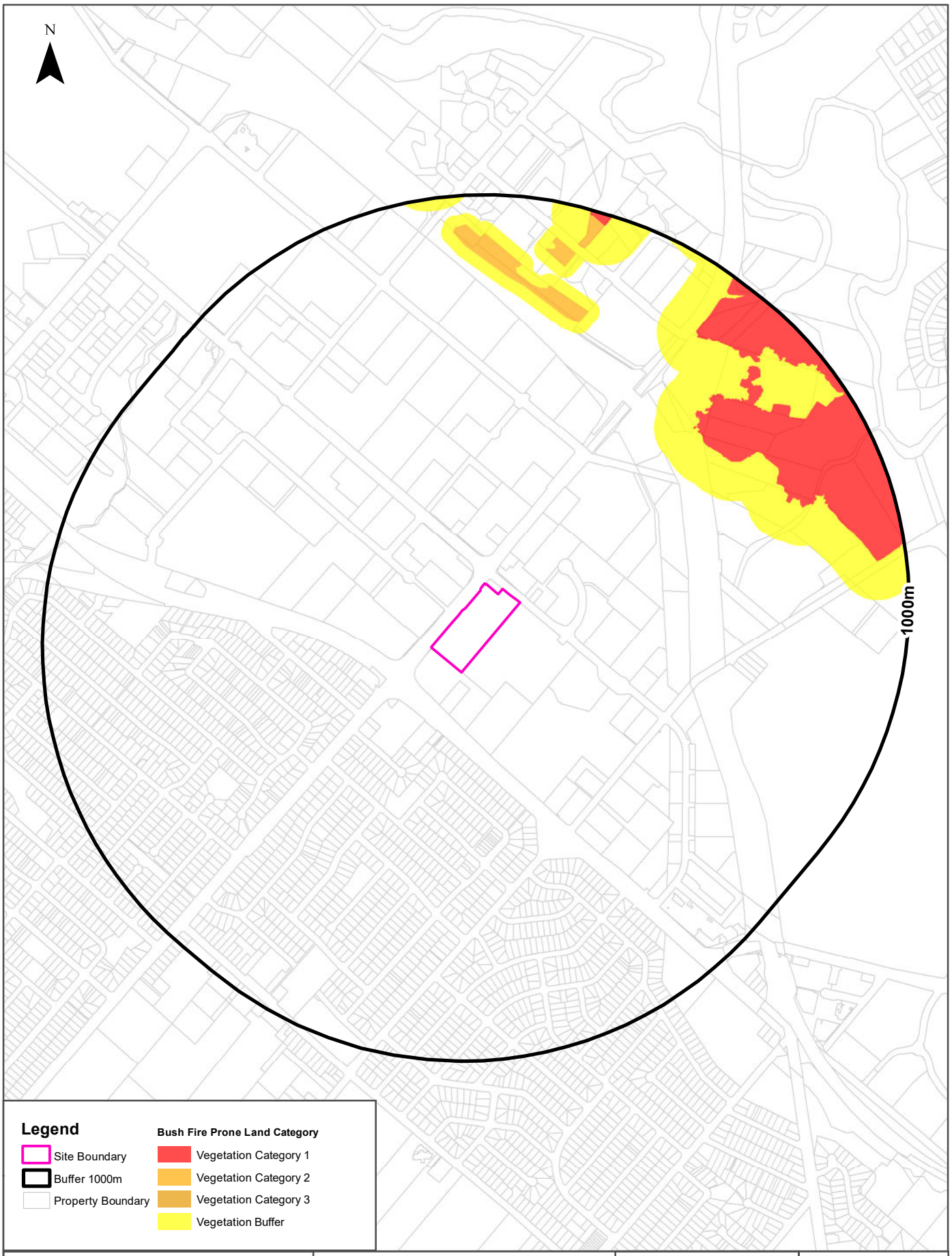
Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
44	Northern Suburbs Cemetery	Item - General	Local	Ryde Local Environmental Plan 2014	12/09/2014	12/09/2014	21/04/2023	596m	East
345	Macquarie Ice Rink - Olympic-sized rink with its setting within retail premises, including rink seating and associated rink facilities	Item - General	Local	Ryde Local Environmental Plan 2014	06/08/2021	06/08/2021	21/04/2023	939m	North West

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
39	North Ryde Public School (Buildings B00J, B00M and B00N)	Item - General	Local	Ryde Local Environmental Plan 2014	10/04/2015	10/04/2015	21/04/2023	969m	South West

Heritage Data Source: NSW Crown Copyright - Planning & Environment
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Natural Hazards - Bush Fire Prone Land

34 Waterloo Road, Macquarie Park, NSW 2113



Data Sources: Bush Fire Prone Land: © NSW Rural Fire Service 2023. Property Boundaries: © Department Finance, Services & Innovation 2023

Coordinate System: GDA 1994 MGA Zone 56

Date: 08 December 2023

Natural Hazards

34 Waterloo Road, Macquarie Park, NSW 2113

Bush Fire Prone Land

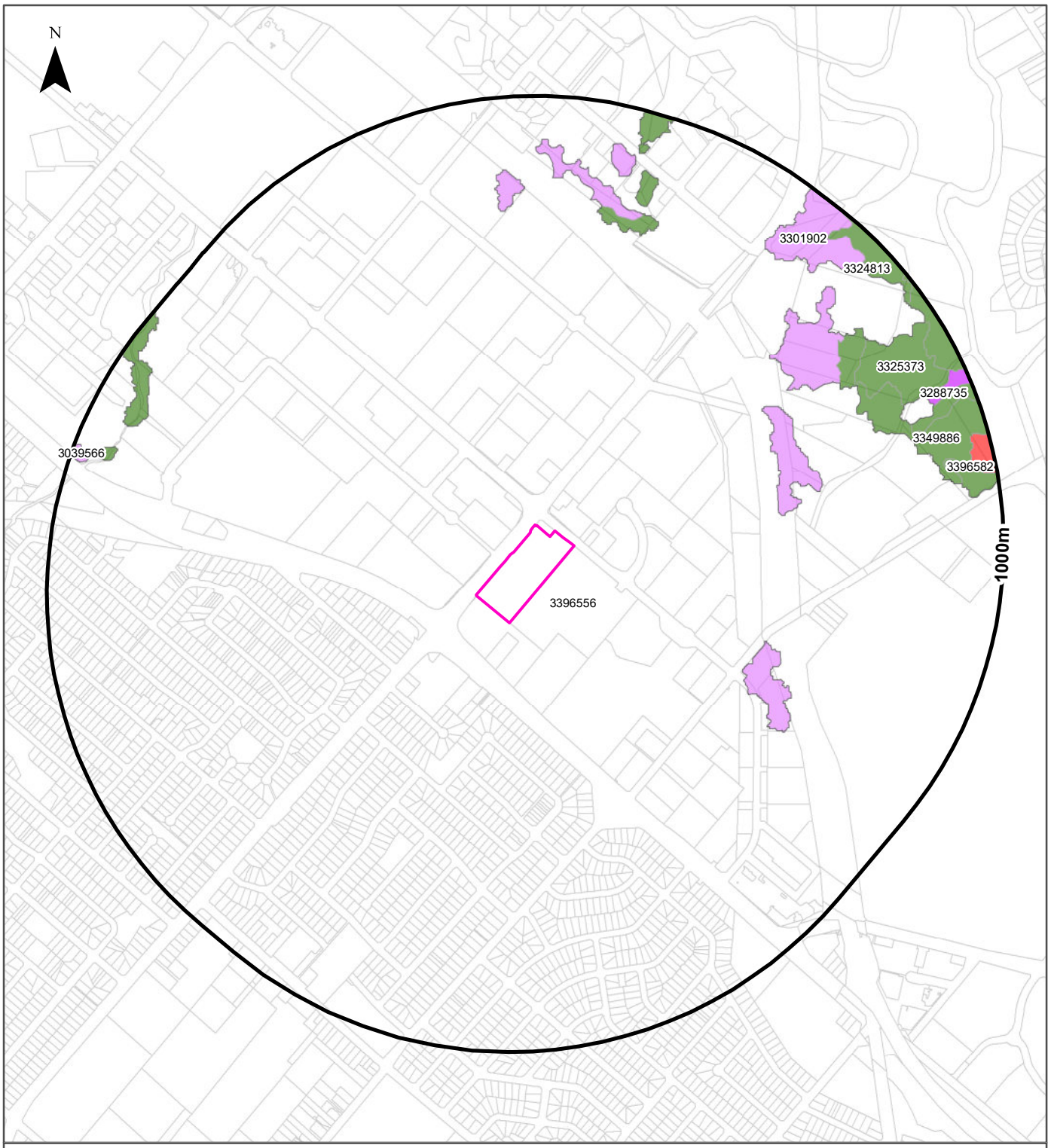
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	526m	North East
Vegetation Category 1	626m	North East
Vegetation Category 2	713m	North

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

Ecological Constraints - Vegetation & Ramsar Wetlands

34 Waterloo Road, Macquarie Park, NSW 2113



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 2023

Coordinate System: GDA 1994 MGA Zone 56

Date: 08 December 2023

Ecological Constraints

34 Waterloo Road, Macquarie Park, NSW 2113

Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
3396556	Not classified	(Not classified) Not classified	Not classified	0m	On-site
3301902	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Sydney Coastal Shale-Sandstone Forest	Northern Hinterland Wet Sclerophyll Forests	481m	North East
3325373	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Sydney Coastal Enriched Sandstone Forest	Sydney Coastal Dry Sclerophyll Forests	713m	North East
3349886	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Sydney Coastal Sandstone Gully Forest	Sydney Coastal Dry Sclerophyll Forests	718m	North East
3288735	Wet Sclerophyll Forests (Shrubby sub-formation)	(Wet Sclerophyll Forests (Shrubby sub-formation)) Sydney Enriched Sandstone Moist Forest	North Coast Wet Sclerophyll Forests	889m	North East
3324813	Dry Sclerophyll Forests (Shrubby sub-formation)	(Dry Sclerophyll Forests (Shrubby sub-formation)) Northern Sydney Scribbly Gum Woodland	Sydney Coastal Dry Sclerophyll Forests	926m	North East
3396582	Rainforests	(Rainforests) Sydney Coastal Coachwood Gallery Rainforest	Northern Warm Temperate Rainforests	933m	East
3039566	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Sydney Turpentine Ironbark Forest	Northern Hinterland Wet Sclerophyll Forests	955m	West

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

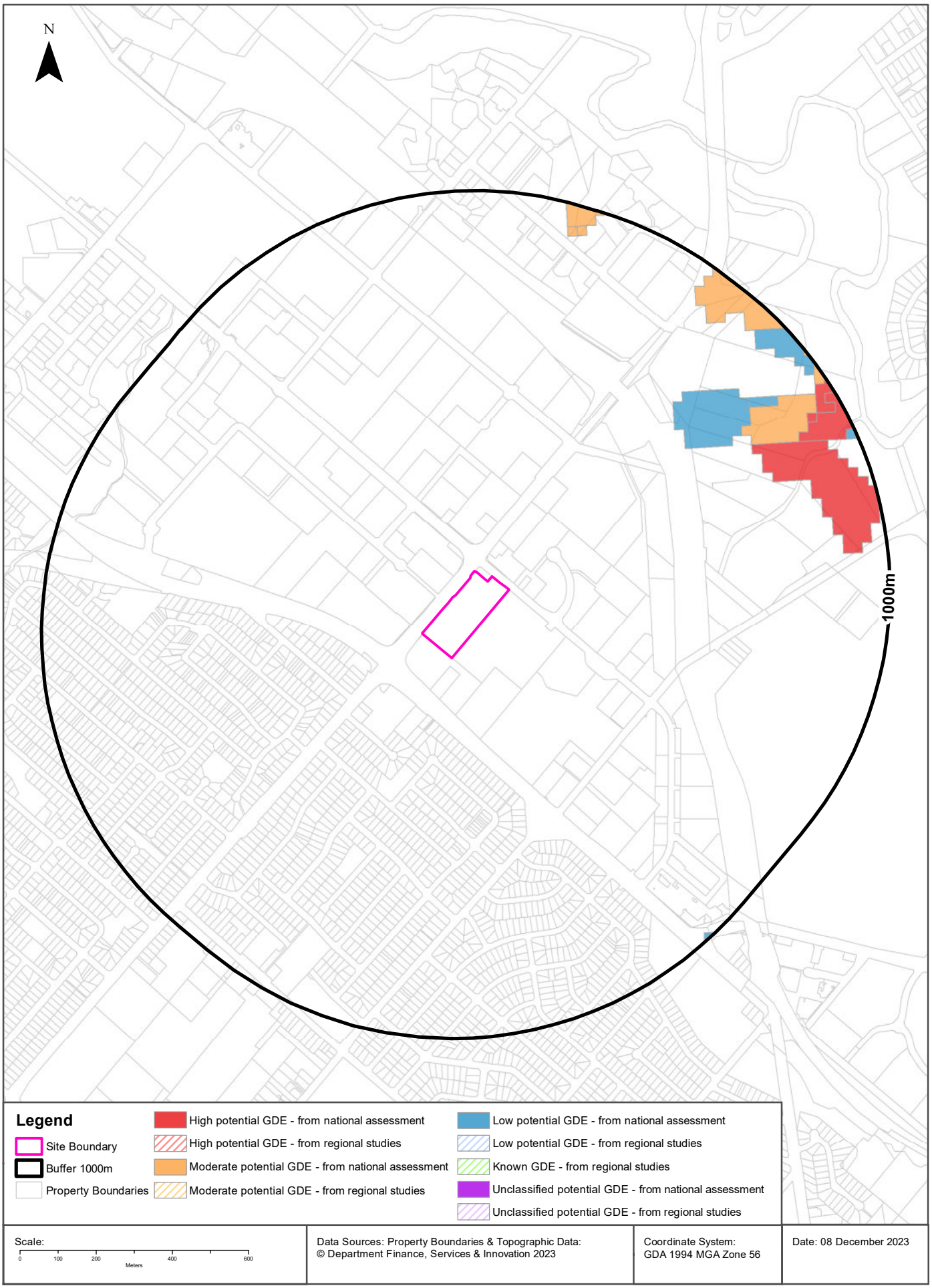
What Ramsar Wetland areas exist within the dataset buffer?

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 - Groundwater Dependent Ecosystems Atlas

34 Waterloo Road, Macquarie Park, NSW 2113



Ecological Constraints

34 Waterloo Road, Macquarie Park, NSW 2113

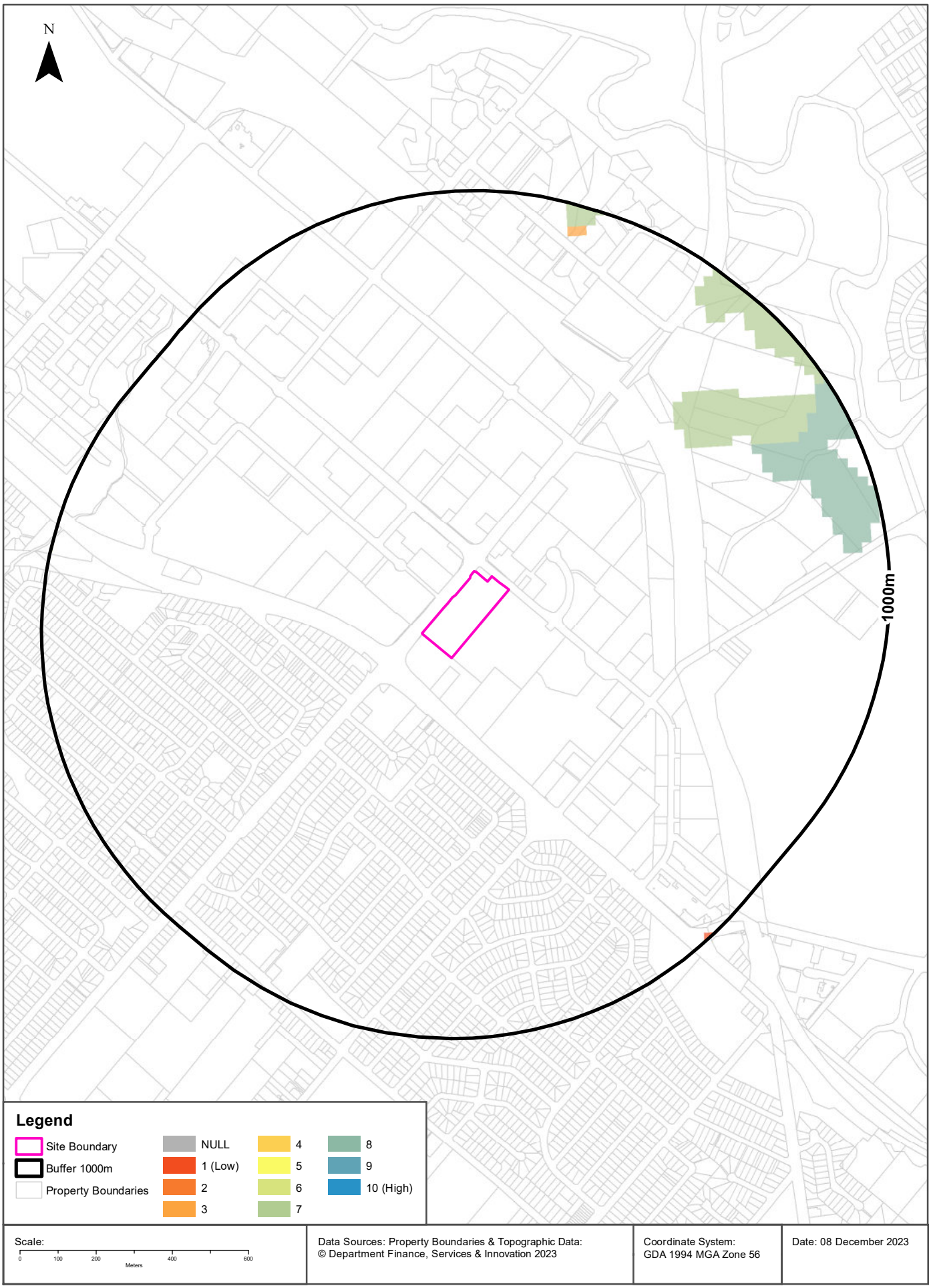
Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	Low potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	592m	North East
Terrestrial	High potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	730m	East
Terrestrial	Moderate potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	731m	North East

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology
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Ecological Constraints - Inflow Dependent Ecosystems Likelihood

34 Waterloo Road, Macquarie Park, NSW 2113



Ecological Constraints

34 Waterloo Road, Macquarie Park, NSW 2113

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	7	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	592m	North East
Terrestrial	8	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	730m	East
Terrestrial	3	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	913m	North
Terrestrial	1	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	978m	South East

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology
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Ecological Constraints

34 Waterloo Road, Macquarie Park, NSW 2113

NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Heleioporus australiacus	Giant Burrowing Frog	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Amaurornis moluccana	Pale-vented Bush-hen	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Category 2	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna carneipes	Flesh-footed Shearwater	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna grisea	Sooty Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna pacifica	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris alba	Sanderling	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Listed	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Endangered	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Vulnerable	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Endangered	
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Endangered Population, Vulnerable	Category 3	Endangered	
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Vulnerable	Category 2	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Cecropis daurica	Red-rumped Swallow	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius leschenaultii	Greater Sand-plover	Vulnerable	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Circus assimilis	Spotted Harrier	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Cuculus optatus	Oriental Cuckoo	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Endangered Population, Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Falco hypoleucos	Grey Falcon	Vulnerable	Category 2	Vulnerable	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Gelochelidon nilotica	Gull-billed Tern	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Grantiella picta	Painted Honeyeater	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Limicola falcinellus	Broad-billed Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa limosa	Black-tailed Godwit	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lophochroa leadbeateri	Major Mitchell's Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Menura alberti	Albert's Lyrebird	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Motacilla flava	Yellow Wagtail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Nettapus coromandelianus	Cotton Pygmy-Goose	Endangered	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius minutus	Little Curlew	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Onychoprion fuscata	Sooty Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pachycephala olivacea	Olive Whistler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Philomachus pugnax	Ruff	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Polytelis anthopeplus monarchoides	Regent Parrot (eastern subspecies)	Endangered	Category 3	Vulnerable	
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Pterodroma leucoptera leucoptera	Gould's Petrel	Vulnerable	Not Sensitive	Endangered	
Animalia	Aves	Ptilinopus magnificus	Wompoo Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Stercorarius pomarinus	Pomarine Jaeger	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Sterna hirundo	Common Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Sternula albifrons	Little Tern	Endangered	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Sula dactylatra	Masked Booby	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Thalassarche melanophris	Black-browed Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Thalasseus bergii	Crested Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Thinornis cucullatus cucullatus	Eastern Hooded Dotterel	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Tringa brevipes	Grey-tailed Tattler	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa glareola	Wood Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Tyto longimembris	Eastern Grass Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Xenus cinereus	Terek Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Gastropoda	Pommerhelix duralensis	Dural Land Snail	Endangered	Not Sensitive	Endangered	
Animalia	Insecta	Petalura gigantea	Giant Dragonfly	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Arctocephalus forsteri	New Zealand Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Arctocephalus pusillus doriferus	Australian Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Dasyurus viverrinus	Eastern Quoll	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Eubalaena australis	Southern Right Whale	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Isoodon obesulus obesulus	Southern Brown Bandicoot (eastern)	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Perameles nasuta	Long-nosed Bandicoot	Endangered Population	Not Sensitive	Not Listed	
Animalia	Mammalia	Petauroides volans	Southern Greater Glider	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Pseudomys gracilicaudatus	Eastern Chestnut Mouse	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Pseudomys novaehollandiae	New Holland Mouse	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Vespadelus troughtoni	Eastern Cave Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Aspidites ramsayi	Woma	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Dermochelys coriacea	Leatherback Turtle	Endangered	Not Sensitive	Endangered	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Reptilia	Diplodactylus platyurus	Eastern Fat-tailed Gecko	Endangered	Not Sensitive	Not Listed	
Animalia	Reptilia	Hemiaspis damelii	Grey Snake	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Myuchelys bellii	Western Sawshelled Turtle, Bell's Turtle	Endangered	Not Sensitive	Vulnerable	
Animalia	Reptilia	Pseudonaja modesta	Ringed Brown Snake	Endangered	Not Sensitive	Not Listed	
Animalia	Reptilia	Tiliqua occipitalis	Western Blue-tongued Lizard	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Uvidicolus sphyrurus	Border Thick-tailed Gecko	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Varanus rosenbergi	Rosenberg's Goanna	Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	Camarophyllopsis kearneyi		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe anomala var. ianthinomarginata		Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe aurantipes		Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe austropratensis		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe collucera		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe griseoramosa		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe lanecovensis		Endangered	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe reesiae		Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe rubronivea		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia clunies-rossiae	Kanangra Wattle	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Acacia pubescens	Downy Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia terminalis subsp. Eastern Sydney	Sunshine wattle	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Allocasuarina portuensis	Nielsen Park She-oak	Endangered	Category 3	Endangered	
Plantae	Flora	Argyrotegium nitidulum	Shining Cudweed	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Caladenia tessellata	Thick Lip Spider Orchid	Endangered	Category 2	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Cryptostylis hunteriana	Leafless Tongue Orchid	Vulnerable	Category 2	Vulnerable	
Plantae	Flora	Darwinia biflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Darwinia peduncularis		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Davidsonia jerseyana	Davidson's Plum	Endangered	Category 2	Endangered	
Plantae	Flora	Deyeuxia appressa		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Dillwynia tenuifolia		Endangered Population, Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Dillwynia tenuifolia		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Epacris purpurascens var. purpurascens		Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Epacris sparsa	Sparse Heath	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus camfieldii	Camfield's Stringybark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Galium australe	Tangled Bedstraw	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Genoplesium baueri	Bauer's Midge Orchid	Endangered	Category 2	Endangered	
Plantae	Flora	Genoplesium plumosum	Tallong Midge Orchid	Critically Endangered	Category 2	Endangered	
Plantae	Flora	Grammitis stenophylla	Narrow-leaf Finger Fern	Endangered	Category 3	Not Listed	
Plantae	Flora	Grevillea beadleana	Beadle's Grevillea	Endangered	Category 3	Endangered	
Plantae	Flora	Grevillea caleyi	Caley's Grevillea	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	Grevillea hilliana	White Yiel Yiel	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Grevillea juniperina subsp. juniperina	Juniper-leaved Grevillea	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Haloragodendron lucasii		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Hibbertia puberula		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Hibbertia spanantha	Julian's Hibbertia	Critically Endangered	Category 2	Critically Endangered	
Plantae	Flora	Isotoma fluviatilis subsp. fluviatilis		Not Listed	Category 3	Extinct	
Plantae	Flora	Lasiopetalum joyceae		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Leptospermum deanei		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia tetraphylla	Rough-shelled Bush Nut	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Melaleuca biconvexa	Biconvex Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Melaleuca deanei	Deane's Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Endangered	Category 3	Endangered	
Plantae	Flora	Persoonia mollis subsp. maxima		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pimelea curviflora var. curviflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Pomaderris prunifolia	Plum-leaf Pomaderris	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Prostanthera marifolia	Seaforth Mintbush	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	Pterostylis nigricans	Dark Greenhood	Vulnerable	Category 2	Not Listed	
Plantae	Flora	Rhizanthella slateri	Eastern Australian Underground Orchid	Vulnerable	Category 2	Endangered	
Plantae	Flora	Rhodamnia rubescens	Scrub Turpentine	Critically Endangered	Not Sensitive	Critically Endangered	
Plantae	Flora	Sarcochilus hartmannii	Hartman's Sarcochilus	Vulnerable	Category 2	Vulnerable	
Plantae	Flora	Senecio behrianus		Extinct	Not Sensitive	Endangered	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Tetratheca glandulosa		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Tetratheca juncea	Black-eyed Susan	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Wahlenbergia multicaulis	Tadgell's Bluebell	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Wilsonia backhousei	Narrow-leafed Wilsonia	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Zannichellia palustris		Endangered	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.
NSW BioNet: © State of NSW and Office of Environment and Heritage

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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      (ii) content which is derived from content described in paragraph (i);
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12. These Terms are subject to New South Wales law.

Land Title Records

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Summary of Owners Report

Address: 269 Lane Cove Road, Macquarie Park

Description: Lot 3 D.P. 1129811

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
1919 (1919 to 1948)	Walter Cornelius Woodfine	Returned Soldiers Special Holding Purchase 1919/2 Metropolitan Now Volume 5642 Folio 61
12.07.1948 (1948 to 1951)	Frederick Francis James Hicks (Orchardist)	Volume 5642 Folio 61
27.10.1951 (1951 to 1955)	Edward Thomas Kent (Company Director)	Volume 5642 Folio 61
02.02.1955 (1955 to 1980)	Hunter River Properties Pty Limited	Volume 5642 Folio 61 Now Volume 14006 Folio 100
19.02.1980 (1980 to 1986)	Land Lease Development Pty Limited	Volume 14006 Folio 100
06.07.1986 (1986 to 1994)	Manufacturers Mutual Insurance Limited Now MMI Limited	Volume 14006 Folio 100 Now 1/605622
12.09.1994 (1994 to 2000)	MMI General Insurance Limited Now Allianz Australia Insurance Limited	1/605622 Now 100/875114
20.04.2000 (2000 to 2000)	Perpetual Trustee Company Limited	100/875114
17.10.2000 (2000 to 2017)	Mirvac Funds Limited	100/875114 Now 3/1129811
16.05.2017 (2017 to 2022)	Mirvac Projects Pty Limited	3/1129811
14.12.2022 (2022 to date)	# NEXTDC Limited	3/1129811

 # Denotes current registered proprietor

Continued Over

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Easements:

- 05.11.1979 (DP605622) Easement to Drain Water 2.5 metres wide, designated H on DP1129811.

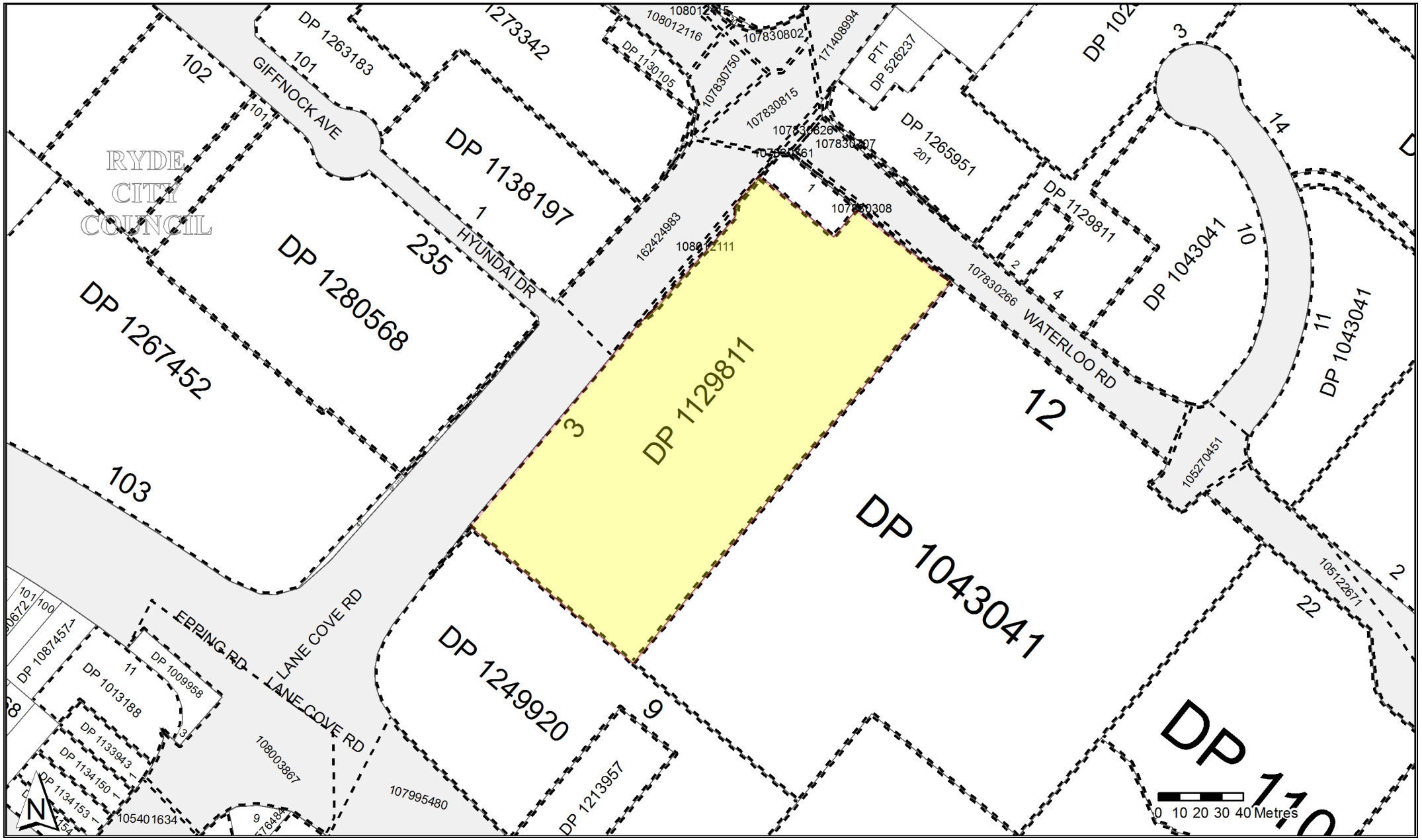
Leases, excluding premises:

- Various leases were found from 23.02.1981 that have since been surrendered or expired due to effluxion of time.
- 03.08.1982 (S738771) To the Sydney City Council of Substation No 5423 with a Right of Way & Easement for Electricity Purposes designated O on DP1129811.
    - 28.02.2017 (AK971351): Lease of lease S738771 to Blue Asset Partner Pty Ltd, Eric Alpha Assess Corporation 1 Pty Ltd, Eric Alpha Asset Corporation 2 Pty Ltd, Eric Alpha Asset Corporation 3 Pty Ltd, Eric Alpha Asset Corporation 4 Pty Ltd. Expires: See dealing. Clause 2.3 (b) (ii).
    - 28.02.2017 (AK971352): Lease of lease AK971351 to Blue OP Partner Pty Ltd, Eric Alpha Operator Corporation 1 Pty Ltd, Eric Alpha Operator Corporation 2 Pty Ltd, Eric Alpha Operator Corporation 3 Pty Ltd, Eric Alpha Operator Corporation 4 Pty Ltd. Expires: See dealing. Clause 12.1.
    - 28.02.2017 (AK971571): Change of name affecting lease S738771 lessee now Alpha Distribution Ministerial Holding Corporation.
- 03.08.1982 (S985304) To the Sydney County Council of Substation No. 5594 with a Right of Way & Easement for Electricity designated I on DP1129811.
    - 28.02.2017 (AK971351): Lease of lease S985304 to Blue Asset Partner Pty Ltd, Eric Alpha Assess Corporation 1 Pty Ltd, Eric Alpha Asset Corporation 2 Pty Ltd, Eric Alpha Asset Corporation 3 Pty Ltd, Eric Alpha Asset Corporation 4 Pty Ltd. Expires: See dealing. Clause 2.3 (b) (ii).
    - 28.02.2017 (AK971352): Lease of lease AK971351 to Blue OP Partner Pty Ltd, Eric Alpha Operator Corporation 1 Pty Ltd, Eric Alpha Operator Corporation 2 Pty Ltd, Eric Alpha Operator Corporation 3 Pty Ltd, Eric Alpha Operator Corporation 4 Pty Ltd. Expires: See dealing. Clause 12.1.
    - 28.02.2017 (AK971571): Change of name affecting lease S985304lessee now Alpha Distribution Ministerial Holding Corporation.

Yours Sincerely
Molly Elson
18th December 2023

Cadastral Records Enquiry Report : Lot 3 DP 1129811

Locality : MACQUARIE PARK
Parish : HUNTERS HILL
LGA : RYDE
County : CUMBERLAND



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This information is provided as a searching aid only.Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For ALL ACTIVITY PRIOR TO SEPTEMBER 2002 you must refer to the RGs Charting and Reference Maps

PLAN FORM 2 (A2)

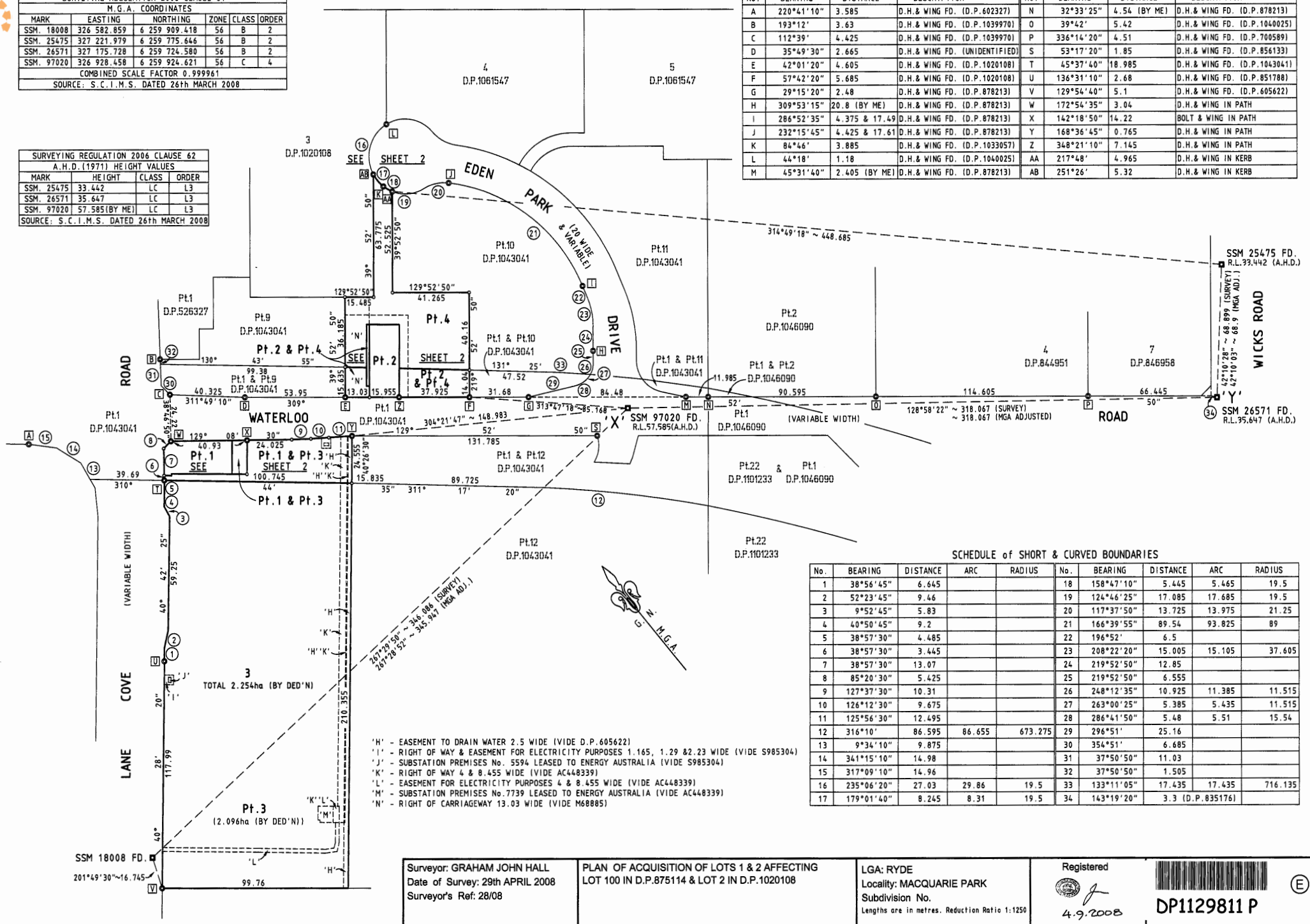
WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

SURVEYING REGULATION 2006 CLAUSE 61					
M.G.A. COORDINATES					
MARK	EASTING	NORTHING	ZONE	CLASS	ORDER
SSM. 18008	326 582.859	6 259 909.418	56	B	2
SSM. 25475	327 221.979	6 259 775.646	56	B	2
SSM. 26571	327 175.728	6 259 724.580	56	B	2
SSM. 97020	326 928.458	6 259 924.621	56	C	4
COMBINED SCALE FACTOR 0.999961					
SOURCE: S.C.I.M.S. DATED 26th MARCH 2008					

SURVEYING REGULATION 2006 CLAUSE 62			
A.H.D.(1971) HEIGHT VALUES			
MARK	HEIGHT	CLASS	ORDER
SSM. 25475	33.442	LC	L3
SSM. 26571	35.647	LC	L3
SSM. 97020	57.585(BY ME)	LC	L3
SOURCE: S.C.I.M.S. DATED 26th MARCH 2008			

REFERENCE MARKS

No.	BEARING	DISTANCE	DESCRIPTION	No.	BEARING	DISTANCE	DESCRIPTION
A	220°41'10"	3.585	D.H.& WING FD. (D.P.602327)	N	32°33'25"	4.54 (BY ME)	D.H.& WING FD. (D.P.878213)
B	193°12'	3.63	D.H.& WING FD. (D.P.1039970)	O	39°42'	5.42	D.H.& WING FD. (D.P.1040025)
C	112°39'	4.425	D.H.& WING FD. (D.P.1039970)	P	336°14'20"	4.51	D.H.& WING FD. (D.P.700589)
D	35°49'30"	2.665	D.H.& WING FD. (UNIDENTIFIED)	S	53°17'20"	1.85	D.H.& WING FD. (D.P.856133)
E	42°01'20"	4.605	D.H.& WING FD. (D.P.1020108)	T	45°37'40"	18.985	D.H.& WING FD. (D.P.1043041)
F	57°42'20"	5.685	D.H.& WING FD. (D.P.1020108)	U	136°31'10"	2.68	D.H.& WING FD. (D.P.851788)
G	29°15'20"	2.48	D.H.& WING FD. (D.P.878213)	V	129°54'40"	5.1	D.H.& WING FD. (D.P.605622)
H	309°53'15"	20.8 (BY ME)	D.H.& WING FD. (D.P.878213)	W	172°54'35"	3.04	D.H.& WING IN PATH
I	286°52'35"	4.375 & 17.49	D.H.& WING FD. (D.P.878213)	X	142°18'50"	14.22	BOLT & WING IN PATH
J	232°15'45"	4.425 & 17.61	D.H.& WING FD. (D.P.878213)	Y	168°36'45"	0.765	D.H.& WING IN PATH
K	84°46'	3.885	D.H.& WING FD. (D.P.1033057)	Z	348°21'10"	7.145	D.H.& WING IN PATH
L	44°18'	1.18	D.H.& WING FD. (D.P.1040025)	AA	217°48'	4.965	D.H.& WING IN KERB
M	45°31'40"	2.405 (BY ME)	D.H.& WING FD. (D.P.878213)	AB	251°26'	5.32	D.H.& WING IN KERB



SCHEDULE of SHORT & CURVED BOUNDARIES

No.	BEARING	DISTANCE	ARC	RADIUS	No.	BEARING	DISTANCE	ARC	RADIUS
1	38°56'45"	6.645			18	158°47'10"	5.445	5.465	19.5
2	52°23'45"	9.46			19	124°46'25"	17.085	17.685	19.5
3	9°52'45"	5.83			20	117°37'50"	13.725	13.975	21.25
4	40°50'45"	9.2			21	166°39'55"	89.54	93.825	89
5	38°57'30"	4.485			22	196°52'	6.5		
6	38°57'30"	3.445			23	208°22'20"	15.005	15.105	37.605
7	38°57'30"	13.07			24	219°52'50"	12.85		
8	85°20'30"	5.425			25	219°52'50"	6.555		
9	127°37'30"	10.31			26	248°12'35"	10.925	11.385	11.515
10	126°12'30"	9.675			27	263°00'25"	5.385	5.435	11.515
11	125°56'30"	12.495			28	286°41'50"	5.48	5.51	15.54
12	316°10'	86.595	86.655	673.275	29	296°51'	25.16		
13	9°34'10"	9.875			30	354°51'	6.685		
14	341°15'10"	14.98			31	37°50'50"	11.03		
15	317°09'10"	14.96			32	37°50'50"	1.505		
16	235°06'20"	27.03	29.86	19.5	33	133°11'05"	17.435	17.435	716.135
17	179°01'40"	8.245	8.31	19.5	34	143°19'20"	3.3 (D.P.835176)		

'H' - EASEMENT TO DRAIN WATER 2.5 WIDE (VIDE D.P.605622)
'I' - RIGHT OF WAY & EASEMENT FOR ELECTRICITY PURPOSES 1.165, 1.29 &2.23 WIDE (VIDE S985304)
'J' - SUBSTATION PREMISES No. 5594 LEASED TO ENERGY AUSTRALIA (VIDE S985304)
'K' - RIGHT OF WAY 4 & 8.455 WIDE (VIDE AC448339)
'L' - EASEMENT FOR ELECTRICITY PURPOSES 4 & 8.455 WIDE (VIDE AC448339)
'M' - SUBSTATION PREMISES No.7739 LEASED TO ENERGY AUSTRALIA (VIDE AC448339)
'N' - RIGHT OF CARRIAGEWAY 13.03 WIDE (VIDE M68885)

Surveyor: GRAHAM JOHN HALL
Date of Survey: 29th APRIL 2008
Surveyor's Ref: 28/08

PLAN OF ACQUISITION OF LOTS 1 & 2 AFFECTING LOT 100 IN D.P.875114 & LOT 2 IN D.P.1020108

LGA: RYDE
Locality: MACQUARIE PARK
Subdivision No.
Lengths are in metres. Reduction Ratio 1:1250

Registered
4.9.2008

DP1129811 P

E

10 20 30 40 50 Table of mm 80 90 100 110 120 130 140

InfoTrack
Req:R684055 /Doc:DP 1129811 P /Rev:19-Oct-2009 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 10:25 /Seq:1 of 3
© Office of the Registrar-General /Src:InfoTrack /Ref:269 Lane Cove Road

CAD REF: 280851

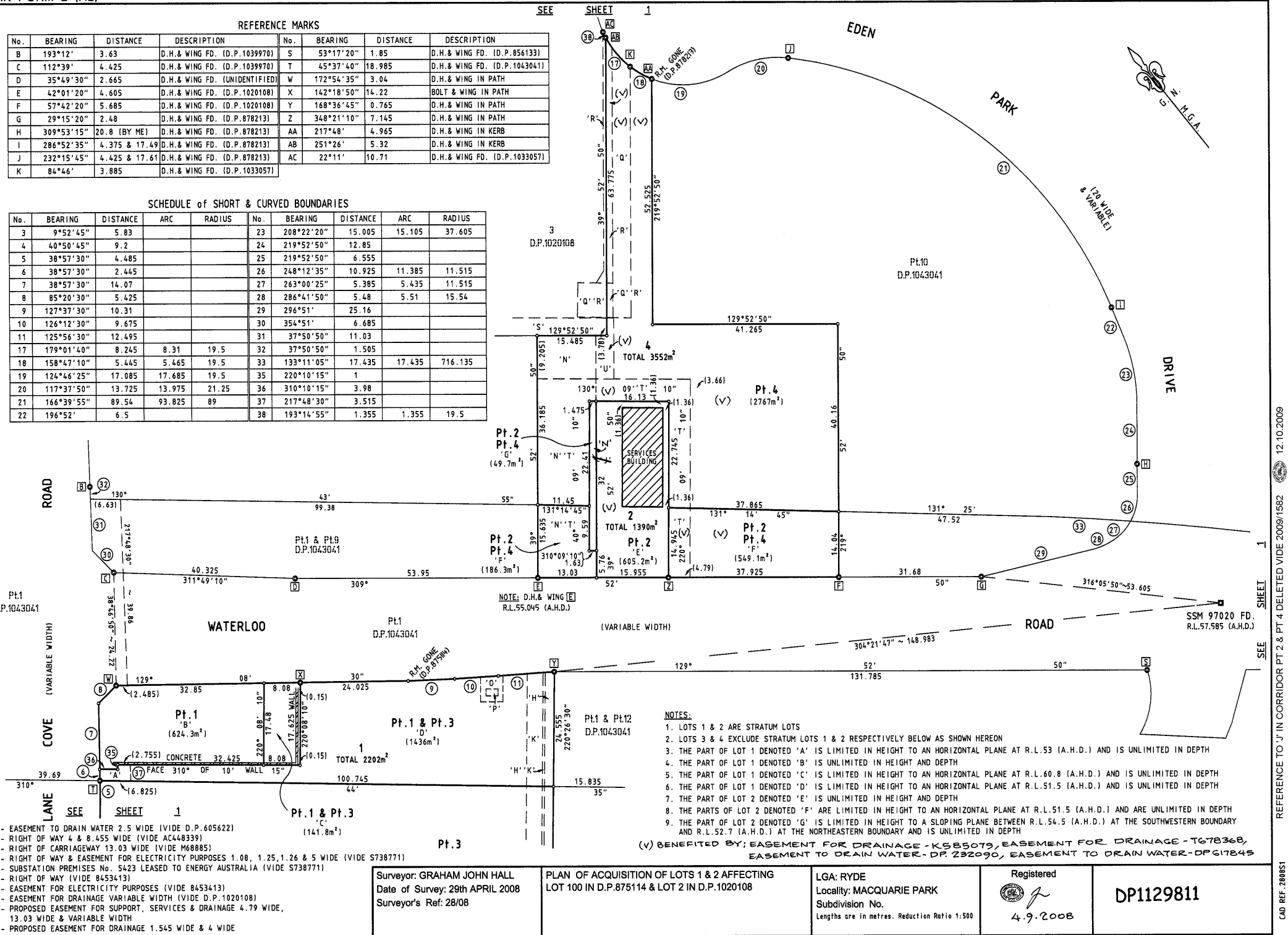
SEE SHEET 1

REFERENCE MARKS

No.	BEARING	DISTANCE	DESCRIPTION	No.	BEARING	DISTANCE	DESCRIPTION
B	193°12'	3.63	D.H.& WING FD. (D.P.1039970)	S	53°17'20"	1.85	D.H.& WING FD. (D.P.856133)
C	112°39'	4.425	D.H.& WING FD. (D.P.1039970)	T	45°37'40"	18.985	D.H.& WING FD. (D.P.1043041)
D	35°49'30"	2.665	D.H.& WING FD. (UNIDENTIFIED)	W	172°54'35"	3.04	D.H.& WING IN PATH
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H	309°53'15"	20.8 (BY ME)	D.H.& WING FD. (D.P.878213)	AA	217°48'	4.965	D.H.& WING IN KERB
I	286°52'35"	4.375 & 17.49	D.H.& WING FD. (D.P.878213)	AB	251°26'	5.32	D.H.& WING IN KERB
J	232°15'45"	4.425 & 17.61	D.H.& WING FD. (D.P.878213)	AC	22°11'	10.71	D.H.& WING FD. (D.P.1033057)
K	84°46'	3.885	D.H.& WING FD. (D.P.1033057)				

SCHEDULE of SHORT & CURVED BOUNDARIES

No.	BEARING	DISTANCE	ARC	RADIUS	No.	BEARING	DISTANCE	ARC	RADIUS
3	9°52'45"	5.83			23	208°22'20"	15.005	15.105	37.605
4	40°50'45"	9.2			24	219°52'50"	12.85		
5	38°57'30"	4.485			25	219°52'50"	6.555		
6	38°57'30"	2.445			26	248°12'35"	10.925	11.385	11.515
7	38°57'30"	14.07			27	263°00'25"	5.385	5.435	11.515
8	85°20'30"	5.425			28	286°41'50"	5.48	5.51	15.54
9	127°37'30"	10.31			29	296°51'	25.16		
10	126°12'30"	9.675			30	354°51'	6.685		
11	125°56'30"	12.495			31	37°50'50"	11.03		
17	179°01'40"	8.245	8.31	19.5	32	37°50'50"	1.505		
18	158°47'10"	5.445	5.465	19.5	33	133°11'05"	17.435	17.435	716.135
19	124°46'25"	17.085	17.685	19.5	35	220°10'15"	1		
20	117°37'50"	13.725	13.975	21.25	36	310°10'15"	3.98		
21	166°39'55"	89.54	93.825	89	37	217°48'30"	3.515		
22	196°52'	6.5			38	193°14'55"	1.355	1.355	19.5



SEE SHEET 1

'H' - EASEMENT TO DRAIN WATER 2.5 WIDE (VIDE D.P.605622)
'K' - RIGHT OF WAY 4 & 8.455 WIDE (VIDE AC448339)
'N' - RIGHT OF CARRIAGEWAY 13.03 WIDE (VIDE M68885)
'O' - RIGHT OF WAY & EASEMENT FOR ELECTRICITY PURPOSES 1.08, 1.25,1.26 & 5 WIDE (VIDE S738771)
'P' - SUBSTATION PREMISES No. 5423 LEASED TO ENERGY AUSTRALIA (VIDE S738771)
'Q' - RIGHT OF WAY (VIDE 8453413)
'R' - EASEMENT FOR ELECTRICITY PURPOSES (VIDE 8453413)
'S' - EASEMENT FOR DRAINAGE VARIABLE WIDTH (VIDE D.P.1020108)
'T' - PROPOSED EASEMENT FOR SUPPORT, SERVICES & DRAINAGE 4.79 WIDE, 13.03 WIDE & VARIABLE WIDTH
'U' - PROPOSED EASEMENT FOR DRAINAGE 1.545 WIDE & 4 WIDE

NOTES:
1. LOTS 1 & 2 ARE STRATUM LOTS
2. LOTS 3 & 4 EXCLUDE STRATUM LOTS 1 & 2 RESPECTIVELY BELOW AS SHOWN HEREON
3. THE PART OF LOT 1 DENOTED 'A' IS LIMITED IN HEIGHT TO AN HORIZONTAL PLANE AT R.L.53 (A.H.D.) AND IS UNLIMITED IN DEPTH
4. THE PART OF LOT 1 DENOTED 'B' IS UNLIMITED IN HEIGHT AND DEPTH
5. THE PART OF LOT 1 DENOTED 'C' IS LIMITED IN HEIGHT TO AN HORIZONTAL PLANE AT R.L.60.8 (A.H.D.) AND IS UNLIMITED IN DEPTH
6. THE PART OF LOT 1 DENOTED 'D' IS LIMITED IN HEIGHT TO AN HORIZONTAL PLANE AT R.L.51.5 (A.H.D.) AND IS UNLIMITED IN DEPTH
7. THE PART OF LOT 2 DENOTED 'E' IS UNLIMITED IN HEIGHT AND DEPTH
8. THE PARTS OF LOT 2 DENOTED 'F' ARE LIMITED IN HEIGHT TO AN HORIZONTAL PLANE AT R.L.51.5 (A.H.D.) AND ARE UNLIMITED IN DEPTH
9. THE PART OF LOT 2 DENOTED 'G' IS LIMITED IN HEIGHT TO A SLOPING PLANE BETWEEN R.L.54.5 (A.H.D.) AT THE SOUTHWESTERN BOUNDARY AND R.L.52.7 (A.H.D.) AT THE NORTHEASTERN BOUNDARY AND IS UNLIMITED IN DEPTH

(v) BENEFITED BY; EASEMENT FOR DRAINAGE - K585079, EASEMENT FOR DRAINAGE - T678368, EASEMENT TO DRAIN WATER - DP. 232090, EASEMENT TO DRAIN WATER - DP617845

Surveyor: GRAHAM JOHN HALL Date of Survey: 29th APRIL 2008 Surveyor's Ref: 28/08	PLAN OF ACQUISITION OF LOTS 1 & 2 AFFECTING LOT 100 IN D.P.875114 & LOT 2 IN D.P.1020108	LGA: RYDE Locality: MACQUARIE PARK Subdivision No. Lengths are in metres. Reduction Ratio 1:500	Registered 4.9.2008	DP1129811

10 | 20 | 30 | 40 | 50 | Table of mm | 80 | 90 | 100 | 110 | 120 | 130 | 140

© Office of the Registrar-General /Src:InfoTrack /Ref:269 Lane Cove Road (Req:R684055 /Doc:DP 1129811 P /Rev:19-Oct-2009 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 10:25 /Seq:2 of 3

REFERENCE TO 'J' IN CORRIDOR PT 2 & PT 4 DELETED VIDE 2009/1582 12.10.2009

CAD REF. 280851

Req:R684055 /Doc:DP 1129811 P /Rev:19-Oct-2009 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 10:25 /Seq:3 of 3
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PLAN FORM 6 WARNING: Creasing or folding will lead to rejection

DEPOSITED PLAN ADMINISTRATION SHEET Sheet 1 of 1 sheet(s)

SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

IT IS INTENDED TO ACQUIRE LOTS 1 & 2 FOR RAILWAY PURPOSES

Use PLAN FORM 6A
for additional certificates, signatures, seals and statements

Crown Lands NSW / Western Lands Office Approval

I.....in approving this plan certify
(Authorised Officer)
that all necessary approvals in regard to the allocation of the land shown herein have been given.

Signature:.....

Date:.....

File Number:.....

Office:.....

Subdivision Certificate

I certify that the Provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to:

the proposed ..... set out herein
(insert 'subdivision' or 'new road')

.....
* Authorised Person/General Manager/Accredited Certifier

Consent Authority:.....

Date of Endorsement:.....

Accreditation no:.....

Subdivision Certificate no: .....

File no: .....

*Delete whichever is inapplicable

DP1129811 S

Registered: 4.9.2008
Title System: TORRENS
Purpose: ACQUISITION

PLAN OF

ACQUISITION OF LOTS 1 & 2 AFFECTING LOT 100 IN D.P.875114 & LOT 2 IN D.P.1020108

LGA: RYDE
Locality: MACQUARIE PARK
Parish: FIELD OF MARS
County: CUMBERLAND

Surveying Regulation, 2006

I, GRAHAM JOHN HALL

of CRAIG & RHODES PTY LTD
LEVEL 4, 16-18 CAMBRIDGE ST EPPING 2121

a surveyor registered under the Surveying Act, 2002, certify that the survey represented in this plan is accurate, has been made in accordance with the Surveying Regulation, 2006 and was completed on: 29th APRIL 2008

The survey relates to LOTS 1 & 2

.....

(specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey)

Signature Graham Hall Dated 18/7/08
Surveyor registered under the Surveying Act, 2002

Datum Line: 'X' - 'Y'

Type: Urban/~~Rural~~

Plans used in preparation of survey / ~~compilation.~~

D.P.605622
D.P.617845
D.P.700942
D.P.851788
D.P.856133
D.P.875114
D.P.878213
D.P.1020108
D.P.1033057
D.P.1039970
D.P.1043041
D.P.1044956
D.P.1049708
D.P.1061547
D.P.1062905
D.P.1069715

(If insufficient space use Plan Form 6A annexure sheet)

SURVEYOR'S REFERENCE: 28/08

*OFFICE USE ONLY

CAD REF.2808S1

PLAN FORM 2

Plan Drawing only to appear in this space

SIGNATURE AND SEALS ONLY.

Common Seal MIRVAC FUNDS LIMITED A.C.N. 002 561 640

S. MYERS COMPANY SECRETARY

Kathryn Margaret Goonan Assistant Manager

DELEMI RODRIGO ASSISTANT MANAGER

NICOLA PIGOTT

This plan is only available to define and for lease purposes where the term plus any renewals is 5 years or less. It is not available for subdivision for lease purposes

Crown Lands Office Approval

PLAN APPROVED ..... Authorised Officer

Land District .....

Paper No. .....

Field-Book ..... pages .....

Subdivison Certificate

I hereby certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed ..... set out herein

* (Insert "subdivision" or "new road")

the subdivision is for lease purposes in accordance with s.23H of the Conveyancing Act 1919.

..... * Authorised Person/General Manager/Accredited Certifier

Consent Authority: .....

Date of endorsement : .....

Accreditation no : .....

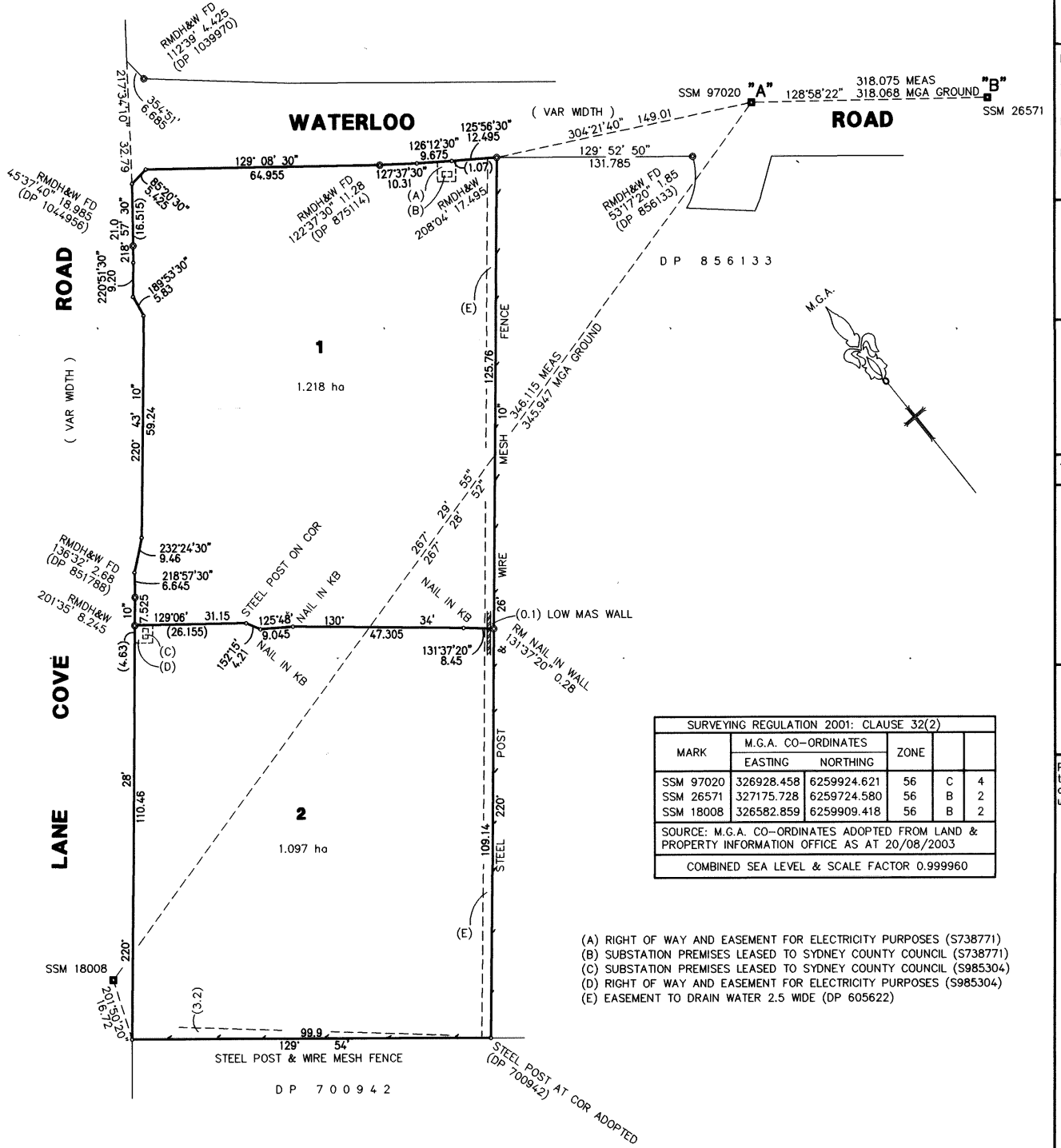
Subdivision Certificate no : .....

File no. .....

Note:
When the plan is to be lodged electronically in the land Titles Office it should include a signature in an electronic or digital format approved by the Registar-General.

* Delete whichever is inapplicable

SURVEYOR'S REFERENCE: 47732



SURVEYING REGULATION 2001: CLAUSE 32(2)					
MARK	M.G.A. CO-ORDINATES		ZONE		
	EASTING	NORTHING			
SSM 97020	326928.458	6259924.621	56	C	4
SSM 26571	327175.728	6259724.580	56	B	2
SSM 18008	326582.859	6259909.418	56	B	2
SOURCE: M.G.A. CO-ORDINATES ADOPTED FROM LAND & PROPERTY INFORMATION OFFICE AS AT 20/08/2003					
COMBINED SEA LEVEL & SCALE FACTOR 0.999960					

(A) RIGHT OF WAY AND EASEMENT FOR ELECTRICITY PURPOSES (S738771)
(B) SUBSTATION PREMISES LEASED TO SYDNEY COUNTY COUNCIL (S738771)
(C) SUBSTATION PREMISES LEASED TO SYDNEY COUNTY COUNCIL (S985304)
(D) RIGHT OF WAY AND EASEMENT FOR ELECTRICITY PURPOSES (S985304)
(E) EASEMENT TO DRAIN WATER 2.5 WIDE (DP 605622)

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 Table of mm 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

DP1062905

Registered 15-12-2003*

Title System: TORRENS

Purpose: LEASE

Ref. Map: U 0952 - 12
U 0960 - 74

Last Plan: D.P. 875114

PLAN

OF SUBDIVISION FOR LEASING PURPOSES OVER LOT 100 D.P.875114

Lengths are in metres. Reduction Ratio 1: 800

LGA RYDE

Suburb/Locality: MACQUARIE PARK ~~NORTH RYDE~~

Parish: HUNTERS HILL

County: CUMBERLAND

~~This is sheet 1 of my plan in sheets.~~
(Delete if inapplicable)

Survey Certificate Surveyors (Practice) Regulation 2001

I, ROBERT LIGHTFOOT
HILL & BLUME P/L
of 102 CROWN ST, WOOLLOOMOOLOO
a surveyor registered under the Surveyors Act, 1929, hereby certify that the survey represented in this plan is accurate, has been made in accordance with the Surveyors (Practice) Regulation 2001 and was completed on 20/08/03

The survey relates to LOTS 1 & 2
(specify the land actually surveyed, or specify any land shown in the plan that is not the subject of the survey)

(Signature) ..... Dated: 21/10/03
Surveyor registered under the surveyors Act 1929

Datum Line: "A" - "B"
Type: urban/~~Rural~~

Plans used in preparation of survey/compilation.
DP 856133 DP 700942 DP 1044956
DP 1043041 DP 1039970 DP 875114
DP 605622

PANEL FOR USE ONLY for statements of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

*OFFICE USE ONLY

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Req:R683293 /Doc:CT 14006-100 CT /Rev:23-Dec-2010 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 09:13 /Seq:1 of 2
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14006100

[redacted]FICATE OF TITLE

NEW SOUTH WALES

F53.

[redacted]L PROPERTY ACT, 1900

Vol. 14006 Fol. 100

Crown Grants Vol.5597 Fol. [illegible]
Vol.5642 Fol. 61

Prior Titles Vol.5642 Fol. 61
Vol.5971 Fol.128
Vol.6902 Fol.128

EDITION ISSUED

7 2 1980

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

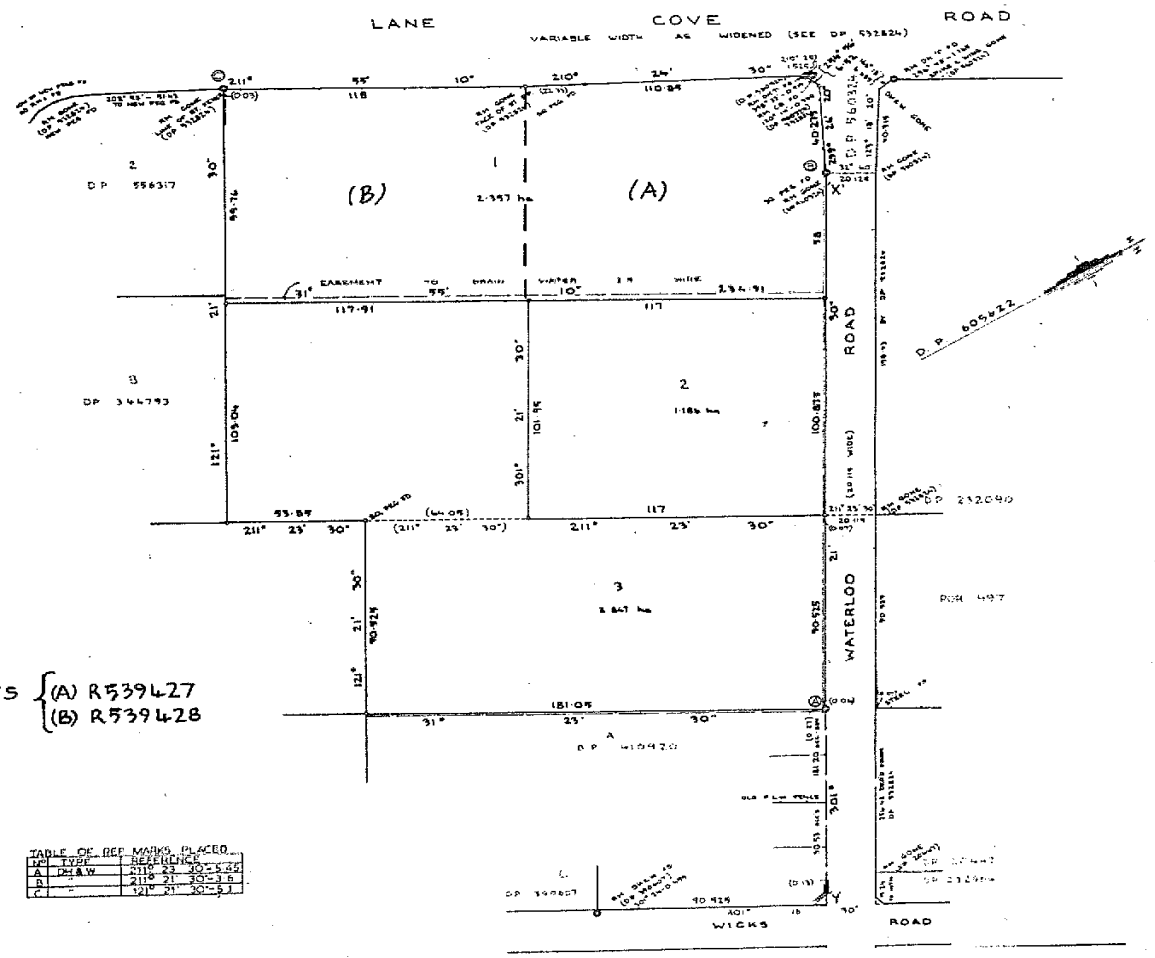
Registrar General.

14006 Fol. 100

(Page 1) Vol.

PLAN SHOWING LOCATION OF LAND

LENGTHS ARE IN METRES



COVENANTS (A) R539427
(B) R539428

TABLE OF REF MARKS PLACED

No	TYPE	REFERENCE
A	Dr & W	211° 23' 30"-5.26
B		211° 21' 30"-3.6
C		121° 21' 30"-5.1

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 1 in Deposited Plan 605622 at North Ryde in the Municipality of Ryde Parish of Hunters Hill and County of Cumberland. EXCEPTING THEREOUT the minerals reserved by the Crown Grants

FIRST SCHEDULE

~~HUNTER RIVER PROPERTIES PTY. LIMITED to the part of the land above described formerly comprised in Certificate of Title Volume 5642 Folio 61 and GREENFIELDS DEVELOPMENT COMPANY PTY. LIMITED to the parts formerly comprised in Certificates of Title Volume 5971 Folio 128 and Volume 6902 Folio 128.~~

SECOND SCHEDULE

1. Reservations and conditions, if any, contained in the Crown Grants above referred to.
2. R471977 Request. Attention is directed to section 8, Land Aggregation Tax Management Act, 1971.
3. DP605622 Easement to drain water affecting the part of the land above described shown so burdened in Deposited Plan 605622.

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS CERTIFICATE OR ANY NOTIFICATION HEREON

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE REGISTRAR GENERAL'S OFFICE.

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

RG 2/62

Vol. 14006 Fol. 100

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT NATURE	INSTRUMENT NUMBER	REGISTERED	Signature of Registrar General
~~Lend Lease Development Pty Limited~~	~~Transfer~~	~~R539427~~ R539428	~~19-2-1980~~	
~~Bank of New South Wales Nominees Pty. Limited~~	Transfer	S281875	23-2-1981	
The Manufacturers' Mutual Insurance Limited by Transfer W406192. Registered 4-7-1986				

FOLIO CANCELLED – NEW FOLIO IS 1/605622

SECOND SCHEDULE (continued)

INSTRUMENT NATURE	INSTRUMENT NUMBER	PARTICULARS	REGISTERED	Signature of Registrar General	CANCELLATION	
~~Covenant~~	~~R539427~~	~~Created by Transfer No. R539427 affecting the land shown so burdened on the plan hereon.~~				
			~~19-2-1980~~		Released	X715869
~~Covenant~~	~~R539428~~	~~Created by Transfer No. R539428 affecting the land shown so burdened on the plan hereon.~~	~~19-2-1980~~		Released	X715869
~~Caveat~~	~~S14612~~	~~by Butterworths Pty. Limited~~	~~5-11-1980~~		Withdrawn	T740765
~~Lease~~	~~S281873~~	~~to Adler Business Machines Pty. Limited of premises known as Block 1 situate Lane Cove Road, North Ryde, together with option of renewal. Expires 8-5-1986~~	~~23-2-1981~~		Expired	26-5-1986.
~~Caveat~~	~~S234892~~	~~by Lend Lease Development Pty. Limited~~	~~23-2-1981~~		Withdrawn	T656864
S738771		Lease to The Sydney County Council of Substation premises No. 5423 as shown in plan with S738771 together with a right of way and easement for electricity purposes over another part of the land above described. Expires 31-12-2030. Registered 3-8-1982.				
S985304		Lease to The Sydney County Council of substation premises No. 5594 together with a right of way and easement for electricity purposes over another part of the land above described. Expires 31-12-2031. Registered 3-8-1982.				
T604122	Lease	to Butterworths Pty. Limited of premises known as Block 2, Industrial Estate, Lane Cove Road, North Ryde, together with and reserving rights and an option of renewal. Expires 7-4-1991. Registered 4-10-1983.				
W336354	Lease	to Adler Business Machines Pty. Limited of Block 1, Lane Cove Road, North Ryde. Expires 8-4-1990. Option of renewal 4 years 11 months. Registered 26-5-1986.				
W336354	Lease	X380348 Transfer of Lease to Philips Industries Holdings Limited. Registered 25-2-1988				

(Page 2 of 2 pages)

NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY THE SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

S14612 affects
S234892 affects
S281873
– 874
– 875
C.T. 1.10.81
S738771 (Sub-station 5423)
S985304 (Substation 5594)
T604122
T656864
T740765 w/d
W336354 (Block 1.)
W406192 T. of L.
X380348 TL
X715869

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Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

18/12/2023 9:06AM

FOLIO: 1/605622

First Title(s): VOL 5597 FOL 53 VOL 5642 FOL 61
Prior Title(s): VOL 14006 FOL 100

Recorded	Number	Type of Instrument	C.T. Issue
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
1/9/1988	X715869	TRANSFER	FOLIO CREATED EDITION 1
9/8/1989	Y516992	SURRENDER OF LEASE	
9/8/1989	Y516993	LEASE	EDITION 2
6/10/1989	Y649008	DEPARTMENTAL DEALING	EDITION 3
23/11/1989	Y731746	DEPARTMENTAL DEALING	EDITION 4
4/12/1989	Y746956	DEPARTMENTAL DEALING	EDITION 5
8/4/1991	Z570065	LEASE	EDITION 6
6/10/1992	E805021	VARIATION OF LEASE	
12/9/1994	U609676	TRANSFER	EDITION 7
24/8/1995	DP851788	DEPOSITED PLAN	
3/2/1997	2802784	CHANGE OF NAME	
3/2/1997	2802785	VARIATION OF LEASE	
24/7/1997	3264794	CHANGE OF NAME	
24/7/1997	3264795	VARIATION OF LEASE	EDITION 8
19/2/1998	DP875114	DEPOSITED PLAN	
14/8/1998	5173156	TRANSFER	FOLIO CANCELLED

*** END OF SEARCH ***

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Received: 18/12/2023 09:06:14

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97-01T

TRANSFER

Real Property Act, 1900

U 609676 S

Office of State Revenue use only

OFFICE OF STATE REVENUE (N.S.W. TREASURY) 1994/95 P23 NO STAMP DUTY IS PAYABLE ON THIS INSTRUMENT

(A) LAND TRANSFERRED

Show no more than 20 References to Title. If appropriate, specify the share transferred.

FOLIO IDENTIFIER 1/605622

(B) LODGED BY

L.T.O. Box: 4NJ

Name, Address or DX and Telephone:
Mallesons Stephen Jaques
Governor Phillip Tower
1 Farrer Place
Sydney NSW 2000

Reference (max. 15 characters): CGA MANU2314-003 ~~ALB:P97553~~

(C) TRANSFEROR

MMI LIMITED (ACN 000 006 226)
~~(formerly Manufacturers Mutual Insurance Limited)~~

(D) ~~acknowledges receipt of the consideration of~~ pursuant to a corporate restructure between the parties ~~and as regards the land specified above~~ transfers to the transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. S738771 £570065 2. S985304 3. Y516993

(F) TRANSFEREE

T MMI GENERAL INSURANCE LIMITED (ACN 000 122 850)

(G) TENANCY:

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900

DATE 30 June 1994

FOR EXECUTION CLAUSES SEE ANNEXURE

~~Signed in my presence by the transferor who is personally~~ known to me

.....
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

.....
Address of Witness

.....
Signature of Transferor

Signed in my presence by the transferee who is personally known to me

.....
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

.....
~~Address of Witness~~

.....
~~Signature of Transferee~~

INSTRUCTIONS FOR FILLING OUT THIS FORM ARE AVAILABLE FROM THE LAND TITLES OFFICE

CHECKED BY (office use only)

H. C. MARTYN & SONS (AUST.) PTY. LTD. PH: (02) 699 2499

Req:R683295 /Doc:DL U609676 /Rev:19-Mar-2010 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 09:13 /Seq:2 of 2
© Office of the Registrar-General /Src:InfoTrack /Ref:269 Lane Cove Road

This is the annexure containing execution clauses to Transfer made
Between:
MMI LIMITED (as Transferor)
And:
MMI GENERAL INSURANCE LIMITED (as Transferee)

THE COMMON SEAL of MMI LIMITED is affixed in accordance with its articles of association in the presence of:

MMI LIMITED A.C.N. 000 000 226 Common Seal

.....
Signature of authorised person

SECRETARY/DIRECTOR
Office held

D. J. HENRY
Name of authorised person (block letters)

.....
Signature of authorised person

DIRECTOR
Office held

J T Cameron
Name of authorised person (block letters)

THE COMMON SEAL of MMI GENERAL INSURANCE LIMITED is affixed in accordance with its articles of association in the presence of:

MMI GENERAL INSURANCE LIMITED A.C.N. 000 122 850 Common Seal

.....
Signature of authorised person

SECRETARY/DIRECTOR
Office held

D. J. HENRY
Name of authorised person (block letters)

.....
Signature of authorised person

DIRECTOR
Office held

W.D. ADCOCK
Name of authorised person (block letters)

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
18/12/2023 9:05AM

FOLIO: 100/875114

First Title(s): VOL 5597 FOL 53 VOL 5642 FOL 61
Prior Title(s): 1/605622

Recorded	Number	Type of Instrument	C.T. Issue
19/2/1998	DP875114	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
~~17/8/1998~~	~~5173156~~	~~TRANSFER~~	FOLIO CREATED EDITION 1
20/4/2000	6733927	TRANSFER	EDITION 2
17/10/2000	7154698	TRANSFER	EDITION 3
5/6/2001	7665871	LEASE	EDITION 4
7/9/2001	7916117	MORTGAGE	
7/9/2001	7916118	MORTGAGE	EDITION 5
6/11/2001	8090596	DEPARTMENTAL DEALING	
16/5/2002	8600769	LEASE	
6/12/2002	9193985	DEPARTMENTAL DEALING	
20/12/2002	DP1044956	DEPOSITED PLAN	
25/2/2003	DP1049708	DEPOSITED PLAN	
1/7/2003	9745684	SURRENDER OF LEASE	
3/11/2003	9801431	REJECTED - LEASE	
3/11/2003	9801432	REJECTED - LEASE	
3/11/2003	9801433	REJECTED - LEASE	
15/12/2003	DP1062905	DEPOSITED PLAN	
24/3/2004	AA423966	LEASE	
24/3/2004	AA423964	LEASE	
24/3/2004	AA423965	LEASE	
13/4/2004	AA559152	MORTGAGE OF LEASE	
21/4/2004	AA539495	LEASE	

END OF PAGE 1 - CONTINUED OVER

SEARCH DATE
18/12/2023 9:05AM

FOLIO: 100/875114

Recorded	Number	Type of Instrument	C.T. Issue
21/4/2004	AA539500	LEASE	
30/5/2006	AC341639	DEPARTMENTAL DEALING	EDITION 6
15/6/2006	AC376882	DISCHARGE OF MORTGAGE	
15/6/2006	AC376883	DISCHARGE OF MORTGAGE	EDITION 7
24/7/2006	AC448340	SUB-LEASE	
24/7/2006	AC448339	SUB-LEASE	
25/8/2006	AC549361	VARIATION OF MORTGAGE	
4/9/2008	DP1129811	DEPOSITED PLAN	
13/11/2008	AE300034	TRANSFER	FOLIO CANCELLED
20/7/2016	AK607998	DEPARTMENTAL DEALING	

*** END OF SEARCH ***

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Req:R683236 /Doc:DL 6733927 /Rev:29-Apr-2000 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 09:06 /Seq:1 of 4
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Form: 07-011
Licence Number: 599D/0366/96

TRANSFER
Real Property Act

6733927Y

Office of State Revenue use only
NEW SOUTH WALES DUTY
17-04-2000 0000284698-001
SECTION 18(2)
DUTY $ **********2.00

(A) **LAND TRANSFERRED**
Show no more than 20 References to Title.
If appropriate, specify the share transferred.

100/875114

(B) **LODGED BY**

L.T.O. BOX	Name, Address or DX and Telephone
646W ~~509D~~	Coudert Brothers Level 8, Gateway Building 1 Macquarie Place DX 119 SYDNEY Telephone: (02) 9930 7500 PJW

(C) **TRANSFEROR**

ALLIANZ AUSTRALIA INSURANCE LIMITED (formerly MMI General Insurance Limited) ACN 000 122 850

(D) acknowledges receipt of the consideration of $17,100,000.00
and as regards the land specified above transfers to the Transferee an estate in fee simple

(E) subject to the following **ENCUMBRANCES** 1. 2. 3.

(F) **TRANSFEREE**

T TS (s713 LGA) TW (Sheriff)	Perpetual Trustee Company Limited ACN 000 001 007

(G) **TENANCY:**

(H) We certify this dealing correct for the purposes of the Real Property Act 1900

DATE .....

The Common Seal of Allianz Australia Insurance Limited ACN 000 122 850 is affixed in accordance with its constitution in the presence of

~~Signed in my presence by the Transferor who is personally known to me~~

~~Signature of Witness~~ ~~Director~~

PETER HUEHNE
Name of ~~Witness (BLOCK LETTERS)~~ Director

Address of ~~Witness~~
Signature of Director

P. McGahen
Signature of ~~Transferor~~ Secretary

PAUL McGAHEN
Name of Secretary

Signed in my presence by the Transferee who is personally known to me

.....
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

.....
Address of Witness

Peter Cabu, Solicitor for
~~Signature of~~ Transferee

NB: if applicable, indicate that the signatory is the transferee's solicitor and show the solicitor's full name

CHECKED BY (office use only)

SYD3_392665_1

Req:R683236 /Doc:DL 6733927 /Rev:29-Apr-2000 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 09:06 /Seq:2 of 4
© Office of the Registrar-General /Src:InfoTrack /Ref:269 Lane Cove Road

6733927

STATUTORY DECLARATION

I, Warren John Colman of 44 Martin Place, Sydney in the state of New South Wales, do solemnly and sincerely declare as follows:

1. I am the solicitor for Allianz Australia Insurance Limited (ACN 000 122 850)('**Allianz**').

2. Allianz was formerly known as Allianz Australia General Insurance Limited and before that, MMI General Insurance Limited.

3. MMI General Insurance Limited changed its name to Allianz Australia General Insurance Limited on 29 February 2000.

4. Allianz Australia General Insurance Limited changed its name to Allianz Australia Insurance Limited on 21 March 2000.

5. Annexed to this statutory declaration as Annexure 'A' is a copy of two Certificates of Registration on Change of Name.

AND I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1900*.

SUBSCRIBED and **DECLARED** at)
Sydney this 4th day of April 2000)
before me)

.....

.....
A Justice ~~of the Peace~~/Solicitor - Maxine Wong

Req:R683236 /Doc:DL 6733927 /Rev:29-Apr-2000 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 09:06 /Seq:3 of 4
© Office of the Registrar-General /Src:InfoTrack /Ref:269 Lane Cove Road 1000 0404 P. 03

ALLIANZ AUSTRALIA LIMITED
ATTN: DONALD HENRY
GPO BOX 4049
SYDNEY NSW 2001

Remove this top section if desired before printing

Certificate of Registration on Change of Name

This is to certify that

MMI GENERAL INSURANCE LTD

Australian Company Number 000 122 850

did on the twenty-ninth day of February 2000 change its name to

ALLIANZ AUSTRALIA GENERAL INSURANCE LIMITED

Australian Company Number 000 122 850

The company is a public company.

The company is limited by shares.

The company is taken to be registered as a company under the Corporations Law of New South Wales.

Issued by the
Australian Securities and Investments Commission
on this twenty-ninth day of February, 2000.

Alan Cameron
Chairman

Req:R683236 /Doc:DL 6733927 /Rev:29-Apr-2000 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 09:06 /Seq:4 of 4
© Office of the Registrar-General /Src:InfoTrack /Ref:269 Lane Cove Road

ALLIANZ AUSTRALIA LIMITED
ATTN: DONALD HENRY
GPO BOX 4049
SYDNEY NSW 2001

Remove this top section if desired before framing

Certificate of Registration on Change of Name

This is to certify that

ALLIANZ AUSTRALIA GENERAL INSURANCE LIMITED

Australian Company Number 000 122 850

did on the twenty-first day of March 2000 change its name to

ALLIANZ AUSTRALIA INSURANCE LIMITED

Australian Company Number 000 122 850

The company is a public company.

The company is limited by shares.

The company is taken to be registered as a company under the Corporations Law of New South Wales.

Issued by the
Australian Securities and Investments Commission
on this twenty-first day of March, 2000.

Alan Cameron
Chairman

Req:R683237 /Doc:DL 7154698 /Rev:21-Oct-2000 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 09:06 /Seq:1 of 2
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Form: 97-01T
Licence: LAW/0526/98

TRANSFER

New South Wales

Real Property Act 1900

7154698P

Office of State Revenue use only

NEW SOUTH WALES DUTY
08-09-2000 0000368869-009
SECTION 54A(2)
DUTY $ ***********10.00

(A) **LAND TRANSFERRED**
If appropriate, specify the share or part transferred.

Folio Identifier 100/875114

(B) **LODGED BY**

LTO Box	Name, Address or DX and Telephone
644W	Coudert Brothers
	REFERENCE (optional):

(C) **TRANSFEROR** **Perpetual Trustee Company Limited ACN 000 001 007**

(D) acknowledges receipt of the consideration of
and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) Encumbrances (if applicable) 1. 2. 3.

(F) **TRANSFEREE**

T / **TS** (s713 LGA) / **TW** (Sheriff)	**Mirvac Funds Limited ACN 002 561 640**
(G)	**TENANCY:**

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. **DATE** 1 June 2000

Signed in my presence by the transferor who is personally known to me.

..... For execution see annexure "A"
Signature of Witness

.....
Name of Witness (BLOCK LETTERS)

..... Signature of Transferor

.....
Address of Witness

Signed in my presence by the transferee who is personally known to me.

.....
Signature of Witness

For execution see annexure "A"

.....
Name of Witness (BLOCK LETTERS)

.....
Address of Witness

..... Signature of Transferee

CHECKED BY (LTO use).....

Req:R683237 /Doc:DL 7154698 /Rev:21-Oct-2000 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 09:06 /Seq:2 of 2
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Signed for and on behalf of **Perpetual Trustee Company Limited** (incorporated in NSW) by its attorney who states that he has not received any notice of the revocation of Power of Attorney dated 3/12/99 Registered No. 420 Book 4257 whereupon he now executes this instrument in the presence of:

VICKI RIGGIO
Signature of Attorney

PAUL JOHN HOPE
Signature of Attorney

Signature of Witness

DAVID NIGEL GREY
Full name of Witness

The Common Seal of **Mirvac Funds Limited** was affixed in the presence of

Common
MIRVAC
FUNDS LIMITED
A.C.N. 002 561 640
Seal

Signature of Witness

M R Sheaffe
Full name of Witness

Company Secretary
Position held

Signature of Witness

BARNEIL
Full name of Witness

Director
Position held

LAND REGISTRY SERVICES Historical Search

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

18/12/2023 9:05AM

FOLIO: 3/1129811

First Title(s): VOL 5597 FOL 53 VOL 5642 FOL 61
Prior Title(s): 100/875114

Recorded	Number	Type of Instrument	C.T. Issue
4/9/2008	DP1129811	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
~~13/11/2008~~	~~AE300034~~	~~TRANSFER~~	FOLIO CREATED EDITION 1
16/2/2010	AF317556	VARIATION OF LEASE	
16/2/2010	AF317557	VARIATION OF LEASE	EDITION 2
10/11/2010	AF869116	TRANSFER OF MORTGAGE	
30/10/2012	AH331442	LEASE	EDITION 3
24/8/2015	AJ720501	LEASE	EDITION 4
28/2/2017	AK971351	LEASE	
28/2/2017	AK971352	SUB-LEASE	
28/2/2017	AK971502	MORTGAGE OF LEASE	
28/2/2017	AK971571	CHANGE OF NAME	
28/2/2017	AM33440	DEPARTMENTAL DEALING	
16/5/2017	AM367115	TRANSFER	EDITION 5
14/8/2018	AN580823	VARIATION OF LEASE	
10/12/2018	AN911666	VARIATION OF LEASE	
1/2/2019	AP28688	VARIATION OF LEASE	
18/2/2019	DP1249920	DEPOSITED PLAN	
15/9/2022	AS466933	VARIATION OF LEASE	EDITION 6
14/12/2022	AS716828	TRANSFER	EDITION 7
13/7/2023	AT256656	VARIATION OF LEASE	EDITION 8

*** END OF SEARCH ***

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Received: 18/12/2023 09:05:26

Req:R683233 /Doc:DL AM367115 /Rev:10-May-2017 /NSW LRS /Pgs:ALL /Prt:18-Dec-2023 09:05 /Seq:1 of 1
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Form: 01T
Release: 6·1

TRANSFER

New South Wales
Real Property Act 1900

AM367115F

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY Office of State Revenue use only

NEW SOUTH WALES DUTY
24-04-2017 0009054016-001
SECTION 18(2)-TRANSFER
NO DUTY PAYABLE

(A) **TORRENS TITLE** 3/1129811

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
599D	MinterEllison LLPNj 123438S 1 Farrer Place, Sydney Telephone: (02) 9921 8888 Reference: AEW:1163872	T TW

(C) **TRANSFEROR** MIRVAC FUNDS LIMITED ACN 002 561 540

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 38,500,000.00 and as regards

(E) **ESTATE** the abovementioned land transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** MIRVAC PROJECTS PTY LIMITED ACN 001 069 245

(I) **TENANCY:**

DATE

(J) Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the company named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.

Company: MIRVAC FUNDS LIMITED ACN 002 561 540
Authority: section 127 of the Corporations Act 2001

Signature of authorised person:
Name of authorised person: Sean Ward
Office held: Company Secretary

Signature of authorised person:
Name of authorised person: Susan Lloyd-Hurwitz
Office held: Director

Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the company named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.

Company: MIRVAC PROJECTS PTY LIMITED ACN 001 069 245
Authority: section 127 of the Corporations Act 2001

Signature of authorised person:
Name of authorised person: Sean Ward
Office held: Company Secretary

Signature of authorised person:
Name of authorised person: Campbell John Hanan
Office held: Director

(K) The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 1292098 Full name: Annabel Weiss Signature:

* *s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.*

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

1303

DRN L/F 106123

EVIDENCE NUMBER EV 184596D

LAND REGISTRY SERVICES

Title Search

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 3/1129811

SEARCH DATE	TIME	EDITION NO	DATE
18/12/2023	9:05 AM	8	13/7/2023

LAND

LOT 3 IN DEPOSITED PLAN 1129811
AT MACQUARIE PARK
LOCAL GOVERNMENT AREA RYDE
PARISH OF HUNTERS HILL COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1129811

FIRST SCHEDULE

NEXTDC LIMITED (T AS716828)

SECOND SCHEDULE (7 NOTIFICATIONS)

1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)

2 DP605622 EASEMENT TO DRAIN WATER AFFECTING THE SITE DESIGNATED (H) IN THE TITLE DIAGRAM

3 S738771 LEASE TO THE SYDNEY COUNTY COUNCIL OF SUBSTATION PREMISES NO 5423 AS SHOWN IN PLAN WITH S738771 TOG. WITH A RIGHT OF WAY & EASEMENT FOR ELECTRCITY PURPOSES AFFECTING THE SITE DESIGNATED (O) IN THE TITLE DIAGRAM. EXPIRES 31.12.2030

AK971351 LEASE OF LEASE S738771 TO BLUE ASSET PARTNER PTY LTD, ERIC ALPHA ASSET CORPORATION 1 PTY LTD, ERIC ALPHA ASSET CORPORATION 2 PTY LTD, ERIC ALPHA ASSET CORPORATION 3 PTY LTD & ERIC ALPHA ASSET CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 2.3 (b) (ii).

AK971352 LEASE OF LEASE AK971351 TO BLUE OP PARTNER PTY LTD, ERIC ALPHA OPERATOR CORPORATION 1 PTY LTD, ERIC ALPHA OPERATOR CORPORATION 2 PTY LTD, ERIC ALPHA OPERATOR CORPORATION 3 PTY LTD & ERIC ALPHA OPERATOR CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 12.1

AK971502 MORTGAGE OF LEASE AK971351 TO ANZ FIDUCIARY SERVICES PTY LTD

AK971571 CHANGE OF NAME AFFECTING LEASE S738771 LESSEE NOW ALPHA DISTRIBUTION MINISTERIAL HOLDING CORPORATION

4 S985304 LEASE TO THE SYDNEY COUNTY COUNCIL OF SUBSTATION PREMISES NO 5594 AS SHOWN IN PLAN WITH S985304 TOG WITH A RIGHT OF WAY & EASEMENT FOR ELECTRICITY

END OF PAGE 1 - CONTINUED OVER

SECOND SCHEDULE (7 NOTIFICATIONS) (CONTINUED)

PURPOSES AFFECTING THE SITE DESIGNATED (I) IN THE TITLE DIAGRAM. EXPIRES 31.12.2030

AK971351 LEASE OF LEASE S985304 TO BLUE ASSET PARTNER PTY LTD, ERIC ALPHA ASSET CORPORATION 1 PTY LTD, ERIC ALPHA ASSET CORPORATION 2 PTY LTD, ERIC ALPHA ASSET CORPORATION 3 PTY LTD & ERIC ALPHA ASSET CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 2.3 (b) (ii).

AK971352 LEASE OF LEASE AK971351 TO BLUE OP PARTNER PTY LTD, ERIC ALPHA OPERATOR CORPORATION 1 PTY LTD, ERIC ALPHA OPERATOR CORPORATION 2 PTY LTD, ERIC ALPHA OPERATOR CORPORATION 3 PTY LTD & ERIC ALPHA OPERATOR CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 12.1

AK971502 MORTGAGE OF LEASE AK971351 TO ANZ FIDUCIARY SERVICES PTY LTD

AK971571 CHANGE OF NAME AFFECTING LEASE S985304 LESSEE NOW ALPHA DISTRIBUTION MINISTERIAL HOLDING CORPORATION

5 THE LAND ABOVE DESCRIBED IS LIMITED IN STRATUM IN THE MANNER DESCRIBED IN THE TITLE DIAGRAM

6 AH331442 LEASE TO WORK ARENA PTY LIMITED OF GROUND FLOOR AND WAREHOUSE, BUILDING 1, 34 WATERLOO ROAD, MACQUARIE PARK. EXPIRES: 14/5/2018. OPTION OF RENEWAL: 3 YEARS.

AN580823 VARIATION OF LEASE AH331442 EXPIRY DATE NOW 29/3/2021. OPTION OF RENEWAL: RELINQUISHED.

AN911666 VARIATION OF LEASE AH331442

AS466933 VARIATION OF LEASE AH331442 EXPIRY DATE NOW 30/6/2023.

AT256656 VARIATION OF LEASE AH331442 EXPIRY DATE NOW 20/11/2024.

7 AJ720501 LEASE TO FOXTEL MANAGEMENT PTY LIMITED OF PART BEING LOT 2 IN DP1062905. COMMENCES 30/3/2018. EXPIRES: 29/3/2021.

AP28688 VARIATION OF LEASE AJ720501 EXPIRY DATE NOW 30/6/2023.

NOTATIONS

9193985 NOTE: ACQUIRED FOR THE PURPOSES OF THE STATE RAIL AUTHORITY, TRANSPORT ADMINISTRATION ACT. 1988 GAZ.22.11.2002 FOL.9959

DP1044956 NOTE: PLAN OF ACQUISITION

DP1249920 PLAN OF ACQUISITION (ROADS ACT,1993)

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Section 10.7 Certificates

City of Ryde

Lifestyle and opportunity @ your doorstep

Customer Service Centre
1 Pope Street, Ryde NSW 2112
(Within Top Ryde City shopping centre)
Phone (02) 9952 8222
Fax (02) 9952 8070
Email cityofryde@ryde.nsw.gov.au
Post Locked Bag 2069, North Ryde NSW 1670
ABN 81 621 292 610
www.ryde.nsw.gov.au

Jk Environments
C/- Jk Geotechnics, Rear, 115 Wicks Road
MACQUARIE PARK NSW 2113

Issue Date:	07 December 2023
Certificate No:	PLN2023/5464
Your Ref:	E36466PR

PLANNING CERTIFICATE SECTION 10.7

NSW Environmental Planning and Assessment Act 1979 ('Act')

Property Address: 269 Lane Cove Rd MACQUARIE PARK NSW 2113
Legal Description: Lot 3 DP 1129811
Property Reference: 543734
Land Reference: 52889

INFORMATION PROVIDED PURSUANT TO SECTION 10.7(2) OF THE ACT AND SCHEDULE 2 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 2021

1. NAMES OF RELEVANT PLANNING INSTRUMENTS AND DEVELOPMENT CONTROL PLANS

a) LOCAL ENVIRONMENTAL PLANS
Ryde Local Environment Plan 2014

b) PROPOSED LOCAL ENVIRONMENTAL PLANS that are or have been the subject of community consultation or public exhibition under the Act.
NIL

c) DEVELOPMENT CONTROL PLANS
City of Ryde Development Control Plan 2014

d) DRAFT DEVELOPMENT CONTROL PLANS that are or have been the subject of community consultation or public exhibition under the Act.
NIL

e) STATE ENVIRONMENTAL PLANNING POLICIES
State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development.
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Biodiversity and Conservation) 2021
State Environmental Planning Policy (Housing) 2021
State Environmental Planning Policy (Industry and Employment) 2021
State Environmental Planning Policy (Planning Systems) 2021
State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021

State Environmental Planning Policy (Primary Production) 2021
State Environmental Planning Policy (Resilience and Hazards) 2021
State Environmental Planning Policy (Resources and Energy) 2021
State Environmental Planning Policy (Transport and Infrastructure) 2021
State Environmental Planning Policy (Sustainable Buildings) 2022

f) PROPOSED STATE ENVIRONMENTAL PLANNING POLICIES that are or have been the subject of community consultation or public exhibition under the Act.
NIL

***Note**: Specific constraints and zoning of the land may affect the applicability of certain provisions within the Policies listed above.*

2. ZONING AND LAND USE UNDER RELEVANT PLANNING INSTRUMENTS

(a) ZONING AND ZONING TABLE UNDER RYDE LOCAL ENVIRONMENTAL PLAN 2014
Ryde Local Environmental Plan 2014 - Zone E2 - Commercial Centre

1 Objectives of zone
•To strengthen the role of the commercial centre as the centre of business, retail, community and cultural activity.
•To encourage investment in commercial development that generates employment opportunities and economic growth.
•To encourage development that has a high level of accessibility and amenity, particularly for pedestrians.
•To enable residential development only if it is consistent with the Council's strategic planning for residential development in the area.
•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.

2 Permitted without consent
Home occupations

3 Permitted with consent
Amusement centres; Artisan food and drink industries; Backpackers' accommodation; Building identification signs; Business identification signs; Centre-based child care facilities; Commercial premises; Community facilities; Entertainment facilities; Function centres; Hotel or motel accommodation; Information and education facilities; Light industries; Local distribution premises; Medical centres; Mortuaries; Oyster aquaculture; Passenger transport facilities; Places of public worship; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Respite day care centres; Restricted premises; Serviced apartments; Tank-based aquaculture; Vehicle repair stations; Veterinary hospitals; 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 homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Home-based child care; Home occupations (sex services); Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Open cut mining; Port facilities; Recreation facilities (major); Residential accommodation; Resource

recovery facilities; Rural industries; Service stations; Sewerage systems; Sex services premises; Signage; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Waste disposal facilities; Water recreation structures; Water supply systems; Wholesale supplies.

(b) ZONING AND ZONING TABLE UNDER STATE ENVIRONMENTAL PLANNING POLICY
NIL

(c) ADDITIONAL PERMITTED USES APPLY TO THE LAND
NIL

(d) DEVELOPMENT STANDARDS FOR THE ERECTION OF A DWELLING HOUSE
No development standards under the Local Environment Plan apply to the land that fix minimum land dimension for the erection of a dwelling house on the land.

(e) AREA OF OUTSTANDING BIODIVERSITY VALUE UNDER THE BIODIVERSITY CONSERVATION ACT 2016
No. The land does not include an area of outstanding biodiversity value under the Biodiversity Conservation Act 2016.

(f) CONSERVATION AREA (however described)
No. The land has not been identified as being within a heritage conservation area under the Local Environment Plan.

(g) ITEMS OF ENVIRONMENTAL HERITAGE (however described)
No. An item of environmental heritage is not situated on the land under the Local Environmental Plan.

OTHER PRESCRIBED INFORMATION

3. CONTRIBUTIONS PLANS
The name of each contributions plan applying to the land:

- City of Ryde Section 7.11 Development Contributions Plan 2020.
- City of Ryde Fixed Rate Levy (Section 7.12) Development Contributions Plan 2020.

The name of the area if the land is in a special contributions area:
NIL

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.

Agritourism and Farm Stay Accommodation Code, Rural Housing Code, Greenfield Housing Code and Inland Code

The Agritourism and Farm Stay Accommodation Code, Rural Housing Code, Greenfield Housing Code and Inland Code **do not apply** to this Local Government Area.

Housing Code, Low Rise Housing Diversity Code, Industrial and Business Building Code, Housing Alterations Code, Industrial and Business Alterations Code, Subdivisions Code, General Development Code, Demolition Code, Fire Safety Code, and Container Recycling Facilities Code

Housing Code, Low Rise Housing Diversity Code, Industrial and Business Building Code, Housing Alterations Code, Industrial and Business Alterations Code, Subdivisions Code, General Development Code, Demolition Code, Fire Safety Code, and Container Recycling Facilities Code **do apply** to this Local Government Area.

Clause 1.17A(1)(c) to (e), (2), (3) and (4); 1.18(1)(c3); and 1.19 of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* determine the extent to which complying development **may** or **may not** be carried out on land in response to the provisions of those clauses.

Refer to **Appendix 1** for detail on what codes **may** or **may not** allow complying development on the land.

Note: All Exempt and Complying Development Codes: Council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land. Despite any statement preventing the carrying out of complying development in the Codes listed in Appendix 1, complying development may still be carried out providing the development is not on the land affected by the exclusion and meets the requirements and standards of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

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.

General Exempt Development Code, Advertising and Signage Exempt Development Code, and Temporary Uses and Structures Exempt Development Code

General Exempt Development Code, Advertising and Signage Exempt Development Code, and Temporary Uses and Structures Exempt Development Code **do apply** to this Local Government Area.

Clause 1.16(1)(b1)–(d) or 1.16A of the *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* determine the extent to which exempt development **may** or **may not** be carried out on land in response to the provisions of those clauses.

Refer to **Appendix 2** for detail on what codes **may** or **may not** allow exempt development on the land.

Note: All Exempt and Complying Development Codes: Council does not have sufficient information to ascertain the extent to which exempt development may or may not be carried out on the land. Despite any statement preventing the carrying out of exempt development in the Codes listed in Appendix 2, exempt development may still be carried out providing the development is not on the land affected by the exclusion and meets the requirements and standards of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

6. AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS

(1) Whether Council is aware that-

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

NO

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

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 Part 4 of the Building Products (Safety) Act 2017.

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

No Environmental Planning Instrument applying to the land provides for the acquisition of the land by a public authority as referred to in Section 3.15 of the Act.

8. ROAD WIDENING AND ROAD REALIGNMENT

Whether or not the land is affected by any road widening or road realignment.

The land is not affected by any road widening or road realignment under:

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

(b) any environmental planning instrument, or

(c) any resolution of Council.

9. FLOOD RELATED DEVELOPMENT CONTROLS

(1) Whether or not the land or part of the land is within the flood planning area and subject to flood related development controls - **NO**

(2) Whether or not 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 - **YES**

(3) In this clause-
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
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.

(i) landslip - NO
(ii) bush fire - NO
(iii) tidal inundation - NO
(iv) subsidence - NO
(v) acid sulphate soil - NO
(vi) contamination – NO
(vii) aircraft noise – NO
(viii) salinity – NO
(ix) coastal hazards – NO
(x) sea level rise – NO
(xi) any other risk (other than flooding) - NO

Note*: The fact that land has not been identified as being affected by a policy to restrict development because of the risks referred to does not mean that the risk is non-existent.*

Adopted policy *means a policy adopted by the council, or 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.*

11. BUSH FIRE PRONE LAND
Is any part of the land designated as bush fire prone land by the Commissioner of the NSW Rural Fire Service under Section 10.3 of the Act?

NO

12. LOOSE-FILL ASBESTOS INSULATION
The land does NOT include any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989*) that are listed on the register that is required to be maintained under that Division.

13. MINE SUBSIDENCE
The land is not declared to be a mine subsidence district, within the meaning of the *Coal Mine Subsidence Compensation Act 2017*.

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. NIL

(2) The date of a subdivision order that applies to the land. NIL
(3) Words and expressions used in this section have the same meaning as in this Regulation, Part 10 and the Act, Schedule 7.

Note: City of Ryde does not hold any paper subdivision within the meaning of this section.

15. PROPERTY VEGETATION PLANS
The land is not subject to an approved property vegetation plan under Part 4 of the *Native Vegetation Act 2003* (that Council has been notified of).

16. BIODIVERSITY STEWARDSHIP SITES
The land is not a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* (that Council has been notified of).

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

17. BIODIVERSITY CERTIFIED LAND
This land is not biodiversity certified land Under Part 8 of the *Biodiversity Conservation Act 2016*.

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

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 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
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

Note. Existing coastal protection works has the same meaning as in the *Local Government Act 1993*, section 553B. 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
(b) shown on the Lighting Intensity and Wind Shear Map, or
(c) shown on the Obstacle Limitation Surface Map, or
(d) in the "public safety area" on the Public Safety Area Map, or
(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

There are no conditions of development consent granted after 11 October 2007 in relation to the land that are of the kind set out in the State Environmental Planning Policy (Housing) 2021, Section 88(2), Chapter 3, Part 5.

22. SITE COMPATIBILITY CERTIFICATES AND DEVELOPMENT CONSENT CONDITIONS FOR AFFORDABLE RENTAL HOUSING

(1) There is no current site compatibility certificate under State Environmental Planning Policy (Housing) 2021, or a former site compatibility certificate, that Council is aware of, in relation to proposed development on the land.

(2) There are no conditions of development consent in relation to the land that are of a kind referred to in State Environmental Planning Policy (Housing) 2021, section 21(1) or 40(1), Chapter 2, Part 2, Division 1 or 5.

(3) There are no conditions of development consent in relation to the land that are of a kind referred to in State Environmental Planning Policy (Affordable Housing) 2009, clause 17(1) or 38(1).

Note. ***Former site compatibility certificate*** means a site compatibility certificate issued under *State Environmental Planning Policy (Affordable Rental Housing) 2009.*

Note. 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) The land to which this certificate relates IS NOT significantly contaminated land.
(b) The land to which this certificate relates IS NOT subject to a management order.
(c) The land to which this certificate relates IS NOT the subject of an approved voluntary management proposal.
(d) The land to which this certificate relates IS NOT subject to an ongoing maintenance order.
(e) The land to which this certificate relates IS NOT subject of a site audit statement.

ADDITIONAL INFORMATION UNDER SECTION 10.7(5) OF THE ACT

Environmental planning instruments or development control plans may place restrictions on matters such as:

i) the purpose for which buildings, works or land may be erected, carried out or used;
ii) the extent of development permitted;
iii) minimum site requirements; and/or
iv) the means of vehicular access to the land.

The instruments and the plans should be examined in relation to the specific restrictions which may apply to any development which may be proposed.

Registers of Consents may be examined at Council's Customer Service Centre for particulars relating to development consents which may have been issued for the use or development of the land.

Enquiries regarding areas reserved for Classified Road and Regional Open Space should be directed to the Roads and Maritime Services and Departments of Planning and Environment respectively.

The information provided concerning the *Coastal Management Act 2016* is only to the extent that the Council has been notified by the Environment and Heritage Group of the Department of Planning and Environment.

Council has adopted by resolution a policy concerning the management of contaminated land. This policy applies to all land in the City of Ryde and will restrict development of the land if the circumstances set out in the policy prevail. Copies of the policy are available on Council's Website at www.ryde.nsw.gov.au.

FURTHER ADDITIONAL INFORMATION UNDER SECTION 10.7(5) OF THE ACT

No further additional information is available under this section with respect to this property.

***Note**: The information in this certificate is current as of the date of the certificate.*



Mel Fyfe
Executive Officer City Places

Appendix 1 – Complying Development

Housing Alterations Code, Industrial and Business Alterations Code, Subdivisions Code, General Development Code, Demolition Code, Fire Safety Code, and Container Recycling Facilities Code.

If any of the following statements are **YES** in response to the provisions of Clause 1.17A(1)(c) to (e), (2), (3) and (4) and 1.18(1)(c3) complying development **may not** be carried out on land under the above codes:

1.17A Requirements for complying development for all environmental planning instruments	
To be complying development for the purposes of any environmental planning instrument, the development must not:	
be on land that is, or is part of, a wilderness area (within the meaning of the *Wilderness Act 1987*) (See 1.17A(1)(c))	NO
be carried out on land that: (i) comprises an item that is listed on the State Heritage Register under the *Heritage Act 1977* or on which such an item is located, (ii) is subject to an interim heritage order under that Act or on which is located an item that is so subject, or (iii) is identified as an item of environmental heritage or a heritage item by an environmental planning instrument or on which is located an item that is so identified. (See 1.17A(1)(d))	NO
Except as otherwise provided by this Policy, be on land that is within an environmentally sensitive area (See 1.17A(1)(e)).	NO
1.18 General requirements for complying development under this Policy	
To be complying development for the purposes of this Policy, the development must:	
Not be carried out on land that comprises, or on which there is, a draft heritage item (See 1.18(c3))	NO

Housing Code, Low Rise Housing Diversity Code, and Industrial and Business Building Code

If any of the following statements are **YES** in response to the provisions of Clause 1.17A(1)(c) to (e), (2), (3) and (4); 1.18(1)(c3); and 1.19 complying development **may not** be carried out on land under the above codes:

1.17A Requirements for complying development for all environmental planning instruments	
To be complying development for the purposes of any environmental planning instrument, the development must not:	
be on land that is, or is part of, a wilderness area (within the meaning of the *Wilderness Act 1987*) (See 1.17A(1)(c))	NO

be carried out on land that: (i) comprises an item that is listed on the State Heritage Register under the *Heritage Act 1977* or on which such an item is located, (ii) is subject to an interim heritage order under that Act or on which is located an item that is so subject, or (iii) is identified as an item of environmental heritage or a heritage item by an environmental planning instrument or on which is located an item that is so identified. (See 1.17A(1)(d))	NO
Except as otherwise provided by this Policy, be on land that is within an environmentally sensitive area (See 1.17A(1)(e)).	NO
1.18 General requirements for complying development under this Policy	
To be complying development for the purposes of this Policy, the development must:	
Not be carried out on land that comprises, or on which there is, a draft heritage item (See 1.18(c3))	NO
1.19 Land on which complying development may not be carried out	
To be complying development specified for the Housing Code, Low Rise Housing Diversity Code, and Industrial and Business Building Code the development must not be carried out on:	
Land within a heritage conservation area or a draft heritage conservation area, unless the development is a detached outbuilding, detached development (other than a detached studio) or swimming pool (See 1.19(1)(a)). However, any complying development under the Industrial and Business Building Code must not be carried out on land within a heritage conservation area or a draft heritage conservation area (See 1.19(5)(a)).	NO
Land that is reserved for a public purpose by an environmental planning instrument (See 1.19(1)(b) and 1.19(5)(b))	NO
Land identified on an Acid Sulfate Soils Map as being Class 1 or Class 2 (See 1.19(1)(c) and 1.19(5)(c))	NO
Land that is significantly contaminated land within the meaning of the *Contaminated Land Management Act 1997* (see 1.19(1)(c1) and 1.19(5)(d))	NO
Land identified by an environmental planning instrument as being: (i) within a buffer area, or (ii) within a river front area, or (iii) within an ecologically sensitive area, or (iv) environmentally sensitive land, or (v) within a protected area.(See 1.19(1)(e) and 1.19(5)(f))	Council does not have sufficient information to ascertain the extent of this land-based exclusion on a property

Land that is identified by an environmental planning instrument, a development control plan or a policy adopted by the council as being or affected by: (i) a coastline hazard, or (ii) a coastal hazard, or (iii) a coastal erosion hazard. (see 1.19(1)(f) and 1.19(5)(g))	Council does not have sufficient information to ascertain the extent of this land-based exclusion on a property
Land in a foreshore area (see 1.19(1)(g) and 1.19(5)(h))	NO
(3A) Development specified in the Low Rise Housing Diversity Code is not complying development under that code if it is carried out on land on which there is a heritage item or a draft heritage item.	NO

Appendix 2 – Exempt Development

If any of the following statements are **YES** in response to the provisions of Clause 1.16(1)(b1)–(d), exempt development **may not** be carried out on land under the Policy.

1.16 (1) (b1)-(d) General requirements for exempt development	
To be exempt development for the purposes of this Policy, the development must not be carried out on land that is:	
a declared area of outstanding biodiversity value under the *Biodiversity Conservation Act 2016* or declared critical habitat under Part 7A of the *Fisheries Management Act 1994*, and	NO
or is part of, a wilderness area (within the meaning of *Wilderness Act 1987*), and	NO
or on which there is, an item that is listed on the State Heritage Register under the *Heritage Act 1977*, or that is subject to an interim heritage order under that Act, and	NO
described or otherwise identified on a map specified in Schedule 4.	NO

City of Ryde Council Records

Craig Ridley

From: Tim Herridge <TimH@ryde.nsw.gov.au>
Sent: Tuesday, 12 December 2023 10:39 AM
To: Craig Ridley
Subject: 269 Lane Cove Road/34 Waterloo Road, Macquarie Park - response to request for information

Follow Up Flag: Follow up
Flag Status: Flagged

This message originated outside the JKG network. If this looks to be from a staff member, it is likely to be malicious (spam/phish attack). Do not click links of open attachments unless you recognise the sender and know the content is safe.

Dear Craig

I refer to your informal request for information in relation to the above property.

The entries in our systems for previous building and development applications do not include a description of the proposed works. We dealt with a formal access application 5 years ago and I have attached a screen print of the development records that were found. Some include descriptions of the works;

01. BA1993 125 Waterloo Road 34, North Ryde - Building Application for additions
02. BA1993 125 Waterloo Road 34, North Ryde - Building Application for additions - plan VIEW ONLY
03. BA1993 282 34 Waterloo Road, building application for renovation of fire damage
04. BA1993 282 34 Waterloo Road, drawings for building application OK TO RELEASE
05. BA1993 294 34 Waterloo Road, building application
06. BA1993 294 34 Waterloo Road, drawings for building application VIEW ONLY
07. CDP2012 140 Lane Cove Road 269, Complying Development certificate, air conditioning cooling towers and reserve water tank
08. CDP2012 140 Lane Cove Road 269, Complying Development plans, air conditioning cooling towers and reserve water tank VIEW ON
09. CDP2012 317 Lane Cove Road 269, Complying Development certificate, office and storeroom to warehouse, fitout to ground floor o
10. CDP2012 317 Lane Cove Road 269, Complying Development plans , office and storeroom to warehouse, fitout to ground floor offic
11. CDP2017 697 4_Waterloo Road 34, Complying Development certificate, amend and rectify the AFSS OK NO PICAD
12. LDA1998 91 Waterloo Road 34, Consent and report
13. LDA1998 91 Waterloo Road 34, Approved Plans VIEW ONLY
14. LDA1999 372 Waterloo Road 34, Consent and assessment report
15. LDA1999 372 Waterloo Road 34, Approved Plans - VIEW ONLY
16. LDA1999 1438 Waterloo Road 34, DA consent and report
17. LDA1999 1438 Waterloo Road 34, DA approved plans VIEW ONLY
18. LDA2000 862 Waterloo Road 34, DA consent and assessment report
19. LDA2000 862 Waterloo Road 34, DA approved plans OK TO RELEASE

1998 DA for new entrance off Lane Cove Road - released informally less the copyright protected plans

20. LDA2000 1005 Waterloo Road 34, Consent report and Approved Plans OK TO RELEASE
21. LDA2001 150 Waterloo Road 34, DA consent and report, satellite dish and 2 x 25,000 litre diesel underground tanks
22. LDA2001 150 Waterloo Road 34, DA satellite dish and 2 x 25,000 litre diesel underground tanks - approved plans OK TO RELEASE
23. LDA2001 491 Waterloo Road 34, DA consent and report for modifications to the internal traffic system
24. LDA2001 491 Waterloo Road 34, DA plans for modifications to the internal traffic system VIEW ONLY
25. LDA2003 654 Waterloo Road 34, DA consent and report
26. LDA2003 654 Waterloo Road 34, DA approved plans VIEW ONLY
27. LDA2003 1072 Waterloo Road 34, DA consent and report
28. LDA2003 1072 Waterloo Road 34, DA approved plans VIEW ONLY

29. LDA2003 1072.2 Waterloo Road 34, section 96 DA consent and report
30. LDA2003 1072.2 Waterloo Road 34, section 96 DA approved plans VIEW ONLY
31. LDA2005 487 Waterloo Road 34, Consent and report
32. LDA2005 487 Waterloo Road 34, Stamped Approved Plans VIEW ONLY
33. LDA2006 842 Lane Cove Road 271, DA consent and assessment report
34. LDA2006 842 Lane Cove Road 271, Macquarie Park - development approved plans VIEW ONLY
35. LDA2006 842.2 Lane Cove Road 271, section 96 Development Consent, assessment report and plans OK TO RELEASE
36. LDA2006 842.2 Lane Cove Road 271, section 96 Development landscape plans VIEW ONLY
37. LDA2006 842.3 Lane Cove Road 271, Development Consent and assessment report NO PLANS REQUIRED MOD2011 96
38. LDA2006 842.4 Lane Cove Road 271, Development Consent and assessment report NO PLANS REQUIRED MOD 2012 117
39. LDA2009 214 Waterloo Road 34, DA consent, report and approved plans OK TO RELEASE
40. LDA2016 83 Lane Cove Road 269, Development Consent and assessment report
41. LDA2016 83 Lane Cove Road 269, approved plans VIEW ONLY
42. Waterloo Road 34 development application 382_97 - new vehicle access, consent, approved plans report, supporting documents
43. Waterloo Road 34, development application 71_98, consent, approved plans and all supporting documents

The list includes approvals that don't have a description and we would not be able to go through all of these in response to an informal request for information. To expedite your request, we would be happy to provide viewing access to the information so that you or someone in your team could go through the records themselves to ascertain what the approvals related to. Alternatively, if you require us to attend to this, then a formal access application will be required

Let me know how you would like to proceed in relation to the development records that don't have any descriptions.

Regards
Tim

Tim Herridge
Senior Information Access Officer
INFORMATION & TECHNOLOGY MANAGEMENT
P +61299528079
E TimH@ryde.nsw.gov.au
W www.ryde.nsw.gov.au

City of Ryde



Customer Service Centre 1 Pope Street, Ryde (Within Top Ryde City shopping centre)
North Ryde Office Riverview Business Park, Building 0, Level 1, 3 Richardson Place, North Ryde

Let's Connect Facebook | Twitter | Instagram | YouTube | eNews

The City of Ryde wishes to acknowledge the Traditional Custodians of the Land on which we work and pay our respect to the Elders both past, present and emerging, and extend that respect to all Aboriginal and Torres Strait Islander peoples.

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JKEnvironments

PO Box 976, North Ryde BC NSW 1670
115 Wicks Rd, Macquarie Park NSW 2113
Tel: 02 9888 5000 Fax: 02 9888 5001
www.jkenvironments.com.au

PURPOSE: Council Records
LOCATION: Macquarie Park
GIVEN TO:
OF:

JKE JOB No: E36466PR
DATE: 09/01/24
PAGE: 1 OF 3
INSP BY: AD

INSPECTION REPORT No

(1) BA1993 125 Waterloo Rd 34, North Ryde
- 18 Feb 1993
- Warehouse & offices
- Lot 1 DP 605622
- Approved

(2) BA1993 282 34 Waterloo Rd
- BA for renovation of fire damage
- Reinstatement of internal non load-bearing partitions
- Approved May 93
- Lot 1

(3) CDP2012 140 271 (269) Lane Cove Rd on COC
- CDC for air con cooling towers & reserve water tank
- Lot 1 in DP 1062905

(4) CDP2012 317 269 Lane Cove Rd
- CDC for office & storeroom to warehouse, fit out to ground floor office

(5) CDP2017 6974 34 Waterloo Rd
- Amend & rectify the IAFSS?

(6) LDA199891 34 Waterloo Rd

(7) LDA1999 372 34 Waterloo Rd
- Internal fitout for Datacom P/L
Lot 1 DP 605622

(8) LDA1999 1438 34 Waterloo Rd
- Erect & display of 3 internally illuminated flush wall signs measuring 1.1m x 5.86m

Given by: Received by:

Time Arrive: Time Depart:

DISTRIBUTION: Original JKE file, Copy to Client

JKEnvironments

PO Box 976, North Ryde BC NSW 1670
115 Wicks Rd, Macquarie Park NSW 2113
Tel: 02 9888 5000 Fax: 02 9888 5001
www.jkenvironments.com.au

PURPOSE: Council records
LOCATION: Macquarie Park
GIVEN TO:
OF:

JKE JOB No: E36466PR
DATE: 09/01/24
PAGE: 2 OF 3
INSP BY: AD

INSPECTION REPORT No

(9) LDA2000 862 34 Waterloo Rd
- Fitout the existing building for use by Cable & Wireless optus for testing & application labs & control centres and associated offices. It is also proposed to intall a new substation new generator & uninterruptable power supply, supplementary air conditioning & 3 receive only satellite dishes
- Consent date = 6 Dec 2000

↳ Plans indicate there is a proposed 25,000L bulk fuel tank
↳ NDMC - office Data centre

(10) LDA2000 1005 34 Waterloo Rd
- External upgrade of the existing building, relocate proposed generator, plant & services area & erect perimeter security fencing
- consent date = 27 Feb 2001

(11) LDA2001 150 34 Waterloo Rd
- Install an additional receive only satellite dish & 2x 25,000L diesal USTs
- consent date = 2 May 2001
- The underground tanks are ancillary to the approved use of the building (for back up generators)
- "Any combustible liquids under 50,000L in a single storage tank does not need to be licensed by the Workcover Authority"
- Proposed location = setback 13.5m from the SW boundary, refueling to occur twice a year ~~consent date~~ 2.

(12) LDA2003 654 34 Waterloo Rd
- Installation of 2 generators & load bank kiosk

Given by: ..... Received by: .....

Time Arrive: ..... Time Depart: .....

DISTRIBUTION: Original JKE file, Copy to Client

JKEnvironments

PO Box 976, North Ryde BC NSW 1670
115 Wicks Rd, Macquarie Park NSW 2113
Tel: 02 9888 5000 Fax: 02 9888 5001
www.jkenvironments.com.au

PURPOSE: Council records
LOCATION: Macquarie Park
GIVEN TO:
OF:

JKE JOB No: E36466PR
DATE: 09/01/24
PAGE: 3 OF 3
INSP BY: AP

INSPECTION REPORT No .....

(13) LDA2003 1072 34 Waterloo Rd
- Installation of four new satellite dishes (receive only) and one microwave dish for Foxtel Digital Centre & relocate electrical load kiosk
- Consent date = 21 Nov 2003

(14) LDA2006 842 271 Lane Cove Rd
- Mixed use development - commercial office & retail development comprising 3 buildings; Part 8/9 storeys, part 8/10 storeys, basement parking for 560 vehicles
- Consent date = 10 Sept 2007

(15) LDA2016 83 369 Lane Cove Rd
- To replace existing cladding on western elevation with five new windows
- Consent date = 2 Mar 2015

Request from Tim = File #22
- LDA2001 150 Waterloo Rd, 34 DA satellite dish & 2x 25,000L diesel UST - approved plans

File #4 plans for fire damage reconstruction

Given by: ..... Received by: .....

Time Arrive: ..... Time Depart: .....

DISTRIBUTION: Original JKE file, Copy to Client

282/93

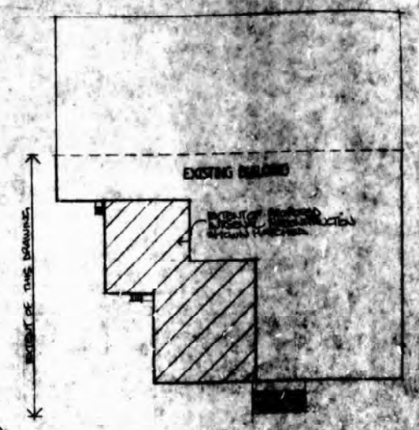
EXISTING WAREHOUSE

COUNCIL COPY

COUNCIL COPY

OFFICE
OFFICE
OFFICE
OPEN OFFICE
OFFICE
OFFICE
OFFICE
PRINTER
OFFICE
OFFICE
OFFICE
OFFICE
OFFICE
OPEN OFFICE
MANAGER
TEA
COPIER
OFFICE
RECEPTION
EXISTING AMENITIES
FOR DETAILS OF THIS AREA REFER BUILDING APPLICATION BY DAVENPORT CAMPBELL
EXISTING FOYER
EXISTING OFFICES

Door to have open operation



PLAN SHOWING LOCATION OF RECONSTRUCTION WORKS
SCALE 1:500

RYDE CITY COUNCIL
FIELD COPY

RYDE CITY COUNCIL
SEE CONDITIONS OF APPROVAL

RYDE CITY COUNCIL
BUILDING APPLICATION No. 282/93
APPROVED: subject to attached conditions.
Manager Building Approvals
18 MAY 1993
Date of Approval.

LEGEND
- EXISTING WALLS & PARTITIONS
- NEW STUD PARTITION
- NEW STUD PARTITION WITH INSULATION
- NEW 1/2 GLAZED STUD PARTITION
- NEW EXIT LIGHT.

Project
FIRE DAMAGE RECONSTRUCTION
34 WATERLOO RD. N. RYDE

Client
PHILIPS LIGHTING P/L

Drawing
FLOOR PLAN

BUTLER & CO ARCHITECTS
ACN 001-754-749
29/47 Norfolk St. Chatswood
Phone (02) 411 7311

Drawn	Approved	Date
K.B.		22/6/93
Scale 1:100	Drawing No. 9305.BA 01	Issue

RECEIVED
05 APR 1993
DEVELOPMENT AND BUILDING SERVICES

Hasty
Sidaway.

PRIVATE ROAD

BOUNDARY

RETAINEXISTING SECURITY FENCE ALONG THIS BOUNARY

BOUNDARY RETAINING WALL

REMOVE PARKING SPACE/LINES

VEHICLE ACCESS

750 CARD READER

01/1042 DETAIL TBA

SLIDING GATE

ACCESS ROAD

NEW HYDRANT & BOLLARDS

PIT

5 x BOLLARDS & CHAIN PIT

PROPOSED ANTENNA

K J H G F E D C B A

8400 VOS | 8400 VOS | 8400 VOS | 8400 VOS | 8400 VOS | 8400 VOS | 8400 VOS | 8400 VOS | 5085 VOS

1 2 3 4 5 6 7 8 9 10

7595 VOS | 7320 VOS | 7320 VOS | 7320 VOS | 7320 VOS | 7320 VOS | 7320 VOS | 7320 VOS | 7320 VOS | 7600 VOS | 10400 | 13500

A7: POWER ROOM GF:05 176 M2

STAIR No.4

MAIN SWITCHROOM /EPG PLANT GF:07

SUBSTATION GF:08

CHILLER PLANT GF:09

STAIR No.6

NEW HYDRANT & BOLLARDS

STAIR No.3

EXISTING RETAINING WALL

AIR HANDLING PLANT GF:10

A1: NDP ROOM GF:04 509 M2

FUTURE EXTENSION GF:11

CARPARKING

RAMP UP

NEW SECURITY FENCE UNDER SLAB SOFFIT

CARPARKING

NEW KERB (150 HIGH x 100 WIDE)

NEW HYDRANT

1100

RAISED BITUMEN SURFACE (150 HIGH)

PROPOSED SCREEN ABOVE

A8A: PRESENTATION ROOM 140 M2

A3: CONTROL ROOM GF:18 160 M2

A3: ANNEX GF:17 61 M2

A2: CAS GF:16 50 M2

CORRIDOR GF:03

CORRIDOR GF:35

STAGING GF:39 48 M2

A4: PRE-PRODUCTION TEST EQUIPMENT GF:13 53 M2

DOCK GF:12

LOADING ACCESS

℄ OF TANK

A8: MEDIA HANDLING GF:6 56 M2

PLANT ROOM GF:19 32 M2

A9: MAINTENANCE ROOM GF:20 46 M2

SPARE ROOM GF:15 57 M2

A4: PRE-PRODUCTION TEST LAB GF:14 47 M2

DIMENSION FROM OUTSIDE FACE OF WALL TO GENSET SLAB EDGE

REDUNDANT EXISTING FUEL TANK

STANDBY GENSET PAINTED DULUX BIRCH WHITE

EXISTING HYDRANT

RAMP UP

CORRIDOR GF:21

ELECT./UPS SWITCHRM

STAIR No.7

STAIR No.5

ENTRY LOBBY GF:01

FUTURE LIFT

FACILITY RM GF:22

STORE GF:23

A/WC GF:36

M.TOILETS/SHOWERS GF:33

F.TOILETS/SHOWERS GF:37

STORE GF:24

SICK ROOM GF:26

STORE GF:27

STORE GF:28

MAIN ENTRY

A13:APPLICATION DEVELOPMENT LAB 1 GF:32 121 M2

A13:APPLICATION DEVELOPMENT LAB 2 GF:33 121 M2

A6: APPLICATION DEVELOPMENT EQUIPMENT ROOM GF:34 110 M2

NEW 25,000L BULK FUEL TANK (BELOW GROUND LEVEL)

MOTORCYCLE PARKING

STAIR No.2

FUEL FILL POINT & VENTS & NEW BOLLARDS

℄ OF TANK

SLAB OVER FUEL TANK

3975 | 3950 | 6993

DIMENSION FROM OUTSIDE FACE OF WALL TO GENSET SLAB EDGE

150 THICK CONCRETE SLAB TO FUEL TANK UNDER

GALVANISED STEEL FRAMED AWNING ABOVE T.B.A.

MOTORCYCLE PARKING

BICYCLE PARKING

BREAKOUT GF:25 116 M2

A5 DEMO FACILITY GF:30 84 M2

SPARE GF:31 39 M2

HUB ROOM GF:42 11 M2

FRA (4)

BBQ & RECREATION

EXISTING TENNIS COURT SLAB/ENCLOSURE CUT BACK TO ALIGN WITH GRIDLINE

1 x PROPOSED ANTENNA

2 x APPROVED ANTENNAS

ANTENNA ENCLOSURE

CARPARKING

GREhon (6)

NEW HYDRANT

DIEbic (23)

FUTURE FUEL TANK

FUTURE 25,000L BULK FUEL TANK

WEATHER PROTECTED AREA

CONCRETE SEATING ON GRASS

GREmoo (18)

405 | 1464 | 4668 | 1464

2600 HIGH NEW SECURITY FENCE

NEW GATE 1200W X 2200H

CARD READER AT 1000 ABOVE FFL

NEW PATH

EXIST PUMP HOUSE

DIEbic (270)

LANDSCAPED SCREEN

2600 HIGH NEW SECURITY FENCE EQUAL TO CYCLONE CHAINWIRE WITH BLACK PVC COATING AND POST EXTENSION ARM TO SUPPORT 3 LINES OF GALVANISED BARBWIRE

HARbic (33)

EREnyo (42)

GREmoo (11)

GREhon (7)

GREmoo (3)

2600 HIGH NEW SECURITY FENCE

19600

BOUNDARY

BOUNDARY RETAINING WALL

BOUNDARY

EXISTING SUBSTATION

LANE COVE ROAD

Drawing file: P:\2-25-1107\A15_cad\Autocad\Ryde\Plotfiles-2000\A1006.dwg Date: Mar 13, 2001 - 5:10pm VG

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PLANT LEGEND & SCHEDULE

CODE	BOTANICAL NAME	TOTAL No	POT SIZE
GREhon	Grevilia "Honey Gem"	13	25 litre
DIEbic	Dieties Bicolour	293	300 mm
GREmoo	Grevilia "Moonlight"	32	25 litre
HARDvio	Hardenbergia Violacea	39	300 mm
ERInyr	Ereostemon Myrpporojdes	42	300 mm
ACMsmi	Acmena Smithii	16	50 litre
FRA	Frangapani	4	50 litre

RYDE CITY COUNCIL

RECEIVED 26 MAR 2001 CUSTOMER SERVICE CENTRE

LDA No 150/2001

Signed

Date 2/5/01

Submissions of Amendment

REV	DATE	DESCRIPTION	CONS APPR	(COMP) APPR
K	16.02.01	ISSUED FOR DA		
	15.02.01	ADDITIONAL ANTENNA ADDED		
J	14.02.01	RE-ISSUED FOR CONSTRUCTION		
	13.02.01	BOLLARDS ADDED NEXT TO NEW HYDRANTS		
	13.02.01	LANDSCAPING REVISED		
	08.02.01	BBQ/RECREATION AREA REVISED		
H	24.01.01	RE-ISSUED FOR CONSTRUCTION		
	23.01.01	GENSET & FUEL TANK DIMENSIONED, NOTES ADDED		
	23.01.01	WALL ON GRID J BETWEEN GRIDS 1,2 ALTERED		
G	06.12.00	RE-ISSUED FOR CONSTRUCTION		
	05.12.00	GENERAL REVISIONS		
F	29.11.00	RE-ISSUED FOR CONSTRUCTION		
	28.11.00	GENERAL REVISIONS		
E	27.11.00	ISSUED FOR EXTERNAL WORKS DA		
	24.11.00	LANDSCAPING ADDED		
D	22.11.00	RE-ISSUED FOR CONSTRUCTION		
	21.11.00	GENERAL REVISIONS		
C	15.11.00	ISSUED FOR EXTERNAL WORKS DA		
M	14.03.01	RE-ISSUED FOR CONSTRUCTION		
	13.03.01	SECURITY GATE DIMS & DETAIL REFS. ADDED		
L	01.03.01	RE-ISSUED FOR CONSTRUCTION		
	01.03.01	SECURITY FENCE MODIFIED		

Site:

B A

QUALITY RECORD

STATUS: REV:

REVIEW	NAME	SIGNATURE	DATE
DRAWN	VG		
TECH. CHECK	-		
G.A. CHECK	-		
PROJ. MANAGER	-		
DESIGN MANAGER	-		
USER	-		
CLIENT	-		

Architect

WOODS BAGOT

ARCHITECTURE HEALTH PLANNING INTERIOR DESIGN LANDSCAPE AND URBAN PLANNING STRATEGIC PLANNING

WOODS BAGOT JOB NUMBER 2-25-1107

LEIGHTON

LEIGHTON CONTRACTORS
LEVEL 3, 11-15 FALCON STREET
CROWS NEST NSW 2065
Tel. (02) 9966 4322
Fax (02) 9966 4355

Scale: 1:5 0 1 2 3 4 5M

Client:

CABLE & WIRELESS OPTUS

CABLE & WIRELESS OPTUS
101 MILLER STREET
NORTH SYDNEY NSW 2060
Tel. (02) 9342 7800
Fax (02) 9342 7277

Project:

NDMC - OFFICE DATA CENTRE

34 WATERLOO ROAD
NORTH RYDE

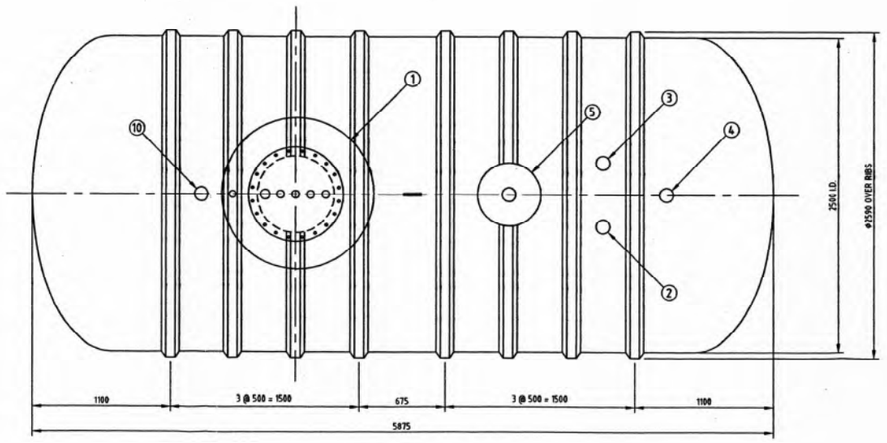
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GROUND FLOOR KEY PLAN

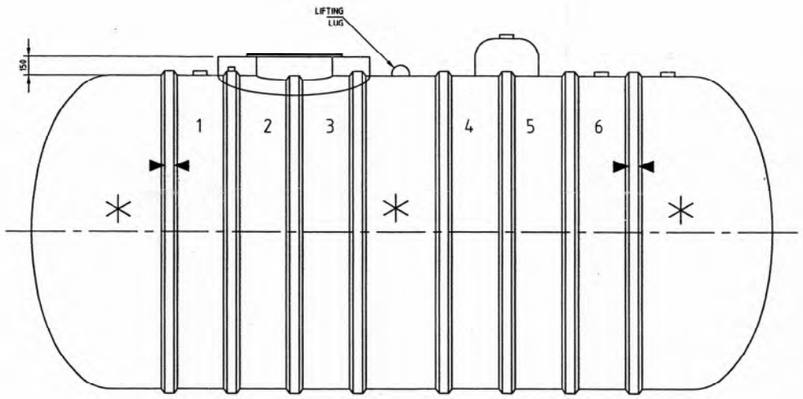
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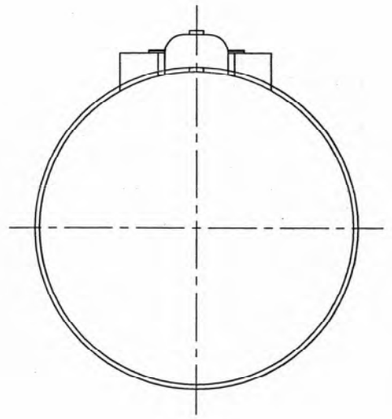
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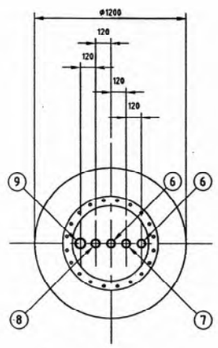
PLAN VIEW



SIDE ELEVATION



END ELEVATION



PLAN VIEW OF MANWAY

EQUIPMENT LIST

ITEM	QTY	DESCRIPTION	SIZE	SCHED.	TYPE	REMARKS
1	1	MANWAY	600nb	-	NON MACHINED	C/W SOCKETS 6, 7, 8 & 9
2	1	FILL	100nb	-	SOCKET	C/W INTERNAL PIPE
3	1	VENT	100nb	-	SOCKET	
4	1	DIP	100nb	-	SOCKET	C/W INTERNAL PIPE
5	1	HYDROGUARD RESERVOIR	100nb	-	SPECIAL	-
6	2	SUCTION	50nb	-	SOCKET	-
7	1	FUEL LEVEL TRANSMITTER	50nb	-	SOCKET	-
8	1	WATER IN FUEL SENSOR	50nb	-	SOCKET	-
9	1	RETURN	50nb	-	SOCKET	-
10	1	SLUDGE PUMPOUT	100nb	-	SOCKET	C/W INTERNAL PIPE

NOTES:

1. BULK TANK INSTALLATION SHALL BE IN ACCORDANCE WITH ENVIROTANK INSTALLATION INSTRUCTIONS AND THE APPLICABLE AUSTRALIAN STANDARDS.
2. THE TANK SHALL BE MANUFACTURED IN ACCORDANCE WITH AS.1692 FOR DOUBLE WALLED FIBREGLASS TANKS.
3. STRIKER PLATES SHALL BE FITTED UNDER ALL TANK OPENINGS.
4. AN IDENTIFICATION PLATE, SHOWING THE TANK IDENTIFICATION NUMBER, THE DATE OF MANUFACTURE AND THE CAPACITY OF EACH CHAMBER SHALL BE LAMINATED TO THE TANK INSIDE THE MANWAY RISER.
5. THE POSITIONS OF THE HOLD DOWN STRAPS SHALL BE MARKED ON THE TANK DURING MANUFACTURE.

BULK FUEL TANK DATA

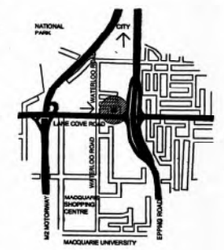
1. TYPE: DWT H25
1. MODEL No: DWT H25
2. ACTUAL CAPACITY: 26,680 LITRES
3. DRY MASS: 2,100kg

RECEIVED
16 MAR 2001
CUSTOMER SERVICE CENTRE

This drawing has been inspected for compliance with general arrangement and requirements specified under this contract. Amendments required are noted hereon. Dimensions, coordination with subcontract plant and all other services and site conditions, compliance with statutory regulations and compliance with specified requirements, remain the responsibility of the contractor.
Norman Disney & Young
Consulting Engineers
SIGNED ..... DATE 23/02/01

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CONTRACTORS MUST VERIFY ALL DIMENSIONS AT THE JOB BEFORE COMMENCING ANY WORK OR PREPARING SHOP DRAWINGS



LOCATION PLAN

Rev	Date	Description	Cons Appr.	(Comp) Appr.
SDB	01.02.01	ISSUED FOR CONSTRUCTION		B.M
SDA	27.12.00	ISSUED FOR APPROVAL		B.M

Drawn: LMS — JOB No. PRO 199
Date: 27.12.00 — Design:

QUALITY RECORD:
STATUS: RFE

	REVIEW	NAME	SIGNATURE	DATE
CONSULTANT	DRAFTER			
	TECH. CHECK			
	Q.A. CHECK			
	PROJ. MANAGER			
	DESIGN MANAGER			
CLIENT	USER			
	OSME			

Filing Code
26379-1
NOV 20 FEB 2001
Project Co-ordinator PK

Subcontractor: ENVIROTANK

Contractor:
ENERGY POWER SYSTEMS
ENERGY POWER SYSTEMS AUSTRALIA PTY LTD
UNIT 4, 17-37 WOLLONGONG ROAD
ARNCLIFFE NSW 2205
PHONE: 02 9556 9966 FAX: 02 9567 1868
A.C.N. 059 274 516

Services Engineers:
NORMAN DISNEY & YOUNG
1 CHANDOS STREET
ST LEONARDS
NSW 2065 AUSTRALIA
TELEPHONE +61 2 9928 8800
FACSIMILE +61 2 9439 4580

Architects:

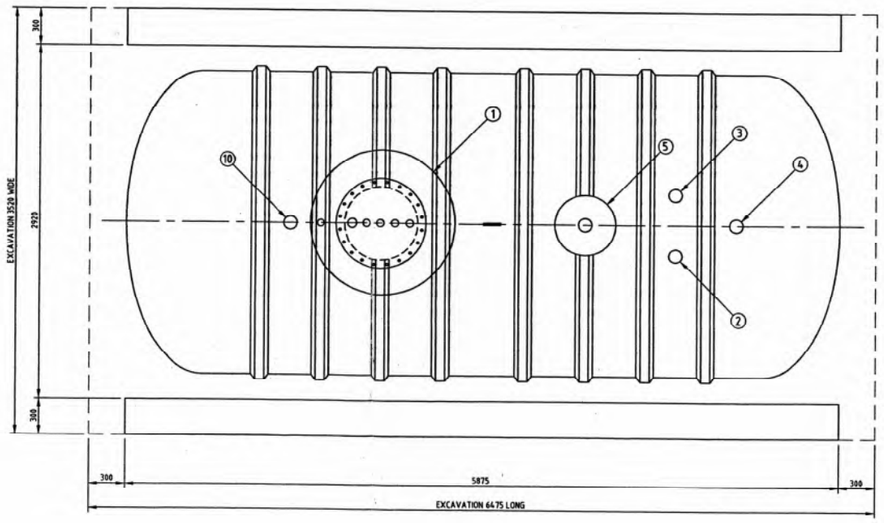
Project Manager:
Leighton Contractors Pty Limited
L3, 11-15 Falcon Street
Crows Nest NSW 2065
Tel:(02) 9966 4322
Fax:(02) 9966 4305

Client:
CABLE & WIRELESS OPTUS
101 Miller Street
North Sydney, NSW 2060
Tel. (02) 9342 7000
Fax (02) 9342 7277

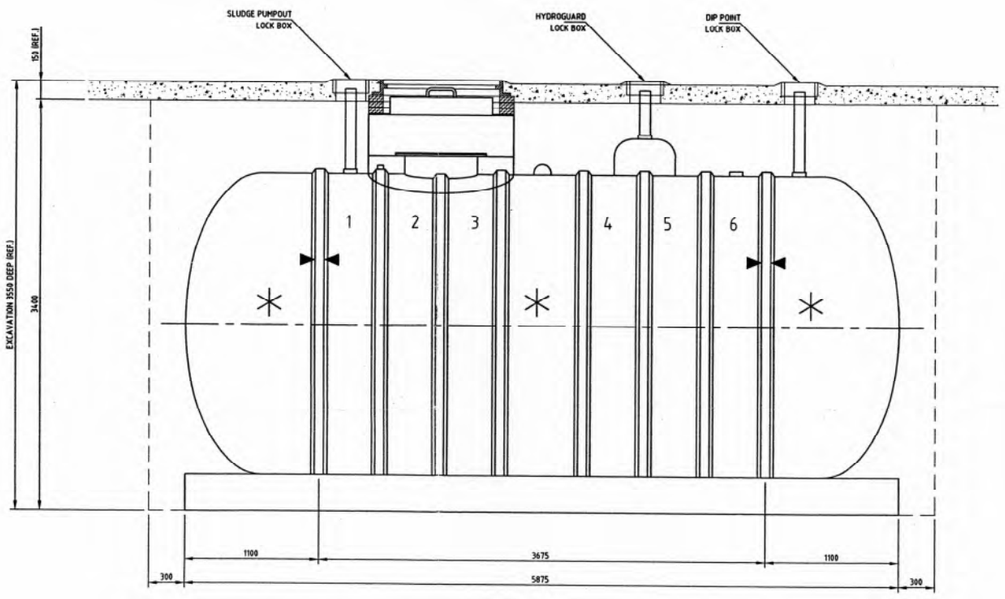
Project:
NDMC - OFFICE DATA CENTRE
34 WATERLOO ROAD
NORTH RYDE

Drawing Title:
STANDBY POWER SYSTEM
DIESEL GENERATOR SET
BULK FUEL TANK CONSTRUCTION

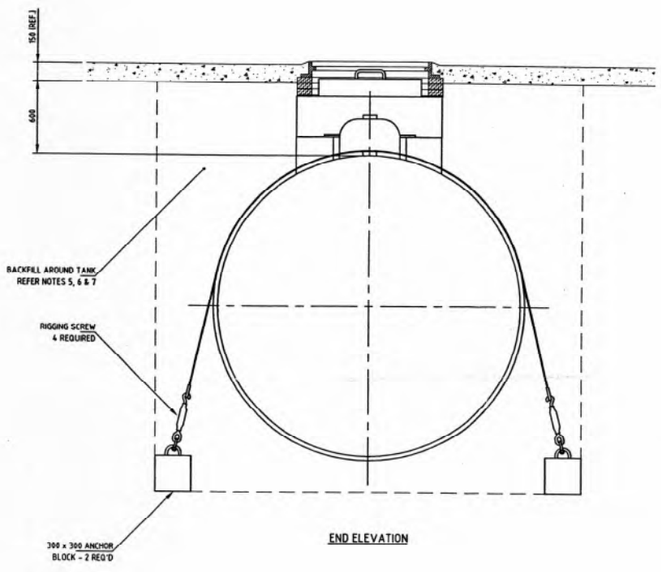
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PLAN VIEW



SIDE ELEVATION



END ELEVATION

INSTALLATION INSTRUCTIONS

1. INSTALLATION OF THE BULK FUEL TANK SHALL BE IN ACCORDANCE WITH AS.1940, FOR UNDERGROUND, CATEGORY 4, TANKS CONTAINING CLASS C1 (COMBUSTIBLE) LIQUID.
2. ALL EXCAVATION, BACKFILLING AND COMPACTING SHALL BE CARRIED OUT BY THE BUILDING CONTRACTOR.
3. AFTER EXCAVATION, THE TWO (2) DEADMAN ANCHORS FOR THE TANK SHALL BE PLACED IN THE BOTTOM OF THE PIT BY THE EPG CONTRACTOR, AS DETAILED ON THIS DRAWING.
4. THE BOTTOM OF THE EXCAVATION SHALL THEN BE FILLED TO A DEPTH OF 300mm WITH SAND OR PEA GRAVEL, PROPERLY GRADED AND FULLY COMPACTED.
5. AFTER THE BULK FUEL TANK HAS BEEN PLACED IN POSITION AND STRAPPED SECURELY TO THE DEADMEN, THE TURNBUCKLES AND ALL OTHER UNPROTECTED STEEL ON THE STRAPS SHALL BE WRAPPED IN DENSO TAPE, TO MANUFACTURER'S INSTRUCTIONS. THE EXCAVATION SHALL THEN BE PROGRESSIVELY BACKFILLED WITH SAND, OR PEA GRAVEL, UNTIL THE TANK IS JUST COVERED.
6. AFTER BACKFILLING TO THE TOP OF THE TANK HAS BEEN COMPLETED, ALL FUEL LINES, STANDPIPES AND CONDUITS SHALL THEN BE INSTALLED AND CONNECTED TO THE BULK FUEL TANKS.
7. THE TANK'S CONTAINMENT RINGS SHALL THEN BE CUT TO LENGTH AND INSTALLED BY THE EPG CONTRACTOR. THE REMAINING VOLUME ABOVE THE TANK SHALL THEN BE BACKFILLED AS INSTRUCTED ABOVE, UP TO THE LEVEL ABOVE WHICH THE PAVEMENT SHALL BE LAID.
8. THE MANWAY COVERS, TRELOAR CAT. No. MC1000B, AND ALL LOCK BOXES SHALL BE CAST IN BY THE BUILDING CONTRACTOR. THE DEPTHS OF THE LOCK BOXES SHALL BE EXTENDED SO THAT THEY EQUAL THE DEPTH OF THE PAVEMENT SLAB. THE MANWAY COVERS AND LOCK BOXES SHALL BE SO LOCATED THAT THEY ARE PROUD OF THE PAVEMENT BY 25mm, WITH THE SURROUNDING PAVEMENT SLOPED TO SUIT. THIS WILL MINIMISE WATER ENTRY INTO THE CONTAINMENT RING AREA.
9. THE ABOVE INSTALLATION INSTRUCTIONS ARE GENERALLY IN ACCORDANCE WITH THE BULK TANK MANUFACTURER'S PUBLISHED INSTALLATION INSTRUCTIONS.

GENERAL NOTES:

LOCK CAPS SHALL BE FITTED TO EACH OF THE ACCESS PIPES FOR DIP AND SLUDGE PUMPOUT EXTENSIONS, WITHIN THEIR RELEVANT LOCK BOXES. LOCK CAPS SHALL BE FITTED TO THE FILL PIPES, AT THE REMOTE FILL PANEL.

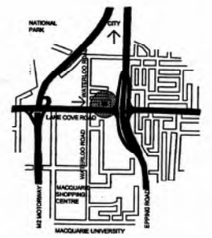
THE EXTENSION PIPE FOR THE HYDROGUARD RESERVOIR SHALL BE MADE FROM STAINLESS STEEL, WITH A SUITABLE LOCK CAP FITTED TO THE EXTENSION.

This drawing has been inspected for compliance with general arrangement and requirements specified under this contract. Amendments required are noted hereon. Dimensions, coordination with associated plant and all other services and site conditions, compliance with statutory requisitions and compliance with specified requirements remain the responsibility of the contractor.

Norman Disney & Young
Consulting Engineers

SIGNED ..... DATE 23/2/01

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LOCATION PLAN

Rev	Date	Description	Crea Appr.	(Comp) Appr.
SDB	01.02.01	ISSUED FOR CONSTRUCTION		
SDA	27.12.00	ISSUED FOR APPROVAL		B.H

Drawn: LMS | Job No. PRO 190
Date: 27.12.00 | Design:

QUALITY RECORD:
STATUS: RFK

	REVIEW	NAME	SIGNATURE	DATE
CONSULTANT	DRAFTER			
	TECH. CHECK			
	Q.A. CHECK			
	PROJ. MANAGER			
	DESIGN MANAGER			
CONTRACT	USER			
	CLIENT			

Filing Code 26379-1
NOV 2 0 FEB 2001
Project Co-ordinator VDK

CONSTRUCTION: ENVIROTANK

CONTRACTOR:
ENERGY POWER SYSTEMS
ENERGY POWER SYSTEMS AUSTRALIA PTY LTD
UNIT 4, 13-17 WOLLONGONG ROAD
ARNCLIFFE NSW 2205
PHONE: 02 9554 9966 FAX: 02 9567 9640
A.C.N. 003 276 156

Services Engineers:
NORMAN DISNEY & YOUNG
1 CHANDOS STREET
ST LEONARDS
NSW 2065 AUSTRALIA
TELEPHONE +61 2 9906 6000
FACSIMILE +61 2 9439 6580

Architects:

Project Manager:
Leighton Contractors Pty Limited
L3 11-15 Falcon Street
Crows Nest NSW 2065
Tel(02) 9966 4322
Fax(02) 9966 4355

Client:
CABLE & WIRELESS OPTUS
101 Miller Street
North Sydney, NSW 2060
Tel. (02) 9342 7000
Fax (02) 9342 7277

Project:
NDMC - OFFICE DATA CENTRE
34 WATERLOO ROAD
NORTH RYDE

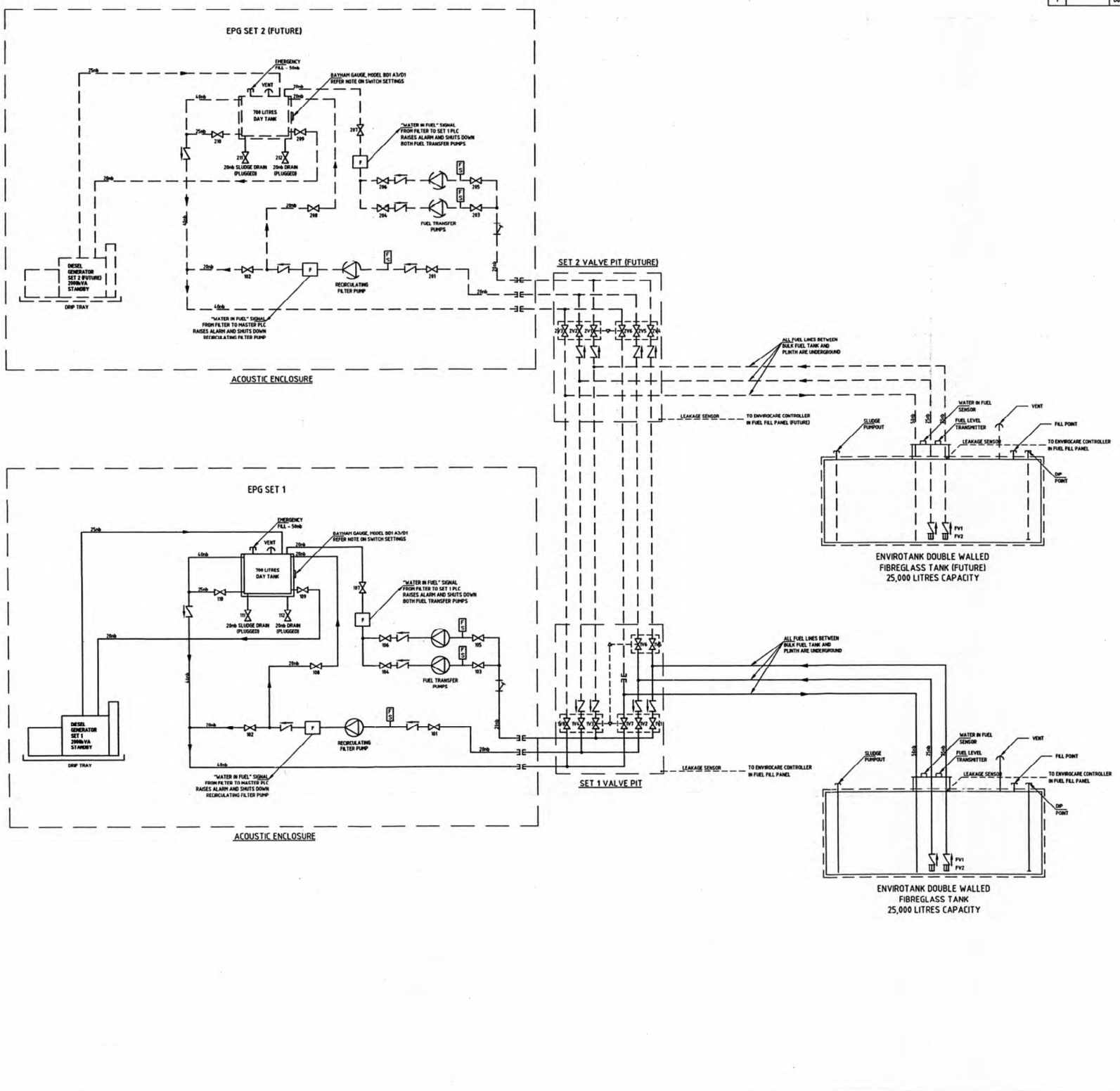
Drawing Title:
STANDBY POWER SYSTEM
DIESEL GENERATOR SET
BULK FUEL TANK INSTALLATION

Scale: 1:20
Drawing Number: V75027/NDMC/E/DR/4303/SDB

RYDE CITY COUNCIL
LOG No. 152/2001
SCAN
Date 9/3/01

EQUIPMENT LIST

QTY	ITEM	FIG/PART	SIZE	MANUFACTURER/SUPPLIER	TYPE/CAT No.
2	FV1	23151-16	25nb	ENZED TOTAL HOSE & FITTING SERVICE	YORKSHIRE CHECK VALVE (PART OF FOOT VALVE ASSEMBLY)
2	FV2	23154-16	25nb	ENZED TOTAL HOSE & FITTING SERVICE	YORKSHIRE S/S FILTER (PART OF FOOT VALVE ASSEMBLY)
6	IV1-IV6	SB3	25nb	PIPELINE SUPPLIES OF AUSTRALIA	TURNFLO BALL VALVE - S/S 3-PIECE
2	IV7, IV8	SB3	50nb	PIPELINE SUPPLIES OF AUSTRALIA	TURNFLO BALL VALVE - S/S 3-PIECE
4		R	25nb	PIPELINE SUPPLIES OF AUSTRALIA	KITZ NON-RETURN VALVE
12	101-112	SEP-45A	20nb	STEAM & ENGINEERING PRODUCTS PTY LTD	BALL VALVE - FULL BORE
4		SEP-4	20nb	STEAM & ENGINEERING PRODUCTS PTY ITD	NON-RETURN VALVE
1		SEP-4	40nb	STEAM & ENGINEERING PRODUCTS PTY LTD	NON-RETURN VALVE
1		SY-5	20nb	STEAM & ENGINEERING PRODUCTS PTY LTD	Y-TYPE STRAINER
3	FS	VM320	20nb	STEAM & ENGINEERING PRODUCTS PTY LTD	SKA FLOW SWITCH
3		Z580V	20nb	EBSRAY PUMPS PTY LTD	EBSRAY PUMPS C/W 0.75kW 1400rpm 3/415/50 MOTOR
2	F	75/1000FGXP	25nb	PERFECT IMPACT PTY LTD	RACOR FILTER C/W WATER IN FUEL PROBE AND PLC CONNECTOR
1		BD1 A3/D1	ø100	MECHTRIC (NSW) PTY LTD	BAYHAM GAUGE - IN FUEL DAY TANK



NOTES:

1. ALL EXCAVATION AND BACKFILLING FOR THE INSTALLATION OF THE BULK FUEL TANK AND THE FUEL PIPES SHALL BE CARRIED OUT BY THE BUILDING CONTRACTOR.
2. ALTHOUGH CIRCUITS ARE SHOWN FOR TWO (2) DIESEL GENERATOR SETS, SET 1 SHALL BE INSTALLED NOW AND SET 2 SHALL BE INSTALLED AT A FUTURE DATE.
3. ALL UNDERGROUND FUEL PIPING BETWEEN THE BULK FUEL TANK AND THE SET 1 VALVE PIT, AND BETWEEN THE SET 1 VALVE PIT AND THE SET 1 PLINTH PENETRATION, SHALL BE DOUBLE WALLED GEOFLEX PIPE, OR SIMILAR, IN GEODUCT, OR SIMILAR, INSTALLED TO MANUFACTURER'S INSTRUCTIONS.
4. CONDUIT STUB PIECES, MADE FROM 100mm UPVC CONDUIT, SHALL EXTEND FROM THE SET 1 VALVE PIT TOWARDS THE POSITION OF THE FUTURE SET 2 VALVE PIT, FOR FUTURE PIPE INSTALLATION. THE ENDS OF THESE CONDUIT STUBS SHALL BE SEALED.
5. ALL SUCTION AND RETURN LINES ISOLATING VALVES AND CHECK VALVES IN THE SET 1 VALVE PIT SHALL BE INSTALLED WITH FLANGES OR OTHER SUITABLE COUPLINGS, SO THAT THE SUCTION AND RETURN LINES MAY BE BROKEN FOR MAINTENANCE PURPOSES.
6. THE FUEL SUCTION PIPES BETWEEN THE BULK FUEL TANK AND THE SET 1 VALVE PIT, AND BETWEEN THE SET 1 VALVE PIT AND THE SET 1 PLINTH PENETRATION SHALL BE ø25. THE RETURN PIPE, FOLLOWING THE SAME ROUTE, SHALL BE ø50. THE GEODUCT SHALL BE ø100.
7. FUEL PIPING INSIDE THE ACOUSTIC ENCLOSURE SHALL BE FABRICATED FROM BLACK MEDIUM GRADE STEEL PIPE TO AS.1074, WITH ALL JOINTS WELDED WHERE POSSIBLE. WHERE SCREWED CONNECTIONS HAVE TO BE USED, THEY SHALL BE KEPT TO AN ABSOLUTE MINIMUM, AND CARE SHALL BE TAKEN TO ENSURE THEY ARE PROPERLY SEALED AGAINST FUEL LEAKS.

DAY TANK SWITCH LEVEL SETTINGS:

THE BAYHAM CONTENTS/LEVEL SWITCH GAUGE, INSTALLED IN EACH OF THE DAY TANKS, HAS A 100mm DIAL, CALIBRATED IN PERCENTAGES READING FROM 0% TO 100% FULL. IT ALSO CARRIES TWO (2) SWITCH SYSTEMS. ONE SYSTEM IS FOR PUMP CONTROL, USING ONE (1) DIFFERENTIAL SWITCH. THE OTHER IS FOR LEVEL SENSING, USING THRE (3) SEPARATE LIMIT SWITCHES.

THE DIFFERENTIAL SWITCH IS SET TO OPERATE AS FOLLOWS:-
- PUMP START - DAY TANK IS 50% FULL (350 LITRES)
- PUMP STOP - DAY TANK IS 95% FULL (665 LITRES)

THE LIMIT SWITCHES ARE SET TO OPERATE AS FOLLOWS:-
- HIGH ALARM - DAY TANK IS 100% FULL (700 LITRES)
- LOW ALARM - DAY TANK IS 30% FULL (210 LITRES)
- LOW LOW ALARM - DAY TANK IS 15% FULL (105 LITRES)

NOTE THAT THE LOW ALARM SWITCH ALSO SIGNALS FOR THE LAG (STANDBY) FUEL TRANSFER PUMP TO START UP.

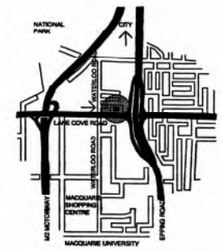
LEGEND:

- ISOLATING VALVE
- FS FLOW SWITCH
- NON RETURN VALVE
- FUEL PUMP
- STRAINER
- F FUEL FILTER: RACOR WATER SEPARATOR TYPE COMPLETE WITH WATER LEVEL SENSOR
- FLANGES TO FACILITATE DISCONNECTION OF FUEL SYSTEM SEE NOTE 3.

This drawing has been inspected for compliance with general arrangement and requirements specified under this contract. Amendments required are noted hereon. Dimensions, coordination with associated plant and all other services and site conditions, compliance with statutory regulations and compliance with specified requirements, remain the responsibility of the contractor.

Norman Disney & Young
Consulting Engineers
SIGNED ... DATE 23/02/01

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CONTRACTORS MUST VERIFY ALL DIMENSIONS AT THE JOB BEFORE COMMENCING ANY WORK OR PREPARING SHOP DRAWINGS



LOCATION PLAN

Rev	Date	Description	Cons Appr.	(Comp) Appr.
50A	31.10.00	ISSUED FOR CONSTRUCTION		
50A	27.12.00	ISSUED FOR APPROVAL		

Drawn: LHS | JOB No. PRO 150
Date: 27.12.00 | Design:

QUALITY RECORD:
STATUS: REV:

	REVIEW	NAME	SIGNATURE	DATE
CONSULTANT	DRAFTER			
	TECH. CHECK			
	Q.A. CHECK			
	PROJ. MANAGER			
	DESIGN MANAGER			
COMPANY	USER			
	OWNR			

Filing Code 263791
NDY 20 FEB 2001
Project Co-ordinator DK

Contractor:
ENERGY POWER SYSTEMS
ENERGY POWER SYSTEMS AUSTRALIA PTY LTD
UNIT 6, 15-17 WOLLONGONG ROAD
ARNCLIFFE NSW 2205
PHONE: 02 9556 9988 FAX: 02 9567 1849
A.C.N. 055 274 516

Services Engineers:
NORMAN DISNEY & YOUNG
1 CHANDOS STREET
ST LEONARDS
NSW 2065 AUSTRALIA
TELEPHONE +61 2 9928 8000
FACSIMILE +61 2 9439 5080

Architects:

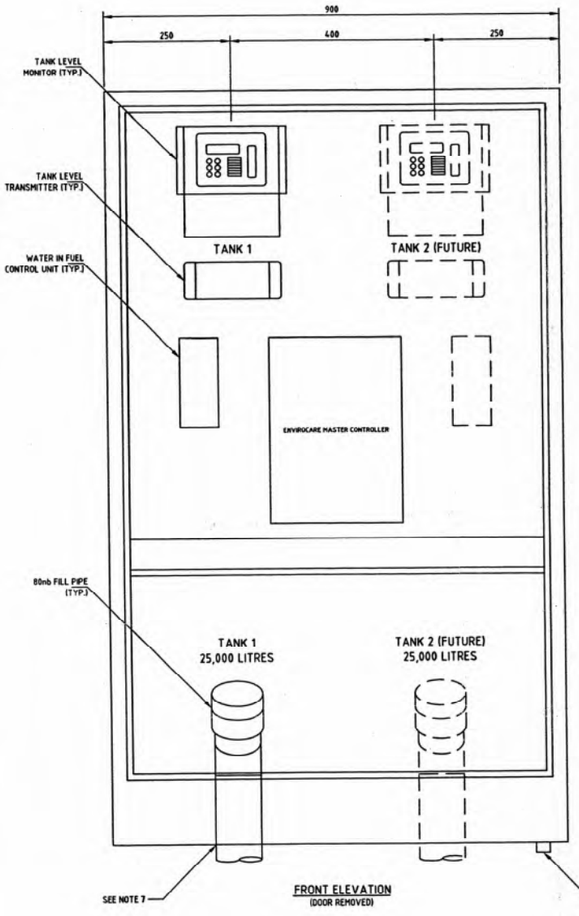
Project Manager:
Leighton Contractors Pty Limited
L3 11-15 Falcon Street
Crows Nest NSW 2065
Tel:(02) 9968 4322
Fax:(02) 9966 4355

Client:
CABLE & WIRELESS OPTUS
101 Pitter Street
North Sydney, NSW 2060
Tel. (02) 9342 7000
Fax (02) 9342 7277

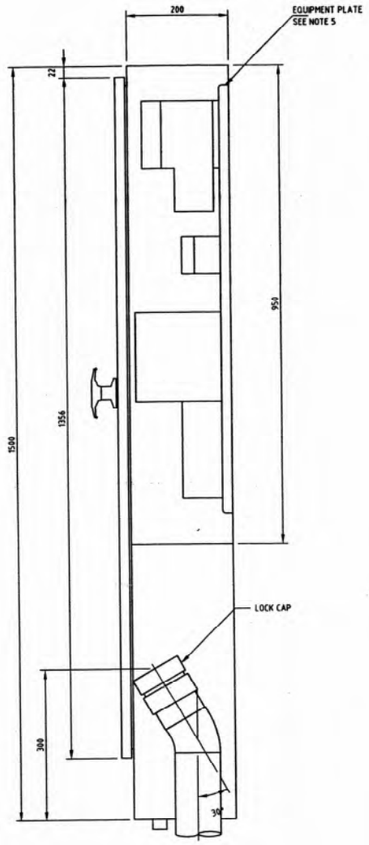
Project:
NDMC - OFFICE DATA CENTRE
34 WATERLOO ROAD
NORTH RYDE

Drawing Title:
STANDBY POWER SYSTEM
DIESEL GENERATOR SET
FUEL SYSTEM SCHEMATIC

Scale: NONE
Drawing Number: V75027/NDMC/E/DR/4304/SDB

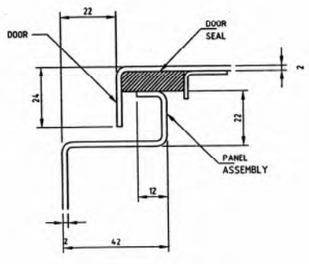


FRONT ELEVATION
(DOOR REMOVED)



RIGHT SIDE ELEVATION

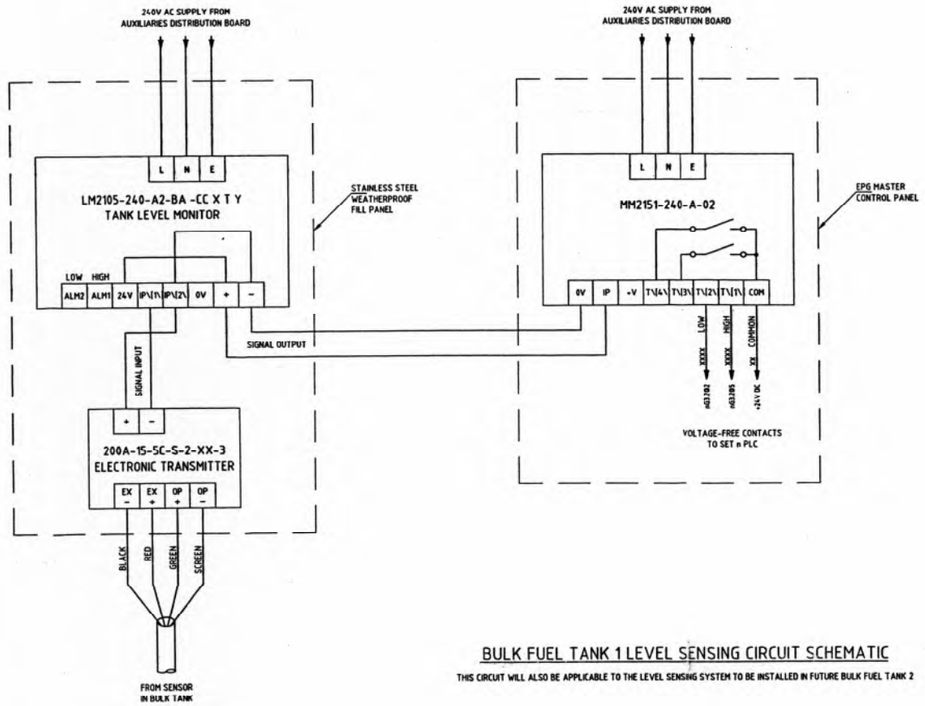
FILL PANEL
SCALE 1:5



DOOR SEAL SECTIONAL DETAIL
SCALE: FULL SIZE

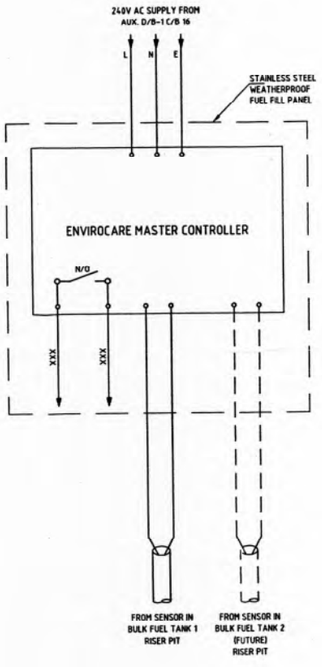
FILL PANEL CONSTRUCTION & INSTALLATION DATA:

1. THE CABINET ASSEMBLY SHALL BE CONSTRUCTED FROM 2mm STAINLESS STEEL SHEET WITH EDGES CONCEALED BY FOLDING AND WITH ALL EXTERNAL JOINTS FULLY WELDED AND GROUND SMOOTH.
2. A PLATE SHALL BE FITTED IN THE CABINET TO SEGREGATE THE ELECTRICAL EQUIPMENT FROM THE FILL POINTS.
3. THE DOOR SHALL BE FABRICATED FROM 2mm STAINLESS STEEL SHEET AND IS ATTACHED TO THE CABINET BY MEANS OF LIFT-OFF PINTLE HINGES. AS REQUIRED, BRACING SHALL BE PROVIDED TO ACHIEVE RIGIDITY AND TO PREVENT WARPING OR SAGGING. THE LINISH OF THE STAINLESS STEEL SHALL BE IN THE VERTICAL PLANE.
4. THE DOOR SHALL CARRY A HEAVY DUTY TYPE LOCK COMPLETE WITH TWO (2) KEYS, COMMON TO LOCKS INSTALLED IN ALL SWITCHBOARDS. THE DOOR SHALL CARRY A '1' HANDLE WITH L&F KEY No. 60002.
5. ALL COMPONENTS SHALL BE FINISH COATED WITH AN ELECTROSTATICALLY APPLIED POLYESTER THERMOSET POWDERCOAT OVEN BAKED FINISH, WITH A MINIMUM FILM THICKNESS OF 0.07mm, THE COLOUR SHALL BE BIRCH WHITE, DULUX COLOUR No. 37131.
6. THE EQUIPMENT PLATE SHALL BE 800mm LONG, 800mm HIGH AND 20mm DEEP. IT SHALL BE FOLDED FROM 3mm THICK MILD STEEL SHEET AND FINISH PAINTED AS IN NOTE 5 ABOVE.
7. FILL PIPES ENTRY HOLES SHALL BE CUT ON SITE AFTER THE FILL PANEL HAS BEEN INSTALLED AND TO SUIT PIPE INSTALLATION. AFTER FILL PIPES HAVE BEEN COMPLETED, THE OPENINGS SHALL BE SEALED TO PROVIDE A SPILL CONTAINMENT AREA IN THE BASE OF THE FILL PANEL.
8. THE FILL PANEL IS DESIGNED FOR WALL MOUNTING. ITS LOCATION SHALL BE IN ACCORDANCE WITH THE LOCATION SHOWN ON DRAWING No. V75027/NDMC/E/DR/4300.

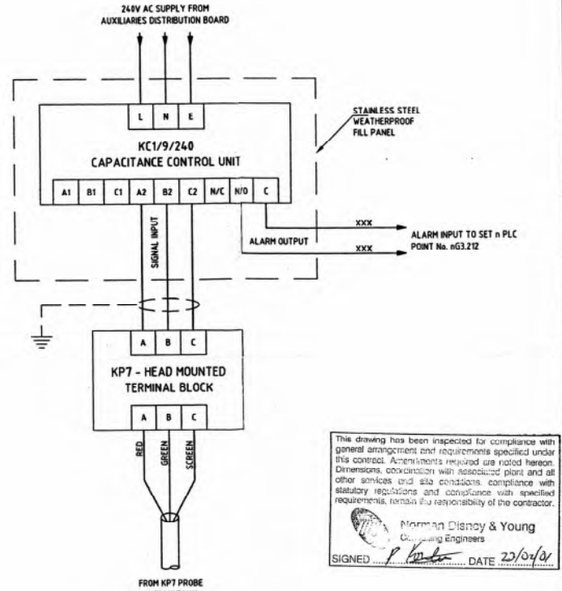


BULK FUEL TANK 1 LEVEL SENSING CIRCUIT SCHEMATIC

THIS CIRCUIT WILL ALSO BE APPLICABLE TO THE LEVEL SENSING SYSTEM TO BE INSTALLED IN FUTURE BULK FUEL TANK 2



ENVIROCARE SYSTEM CIRCUIT SCHEMATIC



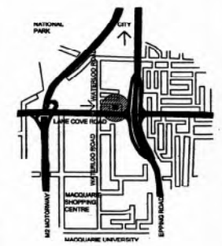
WATER IN BULK FUEL TANK 1 SENSING CIRCUIT SCHEMATIC

THIS CIRCUIT WILL ALSO BE APPLICABLE TO THE SENSING SYSTEM TO BE INSTALLED IN FUTURE BULK FUEL TANK 2

This drawing has been inspected for compliance with general arrangement and requirements specified under this contract. Amendments required are noted hereon. Dimensions, coordination with associated plant and all other services and site conditions, compliance with statutory regulations and consistance with specified requirements, remain the responsibility of the contractor.
Norman Disney & Young Consulting Engineers
SIGNED ... DATE 23/01/01

THE CITY OF [illegible]
LDA No: 150/2001
Signed:
Date: 2/5/01
Subject to the conditions of the consent

© COPYRIGHT
CONTRACTORS MUST VERIFY ALL DIMENSIONS AT THE JOB BEFORE COMMENCING ANY WORK OR PREPARING SHOP DRAWINGS



LOCATION PLAN

Rev	Date	Description	Coord Appr.	(Comp) Appr.
SDB	13.02.01	ISSUED FOR CONSTRUCTION		
SDA	23.01.01	ISSUED FOR APPROVAL		

Drawn LHS | JOB No. PRO 100
Date 23.01.01 | Design

QUALITY RECORD:
STATUS: IFE

	REVIEW	NAME	SIGNATURE	DATE
CHECK LINE	DRAFTER			
	TECH. CHECK			
	Q.A. CHECK			
	PROJ. MANAGER			
	DESIGN MANAGER			
COMPANY	USER			
	CLIENT			

Filing Code
263794
NOV 2 0 FEB 2001
Project Co-ordinator DK

CONTRACTOR
ENERGY POWER SYSTEMS
ENERGY POWER SYSTEMS AUSTRALIA PTY LTD
UNIT 4, 17-37 WOLLONGONG ROAD
ARNCLIFFE NSW 2205
PHONE: 02 9556 0900 FAX: 02 9567 1844
A.C.N. 055 274 514

Services Engineers:
NORMAN DISNEY & YOUNG
1 CHANDOS STREET
ST LEONARDS
NSW 2065 AUSTRALIA
TELEPHONE +61 2 9928 6800
FACSIMILE +61 2 9439 6980

Architects:

Project Manager:
Leighton Contractors Pty Limited
L3 11-15 Falcon Street
Crows Nest NSW 2065
Tel:(02) 9966 4322
Fax:(02) 9966 4355

Client:
CABLE & WIRELESS OPTUS
101 Miller Street
North Sydney, NSW 2060
Tel. (02) 9342 7000
Fax (02) 9342 7277

Project:
NDMC - OFFICE DATA CENTRE
34 WATERLOO ROAD
NORTH RYDE

Drawing Title:
STANDBY POWER SYSTEM
FUEL FILL PANEL LAYOUT
AND SENSING CIRCUITS

Scale: 1:5
Drawing Number: V75027/NDMC/E/DR/4305/SDB

SafeWork NSW Records

N.S.W. GOVERNMENT DEPARTMENT OF INDUSTRIAL RELATIONS

DANGEROUS GOODS BRANCH

WCA - Unclassified

Recfind File 35/018881

WorkCover Authority of NSW

Custodian Licensing Team
Created 1/01/1975

HEALTH & SAFETY MANAGEMENT - LICENSING - Dangerous Goods Keeping Licence 35/018881 - North Ryde, 271-273 Lane Cove Rd

35/018881/9-1

KEEPING LICENCE

INSPECTION DISTRICT NO. 5*

MID - WEST

CANCELLED

FILE SCANNED

DATE BY

DISK NAME 1988

DISPOSAL DATE

RETRIEVED FROM ARCHIVES 10/11/95 BOX NO. 450

35/018881

CDS 28/01/97
EJ 3/12/98

316/37 1697B

Gilbarco AUST LTD
A.C.N. 000 020 799

12-38 Talavera Road PO Box 63 North Ryde NSW 2113
Tel: (02) 888 4888 • Fax: (02) 878 4038 • Telex: AA120832

RECEIVED MAIL ROOM 09 JUN 1995 WORKCOVER NEW SOUTH WALES

Workcover Authority
The Chief Inspector of Dangerous Goods
Locked Bag 10
Clarence St
SYDNEY NSW 2000

35-018881

Dangerous Goods Act, 1975
Contractor's Certificate
Abandonment of Underground Tanks

Gilbarco Aust Ltd hereby certifies that the tanks referred to in the Schedule to this Certificate have been taken out of service by the following method:-

1. ~~Removal of tank/s to an approved place: OR~~
2. Filling with ~~an inert solid material,~~ sand ~~or concrete~~.
(Delete as applicable)

This procedure has been carried out under the provisions of the Dangerous Goods Act, 1975, and Section 9.8.13 of Australian Standard 1940-1993 and acceptance of the Chief Inspector of Dangerous Goods.

Owner of Premises : BUTTERWORTHS

Address of Premises : 271-273 LANE COVE RD
NORTH RYDE.

Noted PW 20/6/95

SCHEDULE

1 x Tank 16000 Litres
1 x Tank 11540 Litres
Tank ~~Litres~~
Tank ~~Litres~~

Dated this 3RD day of MAY 1995

GILBARCO AUST LTD
Authorised Officer

RECEIVED - 9 JUN 1995 SCIENTIFIC SERVICES BRANCH

THE NEW SOUTH WALES GOVERNMENT
Putting people first by managing better

PART A

SCIENTIFIC SERVICES BRANCH
-2 NOV 1993
DANGEROUS GOODS

WORKCOVER AUTHORITY

LICENCE TO KEEP DANGEROUS GOODS

(Dangerous Goods Act 1975)

Application for new licence, amendment or transfer

Expiry: 2.11.95 I/S CSD 24 7 94

1. Name of applicant — ACN
   REED INTERNATIONAL BOOKS AUSTRALIA PTY LIMITED | 001 002 357

2. Site to be licensed
   No: 271-273 | Street: LANE COVE ROAD
   Suburb/Town: NORTH RYDE | NSW | Postcode: 2113

3. Previous licence number (if known): 35/018881

4. Nature of site: BOOK PUBLISHER/DISTRIBUTOR * 2641

5. Emergency contact on site:
   Phone: (02) 335 4531 (A/H 639 7558) | Name: BRUCE W. COLE

6. Site staffing: Hours per day: 17½ | Days per week: 5

7. Major supplier of dangerous goods: SHELL COMPANY OF AUSTRALIA LIMITED

8. If new site or significant modification
   Plan stamped by: | Accredited consultant's name: N/A | Date stamped:

DATA ENTERED 14 OCT 1994

9. Number of dangerous goods depots at site: 3

10. Trading name or occupier's name
    BUTTERWORTHS

11. Postal address of applicant | Suburb/Town | Postcode
    PO BOX 345 | NORTH RYDE | 2113

12. Contact for licence enquiries:
    Phone: 335 4531 | Fax: 335 4622 | Name: BRUCE COLE

I certify that the details contained in this application (or the accompanying computer disk) are true and correct

13. Signature of applicant: FOR AND ON BEHALF OF REED INTERNATIONAL BOOKS AUSTRALIA PTY. LTD. B. W. COLE | Date: 29/10/93

17 OCT 1994

Please complete attached site sketch, depot listing and check sheet (if required) and return to WorkCover Authority in envelope provided.

Form DG1

Site Sketch

Please carefully read the instructions in Part B of the guide before sketching the site.

← TO RYDE ← LANE COVE ROAD → TO WATERLOO RO
TURN RIGH

PART B

35-018881

BOUNDARY LINE, FOOT PATH — Low retaining wall full Length
118·000M 241°55'10" 110·850M 240°24'30" BO

EXIST. LANDSCAPED AREA

SYDNEY ELECTRICITY SUB-STATION

EXIST LANDSCAPED AREA

Metro East
SEEN
C. David
Date 24 7 94

GAS TANK CLASS 2.1

FIRE PUMP HOUSE

EXISTING TENNIS-COURT CONC.

W.S.T.U

BUILDING LINE

STAFF ENTRANCE

FOYER ENTRANCE

EXTENSION TO EXISTING GROUND LEVEL PARKING

EXIST. PARKING BITUMEN FINISH

'BUTTERWORTHS'

PLANT ROOM N°1 — Electricity Switch board on raised slab on ground floor next to PABX Room (Inside PLANT ROOM N° 1)

EXISTING WAREHOUSE

ALTERATIONS

LOADING DOCK.

FIRE Hydrant

HYDRANT

NEW ENTRY RAMP

LINE OF NEW CAR PARK DECK ON

GA 10

EXIST. PARKING BITUMEN FINISH

EXTENSION TO EXIST. 1ST FLOOR

GA 04

NEW EXIT RAMP

EXIST. CAR PARKING

EXISTING LOADING DOCK.

(PHILIPS)

~~'ADLER'~~

34 WATERLOO ROAD.

EXISTING WAREHOUSE

LOADING DOCK

SITE ENTRA

BOUNDARY LINE 99·760M 121°21'30"

COMMON DRIVE WAY TO BUTTERWORTHS AND EXIST. RAMP UP PHILIPS TO → WATERLOO ROAD

NOTE: This is ONLY Entrance to both propert

234·373 M 241°56'20"

BOUNDARY LINE — Wall/Chain wire fence.

BOUNDARY LINE

SITE PLAN 271-273 LANE COVE RD N. RYDE
SCALE 1:500

22 8 10 3

PATH — LOW retaining wall full Length
118·000M 241° 55' 10"

110·850M 210°

SYDNEY ELECTRICITY SUB-STATION

EXIST. LANDSCAPED AREA

NORTH

FIRE PUMP HOUSE

GAS TANK CLASS 2.1 LPG

W.S.T.I.

EXISTING TENNIS-COURT CONC.

STAFF ENTRANCE

FOYER

STAFF ENTRANCE

HYDRANT

FIRE

'BUTTERWORTHS'

PLANT ROOM No 1 — Electricity Switchboard on raised slab on ground floor next to PABX Room. (Inside PLANT ROOM No 1)

EXISTING WAREHOUSE

EXTENSION TO EXIST. 1ST FLOOR

4A 04

EXTENSION TO EXISTING GROUND LEVEL PARKING

NEW ENTRY RAMP

EXIST. PARKING BITUMEN FINISH

NEW EXIT RAMP

EXIST CAR PARKING

LINE OF NEW CAR PARK DECK OVER

4A 10

EXISTING LOADING DOCK.

EXIST. RAMP UP

EXIST

Metro East

SEEN

C. David

Date 24/7/94

34 WA

EXIS

WARE

COMMON DRIVE WAY TO BUTTERWORTHS AND PHILIPS TO → WATERLOO RO

NOTE: THIS IS ONLY F

PART C **CHEMICAL STORAGE**

Complete 1 section per depot

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot number	Type of depot	Class	Licensed maximum storage capacity
LPG1	Change depot 1 to ABOVE GROUND TANK ~~REGISTERED No 186-4-2671~~	2.1	2000

UN number	Shipping name	Pkg. Class	Pkg. Group	Pkg. EPG	Product or common name	Typical quantity	Unit eg. L, kg, m³
1075	Petroleum Ga..				LPGas	2000	L

Depot number	Type of depot	Class	Licensed maximum storage capacity
PET2	Change depot 2 to UNDERGROUND TANK	3	10,000

UN number	Shipping name	Pkg. Class	Pkg. Group	Pkg. EPG	Product or common name	Typical quantity	Unit eg. L, kg, m³
1203	~~ULTRA~~ PETROL (~~Unleaded~~)	3	II		Ultra Unleaded ~~PETROL~~	8000	L

Depot number	Type of depot	Class	Licensed maximum storage capacity
PET3	Change depot 3 to UNDERGROUND TANK	3	10,000

UN number	Shipping name	Pkg. Class	Pkg. Group	Pkg. EPG	Product or common name	Typical quantity	Unit eg. L, kg, m³
1203	~~ULTRA~~ Petrol (~~Unleaded~~)	3	II		Ultra Unleaded ~~PETROL~~	5000	L

Depot number	Type of depot	Class	Licensed maximum storage capacity

UN number	Shipping name	Pkg. Class	Pkg. Group	Pkg. EPG	Product or common name	Typical quantity	Unit eg. L, kg, m³

Complete 1 section per depot

If you have more depots than the space provided, photocopy sufficient sheets first.

Depot number	Type of depot	Class	Licensed maximum storage capacity

UN number	Shipping name	Pkg. Class	Pkg. Group	EPG	Product or common name	Typical quantity	Unit eg. L, kg, m^3

Depot number	Type of depot	Class	Licensed maximum storage capacity

UN number	Shipping name	Pkg. Class	Pkg. Group	EPG	Product or common name	Typical quantity	Unit eg. L, kg, m^3

WorkCover Authority

Details of Licence for Keeping Dangerous Goods on 21 July 1994

Licence Number 35/018881 **Expiry Date** 12/11/93

Licensee Details

Licensee REED INTERNATIONAL BOOKS AUST P/L

Trading name BUTTERWORTHS

Postal Address BOX 345 P O, NORTH RYDE 2113

Licensee Contact

Site Details

Premises Licensed to Keep Dangerous Goods
271-273 LANE COVE RD
NORTH RYDE 2113

Nature of Site PRIVATE DWELLING **Supplier** NOT APPLICABLE

Emergency Contact ph.

Site staffing

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	ABOVEGROUND TANK	Class 2.1	2000 L
2	UNDERGROUND TANK	Class 3	10000 L
3	UNDERGROUND TANK	Class 3	10000 L

RECEIVED IN
11 AUG 1999
ATF

WorkCover New South Wales, 400 Kent Street, Sydney 2000. Telephone 9370 5000 ALL MAIL TO G.P.O. BOX 5364 SYDNEY 2001

Licence No. 35/018886

APPLICATION FOR RENEWAL
OF LICENCE TO KEEP DANGEROUS GOODS

ISSUED UNDER AND SUBJECT TO THE PROVISIONS OF THE DANGEROUS GOODS ACT, 1975 AND REGULATION THEREUNDER

DECLARATION: Please renew licence number 35/018886 to 16/08/2000 . I confirm that all the licence details shown below are correct (amend if necessary).

A. De Paoli ..... Allan De Paoli ..... 6.8.99. .....

(Signature) *(Please print name)* *(Date signed)*

for: SCHOOL EDUCATION DEPARTMENT

*THIS **SIGNED** DECLARATION SHOULD BE **RETURNED TO:***

WorkCover New South Wales
Dangerous Goods Licensing Section
GPO BOX 5364
SYDNEY 2001

Enquiries: ph (02) 9370 5187
fax (02) 9370 6105

Details of licence on 14 July 1999

Licence Number 35/018886 **Expiry Date** 16/08/1999

Licensee SCHOOL EDUCATION DEPARTMENT

Postal Address: WEST METROPOLITAN BOX 877 P O BLACKTOWN NSW 2148

Licensee Contact A DE PAOGI A. DE PAOLI Ph. 02 45 71 2011 Fax. 02 45 71 3391

Premises Licensed to Keep Dangerous Goods COLO HIGH SCHOOL
SCHOOL EDUCATION DEPARTMENT
BELLS LINE OF RD NORTH RICHMOND 2754

Nature of Site SECONDARY EDUCATION

Major Supplier of Dangerous Goods KLEENHEAT

Emergency Contact for this Site A DE PAOLI Ph. 02 47 51 2771

Site staffing 7HRS 5DAYS

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	**ABOVE-GROUND TANK**	**Class 2.1**	**7500 L**
	UN 1075 PETROLEUM GASES, LIQUEFIED		6300 L
2	**ABOVE-GROUND TANK**	**Class 2.1**	**7500 L**
	UN 1075 PETROLEUM GASES, LIQUEFIED		6300 L

RECEIVED
11 AUG 1999
SCIENTIFIC SERVICES

Form DG10

TRANSFER: A Licence to Keep Dangerous Goods is issued for a specified site. If control of a site is transferred (by way of sale or lease or otherwise), the person who held the licence immediately before the transfer must notify WorkCover's Scientific Services Branch. This notification must be submitted, in writing, within 7 days after the transfer and must specify the date the transfer was effected and include the name and address of the new occupier/owner.

AMENDMENT: If there is any change to the licence details or dangerous goods storage conditions at the site, the licensee must as soon as practicable notify WorkCover's Scientific Services Branch, in writing, of the change. The licensee must also apply for an appropriate amendment of the licence if, as a result of the change, the licence details are no longer appropriate or no longer correct.

RENEWAL: The licensee contact will be forwarded an Application to Renew the Dangerous Goods Licence six to eight weeks prior to the expiry date printed on the licence. If you do not receive the renewal application, please contact WorkCover's Dangerous Goods Licensing Section ☎ (02) 9370 5187 before the licence expires.

DESCRIPTION OF DANGEROUS GOODS CLASSES

Class 1	Explosives (including detonators).
Class 1.4S	Safety cartridges.
Class 2.1	Flammable gases (e.g. LP Gas, acetylene).
Class 2.2	Non-flammable, non-toxic gases (e.g. oxygen, nitrogen).
Class 2.3	Toxic gases (e.g. chlorine, anhydrous ammonia).
Class 3	Flammable liquids (e.g. petrol, kerosene, paint thinners, methylated spirits).
C1 & C2	*Combustible liquids (e.g. diesel fuel, heating oil, vegetable oil).*
Class 4.1	Flammable solids (e.g. nitrocellulose, sodium metal, calcium carbide).
Class 4.2	Substances liable to spontaneous combustion (e.g. sodium hydrosulfite).
Class 4.3	Substances that in contact with water emit flammable gases (e.g. calcium carbide).
Class 5.1	Oxidizing substances (e.g. dry pool chlorine, ammonium nitrate).
Class 5.2	Organic peroxides (e.g. dibenzoyl peroxide, MEKP).
Class 6.1	Toxic substances (e.g. sodium cyanide, some pesticides).
Class 6.2	Infectious substances (e.g. bacteria: administered by NSW Health, EPA and WorkCover NSW).
Class 7	Radioactive material (e.g. uranium hexafluoride: administered by the EPA).
Class 8	Corrosive substances (e.g. hydrochloric acid, sulfuric acid, liquid pool chlorine).

SOME DANGEROUS GOODS MAY BE KEPT WITHOUT A DANGEROUS GOODS KEEPING LICENCE.
For example :

1. ***Acetylene***: 60 m^3 or less per premises (i.e. up to and including 8 x "G" size cylinders).
2. ***Diesel fuel, Heating oil***: any amount if stored in packages (e.g. drums) OR in tanks with a capacity of 50,000 litres or less.
3. ***Petrol and other dangerous goods of Class 3, Packing Group I or II***: 100 litres or less per premises when stored aboveground.
4. ***Kerosene and other dangerous goods of Class 3, Packing Group III***: 1,000 litres or less per premises when stored aboveground.
5. ***Class 6.1 - Toxic substances***: 10L/kg or less of Packing Group I, 100L/kg or less of Packing Group II, and 1000L/kg or less of Packing Group III.
6. ***Class 8 - Corrosive substances***: 10L/kg or less of Packing Group I, 100L/kg or less of Packing Group II, and 1000L/kg or less of Packing Group III.

Please contact WorkCover's Dangerous Goods Licensing Section ☎ (02) 9370 5187, Information Centre Hotline 13 10 50, or your local WorkCover office for further information or assistance on licensing or storage of dangerous goods.

WorkCover NSW offices	☎		☎		☎
Blacktown	(02) 9671 8700	Albury	(02) 6021 5911	Gosford	(02) 4324 3384
Hurstville	(02) 9598 3366	Batemans Bay	(02) 4472 5544	Grafton	(02) 6642 0511
Lindfield	(02) 9936 3000	Blackbutt	(02) 4297 3796	Lismore	(02) 6622 0088
Liverpool	(02) 9827 8600	Dubbo	(02) 6884 2799	Narrabri	(02) 6792 4643
Parramatta	(02) 9841 8550	Goulburn	(02) 4822 1243	Newcastle	(02) 4921 2900
Sydney	(02) 9370 5027	Griffith	(02) 6964 2027	Port Macquarie	(02) 6584 1188
Metro East Region	(02) 9370 5059	Orange	(02) 6361 7070	Tamworth	(02) 6786 2490
Metro West Region	(02) 9841 8550	Wagga Wagga	(02) 6921 8766	Toronto	(02) 4959 6366
Country North Region	(02) 4921 2900	Wollongong	(02) 4222 7333	Tweed Heads	(07) 5536 3262
Country South Region	(02) 4222 7333				

Licence Number 35/018881

CANCELLED FILE 1996

REED INTERNATIONAL BOOKS AUST P/L
BUTTERWORTHS

271-273 LANE COVE RD
NORTH RYDE 2113

35/018881

Butterworths
Legal, Tax & Commercial Publishers

RECEIVED
MAIL ROOM
- 1 NOV 1995
WORKCOVER
NEW SOUTH WALES

31 October, 1995

Your Ref:Licence Number
35/018881

Direct Line: (02) 335 4531
Direct Fax: (02) 335 4622

WORKCOVER AUTHORITY
CHIEF INSPECTOR OF DANGEROUS GOODS
LOCKED BAG 10
CLARENCE STREET
SYDNEY NSW 2000

* check tank sizes.
re/ove cancelling

Dear Chief Inspector,

RE : RENEWAL OF LICENCE FOR THE KEEPING OF DANGEROUS GOODS

We wish to advise that we no longer have the aboveground LPG tank, LPG 1,as listed on our licence.We also advise that the two underground petrol tanks,PET 2 and PET 3,have been abandoned.

LPG1, aboveground tank,2000 litres,class 2.1 UN 1075 petroleum gases,was sold to Wesfarmers Kleenheat Gas Pty. Ltd. 48 Edwin Street Mortlake NSW 2137,on 23 August 1994.Kleenheat Gas removed the tank from our premises on the said date.

PET2 and PET3,underground tanks,class 3 UN 1203 petrol,were filled with sand on 3 May 1995,by Gilbarco Aust Ltd of 12-38 Talavera Road North RydeNSW 2113.Their Contractor's Certificate of Abandonment of Underground Tanks,was sent to you on 3 May 1995.A copy of the certificate is enclosed for your information.

As there are now no longer any dangerous goods remaining on our premises,we therefore do not wish to renew our licence.

Should you have any queries regarding the above,please do not hesitate to call me on my direct line.

Yours faithfully,

B W COLE
Building Services Manager

RECEIVED
1 - NOV 1995
SCIENCE SERVICES
BRANCH

271-273 Lane Cove Road (PO Box 345) North Ryde NSW 2113 Australia
DX 8413 Ryde • Telephone (02) 335 4444 • Facsimile (02) 335 4655
A Division of Reed International Books Australia Pty Limited ACN 001 002 357

- 5 JUN 1995

Gilbarco AUST LTD
A.C.N. 000 020 799

12-38 Talavera Road PO Box 63 North Ryde NSW 2113
Tel: (02) 888 4888 • Fax: (02) 878 4038 • Telex: AA120832

Workcover Authority
The Chief Inspector of Dangerous Goods
Locked Bag 10
Clarence St
SYDNEY NSW 2000

Dangerous Goods Act, 1975
Contractor's Certificate
Abandonment of Underground Tanks

Gilbarco Aust Ltd hereby certifies that the tanks referred to in the Schedule to this Certificate have been taken out of service by the following method:-

1. ~~Removal of tank/s to an approved place: OR~~
2. Filling with ~~an inert solid material,~~ sand ~~or concrete~~.

(Delete as applicable)

This procedure has been carried out under the provisions of the Dangerous Goods Act, 1975, and Section 9.8.13 of Australian Standard 1940-1993 and acceptance of the Chief Inspector of Dangerous Goods.

Owner of Premises : BUTTERWORTHS

Address of Premises : 271-273 LANE COVE RD
NORTH RYDE.

SCHEDULE

1 x Tank 16000 Litres
1 x Tank 11540 Litres
Tank ~~Litres~~
Tank ~~Litres~~

Dated this 3RD day of MAY 1995

GILBARCO AUST LTD
Authorised Officer

Personnel

WorkCover Authority

Chemical Safety Unit
Locked Bag 10, P O CLARENCE STREET NSW 2000
Ph. (02) 370 5191 OR (02) 370 5192
Fax (02) 370 6105

Reference

BUTTERWORTHS
A DIVISION OF:

Licensee ~~BUTTERWORTHS P/L~~ REED INTERNATIONAL BOOKS AUSTRALIA PTY LIMITED

BOX 345 P O
NORTH RYDE 2113

15 JUN 1992

BUTTERWORTHS PTY. LIMITED
24 JUN 1992
RECEIVED

SCIENTIFIC SERVICES BRANCH
10 JUL 1992
DANGEROUS GOODS

Dear Sir/Madam,

RE **APPLICATION FOR RENEWAL** OF LICENCE FOR THE KEEPING OF DANGEROUS GOODS

Our records indicate you hold licence number 35/018881 for keeping dangerous goods at 271-273 LANE COVE RD
NORTH RYDE 2113.

Details of depots at site.

Depot No.	Depot type	Goods stored in depot	Quantity kg/litres/no.
1	ABOVEGROUND TANK	FLAMMABLE GASES	2 000
2	UNDERGROUND TANK	FLAMMABLE LIQUIDS	10 000
3	UNDERGROUND TANK	FLAMMABLE LIQUIDS	10 000

DATA
-8 OCT 1992
ENTERED

This licence is now due for renewal. **TO RENEW YOUR LICENCE.** Please carefully check the details shown in this letter and make any required corrections. Then, **SIGN** and **DATE** the declaration below and return this letter to the WorkCover Authority, Chemical Safety Unit. **Fees for these licences have been abolished. DO NOT SEND ANY MONIES.**

Declaration: I wish to renew this licence to 15/07/93. I certify that the licence details shown in this letter are correct.

B.W. COLE 08/07/92
(Signature) *(Date)*

If you do not wish to renew the licence. Please provide the Chemical Safety Unit with a signed statement giving the reason why it is not to be renewed. If you have sold/vacated the site please provide the name and address of the new owner/occupier so we may contact them.

Yours faithfully

Chief Inspector of Dangerous Goods.

Dangerous Goods are divided into classes and an explanation is shown hereunder. Certain dangerous goods may be kept without a licence, providing the quantity of the goods does not exceed the amount specified in the exemptions listed below.

EXPLANATION OF DANGEROUS GOODS AND THEIR CLASSES

1.1	Blasting explosives (including detonators).
1.4	Safety cartridges and/or fireworks.
2.1	Flammable gases (e.g. L.P.G. or acetylene).
2.2, 2.3	Poisonous/cryogenic gases (e.g. ammonia, chlorine, liquid oxygen).
3.1, 3.2	Flammable liquids (e.g. any or all of, petrol, kerosene, methylated spirits, solvents).
3.3	Combustible liquids (e.g. distillate, diesel fuel, heating oil).
4	Flammable solids (e.g. nitro cellulose).
5	Oxidising substances (e.g. pool chlorine, ammonium nitrate).
6.1	(a) Poisons (e.g. sodium cyanide, pesticides); (b) Harmful substances (e.g. sodium fluorosilicate, pesticides, lead acetate).
6.2	Infectious substances (e.g. bacterial cultures).
7	Radioactive substances (storage of Class 7 is NOT covered by the Dangerous Goods Act, 1975).
8	Corrosives (e.g. hydrochloric acid, sulphuric acid, sodium hydroxide and sodium hypochlorite).

EXPLANATION OF DEPOT TYPES

Aboveground Tank	Aboveground or semi-buried tank.
Bulk Solids	Depot for bulk solid goods.
Cylinder Store	Gas cylinder store or decanting cylinders.
Magazine	External or internal explosive magazine.
Premises	Storage of safety cartridges in original packages.
Receptacle	Portable explosive receptacle (max qty 50kg).
Roofed Store	Roofed store of packaged dangerous goods includes flammable liquid cabinets and drum stores.
Roofless Store	Roofless store of packaged dangerous goods includes drum stores.
Underground tank	Underground tank

EXEMPTIONS FROM LICENCE

1. *Acetylene*: Storage of 60 cu.m or less of acetylene per premises (i.e. up to and including 8 x "G" class cylinders, the most common size of acetylene cylinder).
2. *Distillate, Diesel Fuel, Heating Oil*: Storage of 50,000 litres or less per tank.
3. *Petrol*: Storage of 100 litres or less per premises.
4. *Kerosene*: Storage of 1,000 litres or less per premises when stored aboveground.
5. *All dangerous goods of classes 6 and 8*: any quantity.

Please contact the WorkCover Authority, Chemical Safety Unit, for further exemptions.

OTHER WORKCOVER AUTHORITY OFFICES - Advice on Dangerous Goods* can also be obtained from the following offices.

	☎		☎
GOSFORD	(042) 24 2284	BANKSTOWN	(02) 707 2500

Butterworths
Publishers to the Professions

271-273 Lane Cove Road North Ryde NSW 2113
PO Box 345 North Ryde NSW 2113 Australia
DX 8413 Ryde
Telephone (02) 335 4444 Facsimile (02) 335 4655

29 October 1993

To:
B.W.COLE

WorkCover Authority
Locked Bag 10
Clarence Street
SYDNEY NSW 2000

ATTENTION: PETER HARLEY

SCIENTIFIC SERVICES BRANCH
- 1 NOV 1993
DANGEROUS GOODS

Dear Sir

Re: Licence No 35/018881

Owing to an unfortunate oversight, our application for a new licence to keep dangerous goods has not been completed.

The application will be completed and posted to Workcover Authority, no later than 4.00 pm Monday 1 November 1993.

We will endeavour to post today if possible.

I regret any inconvenience caused.

Yours faithfully,

B W COLE
BUILDING SERVICES MANAGER

Dear
I agree to the above course of action. Extension granted to ~~1993~~ November 12, 1993.
29/10/93

CHIEF INSPECTOR OF DANGEROUS GOODS

Butterworths
Publishers to the Professions

271-273 Lane Cove Road North Ryde NSW 2113
PO Box 345 North Ryde NSW 2113 Australia
DX 8413 Ryde
Telephone (02) 335 4444 Facsimile (02) 335 4655

29 October 1993

SCIENTIFIC SERVICES
BRANCH
- 1 NOV 1993
DANGEROUS
GOODS

RECEIVED
0 1 NOV 1993
RECORDS MANAGEMENT UNIT

WorkCover Authority
Locked Bag 10
Clarence Street
SYDNEY NSW 2000

ATTENTION: PETER HARLEY

Dear Sir

Re: Licence No 35/018881

Owing to an unfortunate oversight, our application for a new licence to keep dangerous goods has not been completed.

The application will be completed and posted to Workcover Authority, no later than 4.00 pm Monday 1 November 1993.

We will endeavour to post today if possible.

I regret any inconvenience caused.

Yours faithfully,

B W COLE
BUILDING SERVICES MANAGER

APPLICATION FOR LICENCE (or AMENDMENT or TRANSFER of LICENCE) FOR THE KEEPING OF DANGEROUS GOODS

DG 87.07.0001 – 0082

Application is hereby made for—*a licence (or amendment of the licence) *the transfer of the licence for the keeping of dangerous goods in or on the premises described below.

(*delete whichever is not required)

FEE: ~~$10.00~~ per Depot 4

30-00

LISS 3/07/91 03A

Name of Applicant in full (see over)	Surname ..... Given Names .....
Trading name or occupier's name (if any)	BUTTERWORTHS PTY. LIMITED
Postal address	P.O. BOX 345 NORTH RYDE. N.S.W. Postcode 2113
Telephone number of applicant	STD Code 02 Number 887-3444
Address of the premises in or on which the depot or depots are situated (including street number, if any)	271-273 LANE COVE ROAD. NORTH RYDE. N.S.W. Postcode 2113.
Nature of premises (see over)	BOOK PUBLISHERS

PLEASE ATTACH SITE PLAN

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (see over)	Storage capacity LITRES	Dangerous goods 1D003120 0 Product being stored	C & C Office use only
1	Aboveground	2,400 L	LPG.	1100 23
2	Underground	12,000 l	PETROL	2020 14
3	✓	12,000 l	✓	2020 14
4				
5				
6				
7				
8				
9				
10				
11				
12				

Name of company supplying flammable liquid (if any)

Have premises previously been licensed? No

If known, state name of previous occupier Licence No.

FOR AND ON BEHALF OF BUTTERWORTHS PTY. LIMITED

Signature of applicant E.J. Layer Date 22-6-91.

For external explosives magazine(s), please fill in side 2.

FOR OFFICE USE ONLY

CERTIFICATE OF INSPECTION

I, C.O'K Tam being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

(b) Internal dimensions (mm)

2. Special attention is directed to the necessity for filling in accurately the distances from each of the undermentioned places, irrespective of the quantity of Explosives intended to be kept. If any of the "Protected Places or Protected Works" specified below, are not within a radius of 3 km of the Magazine, place the word NIL against such place or works.

PROTECTED PLACES or PROTECTED WORKS	Distance in metres from magazine to nearest works or place	
	Not occupied or used by applicant	Occupied or used by applicant
Public place		
Waterway used for navigation		
Reservoir (public or private)		
River or sea wall		
Bridge		
Dock, wharf, pier or jetty		
Any furnace, kiln, forge or fire for manufacturing purposes or for the use of any boiler, engine, or machine		
Aboveground water main or water supply channel		
Electrical power transmission line		
Radio or television transmitter		
Shop		
Store or warehouse		
Factory		
Other building or timber yard in which any person is employed or engaged in any trade, business or profession		
Magazine or premises licensed for the keeping of explosives		
Depot for other dangerous goods		
Railway, tramway or aerodrome		
Any dwelling house		
Any church, chapel, college, school or theatre		
Hospital		
Government or public building		
Any other building or structure in or about which persons are usually present or from time to time assemble		

FORM DG1

EXPLANATORY NOTES

1. Name of applicant in full: Full name(s) including given name(s) or holding company name (if any) must be supplied.
2. Nature of premises: State whether premises are a dwelling, service station, fuel storage depot, general store, farm, mine site, etc.
3. Type of depot: Describe depot as "aboveground tank", "underground tank", "magazine" "roofless package store", "roofed package store", "cylinder store" (or where not more than two LPG decanting cylinders each of a capacity not exceeding 50 kg are kept) "decanting cylinders". For safety cartridges describe as "in original packages".
4. If space is insufficient for depot particulars, attach a separate list.
5. For each magazine supply additional information above.
6. A site plan of the premises showing the position(s) of the depot(s) with distances from protected works and public places is to be attached.
7. The completed form and site plan accompanied by the prescribed fee ($10 per depot) should be forwarded to:

Chief Inspector,
Dangerous Goods Branch,
Box 846, P.O.,
Darlinghurst, N.S.W. 2010
(6th Floor, 1 Oxford Street).

FAILURE TO ANSWER ALL QUESTIONS WILL RESULT IN A DELAY IN THE ISSUE OF YOUR LICENCE

Appears Not To Be Licenced.

BUTTERWORTH P/L

271 - 273 LANE COVE RD

NORTH RYDE

1 x 1190 l (TYPE 10) LPG FUEL TANK TO BE INSTALLED AT ABOVE PREMISES.

Glenn Barwick

16.9.80.

R.S. 1.12.80.

This building still under construction.

R/S 1-2-81

E.B. Brooks

12-12-80

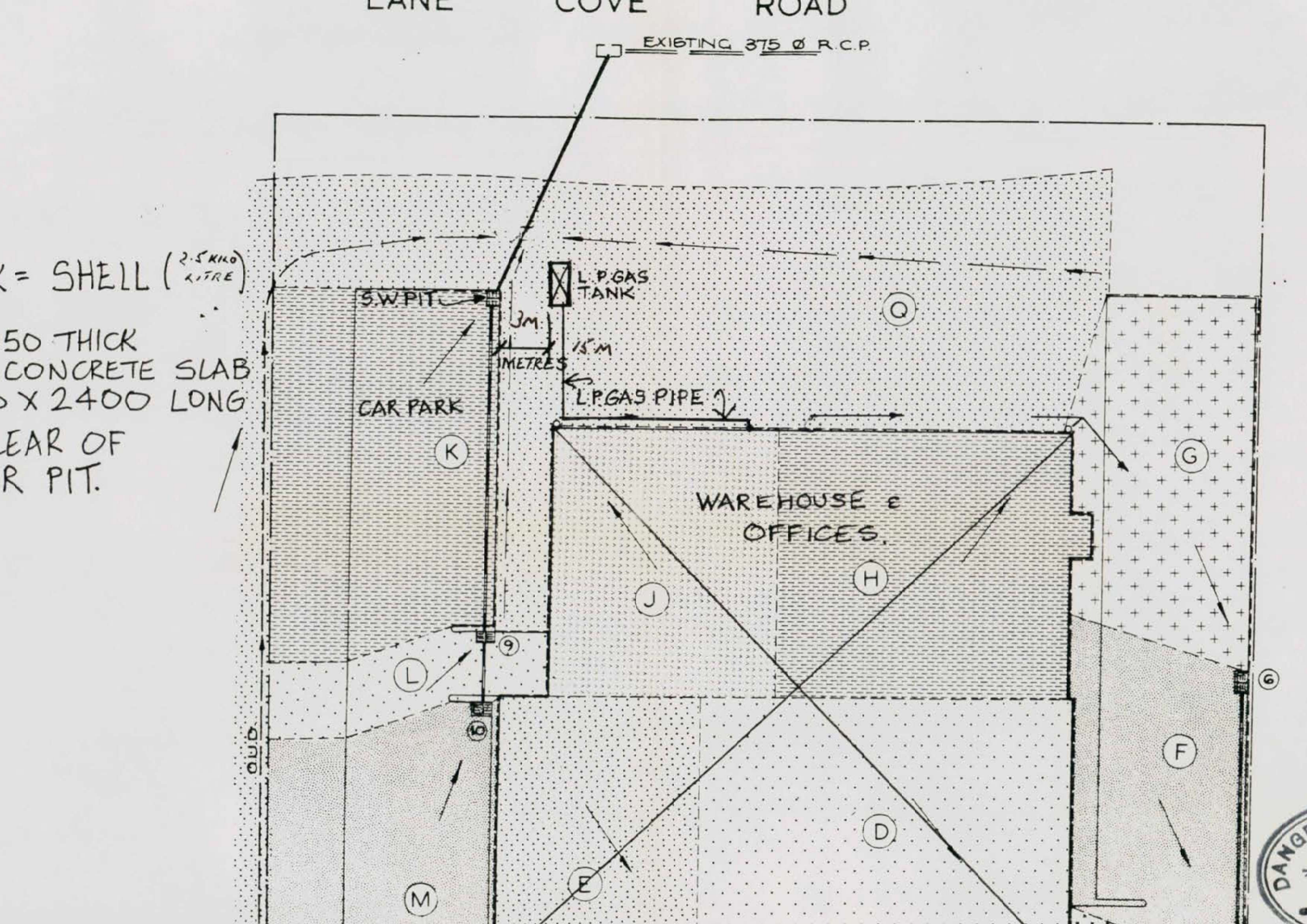
Plans attached for above bund & gas tank, as well as the underground tank

R/S 1.5-81

E.B. Brooks

19.3.81

LANE COVE ROAD



PROPOSED INSTALLATION OF
1 x TYPE 10 & 1 x TYPE 15 U/G
TANKS FOR MOTOR SPIRIT
BUTTERWORTH PTY. LTD
271 - 273 LANE COVE (RD). NORTH RYDE.

LANDSCAPE LINE

NOTE TWIN PARALLEL SUCTION LINES TO RUN FROM THE TWO TANKS TO A POSITION ON PUMP ISLAND FOR SWITCHOVER VALVE. LAYOUT TO ALLOW FOR POSSIBLE FUTURE INSTALLATION OF A DISTILLATE PUMP AND MINIMUM ALTERATION OF PIPEWORK OR ISLAND. SUGGESTED LAYOUT AS FOLLOWS

BUILDING LINE

TYPE 10.

TYPE 15

PETROL PUMP.

SWITCH VALVE

POSSIBLE FUTURE DISTILLATE PUMP.

PARKING
BITUMEN
FINISH

TYPE 10

Underground Fuel Tanks

FILLERS

TYPE 15

Fuel Pumps

LOADING DOCK

Eaves Gutter

1 x RHEEM TYPE 15
1 x RHEEM TYPE 10
TANKS

NOMINAL CAPACITY

121° 21' 30"

DANGEROUS GOODS BRANCH
PASSED
FOR CHIEF INSPECTOR
12 SEP 1980
SUBJECT TO COMPLIANCE WITH REGULATIONS
99.1680

Scale 1:200

MRO DEPT.
DATE RECD 1 SEP 1980
DATE ANS'D / /

FOR THE INSTALLATION OF Shell COMPANY EQUIPMENT

Name of Customer .....

Trade Name of Customer BUTTERWORTH PTY. LTD.

Address 271-273 LANE COVE RD NORTH RYDE Telephone No. .....

Class of Agreement — Co. Controlled Retail Outlet .....

Dealer " " " ..... Industrial ✓ Nature of Business PRINTERS

Nature of Proposal — New Installation ✓ Replacement ..... Removal ..... Purchase .....

EQUIPMENT	*** PUMPS								ϕ TANKS (Capacity in Litres)			
	OTHER		RESELLER METER				INDUSTRIAL METER		TYPE 10 U/G	TYPE 15 U/G		
	S.	D.	S. Tall	S‡ Squat Pod	D. Tall	D‡ Squat Pod	*Class 1	*Class 2				
Already Installed												
Required							(1)		(1)	(1)		

Product to be used — M/S Super ✓ M/S Standard ..... Distillate ..... Kerosine .....

Approval granted by — County Council ..... Local Council ✓ Roads Board .....

WORK REQUIRED BY / /19

Person to Contact re job MR BILL LEGGE, PROJECT MGR. CIVIL & CIVIC PH. 20572 Price at which Product to be sold ..... (for Meter Heads only)

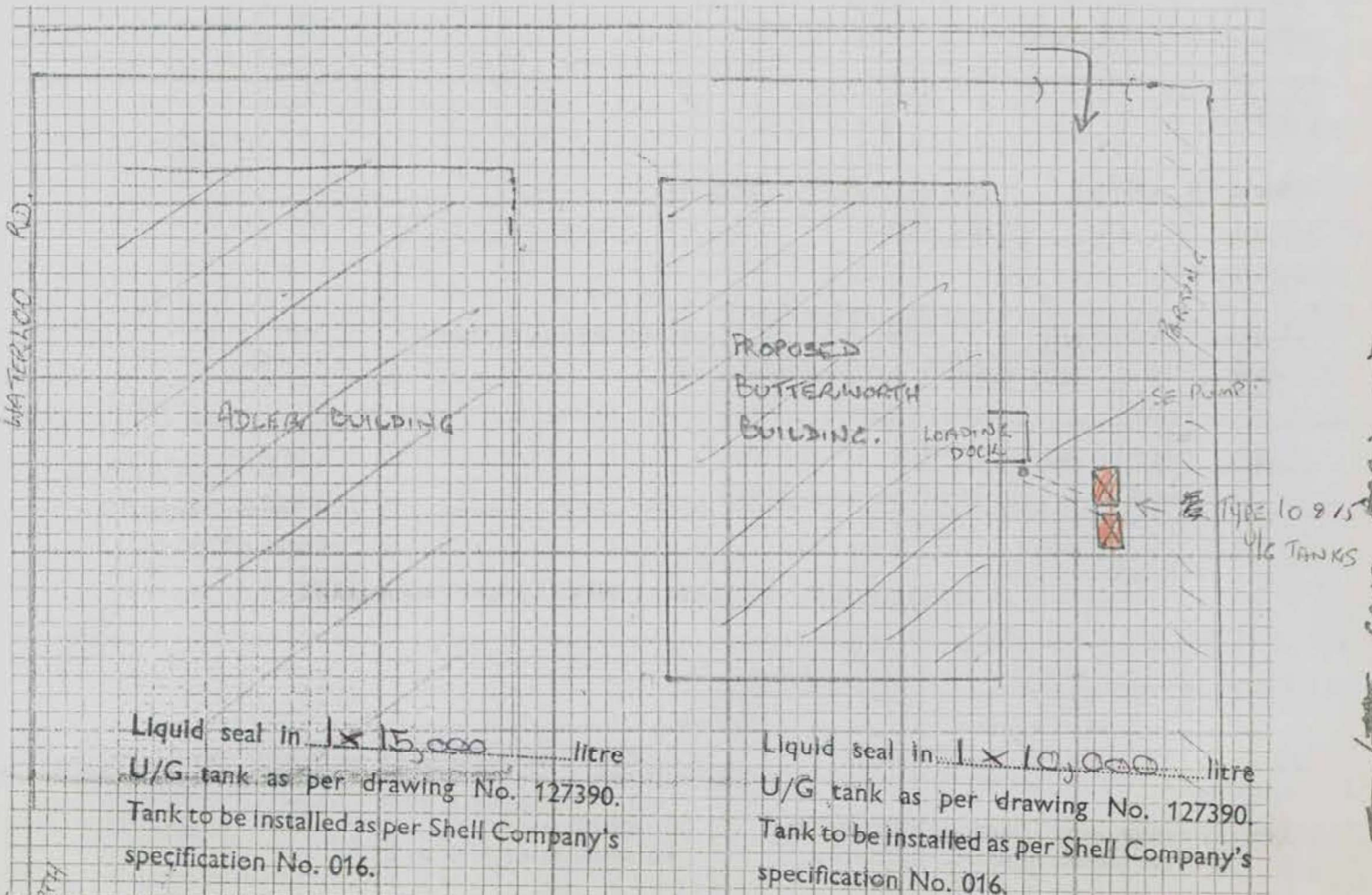
Type of electric current available 240 V Necessary alterations to switchboard: YES/NO

Equipment to be consigned to above by ROAD/RAIL

Is a Concrete Slab required over Tank? ..... If required, show dimensions below.

DISTANCES		Type of Country		Surface at Point of Excavation		Type of Building Walls	
Tank to Pump	6 m.	Sandy		Concrete		Wood	
Tank to Fill Point	— m.	Clay	✓	Wood Floor		Iron	
Tank to Wall for Air Vent	8 m.	Gravel		Asphalt		Brick	✓
Wiring — Pump to nearest entry to Building	8 m.	Rock		Earth	✓		
Wiring — Entry to Building to Switchboard	? m.						

SKETCH OF PROPOSED INSTALLATION — SHOW SCALE



Liquid seal in 1 x 15,000 litre U/G tank as per drawing No. 127390. Tank to be installed as per Shell Company's specification No. 016.

Liquid seal in 1 x 10,000 litre U/G tank as per drawing No. 127390. Tank to be installed as per Shell Company's specification No. 016.

Government Records Repository

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
FTS: Fluorotelomer Sulfonic Acid
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
NEMP: National Environmental Management Plan
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)
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
RSW: Restricted Solid Waste
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)
TCLP: Toxicity Characteristics Leaching Procedure
TS: Trip Spike
TRH: Total Recoverable Hydrocarbons
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).

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.
- 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.
- Data assessed using the Addendum to the NSW EPA Waste Classification Guidelines, Part 1: Classifying Waste (2014) -October 2016

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.

Copyright JK Environments

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**																				
BH1	0.03-0.4	F: Silty Gravelly Sand	<4	<0.4	**15**	**37**	**15**	<0.1	**14**	**49**	**3.5**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Detected
BH1 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	<4	<0.4	**11**	**38**	**12**	<0.1	**9**	**38**	**2.4**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
BH1 - [LAB_TRIP]	0.03-0.4	Laboratory Triplicate	<4	<0.4	**10**	**96**	**13**	<0.1	**10**	**46**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH1	0.5-0.7	F:Silty Sand	**5**	<0.4	**20**	**8**	**17**	<0.1	**13**	**22**	**0.1**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH1	1.5-1.7	F: Silty Clay	**7**	<0.4	**21**	**20**	**24**	<0.1	**21**	**27**	**0.3**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH2	0.02-0.4	F: Silty Gravelly Sand	<4	<0.4	**12**	**26**	**23**	<0.1	**12**	**39**	**1.4**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Detected
BH2	0.5-0.95	F: Silty Sandy Clay	<4	<0.4	**11**	**19**	**12**	<0.1	**6**	**23**	**0.5**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH2	1.7-1.95	Silty Clay	**6**	<0.4	**23**	**2**	**14**	<0.1	**1**	**2**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH3	0.01-0.1	F: Silty Gravelly Sand	<4	<0.4	**13**	**74**	**4**	<0.1	**78**	**42**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH3	0.5-0.95	F: Silty Clay	**6**	<0.4	**17**	**5**	**18**	<0.1	**3**	**3**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH4	0.02-0.3	F:Silty Gravelly Sand	<4	<0.4	**11**	**63**	**3**	<0.1	**59**	**38**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH4	0.5-0.95	F: Silty Clay	**12**	<0.4	**25**	**4**	**20**	<0.1	**1**	**3**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH5	0.03-0.2	F: Gravelly Sand	<4	<0.4	**10**	**60**	**3**	<0.1	**86**	**39**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH5 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	<4	<0.4	**11**	**71**	**3**	<0.1	**100**	**46**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
BH5	0.4-0.5	F: Silty Clay	**14**	<0.4	**18**	**22**	**17**	<0.1	**29**	**16**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH5	2.5-2.8	Silty Clay	**7**	<0.4	**9**	**5**	**19**	<0.1	<1	<1	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH5	3.3-3.45	Siltstone	<4	<0.4	**4**	**4**	**16**	<0.1	<1	<1	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH6	0.025-0.4	F: Silty Gravelly Sand	<4	<0.4	**10**	**82**	**3**	<0.1	**82**	**44**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH6	0.5-0.95	F: Silty Clay	**8**	<0.4	**15**	**10**	**17**	<0.1	**9**	**6**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH7	0.05-0.1	F: Gravelly Sand	<4	<0.4	**10**	**73**	**2**	<0.1	**59**	**34**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH7	0.3-0.5	F: Silty Clay	**8**	<0.4	**21**	**6**	**16**	<0.1	**6**	**6**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH8	0.03-0.4	F: Silty Sand	**23**	<0.4	**16**	**39**	**25**	<0.1	**13**	**40**	**13**	**1.6**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Detected
BH8 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	**15**	<0.4	**15**	**68**	**24**	<0.1	**11**	**41**	**12**	**1.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
BH8 - [LAB_TRIP]	0.03-0.4	Triplicate	**7**	<0.4	**15**	**28**	**27**	<0.1	**10**	**39**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH8	0.5-0.95	F: Gravelly Clay	**8**	<0.4	**17**	**15**	**19**	<0.1	**10**	**14**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH8 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	**6**	<0.4	**19**	**17**	**22**	<0.1	**14**	**20**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
BH9	0.035-0.08	F: Gravelly Silty Sand	<4	<0.4	**15**	**20**	**47**	<0.1	**9**	**35**	**16**	**1.5**	NA	NA	NA	NA	NA	NA	NA	NA	NA	Detected
BH9	0.4-0.5	F: Gravelly Silty Sand	**5**	<0.4	**15**	**11**	**24**	<0.1	**6**	**39**	**3.2**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH9	1.2-1.3	F: Silty Clay	**5**	<0.4	**12**	**11**	**19**	<0.1	**6**	**15**	**0.5**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH10	0.5-0.95	F: Sandy Gravelly Clay	**9**	<0.4	**13**	**15**	**18**	<0.1	**4**	**17**	**21**	**2.4**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH10	1.5-1.7	F: Sandy Gravelly Clay	**9**	<0.4	**18**	**14**	**23**	<0.1	**6**	**26**	**0.4**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH11	0.03-0.3	F: Silty Gravelly Sand	<4	<0.4	**9**	**51**	**3**	<0.1	**45**	**29**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH11	0.5-0.7	F: Silty Clay	**9**	<0.4	**25**	**14**	**16**	<0.1	**15**	**13**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH11	0.7-0.95	Silty Clay	**9**	<0.4	**17**	**2**	**18**	<0.1	<1	<1	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH12	0.05-0.23	F: Gravelly Sand	<4	<0.4	**12**	**51**	**2**	<0.1	**57**	**33**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH12 - [LAB_DUP]	0.05-0.23	Laboratory Duplicate	<4	<0.4	**12**	**73**	**3**	<0.1	**67**	**39**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
BH12	1.7-1.95	F: Silty Clay	**7**	<0.4	**27**	**15**	**20**	<0.1	**25**	**16**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH13	0.5-0.95	F: Silty Gravelly Clay	**6**	<0.4	**11**	**16**	**13**	<0.1	**12**	**10**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH13	1.5-1.7	F: Silty Gravelly Clay	<4	<0.4	**9**	**6**	**16**	<0.1	**2**	**3**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH14	0.02-0.12	F: Gravelly Silty Sand	<4	<0.4	**10**	**76**	**2**	<0.1	**61**	**41**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH14 - [LAB_DUP]	0.02-0.12	Laboratory Duplicate	<4	<0.4	**9**	**53**	**2**	<0.1	**57**	**31**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
BH16	0.01-0.2	F: Sandy Gravel	**6**	<0.4	**10**	**65**	**5**	<0.1	**64**	**38**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH17	0.05-0.15	F: Sandy Gravel	<4	<0.4	**9**	**71**	**3**	<0.1	**48**	**37**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH18	0.01-0.15	F: Gravelly Silty Sand	<4	<0.4	**11**	**64**	**12**	<0.1	**63**	**84**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH19	0.02-0.4	F: Silty Gravelly Sand	<4	<0.4	**10**	**64**	**3**	<0.1	**54**	**35**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH19	0.5-0.95	F: Silty Clay	**11**	<0.4	**9**	**15**	**17**	<0.1	**7**	**8**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH20	0.02-0.3	F: Silty Sand	<4	<0.4	**9**	**39**	**8**	<0.1	**45**	**29**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH20	0.5-0.95	F: Silty Clay	<4	<0.4	**5**	**10**	**12**	<0.1	**6**	**4**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH21	0.04-0.15	F: Silty Clay	<4	<0.4	**10**	**49**	**5**	<0.1	**48**	**30**	**0.5**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH21	0.7-0.95	F: Silty Clay	**4**	<0.4	**12**	**32**	**12**	<0.1	**36**	**21**	**0.66**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH21	2.1-2.5	Silty Clay	**8**	<0.4	**16**	**5**	**20**	<0.1	**2**	**4**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH22	0.1-0.15	F: Gravelly Sand	<4	<0.4	**11**	**75**	**3**	<0.1	**72**	**36**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH22	0.3-0.5	F: Silty Clay	**6**	<0.4	**17**	**12**	**20**	<0.1	**12**	**16**	**3.5**	**0.7**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH23	0.02-0.3	F: Silty Gravelly Sand	<4	<0.4	**13**	**69**	**4**	<0.1	**69**	**43**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH23	0.5-0.95	F: Sand	**12**	<0.4	**7**	**3**	**3**	<0.1	**4**	**8**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH24	0-0.1	F: Silty Sand	<4	<0.4	**14**	**14**	**16**	<0.1	**6**	**33**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH24	0.8-0.95	F: Silty Clay	**8**	<0.4	**18**	**5**	**21**	<0.1	**5**	**11**	**0.3**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH25	0.1-0.3	F: Silty Clay	**7**	<0.4	**13**	**5**	**19**	<0.1	**5**	**5**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH26	0.7-1	XW Siltstone	<4	<0.4	**7**	**51**	**14**	<0.1	**4**	**8**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH27	0.3-0.5	F: Gravelly Silty Sand	**5**	<0.4	**19**	**19**	**20**	<0.1	**13**	**35**	**0.2**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH27	0.8-0.95	F: Silty Clay	**10**	<0.4	**35**	**7**	**23**	<0.1	**2**	**3**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH28	0-0.1	F: Clayey Sand	**6**	<0.4	**11**	**14**	**38**	<0.1	**6**	**56**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH28	1.5-1.95	F: Silty Clay	**6**	<0.4	**18**	**19**	**39**	<0.1	**10**	**43**	**1.2**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH28	3-3.2	F: Silty Clay	**12**	<0.4	**33**	**28**	**47**	**0.2**	**14**	**65**	**4.5**	**0.6**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
BH29	0.5-0.95	F: Silty Clay	**8**	<0.4	**22**	**7**	**24**	<0.1	**4**	**25**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH29 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	**35**	<0.4	**41**	**15**	**33**	<0.1	**20**	**60**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
BH29 - [LAB_TRIP]	0.5-0.95	Triplicate	**17**	<0.4	**31**	**9**	**25**	<0.1	**13**	**39**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH29	3-3.45	F: Silty Clay	**4**	<0.4	**16**	**14**	**51**	<0.1	**7**	**56**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH29 - [LAB_DUP]	3-3.45	Laboratory Duplicate	<4	**2**	**39**	**30**	**110**	<0.1	**30**	**99**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
BH30	0-0.1	F: Gravelly Sand	**6**	<0.4	**14**	**18**	**52**	<0.1	**6**	**55**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH31	0.03-0.1	F: Gravelly Sand	<4	<0.4	**9**	**58**	**5**	<0.1	**57**	**47**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH32	0.03-0.3	F: Gravelly Sand	<4	<0.4	**11**	**66**	**4**	<0.1	**76**	**43**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH33	0.04-0.14	F: Gravelly Silty Sand	<4	<0.4	**10**	**64**	**4**	<0.1	**74**	**40**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
BH34	0.03-0.2	F: Gravelly Sand	<4	<0.4	**12**	**68**	**4**	<0.1	**75**	**48**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH35	0-0.15	F: Silty Clay	**5**	<0.4	**12**	**19**	**52**	<0.1	**9**	**82**	**0.4**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	Not Detected
SDUP1	0.04-0.14	Duplicate of BH33	<4	<0.4	**10**	**64**	**4**	<0.1	**60**	**36**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
SDUP2	0-0.1	Duplicate of BH24	<4	<0.4	**12**	**13**	**17**	<0.1	**7**	**33**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
SDUP3	0.1-0.15	Duplicate of BH22	<4	<0.4	**12**	**50**	**3**	<0.1	**61**	**30**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP4	0.03-0.4	Duplicate of BH8	**6**	<0.4	**15**	**25**	**32**	<0.1	**10**	**43**	**10**	**1.4**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP6	0.03-0.2	Duplicate of BH5	<4	<0.4	**10**	**74**	**3**	<0.1	**100**	**43**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
SDUP6 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	<4	<0.4	**10**	**69**	**3**	<0.1	**93**	**43**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
SDUP8	0.025-0.4	Duplicate of BH6	<4	<0.4	**9**	**56**	<1	<0.1	**79**	**38**	<0.05	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA
SDUP8 (LAB_DUP)	0.025-0.4	Laboratory Duplicate	NA	NA	NA	NA	NA	NA	NA	NA	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP9	0.5-0.95	Duplicate of BH2	<4	<0.4	**15**	**7**	**11**	<0.1	**8**	**18**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP10	0.05-0.23	Duplicate of BH12	<4	<0.4	**10**	**59**	**2**	<0.1	**69**	**39**	<0.05	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FCF1-BH2	0.5-1.5	Fragment	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
FCF1-Surface	-	Fragment	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Detected
Total Number of Samples			84	84	84	84	84	84	84	84	82	82	53	53	53	53	53	53	53	53	53	60
Maximum Value			35	2	41	96	110	0.2	100	99	21	2.4	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	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**								
BH1	0.03-0.4	F: Silty Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH1 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH1	0.5-0.7	F:Silty Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.4
BH1	1.5-1.7	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.9
BH2	0.02-0.4	F: Silty Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1
BH2	0.5-0.95	F: Silty Sandy Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1
BH2	1.7-1.95	Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.5
BH3	0.01-0.1	F: Silty Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.3
BH3	0.5-0.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.5
BH4	0.02-0.3	F:Silty Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.3
BH4	0.5-0.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH5	0.03-0.2	F: Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.5
BH5 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH5	0.4-0.5	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	2.1
BH5	2.5-2.8	Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	2.7
BH5	3.3-3.45	Siltstone	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH6	0.025-0.4	F: Silty Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH6	0.5-0.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH7	0.05-0.1	F: Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.5
BH7	0.3-0.5	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	3.1
BH8	0.03-0.4	F: Silty Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1
BH8 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH8	0.5-0.95	F: Gravelly Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	2.2
BH8 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH9	0.035-0.08	F: Gravelly Silty Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.8
BH9	0.4-0.5	F: Gravelly Silty Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.3
BH9	1.2-1.3	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1
BH10	0.5-0.95	F: Sandy Gravelly Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.8
BH10	1.5-1.7	F: Sandy Gravelly Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1
BH11	0.03-0.3	F: Silty Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH11	0.5-0.7	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH11	0.7-0.95	Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH12	0.05-0.23	F: Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.1
BH12 - [LAB_DUP]	0.05-0.23	Laboratory Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH12	1.7-1.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.9
BH13	0.5-0.95	F: Silty Gravelly Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.4
BH13	1.5-1.7	F: Silty Gravelly Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.8
BH14	0.02-0.12	F: Gravelly Silty Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.4
BH14 - [LAB_DUP]	0.02-0.12	Laboratory Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH16	0.01-0.2	F: Sandy Gravel	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	2.4
BH17	0.05-0.15	F: Sandy Gravel	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.6
BH18	0.01-0.15	F: Gravelly Silty Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.7
BH19	0.02-0.4	F: Silty Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH19	0.5-0.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH20	0.02-0.3	F: Silty Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.3
BH20	0.5-0.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.9
BH21	0.04-0.15	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.1
BH21	0.7-0.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	4.5
BH21	2.1-2.5	Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0
BH22	0.1-0.15	F: Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.6
BH22	0.3-0.5	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.7
BH23	0.02-0.3	F: Silty Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH23	0.5-0.95	F: Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.2
BH24	0-0.1	F: Silty Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	2.4
BH24	0.8-0.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	2.2
BH25	0.1-0.3	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	2.1
BH26	0.7-1	XW Siltstone	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	2.5
BH27	0.3-0.5	F: Gravelly Silty Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.2
BH27	0.8-0.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.2
BH28	0-0.1	F: Clayey Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.6
BH28	1.5-1.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.9
BH28	3-3.2	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.1
BH29	0.5-0.95	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.5
BH29 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH29	3-3.45	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.4
BH29 - [LAB_DUP]	3-3.45	Laboratory Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
BH30	0-0.1	F: Gravelly Sand	0m to <1m	Sand	<25	**63**	<0.2	<0.5	<1	<1	<1	1.5
BH31	0.03-0.1	F: Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	2.2
BH32	0.03-0.3	F: Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.1
BH33	0.04-0.14	F: Gravelly Silty Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	1.2
BH34	0.03-0.2	F: Gravelly Sand	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	0.4
BH35	0-0.15	F: Silty Clay	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	2.7
SDUP1	0.04-0.14	Duplicate of BH33	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
SDUP2	0-0.1	Duplicate of BH24	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
SDUP2 - [LAB_DUP]	0-0.1	Laboratory Duplicate	0m to <1m	Sand	<25	NA	<0.2	<0.5	<1	<1	<1	NA
SDUP3	0.1-0.15	Duplicate of BH22	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
SDUP4	0.03-0.4	Duplicate of BH8	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
SDUP6	0.03-0.2	Duplicate of BH5	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
SDUP6 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
SDUP8	0.025-0.4	Duplicate of BH6	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
SDUP9	0.5-0.95	Duplicate of BH2	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
SDUP10	0.05-0.23	Duplicate of BH12	0m to <1m	Sand	<25	<50	<0.2	<0.5	<1	<1	<1	NA
Total Number of Samples					82	81	82	82	82	82	82	64
Maximum Value					<PQL	63	<PQL	<PQL	<PQL	<PQL	<PQL	4.5

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
BH1	0.03-0.4	F: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH1 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH1	0.5-0.7	F:Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH1	1.5-1.7	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH2	0.02-0.4	F: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH2	0.5-0.95	F: Silty Sandy Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH2	1.7-1.95	Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH3	0.01-0.1	F: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH3	0.5-0.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH4	0.02-0.3	F:Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH4	0.5-0.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH5	0.03-0.2	F: Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH5 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH5	0.4-0.5	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH5	2.5-2.8	Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH5	3.3-3.45	Siltstone	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH6	0.025-0.4	F: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH6	0.5-0.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH7	0.05-0.1	F: Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH7	0.3-0.5	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH8	0.03-0.4	F: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH8 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH8	0.5-0.95	F: Gravelly Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH8 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH9	0.035-0.08	F: Gravelly Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH9	0.4-0.5	F: Gravelly Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH9	1.2-1.3	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH10	0.5-0.95	F: Sandy Gravelly Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH10	1.5-1.7	F: Sandy Gravelly Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH11	0.03-0.3	F: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH11	0.5-0.7	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH11	0.7-0.95	Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH12	0.05-0.23	F: Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH12 - [LAB_DUP]	0.05-0.23	Laboratory Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH12	1.7-1.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH13	0.5-0.95	F: Silty Gravelly Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH13	1.5-1.7	F: Silty Gravelly Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH14	0.02-0.12	F: Gravelly Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH14 - [LAB_DUP]	0.02-0.12	Laboratory Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH16	0.01-0.2	F: Sandy Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH17	0.05-0.15	F: Sandy Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH18	0.01-0.15	F: Gravelly Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH19	0.02-0.4	F: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH19	0.5-0.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH20	0.02-0.3	F: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH20	0.5-0.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH21	0.04-0.15	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH21	0.7-0.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH21	2.1-2.5	Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH22	0.1-0.15	F: Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH22	0.3-0.5	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH23	0.02-0.3	F: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH23	0.5-0.95	F: Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH24	0-0.1	F: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH24	0.8-0.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH25	0.1-0.3	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH26	0.7-1	XW Siltstone	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH27	0.3-0.5	F: Gravelly Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH27	0.8-0.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH28	0-0.1	F: Clayey Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH28	1.5-1.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH28	3-3.2	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH29	0.5-0.95	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH29 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH29	3-3.45	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH29 - [LAB_DUP]	3-3.45	Laboratory Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH30	0-0.1	F: Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH31	0.03-0.1	F: Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH32	0.03-0.3	F: Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH33	0.04-0.14	F: Gravelly Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH34	0.03-0.2	F: Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH35	0-0.15	F: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP1	0.04-0.14	Duplicate of BH33	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP2	0-0.1	Duplicate of BH24	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP2 - [LAB_DUP]	0-0.1	Laboratory Duplicate	0m to <1m	Sand	260	NA	3	NL	NL	230	NL
SDUP3	0.1-0.15	Duplicate of BH22	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP4	0.03-0.4	Duplicate of BH8	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP6	0.03-0.2	Duplicate of BH5	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP6 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP8	0.025-0.4	Duplicate of BH6	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP9	0.5-0.95	Duplicate of BH2	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP10	0.05-0.23	Duplicate of BH12	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**				
BH1	0.03-0.4	Coarse	<25	<50	**190**	**240**
BH1 - [LAB_DUP]	0.03-0.4	Coarse	<25	<50	**160**	**240**
BH1	0.5-0.7	Coarse	<25	<50	<100	<100
BH1	1.5-1.7	Coarse	<25	<50	<100	<100
BH2	0.02-0.4	Coarse	<25	<50	**140**	**210**
BH2	0.5-0.95	Coarse	<25	<50	<100	<100
BH2	1.7-1.95	Coarse	<25	<50	<100	<100
BH3	0.01-0.1	Coarse	<25	<50	<100	<100
BH3	0.5-0.95	Coarse	<25	<50	<100	<100
BH4	0.02-0.3	Coarse	<25	<50	**170**	**510**
BH4	0.5-0.95	Coarse	<25	<50	<100	<100
BH5	0.03-0.2	Coarse	<25	<50	<100	<100
BH5 - [LAB_DUP]	0.03-0.2	Coarse	<25	<50	<100	<100
BH5	0.4-0.5	Coarse	<25	<50	<100	<100
BH5	2.5-2.8	Coarse	<25	<50	<100	<100
BH5	3.3-3.45	Coarse	<25	<50	<100	<100
BH6	0.025-0.4	Coarse	<25	<50	**110**	**360**
BH6	0.5-0.95	Coarse	<25	<50	<100	<100
BH7	0.05-0.1	Coarse	<25	<50	<100	<100
BH7	0.3-0.5	Coarse	<25	<50	<100	<100
BH8	0.03-0.4	Coarse	<25	<50	**320**	**300**
BH8 - [LAB_DUP]	0.03-0.4	Coarse	<25	<50	**270**	**290**
BH8	0.5-0.95	Coarse	<25	<50	<100	<100
BH8 - [LAB_DUP]	0.5-0.95	Coarse	<25	<50	<100	<100
BH9	0.035-0.08	Coarse	<25	<50	**310**	**280**
BH9	0.4-0.5	Coarse	<25	<50	<100	<100
BH9	1.2-1.3	Coarse	<25	<50	<100	<100
BH10	0.5-0.95	Coarse	<25	<50	<100	<100
BH10	1.5-1.7	Coarse	<25	<50	<100	<100
BH11	0.03-0.3	Coarse	<25	<50	**310**	**790**
BH11	0.5-0.7	Coarse	<25	<50	<100	<100
BH11	0.7-0.95	Coarse	<25	<50	<100	<100
BH12	0.05-0.23	Coarse	<25	<50	<100	<100
BH12 - [LAB_DUP]	0.05-0.23	Coarse	<25	<50	<100	<100
BH12	1.7-1.95	Coarse	<25	<50	<100	<100
BH13	0.5-0.95	Coarse	<25	<50	<100	<100
BH13	1.5-1.7	Coarse	<25	<50	<100	<100
BH14	0.02-0.12	Coarse	<25	<50	<100	<100
BH14 - [LAB_DUP]	0.02-0.12	Coarse	<25	<50	<100	<100
BH16	0.01-0.2	Coarse	<25	<50	<100	<100
BH17	0.05-0.15	Coarse	<25	<50	**310**	**480**
BH18	0.01-0.15	Coarse	<25	<50	<100	**210**
BH19	0.02-0.4	Coarse	<25	<50	**210**	**600**
BH19	0.5-0.95	Coarse	<25	<50	<100	<100
BH20	0.02-0.3	Coarse	<25	<50	<100	<100
BH20	0.5-0.95	Coarse	<25	<50	<100	<100
BH21	0.04-0.15	Coarse	<25	<50	<100	<100
BH21	0.7-0.95	Coarse	<25	<50	<100	<100
BH21	2.1-2.5	Coarse	<25	<50	<100	<100
BH22	0.1-0.15	Coarse	<25	<50	<100	<100
BH22	0.3-0.5	Coarse	<25	<50	<100	<100
BH23	0.02-0.3	Coarse	<25	<50	<100	<100
BH23	0.5-0.95	Coarse	<25	<50	**470**	<100
BH24	0-0.1	Coarse	<25	<50	**130**	**200**
BH24	0.8-0.95	Coarse	<25	<50	**220**	**280**
BH25	0.1-0.3	Coarse	<25	<50	<100	<100
BH26	0.7-1	Coarse	<25	<50	<100	<100
BH27	0.3-0.5	Coarse	<25	<50	<100	<100
BH27	0.8-0.95	Coarse	<25	<50	<100	<100
BH28	0-0.1	Coarse	<25	<50	<100	<100
BH28	1.5-1.95	Coarse	<25	<50	<100	<100
BH28	3-3.2	Coarse	<25	<50	<100	<100
BH29	0.5-0.95	Coarse	<25	<50	<100	<100
BH29 - [LAB_DUP]	0.5-0.95	Coarse	<25	<50	<100	<100
BH29	3-3.45	Coarse	<25	<50	<100	<100
BH29 - [LAB_DUP]	3-3.45	Coarse	<25	<50	<100	<100
BH30	0-0.1	Coarse	<25	**63**	**350**	**160**
BH31	0.03-0.1	Coarse	<25	<50	<100	**180**
BH32	0.03-0.3	Coarse	<25	<50	<100	<100
BH33	0.04-0.14	Coarse	<25	<50	<100	**220**
BH34	0.03-0.2	Coarse	<25	<50	<100	**110**
BH35	0-0.15	Coarse	<25	<50	<100	<100
SDUP1	0.04-0.14	Coarse	<25	<50	**100**	**240**
SDUP2	0-0.1	Coarse	<25	<50	<100	<100
SDUP2 - [LAB_DUP]	0-0.1	Coarse	<25	NA	NA	NA
SDUP3	0.1-0.15	Coarse	<25	<50	<100	**100**
SDUP4	0.03-0.4	Coarse	<25	<50	**180**	**160**
SDUP6	0.03-0.2	Coarse	<25	<50	<100	<100
SDUP6 - [LAB_DUP]	0.03-0.2	Coarse	<25	<50	<100	<100
SDUP8	0.025-0.4	Coarse	<25	<50	<100	**160**
SDUP9	0.5-0.95	Coarse	<25	<50	<100	<100
SDUP10	0.05-0.23	Coarse	<25	<50	<100	<100
Total Number of Samples			82	81	81	81
Maximum Value			<PQL	63	470	790

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)
BH1	0.03-0.4	Coarse	700	1000	3500	10000
BH1 - [LAB_DUP]	0.03-0.4	Coarse	700	1000	3500	10000
BH1	0.5-0.7	Coarse	700	1000	3500	10000
BH1	1.5-1.7	Coarse	700	1000	3500	10000
BH2	0.02-0.4	Coarse	700	1000	3500	10000
BH2	0.5-0.95	Coarse	700	1000	3500	10000
BH2	1.7-1.95	Coarse	700	1000	3500	10000
BH3	0.01-0.1	Coarse	700	1000	3500	10000
BH3	0.5-0.95	Coarse	700	1000	3500	10000
BH4	0.02-0.3	Coarse	700	1000	3500	10000
BH4	0.5-0.95	Coarse	700	1000	3500	10000
BH5	0.03-0.2	Coarse	700	1000	3500	10000
BH5 - [LAB_DUP]	0.03-0.2	Coarse	700	1000	3500	10000
BH5	0.4-0.5	Coarse	700	1000	3500	10000
BH5	2.5-2.8	Coarse	700	1000	3500	10000
BH5	3.3-3.45	Coarse	700	1000	3500	10000
BH6	0.025-0.4	Coarse	700	1000	3500	10000
BH6	0.5-0.95	Coarse	700	1000	3500	10000
BH7	0.05-0.1	Coarse	700	1000	3500	10000
BH7	0.3-0.5	Coarse	700	1000	3500	10000
BH8	0.03-0.4	Coarse	700	1000	3500	10000
BH8 - [LAB_DUP]	0.03-0.4	Coarse	700	1000	3500	10000
BH8	0.5-0.95	Coarse	700	1000	3500	10000
BH8 - [LAB_DUP]	0.5-0.95	Coarse	700	1000	3500	10000
BH9	0.035-0.08	Coarse	700	1000	3500	10000
BH9	0.4-0.5	Coarse	700	1000	3500	10000
BH9	1.2-1.3	Coarse	700	1000	3500	10000
BH10	0.5-0.95	Coarse	700	1000	3500	10000
BH10	1.5-1.7	Coarse	700	1000	3500	10000
BH11	0.03-0.3	Coarse	700	1000	3500	10000
BH11	0.5-0.7	Coarse	700	1000	3500	10000
BH11	0.7-0.95	Coarse	700	1000	3500	10000
BH12	0.05-0.23	Coarse	700	1000	3500	10000
BH12 - [LAB_DUP]	0.05-0.23	Coarse	700	1000	3500	10000
BH12	1.7-1.95	Coarse	700	1000	3500	10000
BH13	0.5-0.95	Coarse	700	1000	3500	10000
BH13	1.5-1.7	Coarse	700	1000	3500	10000
BH14	0.02-0.12	Coarse	700	1000	3500	10000
BH14 - [LAB_DUP]	0.02-0.12	Coarse	700	1000	3500	10000
BH16	0.01-0.2	Coarse	700	1000	3500	10000
BH17	0.05-0.15	Coarse	700	1000	3500	10000
BH18	0.01-0.15	Coarse	700	1000	3500	10000
BH19	0.02-0.4	Coarse	700	1000	3500	10000
BH19	0.5-0.95	Coarse	700	1000	3500	10000
BH20	0.02-0.3	Coarse	700	1000	3500	10000
BH20	0.5-0.95	Coarse	700	1000	3500	10000
BH21	0.04-0.15	Coarse	700	1000	3500	10000
BH21	0.7-0.95	Coarse	700	1000	3500	10000
BH21	2.1-2.5	Coarse	700	1000	3500	10000
BH22	0.1-0.15	Coarse	700	1000	3500	10000
BH22	0.3-0.5	Coarse	700	1000	3500	10000
BH23	0.02-0.3	Coarse	700	1000	3500	10000
BH23	0.5-0.95	Coarse	700	1000	3500	10000
BH24	0-0.1	Coarse	700	1000	3500	10000
BH24	0.8-0.95	Coarse	700	1000	3500	10000
BH25	0.1-0.3	Coarse	700	1000	3500	10000
BH26	0.7-1	Coarse	700	1000	3500	10000
BH27	0.3-0.5	Coarse	700	1000	3500	10000
BH27	0.8-0.95	Coarse	700	1000	3500	10000
BH28	0-0.1	Coarse	700	1000	3500	10000
BH28	1.5-1.95	Coarse	700	1000	3500	10000
BH28	3-3.2	Coarse	700	1000	3500	10000
BH29	0.5-0.95	Coarse	700	1000	3500	10000
BH29 - [LAB_DUP]	0.5-0.95	Coarse	700	1000	3500	10000
BH29	3-3.45	Coarse	700	1000	3500	10000
BH29 - [LAB_DUP]	3-3.45	Coarse	700	1000	3500	10000
BH30	0-0.1	Coarse	700	1000	3500	10000
BH31	0.03-0.1	Coarse	700	1000	3500	10000
BH32	0.03-0.3	Coarse	700	1000	3500	10000
BH33	0.04-0.14	Coarse	700	1000	3500	10000
BH34	0.03-0.2	Coarse	700	1000	3500	10000
BH35	0-0.15	Coarse	700	1000	3500	10000
SDUP1	0.04-0.14	Coarse	700	1000	3500	10000
SDUP2	0-0.1	Coarse	700	1000	3500	10000
SDUP2 - [LAB_DUP]	0-0.1	Coarse	700	NA	NA	NA
SDUP3	0.1-0.15	Coarse	700	1000	3500	10000
SDUP4	0.03-0.4	Coarse	700	1000	3500	10000
SDUP6	0.03-0.2	Coarse	700	1000	3500	10000
SDUP6 - [LAB_DUP]	0.03-0.2	Coarse	700	1000	3500	10000
SDUP8	0.025-0.4	Coarse	700	1000	3500	10000
SDUP9	0.5-0.95	Coarse	700	1000	3500	10000
SDUP10	0.05-0.23	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**										
BH1	0.03-0.4	<25	<50	**190**	**240**	<0.2	<0.5	<1	<1	<1	**0.2**
BH1 - [LAB_DUP]	0.03-0.4	<25	<50	**160**	**240**	<0.2	<0.5	<1	<1	<1	NA
BH1	0.5-0.7	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.4**
BH1	1.5-1.7	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.9**
BH2	0.02-0.4	<25	<50	**140**	**210**	<0.2	<0.5	<1	<1	<1	**1**
BH2	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1**
BH2	1.7-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.5**
BH3	0.01-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.3**
BH3	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.5**
BH4	0.02-0.3	<25	<50	**170**	**510**	<0.2	<0.5	<1	<1	<1	**0.3**
BH4	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.2**
BH5	0.03-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.5**
BH5 - [LAB_DUP]	0.03-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH5	0.4-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**2.1**
BH5	2.5-2.8	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**2.7**
BH5	3.3-3.45	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
BH6	0.025-0.4	<25	<50	**110**	**360**	<0.2	<0.5	<1	<1	<1	**0.2**
BH6	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.2**
BH7	0.05-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.5**
BH7	0.3-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**3.1**
BH8	0.03-0.4	<25	<50	**320**	**300**	<0.2	<0.5	<1	<1	<1	**1**
BH8 - [LAB_DUP]	0.03-0.4	<25	<50	**270**	**290**	<0.2	<0.5	<1	<1	<1	NA
BH8	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**2.2**
BH8 - [LAB_DUP]	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH9	0.035-0.08	<25	<50	**310**	**280**	<0.2	<0.5	<1	<1	<1	**0.8**
BH9	0.4-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.3**
BH9	1.2-1.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1**
BH10	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.8**
BH10	1.5-1.7	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1**
BH11	0.03-0.3	<25	<50	**310**	**790**	<0.2	<0.5	<1	<1	<1	**0.2**
BH11	0.5-0.7	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.2**
BH11	0.7-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
BH12	0.05-0.23	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.1**
BH12 - [LAB_DUP]	0.05-0.23	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH12	1.7-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.9**
BH13	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.4**
BH13	1.5-1.7	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.8**
BH14	0.02-0.12	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.4**
BH14 - [LAB_DUP]	0.02-0.12	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH16	0.01-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**2.4**
BH17	0.05-0.15	<25	<50	**310**	**480**	<0.2	<0.5	<1	<1	<1	**1.6**
BH18	0.01-0.15	<25	<50	<100	**210**	<0.2	<0.5	<1	<1	<1	**1.7**
BH19	0.02-0.4	<25	<50	**210**	**600**	<0.2	<0.5	<1	<1	<1	**0.1**
BH19	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
BH20	0.02-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.3**
BH20	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.9**
BH21	0.04-0.15	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.1**
BH21	0.7-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**4.5**
BH21	2.1-2.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0
BH22	0.1-0.15	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.6**
BH22	0.3-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.7**
BH23	0.02-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.2**
BH23	0.5-0.95	<25	<50	**470**	<100	<0.2	<0.5	<1	<1	<1	**0.2**
BH24	0-0.1	<25	<50	**130**	**200**	<0.2	<0.5	<1	<1	<1	**2.4**
BH24	0.8-0.95	<25	<50	**220**	**280**	<0.2	<0.5	<1	<1	<1	**2.2**
BH25	0.1-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**2.1**
BH26	0.7-1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**2.5**
BH27	0.3-0.5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.2**
BH27	0.8-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.2**
BH28	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.6**
BH28	1.5-1.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.9**
BH28	3-3.2	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**0.1**
BH29	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.5**
BH29 - [LAB_DUP]	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH29	3-3.45	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.4**
BH29 - [LAB_DUP]	3-3.45	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
BH30	0-0.1	<25	**63**	**350**	**160**	<0.2	<0.5	<1	<1	<1	**1.5**
BH31	0.03-0.1	<25	<50	<100	**180**	<0.2	<0.5	<1	<1	<1	**2.2**
BH32	0.03-0.3	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**1.1**
BH33	0.04-0.14	<25	<50	<100	**220**	<0.2	<0.5	<1	<1	<1	**1.2**
BH34	0.03-0.2	<25	<50	<100	**110**	<0.2	<0.5	<1	<1	<1	**0.4**
BH35	0-0.15	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	**2.7**
SDUP1	0.04-0.14	<25	<50	**100**	**240**	<0.2	<0.5	<1	<1	<1	NA
SDUP2	0-0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
SDUP2 - [LAB_DUP]	0-0.1	<25	NA	NA	NA	<0.2	<0.5	<1	<1	<1	NA
SDUP3	0.1-0.15	<25	<50	<100	**100**	<0.2	<0.5	<1	<1	<1	NA
SDUP4	0.03-0.4	<25	<50	**180**	**160**	<0.2	<0.5	<1	<1	<1	NA
SDUP6	0.03-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
SDUP6 - [LAB_DUP]	0.03-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
SDUP8	0.025-0.4	<25	<50	<100	**160**	<0.2	<0.5	<1	<1	<1	NA
SDUP9	0.5-0.95	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
SDUP10	0.05-0.23	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	NA
Total Number of Samples		82	81	81	81	82	82	82	82	82	64
Maximum Value		<PQL	63	470	790	<PQL	<PQL	<PQL	<PQL	<PQL	4.5

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 reference	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**
3/01/2024	BH1	0.03-0.4	NA	<10	5,800	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH1	0.03-0.4	970.35	Chrysotile asbestos detected: Amosite asbestos detected: Crocidolite asbestos detected: Organic fibres detected	No asbestos detected	0.1818	Chrysotile:Amosite:Crocidolite	–	0.1764	<0.01	0.0182
3/01/2024	BH1	0.4-1.0	NA	<10	9,360	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH1	0.5-0.7	735.15	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
3/01/2024	BH1	1.0-1.7	NA	<10	4,950	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH1	1.5-1.7	668.77	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
3/01/2024	BH2	0.02-0.5	NA	<10	6,050	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH2	0.02-0.4	913.27	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	Chrysotile:Amosite:Crocidolite	–	0.0285	<0.01	0.0031
3/01/2024	BH2	0.5-1.5	NA	<10	7,450	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH2	0.5-0.95	705.71	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
3/01/2024	BH2	1.5-1.7	NA	<10	1,450	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/01/2024	BH3	0.1-1.0	NA	<10	9,450	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH3	0.01-0.1	1052.51	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
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3/01/2024	BH3	1.1-2.0	NA	<10	3,330	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/01/2024	BH4	0.02-0.3	NA	<10	4,530	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH4	0.02-0.3	931.81	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
3/01/2024	BH4	0.3-1.3	NA	<10	5,450	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH4	0.5-0.95	262.68	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
3/01/2024	BH4	1.3-1.6	NA	<10	5,100	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH4	1.6-1.95								-	-
3/01/2024	BH5	0.03-0.23	NA	<10	3,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH5	0.03-0.2	865.95	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
3/01/2024	BH5	0.23-0.5	NA	<10	2,160	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH5	0.4-0.5	785.19	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
3/01/2024	BH5	1.0-2.0	NA	<10	2,650	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/01/2024	BH6	0.025-0.4	NA	<10	3,750	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH6	0.025-0.4	1292.62	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
3/01/2024	BH6	0.4-1.2	NA	10	10,020	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH6	0.5-0.95	693.15	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
5/01/2024	BH7	0.05-0.3	NA	<10	5,390	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH7	0.05-0.1	977.55	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
5/01/2024	BH7	0.3-1.2	NA	<10	1,060	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH7	0.3-0.5	338.48	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
4/12/2023	BH8	0.03-0.4	NA	<10L	5,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH8	0.03-0.4	874.67	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	Chrysotile	0.0444	–	<0.01	<0.001
4/12/2023	BH8	0.4-1.4	NA	<10L	5,930	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695-A	BH8	0.5-0.95	558.31	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
4/12/2023	BH9	0.035-0.4	NA	<10L	3,000	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH9	0.035-0.08	885.83	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	Chrysotile	0.0117	–	<0.01	<0.001
4/12/2023	BH9	0.4-0.8	NA	<10L	3,560	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695-A	BH9	0.4-0.5	650	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
4/12/2023	BH9	0.8-1.7	NA	<10L	4,730	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695-A	BH9	1.2-1.3	778.07	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
4/12/2023	BH10	0.04-0.45	NA	<10L	6,650	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/12/2023	BH10	0.45-1.45	NA	<10L	7,150	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH10	0.5-0.95	804.34	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
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3/01/2024	BH11	0.03-0.3	NA	<10	2,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH11	0.03-0.3	1105.92	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
3/01/2024	BH11	0.5-0.7	NA	<10	8,950	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH11	0.5-0.7	894.5	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
4/01/2024	BH12	0.05-0.5	NA	<10	3,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH12	0.05-0.23	680.52	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
4/01/2024	BH12	0.5-1.0	NA	<10	2,600	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/01/2024	BH12	1.0-1.4	NA	<10	2,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/01/2024	BH12	1.4-2.0	NA	<10	3,230	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH12	1.7-1.95	768.37	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
4/12/2023	BH13	0.03-0.4	NA	<10L	3,950	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/12/2023	BH13	0.3-1.3	NA	10L	9,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH13	0.5-0.95	777.49	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
4/12/2023	BH13	1.3-2.2	NA	<10L	2,750	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695-A	BH13	1.5-17	798.94	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
28/11/2023	BH14	0.02-0.3	NA	<10L	3,680	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339235	BH14	0.02-0.12	804.42	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
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27/11/2023	BH17	0.05-0.4	NA	<10L	3,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339235	BH17	0.05-0.15	966.28	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
27/11/2023	BH18	0.01-0.2	NA	<10L	5,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339235	BH18	0.01-0.15	1217.86	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
3/01/2024	BH19	0.02-0.4	NA	<10	4,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH19	0.02-0.4	1146.83	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
3/01/2024	BH19	0.4-1.4	NA	<10	6,740	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH19	0.5-0.95	791.5	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
3/01/2024	BH19	1.4-2.4	NA	<10	6,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/01/2024	BH19	2.4-2.8	NA	<10	4,100	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/12/2023	BH20	0.02-0.5	NA	10L	6,350	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH20	0.02-0.3	981.63	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
4/12/2023	BH20	0.5-1.5	NA	10L	11,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695-A	BH20	0.5-0.95	940.18	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
4/12/2023	BH20	1.5-2.1	NA	<10L	6,750	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/01/2024	BH21	0.04-0.5	NA	<10	2,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH21	0.04-0.15	895.02	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
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3/01/2024	BH21	0.5-1.0	NA	<10	3,050	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH21	0.7-0.95	643.72	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
3/01/2024	BH21	1.0-1.5	NA	<10	2,010	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/01/2024	BH21	1.5-2.0	NA	<10	3,020	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/12/2023	BH22	0.04-0.2	NA	<10L	3,470	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH22	0.1-0.15	1002.17	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
4/12/2023	BH22	0.2-0.6	NA	<10L	5,700	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695-A	BH22	0.3-0.5	851.65	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
3/01/2024	BH23	0.02-0.3	NA	<10	3,150	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH23	0.02-0.3	1115.32	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
3/01/2024	BH23	0.3-1.0	NA	<10	4,000	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH23	0.5-0.95	741.5	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
30/11/2023	BH24	0-0.1	No	10L	13,150	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339235	BH24	0-0.1	662.82	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
30/11/2023	BH24	0.2-1.0	NA	<10L	5,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339235-A	BH24	0.8-0.95	505.62	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
4/12/2023	BH25	0.1-0.3	NA	<10L	3,270	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH25	0.1-0.3	769.11	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
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	339235	BH26	0.7-1	929.66	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
4/12/2023	BH27	0.14-0.5	NA	<10L	2,100	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH27	0.3-0.5	279.79	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
4/12/2023	BH27	0.5-1.0	NA	<10L	3,100	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695-A	BH27	0.8-0.95	647.17	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
5/12/2023	BH28	0-0.1	No	10L	10,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH28	0-0.1	634.94	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
5/12/2023	BH28	0.1-1.1	NA	<10L	2,550	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5/12/2023	BH28	1.1-2.1	NA	<10L	6,180	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH28	1.5-1.95	665.03	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
5/12/2023	BH28	2.1-3	NA	<10L	6,180	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5/12/2023	BH28	3-3.2	NA	<10L	3,200	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5/12/2023	BH29	0-0.1	No	<10L	8,700	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5/12/2023	BH29	0.1-1.0	NA	<10L	4,000	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH29	0.5-0.95	632.2	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
5/12/2023	BH29	1.0-2.0	NA	<10L	3,700	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5/12/2023	BH29	2.0-3.0	NA	<10L	4,150	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	339695-A	BH29	3-3.45	707	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
5/12/2023	BH30	0-0.1	No	10L	11,700	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH30	0-0.1	560.61	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
4/12/2023	BH31	0.03-0.1	NA	<10L	3,750	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH31	0.03-0.1	108.85	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
5/12/2023	BH32	0.03-0.3	NA	10L	4,000	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH32	0.03-0.3	1225.73	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
28/11/2023	BH33	0.04-0.2	NA	<10L	935	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339235	BH33	0.04-0.14	971.12	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
5/12/2023	BH34	0.03-0.2	NA	<10L	3,950	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	339695	BH34	0.03-0.2	1012.25	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
5/01/2024	BH35	0-0.15	No	10	10,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	341181	BH35	0-0.15	517.57	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

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**																			
BH1	0.03-0.4	F: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	**15**	**37**	**15**	**14**	**49**	<1	<0.1	<25	<50	**190**	**240**	<0.2	<0.5	<1	<1	**0.3**
BH1 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	Coarse	NA	NA	NA	<4	**11**	**38**	**12**	**9**	**38**	<1	<0.1	<25	<50	**160**	**240**	<0.2	<0.5	<1	<1	**0.06**
BH1	0.5-0.7	F:Silty Sand	Coarse	NA	NA	NA	**5**	**20**	**8**	**17**	**13**	**22**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH1	1.5-1.7	F: Silty Clay	Fine	NA	NA	NA	**7**	**21**	**20**	**24**	**21**	**27**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.08**
BH2	0.02-0.4	F: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	**12**	**26**	**23**	**12**	**39**	<1	<0.1	<25	<50	**140**	**210**	<0.2	<0.5	<1	<1	**0.1**
BH2	0.5-0.95	F: Silty Sandy Clay	Fine	NA	NA	NA	<4	**11**	**19**	**12**	**6**	**23**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.08**
BH2	1.7-1.95	Silty Clay	Fine	NA	NA	NA	**6**	**23**	**2**	**14**	**1**	**2**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH3	0.01-0.1	F: Silty Gravelly Sand	Coarse	**8.1**	**22**	NA	<4	**13**	**74**	**4**	**78**	**42**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH3	0.5-0.95	F: Silty Clay	Fine	NA	NA	NA	**6**	**17**	**5**	**18**	**3**	**3**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH4	0.02-0.3	F:Silty Gravelly Sand	Coarse	NA	NA	NA	<4	**11**	**63**	**3**	**59**	**38**	<1	<0.1	<25	<50	**170**	**510**	<0.2	<0.5	<1	<1	<0.05
BH4	0.5-0.95	F: Silty Clay	Fine	NA	NA	NA	**12**	**25**	**4**	**20**	**1**	**3**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH5	0.03-0.2	F: Gravelly Sand	Coarse	**8**	**16**	NA	<4	**10**	**60**	**3**	**86**	**39**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH5 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	Coarse	**8**	**16**	NA	<4	**11**	**71**	**3**	**100**	**46**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH5	0.4-0.5	F: Silty Clay	Fine	NA	NA	NA	**14**	**18**	**22**	**17**	**29**	**16**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH5	2.5-2.8	Silty Clay	Fine	NA	NA	NA	**7**	**9**	**5**	**19**	<1	<1	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH5	3.3-3.45	Siltstone	Fine	NA	NA	NA	<4	**4**	**4**	**16**	<1	<1	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH6	0.025-0.4	F: Silty Gravelly Sand	Fine	**8.1**	**22**	NA	<4	**10**	**82**	**3**	**82**	**44**	<1	<0.1	<25	<50	**110**	**360**	<0.2	<0.5	<1	<1	<0.05
BH6	0.5-0.95	F: Silty Clay	Coarse	NA	NA	NA	**8**	**15**	**10**	**17**	**9**	**6**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH7	0.05-0.1	F: Gravelly Sand	Coarse	NA	NA	NA	<4	**10**	**73**	**2**	**59**	**34**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH7	0.3-0.5	F: Silty Clay	Coarse	NA	NA	NA	**8**	**21**	**6**	**16**	**6**	**6**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH8	0.03-0.4	F: Silty Sand	Coarse	NA	NA	NA	**23**	**16**	**39**	**25**	**13**	**40**	<1	<0.1	<25	<50	**320**	**300**	<0.2	<0.5	<1	<1	**1.1**
BH8 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	Coarse	NA	NA	NA	**15**	**15**	**68**	**24**	**11**	**41**	<1	<0.1	<25	<50	**270**	**290**	<0.2	<0.5	<1	<1	**0.98**
BH8 - [LAB_TRIP]	0.03-0.4	Triplicate	Coarse	NA	NA	NA	**7**	**15**	**28**	**27**	**10**	**39**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH8	0.5-0.95	F: Gravelly Clay	Fine	NA	NA	NA	**8**	**17**	**15**	**19**	**10**	**14**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH8 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	Fine	NA	NA	NA	**6**	**19**	**17**	**22**	**14**	**20**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH9	0.035-0.08	F: Gravelly Silty Sand	Coarse	NA	NA	NA	<4	**15**	**20**	**47**	**9**	**35**	<1	NA	<25	<50	**310**	**280**	<0.2	<0.5	<1	<1	**0.97**
BH9	0.4-0.5	F: Gravelly Silty Sand	Coarse	NA	NA	NA	**5**	**15**	**11**	**24**	**6**	**39**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.3**
BH9	1.2-1.3	F: Silty Clay	Fine	NA	NA	NA	**5**	**12**	**11**	**19**	**6**	**15**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.05**
BH10	0.5-0.95	F: Sandy Gravelly Clay	Coarse	NA	NA	NA	**9**	**13**	**15**	**18**	**4**	**17**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**1.6**
BH10	1.5-1.7	F: Sandy Gravelly Clay	Coarse	NA	NA	NA	**9**	**18**	**14**	**23**	**6**	**26**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.07**
BH11	0.03-0.3	F: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	**9**	**51**	**3**	**45**	**29**	<1	<0.1	<25	<50	**310**	**790**	<0.2	<0.5	<1	<1	<0.05
BH11	0.5-0.7	F: Silty Clay	Coarse	NA	NA	NA	**9**	**25**	**14**	**16**	**15**	**13**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH11	0.7-0.95	Silty Clay	Coarse	NA	NA	NA	**9**	**17**	**2**	**18**	<1	<1	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH12	0.05-0.23	F: Gravelly Sand	Coarse	NA	NA	NA	<4	**12**	**51**	**2**	**57**	**33**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH12 - [LAB_DUP]	0.05-0.23	Laboratory Duplicate	Coarse	**8**	**16**	NA	<4	**12**	**73**	**3**	**67**	**39**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH12	1.7-1.95	F: Silty Clay	Coarse	NA	NA	NA	**7**	**27**	**15**	**20**	**25**	**16**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH13	0.5-0.95	F: Silty Gravelly Clay	Coarse	NA	NA	NA	**6**	**11**	**16**	**13**	**12**	**10**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH13	1.5-1.7	F: Silty Gravelly Clay	Coarse	NA	NA	NA	<4	**9**	**6**	**16**	**2**	**3**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH14	0.02-0.12	F: Gravelly Silty Sand	Coarse	**8.2**	**20**	NA	<4	**10**	**76**	**2**	**61**	**41**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH14 - [LAB_DUP]	0.02-0.12	Laboratory Duplicate	Coarse	NA	NA	NA	<4	**9**	**53**	**2**	**57**	**31**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH16	0.01-0.2	F: Sandy Gravel	Coarse	**8.1**	**20**	NA	**6**	**10**	**65**	**5**	**64**	**38**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH17	0.05-0.15	F: Sandy Gravel	Coarse	NA	NA	NA	<4	**9**	**71**	**3**	**48**	**37**	<1	NA	<25	<50	**310**	**480**	<0.2	<0.5	<1	<1	<0.05
BH18	0.01-0.15	F: Gravelly Silty Sand	Coarse	**8.1**	**23**	NA	<4	**11**	**64**	**12**	**63**	**84**	<1	<0.1	<25	<50	<100	**210**	<0.2	<0.5	<1	<1	<0.05
BH19	0.02-0.4	F: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	**10**	**64**	**3**	**54**	**35**	<1	<0.1	<25	<50	**210**	**600**	<0.2	<0.5	<1	<1	<0.05
BH19	0.5-0.95	F: Silty Clay	Coarse	NA	NA	NA	**11**	**9**	**15**	**17**	**7**	**8**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH20	0.02-0.3	F: Silty Sand	Coarse	NA	NA	NA	<4	**9**	**39**	**8**	**45**	**29**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH20	0.5-0.95	F: Silty Clay	Fine	NA	NA	NA	<4	**5**	**10**	**12**	**6**	**4**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH21	0.04-0.15	F: Silty Clay	Coarse	NA	NA	NA	<4	**10**	**49**	**5**	**48**	**30**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.09**
BH21	0.7-0.95	F: Silty Clay	Coarse	NA	NA	NA	**4**	**12**	**32**	**12**	**36**	**21**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.1**
BH21	2.1-2.5	Silty Clay	Coarse	NA	NA	NA	**8**	**16**	**5**	**20**	**2**	**4**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH22	0.1-0.15	F: Gravelly Sand	Coarse	**7.9**	**13**	NA	<4	**11**	**75**	**3**	**72**	**36**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH22	0.3-0.5	F: Silty Clay	Fine	NA	NA	NA	**6**	**17**	**12**	**20**	**12**	**16**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.4**
BH23	0.02-0.3	F: Silty Gravelly Sand	Coarse	**8.1**	**22**	NA	<4	**13**	**69**	**4**	**69**	**43**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH23	0.5-0.95	F: Sand	Coarse	NA	NA	NA	**12**	**7**	**3**	**3**	**4**	**8**	<1	NA	<25	<50	**470**	<100	<0.2	<0.5	<1	<1	<0.05
BH24	0-0.1	F: Silty Sand	Coarse	NA	NA	NA	<4	**14**	**14**	**16**	**6**	**33**	<1	<0.1	<25	<50	**130**	**200**	<0.2	<0.5	<1	<1	<0.05
BH24	0.8-0.95	F: Silty Clay	Fine	NA	NA	NA	**8**	**18**	**5**	**21**	**5**	**11**	<1	<0.1	<25	<50	**220**	**280**	<0.2	<0.5	<1	<1	**0.1**
BH25	0.1-0.3	F: Silty Clay	Fine	NA	NA	NA	**7**	**13**	**5**	**19**	**5**	**5**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH26	0.7-1	XW Siltstone	Fine	NA	NA	NA	<4	**7**	**51**	**14**	**4**	**8**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH27	0.3-0.5	F: Gravelly Silty Sand	Coarse	NA	NA	NA	**5**	**19**	**19**	**20**	**13**	**35**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH27	0.8-0.95	F: Silty Clay	Fine	NA	NA	NA	**10**	**35**	**7**	**23**	**2**	**3**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH28	0-0.1	F: Clayey Sand	Coarse	NA	NA	NA	**6**	**11**	**14**	**38**	**6**	**56**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH28	1.5-1.95	F: Silty Clay	Fine	NA	NA	NA	**6**	**18**	**19**	**39**	**10**	**43**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.2**
BH28	3-3.2	F: Silty Clay	Fine	NA	NA	NA	**12**	**33**	**28**	**47**	**14**	**65**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.4**
BH29	0.5-0.95	F: Silty Clay	Fine	NA	NA	NA	**8**	**22**	**7**	**24**	**4**	**25**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH29 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	Fine	NA	NA	NA	**35**	**41**	**15**	**33**	**20**	**60**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH29 - [LAB_TRIP]	0.5-0.95	Triplicate	Fine	NA	NA	NA	**17**	**31**	**9**	**25**	**13**	**39**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH29	3-3.45	F: Silty Clay	Fine	NA	NA	NA	**4**	**16**	**14**	**51**	**7**	**56**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH29 - [LAB_DUP]	3-3.45	Laboratory Duplicate	Fine	NA	NA	NA	<4	**39**	**30**	**110**	**30**	**99**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH30	0-0.1	F: Gravelly Sand	Coarse	NA	NA	NA	**6**	**14**	**18**	**52**	**6**	**55**	<1	NA	<25	**63**	**350**	**160**	<0.2	<0.5	<1	<1	<0.05
BH31	0.03-0.1	F: Gravelly Sand	Coarse	NA	NA	NA	<4	**9**	**58**	**5**	**57**	**47**	<1	NA	<25	<50	<100	**180**	<0.2	<0.5	<1	<1	<0.05
BH32	0.03-0.3	F: Gravelly Sand	Coarse	**8.2**	**22**	NA	<4	**11**	**66**	**4**	**76**	**43**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
BH33	0.04-0.14	F: Gravelly Silty Sand	Coarse	**8**	**22**	NA	<4	**10**	**64**	**4**	**74**	**40**	<1	<0.1	<25	<50	<100	**220**	<0.2	<0.5	<1	<1	<0.05
BH34	0.03-0.2	F: Gravelly Sand	Coarse	**7.8**	**14**	NA	<4	**12**	**68**	**4**	**75**	**48**	<1	NA	<25	<50	<100	**110**	<0.2	<0.5	<1	<1	<0.05
BH35	0-0.15	F: Silty Clay	Coarse	NA	NA	NA	**5**	**12**	**19**	**52**	**9**	**82**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	**0.1**
SDUP1	0.04-0.14	Duplicate of BH33	Coarse	NA	NA	NA	<4	**10**	**64**	**4**	**60**	**36**	<1	<0.1	<25	<50	**100**	**240**	<0.2	<0.5	<1	<1	<0.05
SDUP2	0-0.1	Duplicate of BH24	Coarse	NA	NA	NA	<4	**12**	**13**	**17**	**7**	**33**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
SDUP2 - [LAB_DUP]	0-0.1	Laboratory Duplicate	Coarse	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	NA	<25	NA	NA	NA	<0.2	<0.5	<1	<1	NA
SDUP3	0.1-0.15	Duplicate of BH22	Coarse	**7.9**	**13**	NA	<4	**12**	**50**	**3**	**61**	**30**	<1	NA	<25	<50	<100	**100**	<0.2	<0.5	<1	<1	<0.05
SDUP4	0.03-0.4	Duplicate of BH8	Coarse	NA	NA	NA	**6**	**15**	**25**	**32**	**10**	**43**	<1	NA	<25	<50	**180**	**160**	<0.2	<0.5	<1	<1	**0.99**
SDUP6	0.03-0.2	Duplicate of BH5	Coarse	**8**	**16**	NA	<4	**10**	**74**	**3**	**100**	**43**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
SDUP6 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	Coarse	**8**	**16**	NA	<4	**10**	**69**	**3**	**93**	**43**	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
SDUP8	0.025-0.4	Duplicate of BH6	Coarse	**8.1**	**22**	NA	<4	**9**	**56**	<1	**79**	**38**	<1	<0.1	<25	<50	<100	**160**	<0.2	<0.5	<1	<1	<0.05
SDUP8 (LAB_DUP)	0.025-0.4	Laboratory Duplicate	Coarse	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.05
SDUP9	0.5-0.95	Duplicate of BH2	Coarse	NA	NA	NA	<4	**15**	**7**	**11**	**8**	**18**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
SDUP10	0.05-0.23	Duplicate of BH12	Coarse	**8**	**16**	NA	<4	**10**	**59**	**2**	**69**	**39**	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.05
Total Number of Samples				18	18	0	83	83	83	83	83	83	82	53	82	81	81	81	82	82	82	82	82
Maximum Value				8.2	23	NA	35	41	82	110	100	99	<PQL	<PQL	<PQL	63	470	790	<PQL	<PQL	<PQL	<PQL	1.6

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
BH1	0.03-0.4	F: Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH1 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH1	0.5-0.7	F:Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH1	1.5-1.7	F: Silty Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	2500	6600	95	135	185	95	72
BH2	0.02-0.4	F: Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH2	0.5-0.95	F: Silty Sandy Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH2	1.7-1.95	Silty Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	2500	6600	95	135	185	95	72
BH3	0.01-0.1	F: Silty Gravelly Sand	Coarse	8.1	22	NA	160	320	350	2000	600	1600	370	640	215	170	1700	3300	75	135	165	180	72
BH3	0.5-0.95	F: Silty Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH4	0.02-0.3	F:Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH4	0.5-0.95	F: Silty Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	2500	6600	95	135	185	95	72
BH5	0.03-0.2	F: Gravelly Sand	Coarse	8	16	NA	160	320	330	2000	460	1200	370	640	215	170	1700	3300	75	135	165	180	72
BH5 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	Coarse	8	16	NA	160	320	330	2000	460	1200	370	640	215	170	1700	3300	75	135	165	180	72
BH5	0.4-0.5	F: Silty Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	2500	6600	95	135	185	95	72
BH5	2.5-2.8	Silty Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	2500	6600	95	135	185	95	72
BH5	3.3-3.45	Siltstone	Fine	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	2500	6600	95	135	185	95	72
BH6	0.025-0.4	F: Silty Gravelly Sand	Fine	8.1	22	NA	160	320	350	2000	600	1600	370	640	215	170	2500	6600	95	135	185	95	72
BH6	0.5-0.95	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH7	0.05-0.1	F: Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH7	0.3-0.5	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH8	0.03-0.4	F: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH8 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH8 - [LAB_TRIP]	0.03-0.4	Triplicate	Coarse	NA	NA	NA	160	320	110	2000	60	230	--	--	--	--	--	--	--	--	--	--	--
BH8	0.5-0.95	F: Gravelly Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH8 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH9	0.035-0.08	F: Gravelly Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH9	0.4-0.5	F: Gravelly Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH9	1.2-1.3	F: Silty Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	2500	6600	95	135	185	95	72
BH10	0.5-0.95	F: Sandy Gravelly Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH10	1.5-1.7	F: Sandy Gravelly Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH11	0.03-0.3	F: Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH11	0.5-0.7	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH11	0.7-0.95	Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH12	0.05-0.23	F: Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH12 - [LAB_DUP]	0.05-0.23	Laboratory Duplicate	Coarse	8	16	NA	160	320	330	2000	460	1200	370	640	215	170	1700	3300	75	135	165	180	72
BH12	1.7-1.95	F: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH13	0.5-0.95	F: Silty Gravelly Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH13	1.5-1.7	F: Silty Gravelly Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH14	0.02-0.12	F: Gravelly Silty Sand	Coarse	8.2	20	NA	160	320	330	2000	460	1200	370	640	215	170	1700	3300	75	135	165	180	72
BH14 - [LAB_DUP]	0.02-0.12	Laboratory Duplicate	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH16	0.01-0.2	F: Sandy Gravel	Coarse	8.1	20	NA	160	320	330	2000	460	1200	370	640	215	170	1700	3300	75	135	165	180	72
BH17	0.

TABLE S7
SOIL LABORATORY RESULTS COMPARED TO WASTE CLASSIFICATION GUIDELINES
All data in mg/kg unless stated otherwise

			HEAVY METALS								PAHs		OC/OP PESTICIDES				Total	TRH					BTEX COMPOUNDS				ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P	Total Endosulfans	Chloropyrifos	Total Moderately Harmful	Total Scheduled	PCBs	C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}	Total C_{10}-C_{36}	Benzene	Toluene	Ethyl benzene	Total Xylenes	
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.05	0.1	0.1	0.1	0.1	0.1	25	50	100	100	50	0.2	0.5	1	1	100
General Solid Waste CT1			100	20	100	NSL	100	4	40	NSL	200	0.8	60	4	250	50	50	650		NSL		10,000	10	288	600	1,000	-
General Solid Waste SCC1			500	100	1900	NSL	1500	50	1050	NSL	200	10	108	7.5	250	50	50	650		NSL		10,000	18	518	1,080	1,800	-
Restricted Solid Waste CT2			400	80	400	NSL	400	16	160	NSL	800	3.2	240	16	1000	50	50	2600		NSL		40,000	40	1,152	2,400	4,000	-
Restricted Solid Waste SCC2			2000	400	7600	NSL	6000	200	4200	NSL	800	23	432	30	1000	50	50	2600		NSL		40,000	72	2,073	4,320	7,200	-
Sample Reference	**Sample Depth**	**Sample Description**																									
BH1	0.03-0.4	F: Silty Gravelly Sand	<4	<0.4	**15**	**37**	**15**	<0.1	**14**	**49**	**3.5**	**0.3**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**160**	**160**	<0.2	<0.5	<1	<1	Detected
BH1 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	<4	<0.4	**11**	**38**	**12**	<0.1	**9**	**38**	**2.4**	**0.06**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**150**	**150**	<0.2	<0.5	<1	<1	NA
BH1 - [LAB_TRIP]	0.03-0.4	Laboratory Triplicate	<4	<0.4	**10**	**96**	**13**	<0.1	**10**	**46**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH1	0.5-0.7	F:Silty Sand	**5**	<0.4	**20**	**8**	**17**	<0.1	**13**	**22**	**0.1**	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH1	1.5-1.7	F: Silty Clay	**7**	<0.4	**21**	**20**	**24**	<0.1	**21**	**27**	**0.3**	**0.08**	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH2	0.02-0.4	F: Silty Gravelly Sand	<4	<0.4	**12**	**26**	**23**	<0.1	**12**	**39**	**1.4**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**130**	**130**	<0.2	<0.5	<1	<1	Detected
BH2	0.5-0.95	F: Silty Sandy Clay	<4	<0.4	**11**	**19**	**12**	<0.1	**6**	**23**	**0.5**	**0.08**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH2	1.7-1.95	Silty Clay	**6**	<0.4	**23**	**2**	**14**	<0.1	**1**	**2**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH3	0.01-0.1	F: Silty Gravelly Sand	<4	<0.4	**13**	**74**	**4**	<0.1	**78**	**42**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH3	0.5-0.95	F: Silty Clay	**6**	<0.4	**17**	**5**	**18**	<0.1	**3**	**3**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH4	0.02-0.3	F:Silty Gravelly Sand	<4	<0.4	**11**	**63**	**3**	<0.1	**59**	**38**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**300**	**300**	<0.2	<0.5	<1	<1	Not Detected
BH4	0.5-0.95	F: Silty Clay	**12**	<0.4	**25**	**4**	**20**	<0.1	**1**	**3**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH5	0.03-0.2	F: Gravelly Sand	<4	<0.4	**10**	**60**	**3**	<0.1	**86**	**39**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH5 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	<4	<0.4	**11**	**71**	**3**	<0.1	**100**	**46**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH5	0.4-0.5	F: Silty Clay	**14**	<0.4	**18**	**22**	**17**	<0.1	**29**	**16**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH5	2.5-2.8	Silty Clay	**7**	<0.4	**9**	**5**	**19**	<0.1	<1	<1	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH5	3.3-3.45	Siltstone	<4	<0.4	**4**	**4**	**16**	<0.1	<1	<1	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH6	0.025-0.4	F: Silty Gravelly Sand	<4	<0.4	**10**	**82**	**3**	<0.1	**82**	**44**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**200**	**200**	<0.2	<0.5	<1	<1	Not Detected
BH6	0.5-0.95	F: Silty Clay	**8**	<0.4	**15**	**10**	**17**	<0.1	**9**	**6**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH7	0.05-0.1	F: Gravelly Sand	<4	<0.4	**10**	**73**	**2**	<0.1	**59**	**34**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH7	0.3-0.5	F: Silty Clay	**8**	<0.4	**21**	**6**	**16**	<0.1	**6**	**6**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH8	0.03-0.4	F: Silty Sand	**23**	<0.4	**16**	**39**	**25**	<0.1	**13**	**40**	**13**	**1.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	**170**	**260**	**430**	<0.2	<0.5	<1	<1	Detected
BH8 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	**15**	<0.4	**15**	**68**	**24**	<0.1	**11**	**41**	**12**	**0.98**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	**140**	**230**	**370**	<0.2	<0.5	<1	<1	NA
BH8 - [LAB_TRIP]	0.03-0.4	Triplicate	**7**	<0.4	**15**	**28**	**27**	<0.1	**10**	**39**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH8	0.5-0.95	F: Gravelly Clay	**8**	<0.4	**17**	**15**	**19**	<0.1	**10**	**14**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH8 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	**6**	<0.4	**19**	**17**	**22**	<0.1	**14**	**20**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH9	0.035-0.08	F: Gravelly Silty Sand	<4	<0.4	**15**	**20**	**47**	<0.1	**9**	**35**	**16**	**0.97**	NA	NA	NA	NA	NA	<25	<50	**160**	**240**	**400**	<0.2	<0.5	<1	<1	Detected
BH9	0.4-0.5	F: Gravelly Silty Sand	**5**	<0.4	**15**	**11**	**24**	<0.1	**6**	**39**	**3.2**	**0.3**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH9	1.2-1.3	F: Silty Clay	**5**	<0.4	**12**	**11**	**19**	<0.1	**6**	**15**	**0.5**	**0.05**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH10	0.5-0.95	F: Sandy Gravelly Clay	**9**	<0.4	**13**	**15**	**18**	<0.1	**4**	**17**	**21**	**1.6**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH10	1.5-1.7	F: Sandy Gravelly Clay	**9**	<0.4	**18**	**14**	**23**	<0.1	**6**	**26**	**0.4**	**0.07**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH11	0.03-0.3	F: Silty Gravelly Sand	<4	<0.4	**9**	**51**	**3**	<0.1	**45**	**29**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**460**	**460**	<0.2	<0.5	<1	<1	Not Detected
BH11	0.5-0.7	F: Silty Clay	**9**	<0.4	**25**	**14**	**16**	<0.1	**15**	**13**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH11	0.7-0.95	Silty Clay	**9**	<0.4	**17**	**2**	**18**	<0.1	<1	<1	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH12	0.05-0.23	F: Gravelly Sand	<4	<0.4	**12**	**51**	**2**	<0.1	**57**	**33**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH12 - [LAB_DUP]	0.05-0.23	Laboratory Duplicate	<4	<0.4	**12**	**73**	**3**	<0.1	**67**	**39**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH12	1.7-1.95	F: Silty Clay	**7**	<0.4	**27**	**15**	**20**	<0.1	**25**	**16**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH13	0.5-0.95	F: Silty Gravelly Clay	**6**	<0.4	**11**	**16**	**13**	<0.1	**12**	**10**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH13	1.5-1.7	F: Silty Gravelly Clay	<4	<0.4	**9**	**6**	**16**	<0.1	**2**	**3**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH14	0.02-0.12	F: Gravelly Silty Sand	<4	<0.4	**10**	**76**	**2**	<0.1	**61**	**41**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH14 - [LAB_DUP]	0.02-0.12	Laboratory Duplicate	<4	<0.4	**9**	**53**	**2**	<0.1	**57**	**31**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH16	0.01-0.2	F: Sandy Gravel	**6**	<0.4	**10**	**65**	**5**	<0.1	**64**	**38**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH17	0.05-0.15	F: Sandy Gravel	<4	<0.4	**9**	**71**	**3**	<0.1	**48**	**37**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	**370**	**370**	<0.2	<0.5	<1	<1	Not Detected
BH18	0.01-0.15	F: Gravelly Silty Sand	<4	<0.4	**11**	**64**	**12**	<0.1	**63**	**84**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**120**	**120**	<0.2	<0.5	<1	<1	Not Detected
BH19	0.02-0.4	F: Silty Gravelly Sand	<4	<0.4	**10**	**64**	**3**	<0.1	**54**	**35**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**350**	**350**	<0.2	<0.5	<1	<1	Not Detected
BH19	0.5-0.95	F: Silty Clay	**11**	<0.4	**9**	**15**	**17**	<0.1	**7**	**8**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH20	0.02-0.3	F: Silty Sand	<4	<0.4	**9**	**39**	**8**	<0.1	**45**	**29**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH20	0.5-0.95	F: Silty Clay	<4	<0.4	**5**	**10**	**12**	<0.1	**6**	**4**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH21	0.04-0.15	F: Silty Clay	<4	<0.4	**10**	**49**	**5**	<0.1	**48**	**30**	**0.5**	**0.09**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH21	0.7-0.95	F: Silty Clay	**4**	<0.4	**12**	**32**	**12**	<0.1	**36**	**21**	**0.66**	**0.1**	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH21	2.1-2.5	Silty Clay	**8**	<0.4	**16**	**5**	**20**	<0.1	**2**	**4**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH22	0.1-0.15	F: Gravelly Sand	<4	<0.4	**11**	**75**	**3**	<0.1	**72**	**36**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH22	0.3-0.5	F: Silty Clay	**6**	<0.4	**17**	**12**	**20**	<0.1	**12**	**16**	**3.5**	**0.4**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH23	0.02-0.3	F: Silty Gravelly Sand	<4	<0.4	**13**	**69**	**4**	<0.1	**69**	**43**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH23	0.5-0.95	F: Sand	**12**	<0.4	**7**	**3**	**3**	<0.1	**4**	**8**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	**340**	**160**	**500**	<0.2	<0.5	<1	<1	Not Detected
BH24	0-0.1	F: Silty Sand	<4	<0.4	**14**	**14**	**16**	<0.1	**6**	**33**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**130**	**130**	<0.2	<0.5	<1	<1	Not Detected
BH24	0.8-0.95	F: Silty Clay	**8**	<0.4	**18**	**5**	**21**	<0.1	**5**	**11**	**0.3**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	**110**	**190**	**300**	<0.2	<0.5	<1	<1	Not Detected
BH25	0.1-0.3	F: Silty Clay	**7**	<0.4	**13**	**5**	**19**	<0.1	**5**	**5**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH26	0.7-1	XW Siltstone	<4	<0.4	**7**	**51**	**14**	<0.1	**4**	**8**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH27	0.3-0.5	F: Gravelly Silty Sand	**5**	<0.4	**19**	**19**	**20**	<0.1	**13**	**35**	**0.2**	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH27	0.8-0.95	F: Silty Clay	**10**	<0.4	**35**	**7**	**23**	<0.1	**2**	**3**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH28	0-0.1	F: Clayey Sand	**6**	<0.4	**11**	**14**	**38**	<0.1	**6**	**56**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH28	1.5-1.95	F: Silty Clay	**6**	<0.4	**18**	**19**	**39**	<0.1	**10**	**43**	**1.2**	**0.2**	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH28	3-3.2	F: Silty Clay	**12**	<0.4	**33**	**28**	**47**	**0.2**	**14**	**65**	**4.5**	**0.4**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH29	0.5-0.95	F: Silty Clay	**8**	<0.4	**22**	**7**	**24**	<0.1	**4**	**25**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH29 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	**35**	<0.4	**41**	**15**	**33**	<0.1	**20**	**60**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH29 - [LAB_TRIP]	0.5-0.95	Triplicate	**17**	<0.4	**31**	**9**	**25**	<0.1	**13**	**39**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH29	3-3.45	F: Silty Clay	**4**	<0.4	**16**	**14**	**51**	<0.1	**7**	**56**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH29 - [LAB_DUP]	3-3.45	Laboratory Duplicate	<4	**2**	**39**	**30**	**110**	<0.1	**30**	**99**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
BH30	0-0.1	F: Gravelly Sand	**6**	<0.4	**14**	**18**	**52**	<0.1	**6**	**55**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	**220**	**270**	**490**	<0.2	<0.5	<1	<1	Not Detected
BH31	0.03-0.1	F: Gravelly Sand	<4	<0.4	**9**	**58**	**5**	<0.1	**57**	**47**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH32	0.03-0.3	F: Gravelly Sand	<4	<0.4	**11**	**66**	**4**	<0.1	**76**	**43**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH33	0.04-0.14	F: Gravelly Silty Sand	<4	<0.4	**10**	**64**	**4**	<0.1	**74**	**40**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**140**	**140**	<0.2	<0.5	<1	<1	Not Detected
BH34	0.03-0.2	F: Gravelly Sand	<4	<0.4	**12**	**68**	**4**	<0.1	**75**	**48**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
BH35	0-0.15	F: Silty Clay	**5**	<0.4	**12**	**19**	**52**	<0.1	**9**	**82**	**0.4**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	Not Detected
SDUP1	0.04-0.14	Duplicate of BH33	<4	<0.4	**10**	**64**	**4**	<0.1	**60**	**36**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	**150**	**150**	<0.2	<0.5	<1	<1	NA
SDUP2	0-0.1	Duplicate of BH24	<4	<0.4	**12**	**13**	**17**	<0.1	**7**	**33**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
SDUP2 - [LAB_DUP]	0-0.1	Laboratory Duplicate	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<25	NA	NA	NA	NA	<0.2	<0.5	<1	<1	NA
SDUP3	0.1-0.15	Duplicate of BH22	<4	<0.4	**12**	**50**	**3**	<0.1	**61**	**30**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
SDUP4	0.03-0.4	Duplicate of BH8	**6**	<0.4	**15**	**25**	**32**	<0.1	**10**	**43**	**10**	**0.99**	NA	NA	NA	NA	NA	<25	<50	<100	**160**	**160**	<0.2	<0.5	<1	<1	NA
SDUP6	0.03-0.2	Duplicate of BH5	<4	<0.4	**10**	**74**	**3**	<0.1	**100**	**43**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
SDUP6 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	<4	<0.4	**10**	**69**	**3**	<0.1	**93**	**43**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
SDUP8	0.025-0.4	Duplicate of BH6	<4	<0.4	**9**	**56**	<1	<0.1	**79**	**38**	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
SDUP8 (LAB_DUP)	0.025-0.4	Duplicate of BH6	NA	NA	NA	NA	NA	NA	NA	NA	<0.05	<0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP9	0.5-0.95	Duplicate of BH2	<4	<0.4	**15**	**7**	**11**	<0.1	**8**	**18**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
SDUP10	0.05-0.23	Duplicate of BH12	<4	<0.4	**10**	**59**	**2**	<0.1	**69**	**39**	<0.05	<0.05	NA	NA	NA	NA	NA	<25	<50	<100	<100	<50	<0.2	<0.5	<1	<1	NA
Total Number of Samples			84	84	84	84	84	84	84	84	82	82	53	53	53	53	53	82	81	81	81	81	82	82	82	82	58
Maximum Value			35	2	41	96	110	0.2	100	99	21	1.6	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	340	460	500	<PQL	<PQL	<PQL	<PQL	Detected

Concentration above the CT1 — **VALUE**
Concentration above SCC1 — **VALUE**
Concentration above the SCC2 — **VALUE**
Concentration above PQL — **Bold**
Asbestos detected — **Detected**

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TABLE S8
SOIL LABORATORY TCLP RESULTS
All data in mg/L unless stated otherwise

			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	B(a)P
PQL - Envirolab Services			0.05	0.01	0.01	0.01	0.03	0.0005	0.02	0.02	0.001
TCLP1 - General Solid Waste			5	1	5	NSL	5	0.2	2	NSL	0.04
TCLP2 - Restricted Solid Waste			20	4	20	NSL	20	0.8	8	NSL	0.16
TCLP3 - Hazardous Waste			>20	>4	>20	NSL	>20	>0.8	>8	NSL	>0.16
Sample Reference	**Sample Depth**	**Sample Description**									
BH1	0.03-0.4	F: Silty Gravelly Sand	<0.05	<0.01	<0.01	**0.01**	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH1 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	<0.05	<0.01	<0.01	**0.01**	<0.03	<0.0005	<0.02	**0.03**	<0.0001
BH1	0.5-0.7	F:Silty Sand	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	**0.08**	<0.0001
BH1	1.5-1.7	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.02**	**0.03**	<0.0001
BH2	0.02-0.4	F: Silty Gravelly Sand	<0.05	<0.01	**0.02**	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH2	0.5-0.95	F: Silty Sandy Clay	<0.05	<0.01	<0.01	**0.02**	**0.08**	<0.0005	**0.03**	**0.2**	<0.0001
BH3	0.01-0.1	F: Silty Gravelly Sand	<0.05	<0.01	<0.01	**0.02**	<0.03	<0.0005	**0.24**	**0.02**	<0.0001
BH3	0.5-0.95	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH4	0.02-0.3	F:Silty Gravelly Sand	<0.05	<0.01	<0.01	**0.02**	<0.03	<0.0005	**0.1**	<0.02	<0.0001
BH4	0.5-0.95	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH5	0.03-0.2	F: Gravelly Sand	<0.05	<0.01	<0.01	**0.02**	<0.03	<0.0005	**0.3**	**0.03**	<0.0001
BH5 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	<0.05	<0.01	<0.01	**0.02**	<0.03	<0.0005	**0.3**	**0.03**	<0.0001
BH5	0.4-0.5	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.04**	**0.03**	<0.0001
BH6	0.025-0.4	F: Silty Gravelly Sand	<0.05	<0.01	<0.01	**0.04**	<0.03	<0.0005	**0.1**	<0.02	<0.0001
BH6	0.5-0.95	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH7	0.05-0.1	F: Gravelly Sand	<0.05	<0.01	<0.01	**0.03**	<0.03	<0.0005	**0.1**	<0.02	<0.0001
BH7	0.3-0.5	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH8	0.03-0.4	F: Silty Sand	<0.05	<0.01	**0.01**	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH8	0.5-0.95	F: Gravelly Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH8 [LAB_DUP]	0.5-0.95	Laboratory Duplicate	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH9	0.035-0.08	F: Gravelly Silty Sand	<0.05	<0.01	**0.02**	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH9 - [LAB_DUP]	0.035-0.08	Laboratory Duplicate	<0.05	<0.01	**0.02**	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH9	0.4-0.5	F: Gravelly Silty Sand	<0.05	<0.01	<0.01	**0.01**	<0.03	<0.0005	<0.02	**0.02**	<0.0001
BH9	1.2-1.3	F: Silty Clay	<0.05	<0.01	**0.02**	<0.01	<0.03	<0.0005	<0.02	**0.09**	<0.0001
BH10	0.5-0.95	F: Sandy Gravelly Clay	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH10	1.5-1.7	F: Sandy Gravelly Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	**0.04**	<0.0001
BH11	0.03-0.3	F: Silty Gravelly Sand	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.08**	<0.02	<0.0001
BH11	0.5-0.7	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.02**	<0.02	<0.0001
BH12	0.05-0.23	F: Gravelly Sand	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.1**	<0.02	<0.0001
BH12 - [LAB_DUP]	0.05-0.23	Laboratory Duplicate	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.1**	<0.02	<0.0001
BH12	1.7-1.95	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.04**	<0.02	<0.0001
BH13	0.5-0.95	F: Silty Gravelly Clay	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH13	1.5-17	F: Silty Gravelly Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH14	0.02-0.12	F: Gravelly Silty Sand	<0.05	<0.01	<0.01	**0.03**	<0.03	<0.0005	**0.07**	**0.04**	<0.0001
BH14 - [LAB_DUP]	0.02-0.12	Laboratory Duplicate	<0.05	<0.01	<0.01	**0.02**	<0.03	<0.0005	**0.03**	<0.02	NA
BH16	0.01-0.2	F: Sandy Gravel	<0.05	<0.01	<0.01	**0.03**	<0.03	<0.0005	**0.08**	**0.03**	<0.0001
BH17	0.05-0.15	F: Sandy Gravel	<0.05	<0.01	<0.01	**0.04**	<0.03	<0.0005	**0.1**	**0.04**	<0.0001
BH18	0.01-0.15	F: Gravelly Silty Sand	<0.05	<0.01	<0.01	**0.03**	<0.03	<0.0005	**0.1**	**0.04**	<0.0001
BH19	0.02-0.4	F: Silty Gravelly Sand	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.09**	<0.02	<0.0001
BH19	0.5-0.95	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.02**	<0.02	<0.0001
BH20	0.02-0.3	F: Silty Sand	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH20	0.5-0.95	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.03**	<0.02	<0.0001
BH21	0.04-0.15	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.03**	<0.02	<0.0001
BH21	0.7-0.95	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH22	0.1-0.15	F: Gravelly Sand	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	**0.06**	NA	<0.0001
BH22	0.3-0.5	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH23	0.02-0.3	F: Silty Gravelly Sand	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	**0.08**	<0.02	<0.0001
BH23	0.5-0.95	F: Sand	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH23 - [LAB_DUP]	0.5-0.95	Laboratory Duplicate	NA	NA	NA	NA	NA	NA	NA	NA	<0.0001
BH24	0-0.1	F: Silty Sand	<0.05	<0.01	<0.01	**0.02**	<0.03	<0.0005	<0.02	**0.04**	<0.0001
BH24	0.8-0.95	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH25	0.1-0.3	F: Silty Clay	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH26	0.7-1	XW Siltstone	<0.05	<0.01	<0.01	**0.42**	<0.03	<0.0005	<0.02	**0.04**	<0.0001
BH27	0.3-0.5	F: Gravelly Silty Sand	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH27	0.8-0.95	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH28	0-0.1	F: Clayey Sand	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH28	1.5-1.95	F: Silty Clay	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH28	3-3.2	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	<0.02	<0.0001
BH29	0.5-0.95	F: Silty Clay	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH29	3-3.45	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	**0.04**	<0.0001
BH29 [LAB_DUP]	3-3.45	Laboratory Duplicate	NA	NA	NA	NA	NA	NA	NA	NA	<0.0001
BH30	0-0.1	F: Gravelly Sand	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	<0.02	NA	<0.0001
BH31	0.03-0.1	F: Gravelly Sand	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	**0.03**	NA	<0.0001
BH32	0.03-0.3	F: Gravelly Sand	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	**0.04**	NA	<0.0001
BH33	0.04-0.14	F: Gravelly Silty Sand	<0.05	<0.01	<0.01	**0.03**	<0.03	<0.0005	**0.08**	**0.03**	<0.0001
BH34	0.03-0.2	F: Gravelly Sand	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	**0.03**	NA	<0.0001
BH34 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	<0.05	<0.01	<0.01	NA	<0.03	<0.0005	**0.02**	NA	NA
BH35	0-0.15	F: Silty Clay	<0.05	<0.01	<0.01	<0.01	<0.03	<0.0005	<0.02	**0.1**	<0.0001
Total Number of samples			66	66	66	49	66	66	66	49	66
Maximum Value			<PQL	<PQL	0.02	0.42	0.08	<PQL	0.3	0.2	<PQL

General Solid Waste	**VALUE**
Restricted Solid Waste	**VALUE**
Hazardous Waste	**VALUE**
Concentration above PQL	**Bold**

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TABLE S9
SOIL LABORATORY ASLP RESULTS
All data in µg/L unless stated otherwise

			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	B(a)P
PQL - Envirolab Services			1	0.1	1	1	1	0.05	1	1	0.1
SAC			NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	**Sample Depth**	**Sample Description**									
BH1	0.03-0.4	F: Silty Gravelly Sand	<1	<0.1	**3**	**2**	<1	<0.05	<1	**3**	<0.1
BH1 - [LAB_DUP]	0.03-0.4	Laboratory Duplicate	<1	<0.1	**3**	**2**	<1	<0.05	<1	**3**	<0.1
BH1	0.5-0.7	F:Silty Sand	**6**	<0.1	<1	**3**	**1**	<0.05	<1	**4**	<0.1
BH1	1.5-1.7	F: Silty Clay	**3**	<0.1	**5**	**4**	**5**	<0.05	**2**	**5**	<0.1
BH2	0.02-0.4	F: Silty Gravelly Sand	<1	<0.1	**5**	<1	<1	<0.05	<1	**3**	<0.1
BH2 - [LAB_DUP]	0.02-0.4	Laboratory Duplicate	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
BH2	0.5-0.95	F: Silty Sandy Clay	**9**	<0.1	**2**	**4**	**7**	<0.05	**2**	**9**	<0.1
BH3	0.01-0.1	F: Silty Gravelly Sand	<1	<0.1	<1	**2**	<1	<0.05	**3**	**5**	<0.1
BH3	0.5-0.95	F: Silty Clay	<1	<0.1	**5**	**2**	**4**	<0.05	<1	**5**	<0.1
BH4	0.02-0.3	F:Silty Gravelly Sand	<1	<0.1	**3**	**4**	**2**	<0.05	**4**	**4**	<0.1
BH4	0.5-0.95	F: Silty Clay	**1**	<0.1	**5**	**1**	**3**	<0.05	<1	**5**	<0.1
BH5	0.03-0.2	F: Gravelly Sand	<1	<0.1	<1	**2**	<1	<0.05	**4**	**5**	<0.1
BH5 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	<1	<0.1	<1	**2**	<1	<0.05	**4**	**4**	NA
BH5	0.4-0.5	F: Silty Clay	**3**	<0.1	**6**	**4**	**7**	<0.05	**3**	**5**	<0.1
BH6	0.025-0.4	F: Silty Gravelly Sand	<1	<0.1	<1	**3**	<1	<0.05	**4**	**4**	<0.1
BH6	0.5-0.95	F: Silty Clay	<1	<0.1	**4**	<1	**5**	<0.05	**1**	**4**	<0.1
BH7	0.05-0.1	F: Gravelly Sand	<1	<0.1	<1	<1	<1	<0.05	<1	**3**	<0.1
BH7	0.3-0.5	F: Silty Clay	<1	<0.1	<1	<1	<1	<0.05	<1	**4**	<0.1
BH8	0.03-0.4	F: Silty Sand	<1	<0.1	**5**	**2**	<1	<0.05	<1	**1**	<0.1
BH8	0.5-0.95	F: Gravelly Clay	**7**	**0.2**	**25**	**13**	**24**	<0.05	**10**	**16**	<0.1
BH8 [LAB_DUP]	0.5-0.95	Laboratory Duplicate	**8**	**0.2**	**33**	**15**	**30**	<0.05	**13**	**21**	<0.1
BH9	0.035-0.08	F: Gravelly Silty Sand	**2**	<0.1	**9**	**2**	<1	<0.05	<1	<1	<0.1
BH9 - [LAB_DUP]	0.035-0.08	Laboratory Duplicate	**2**	<0.1	**9**	**2**	<1	<0.05	<1	**2**	NA
BH9	0.4-0.5	F: Gravelly Silty Sand	**4**	<0.1	**4**	**7**	**7**	<0.05	**1**	<1	<0.1
BH9	1.2-1.3	F: Silty Clay	**6**	**0.2**	**20**	**19**	**39**	<0.05	**4**	**20**	<0.1
BH10	0.5-0.95	F: Sandy Gravelly Clay	**14**	**0.4**	**88**	**18**	**55**	<0.05	**15**	**31**	<0.1
BH10	1.5-1.7	F: Sandy Gravelly Clay	**3**	**0.1**	**6**	**3**	**4**	<0.05	**1**	**3**	<0.1
BH11	0.03-0.3	F: Silty Gravelly Sand	<1	<0.1	<1	**1**	<1	<0.05	<1	**4**	<0.1
BH11	0.5-0.7	F: Silty Clay	<1	<0.1	<1	<1	<1	<0.05	<1	**2**	<0.1
BH12	0.05-0.23	F: Gravelly Sand	<1	<0.1	<1	<1	<1	<0.05	**1**	**4**	<0.1
BH12 - [LAB_DUP]	0.05-0.23	Laboratory Duplicate	<1	<0.1	<1	**1**	<1	<0.05	**1**	**3**	<0.1
BH12	1.7-1.95	F: Silty Clay	<1	<0.1	**3**	**1**	**4**	<0.05	<1	**3**	<0.1
BH13	0.5-0.95	F: Silty Gravelly Clay	<1	<0.1	**3**	<1	**3**	<0.05	<1	**1**	<0.1
BH13	1.5-1.7	F: Silty Gravelly Clay	**3**	**0.1**	**12**	**2**	**11**	<0.05	**2**	**3**	<0.1
BH14	0.02-0.12	F: Gravelly Silty Sand	<1	<0.1	<1	**2**	<1	<0.05	**3**	**3**	<0.1
BH14 - [LAB_DUP]	0.02-0.12	Laboratory Duplicate	<1	<0.1	<1	<1	<1	<0.05	**1**	**1**	NA
BH16	0.01-0.2	F: Sandy Gravel	<1	<0.1	<1	<1	<1	<0.05	<1	**1**	<0.1
BH17	0.05-0.15	F: Sandy Gravel	<1	<0.1	<1	<1	<1	<0.05	**1**	**2**	<0.1
BH18	0.01-0.15	F: Gravelly Silty Sand	<1	<0.1	<1	<1	<1	<0.05	<1	**2**	<0.1
BH19	0.02-0.4	F: Silty Gravelly Sand	<1	<0.1	<1	<1	<1	<0.05	<1	**3**	<0.1
BH19	0.5-0.95	F: Silty Clay	<1	<0.1	**3**	<1	**2**	<0.05	<1	**5**	<0.1
BH20	0.02-0.3	F: Silty Sand	**1**	<0.1	**4**	**2**	**3**	<0.05	**3**	**21**	<0.1
BH20	0.5-0.95	F: Silty Clay	**3**	**0.2**	**25**	**8**	**16**	<0.05	**5**	**6**	<0.1
BH21	0.04-0.15	F: Silty Clay	<1	<0.1	**4**	**2**	**4**	<0.05	**1**	**4**	<0.1
BH21	0.7-0.95	F: Silty Clay	<1	<0.1	<1	<1	**1**	<0.05	<1	**3**	<0.1
BH22	0.1-0.15	F: Gravelly Sand	<1	<0.1	<1	<1	<1	<0.05	**1**	**2**	<0.1
BH22	0.3-0.5	F: Silty Clay	**14**	**0.4**	**72**	**14**	**29**	<0.05	**12**	**22**	<0.1
BH23	0.02-0.3	F: Silty Gravelly Sand	<1	<0.1	<1	<1	<1	<0.05	<1	**4**	<0.1
BH23	0.5-0.95	F: Sand	**2**	<0.1	**1**	<1	<1	<0.05	**1**	**5**	<0.1
BH24	0-0.1	F: Silty Sand	<1	<0.1	**1**	**1**	<1	<0.05	<1	**4**	<0.1
BH24	0.8-0.95	F: Silty Clay	**9**	**0.2**	**26**	**7**	**27**	<0.05	**7**	**15**	<0.1
BH25	0.1-0.3	F: Silty Clay	**7**	**0.1**	**27**	**2**	**16**	<0.05	**3**	**6**	<0.1
BH26	0.7-1	XW Siltstone	**2**	<0.1	<1	**1**	**1**	<0.05	<1	<1	<0.1
BH27	0.3-0.5	F: Gravelly Silty Sand	**5**	**0.1**	**30**	**7**	**18**	<0.05	**5**	**21**	<0.1
BH27	0.8-0.95	F: Silty Clay	<1	<0.1	<1	<1	<1	<0.05	<1	**2**	<0.1
BH28	0-0.1	F: Clayey Sand	**5**	**0.1**	**17**	**8**	**13**	<0.05	**4**	**34**	<0.1
BH28	1.5-1.95	F: Silty Clay	**5**	**0.1**	**28**	**7**	**16**	<0.05	**7**	**23**	<0.1
BH28	3-3.2	F: Silty Clay	**5**	<0.1	**17**	**4**	**20**	<0.05	**3**	**9**	<0.1
BH29	0.5-0.95	F: Silty Clay	**11**	**0.2**	**47**	**8**	**22**	<0.05	**9**	**38**	<0.1
BH29	3-3.45	F: Silty Clay	**5**	**0.4**	**16**	**34**	**44**	<0.05	**4**	**65**	<0.1
BH29 [LAB_DUP]	3-3.45	Laboratory Duplicate	**6**	**0.4**	**21**	**31**	**38**	<0.05	**5**	**71**	<0.1
BH30	0-0.1	F: Gravelly Sand	**1**	**0.1**	**6**	**7**	**7**	<0.05	**2**	**32**	<0.1
BH31	0.03-0.1	F: Gravelly Sand	<1	<0.1	**3**	**3**	**2**	<0.05	**3**	**5**	<0.1
BH32	0.03-0.3	F: Gravelly Sand	<1	<0.1	<1	<1	<1	<0.05	<1	**2**	<0.1
BH33	0.04-0.14	F: Gravelly Silty Sand	<1	<0.1	**1**	<1	**1**	<0.05	**1**	**2**	<0.1
BH34	0.03-0.2	F: Gravelly Sand	<1	<0.1	**2**	**2**	**1**	<0.05	**2**	**2**	<0.1
BH34 - [LAB_DUP]	0.03-0.2	Laboratory Duplicate	<1	<0.1	<1	<1	<1	<0.05	<1	**2**	NA
BH35	0-0.15	F: Silty Clay	**1**	<0.1	**2**	**5**	**2**	<0.05	**1**	**13**	<0.1
Total Number of samples			67	67	67	67	67	67	67	67	64
Maximum Value			14	0.4	88	34	55	<PQL	15	71	<PQL

Concentration above PQL **Bold**

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TABLE S10a
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - HUMAN HEALTH
Units are µg/Kg unless stated otherwise.

	PQL	NEMP 2020	BH1	BH1 - [LAB_DUP]	BH1	BH1	BH2	BH2	BH3	BH3	BH4	BH4	BH5	BH5 - [LAB_DUP]	BH5	BH6	BH6	BH7	BH7	BH8	BH8 - [LAB_DUP]	BH8	BH8 - [LAB_DUP]	BH9	BH9	BH9	BH10
	Envirolab	Industrial/	0.03-0.4	0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95	0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2	0.03-0.2	0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5	0.03-0.4	0.03-0.4	0.5-0.95	0.5-0.95	0.035-0.08	0.4-0.5	1.2-1.3	0.04-0.45
	Services	Commercial	F: Silty Gravelly Sand	Laboratory Duplicate	F:Silty Sand	F: Silty Clay	F: Silty Gravlley Sand	F: Silty Sandy Clay	F: Silty Gravelly Sand	F: Silty Clay	F:Silty Gravelly Sand	F: Silty Clay	F: Gravelly Sand	Laboratory Duplicate	F: Silty Clay	F: Silty Gravelly Sand	F: Silty Clay	F: Gravelly Sand	F: Silty Clay	F: Silty Sand	Laboratory Duplicate	F: Gravelly Clay	Laboratory Duplicate	F: Gravelly Silty Sand	F: Gravelly Silty Sand	F: Silty Clay	F: Silty Gravelly Sand
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	<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**
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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.3**	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	0.1	NSL	**0.5**	**0.5**	<0.1	<0.1	**0.5**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.1**	**0.1**	**0.4**	<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	<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
Perfluorooctanesulfonic acid PFOS	0.1	NSL	**5.1**	**4.8**	**0.5**	**0.2**	**7.8**	**0.3**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.9**	**1.0**	**1.3**	**0.8**	**2.3**	**1.0**	**1.4**	**0.8**
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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	**0.2**	**0.2**	<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	**0.4**	<0.1	<0.1	<0.1
Perfluoroheptanoic 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	<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
Perfluorooctanoic acid PFOA	0.1	50,000	**0.2**	**0.2**	<0.1	<0.1	**0.3**	<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**	**0.3**	**0.2**	**0.5**	<0.1	<0.1	<0.1
Perfluorononanoic 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	<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
Perfluorodecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5	<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	<5	<5	<5	<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	<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
6:2 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	<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
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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	<1	<1	<1	<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	<1	<1	<1	<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	<1	<1	<1	<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	<1	<1	<1	<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	<5	<5	<5	<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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.9**	**0.9**	<0.2	<0.2	**0.6**	**0.5**	<0.2	<0.2
Total Positive PFHxS & PFOS	0.1	20,000	**5.6**	**5.3**	**0.5**	**0.2**	**8.3**	**0.5**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.9**	**1.0**	**1.4**	**0.9**	**2.8**	**1.0**	**1.4**	**0.8**
Total Positive PFOS & PFOA	0.1	NSL	**5.3**	**5**	**0.5**	**0.2**	**8.0**	**0.3**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.0**	**1.1**	**1.6**	**1.0**	**2.8**	**1.0**	**1.4**	**0.8**
Total Positive PFAS	0.1	NSL	**6.1**	**5.8**	**0.5**	**0.2**	**8.8**	**0.5**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.9**	**2.1**	**1.7**	**1.1**	**4.9**	**1.5**	**1.4**	**0.8**

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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TABLE S10b
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - HUMAN HEALTH
Units are µg/Kg unless stated otherwise.

	PQL	NEMP 2020	BH10	BH11	BH11	BH12	BH12 - [LAB_DUP]	BH12	BH13	BH13	BH14	BH14 - [LAB_DUP]	BH16	BH17	BH18	BH19	BH19	BH20	BH20	BH21	BH21	BH22	BH22	BH23	BH23	BH24	BH24
	Envirolab	Industrial/	1.5-1.7	0.03-0.3	0.5-0.7	0.05-0.23	0.05-0.23	1.7-1.95	0.5-0.95	1.5-1.7	0.02-0.12	0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0.02-0.4	0.5-0.95	0.02-0.3	0.5-0.95	0.04-0.15	0.7-0.95	0.1-0.15	0.3-0.5	0.02-0.3	0.5-0.95	0-0.1	0.8-0.95
	Services	Commercial	F: Sandy Gravelly Clay	F: Silty Gravelly Sand	F: Silty Clay	F: Gravelly Sand	Laboratory Duplicate	F: Silty Clay	F: Silty Gravelly Clay	F: Silty Gravelly Clay	F: Gravelly Silty Sand	Laboratory Duplicate	F: Sandy Gravel	F: Sandy Gravel	F: Gravelly Silty Sand	F: Silty Gravelly Sand	F: Silty Clay	F: Silty Sand	F: Silty Clay	F: Silty Clay	F: Silty Clay	F: Gravelly Sand	F: Silty Clay	F: Silty Gravelly Sand	F: Sand	F: Silty Sand	F: Silty Clay
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	<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
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	<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
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	<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
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	<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
Perfluorooctanesulfonic acid PFOS	0.1	NSL	**0.5**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.2**	**3.0**	<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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	<0.1	<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	<0.1	<0.1
Perfluoroheptanoic 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	<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
Perfluorooctanoic acid PFOA	0.1	50,000	**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	<0.1	<0.1	**0.3**	<0.1
Perfluorononanoic 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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.1
Perfluorodecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5	<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	<5	<5	<5	<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	<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
6:2 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	<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
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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	<1	<1	<1	<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	<1	<1	<1	<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	<1	<1	<1	<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	<1	<1	<1	<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	<5	<5	<5	<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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	**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	<0.1	**1.2**	**3.0**	<0.1
Total Positive PFOS & PFOA	0.1	NSL	**0.6**	**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	**1.2**	**3.3**	<0.1
Total Positive PFAS	0.1	NSL	**0.6**	**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	**1.2**	**3.5**	<0.1

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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TABLE S10c
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - HUMAN HEALTH
Units are µg/Kg unless stated otherwise.

	PQL Envirolab Services	NEMP 2020 Industrial/ Commercial	BH25 0.1-0.3 F: Silty Clay	BH26 0.7-1 XW Siltstone	BH27 0.3-0.5 F: Gravelly Silty Sand	BH27 0.8-0.95 F: Silty Clay	BH28 0-0.1 F: Clayey Sand	BH28 1.5-1.95 F: Silty Clay	BH28 3-3.2 F: Silty Clay	BH29 0.5-0.95 F: Silty Clay	BH29 - [LAB_DUP] 0.5-0.95 Laboratory Duplicate	BH29 3-3.45 F: Silty Clay	BH30 0-0.1 F: Gravelly Sand	BH31 0.03-0.1 F: Gravelly Sand	BH32 0.03-0.3 F: Gravelly Sand	BH33 0.04-0.14 F: Gravelly Silty Sand	BH34 0.03-0.2 F: Gravelly Sand	BH35 0-0.15 F: Silty Clay	SDUP1 0.04-0.14 Duplicate of BH33	SDUP2 0-0.1 Duplicate of BH24	SDUP3 0.1-0.15 Duplicate of BH22	SDUP4 0.03-0.4 Duplicate of BH8	SDUP6 0.03-0.2 Duplicate of BH5	SDUP6 - [LAB_DUP] 0.03-0.2 Laboratory Duplicate	SDUP8 0.025-0.4 Duplicate of BH6	SDUP9 0.5-0.95 Duplicate of BH2	SDUP10 0.05-0.23 Duplicate of BH12
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	<0.1	<0.1	**<0.1**	**<0.1**	**0.2**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
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	<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
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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**	<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	<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
Perfluorooctanesulfonic acid PFOS	0.1	NSL	<0.1	<0.1	**0.2**	<0.1	**0.6**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**1.4**	<0.1	<0.1	<0.1	<0.1	**1.4**	<0.1	**2.4**	<0.1	**0.9**	<0.1	<0.1	<0.1	**0.4**	<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	<0.2	<0.2	<0.2	<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	**0.3**	<0.2	<0.2	<0.2	<0.2	<0.2	**0.3**	<0.2	<0.2	<0.2	<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	**0.3**	<0.2	<0.2	<0.2	<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	<0.1	<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	<0.1	<0.1
Perfluoroheptanoic 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	<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
Perfluorooctanoic acid PFOA	0.1	50,000	<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	**0.4**	<0.1	**0.2**	<0.1	**0.1**	<0.1	<0.1	<0.1	**0.2**	<0.1
Perfluorononanoic acid	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<5	<0.5	<0.5	<0.5	<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	<5	<5	<5	<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	<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
6:2 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	<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
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	<1	<0.2	<0.2	<0.2	<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	<1	<0.2	<0.2	<0.2	<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	<5	<1	<1	<1	<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	<5	<1	<1	<1	<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	<1	<1	<1	<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	<1	<1	<1	<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	<5	<5	<5	<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	<2	<0.2	<0.2	<0.2	<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	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.6**	<0.2	<0.2	<0.2	<0.2	<0.2
Total Positive PFHxS & PFOS	0.1	20,000	<0.1	<0.1	**0.2**	<0.1	**0.8**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**1.4**	<0.1	<0.1	<0.1	<0.1	**1.4**	<0.1	**2.4**	<0.1	**0.9**	<0.1	<0.1	<0.1	**0.5**	<0.1
Total Positive PFOS & PFOA	0.1	NSL	<0.1	<0.1	**0.2**	<0.1	**0.6**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**1.5**	<0.1	<0.1	<0.1	<0.1	**1.9**	<0.1	**2.6**	<0.1	**1.0**	<0.1	<0.1	<0.1	**0.5**	<0.1
Total Positive PFAS	0.1	NSL	<0.1	<0.1	**0.2**	<0.1	**1.1**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**2.1**	<0.1	<0.1	<0.1	<0.1	**2.4**	<0.1	**2.8**	<0.1	**1.6**	<0.1	<0.1	<0.1	**0.7**	<0.1

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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TABLE S11a
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - ECOLOGY
Units are µg/Kg unless stated otherwise.

	PQL	NEMP 2020	BH1	BH1 - [LAB_DUP]	BH1	BH1	BH2	BH2	BH3	BH3	BH4	BH4	BH5	BH5 - [LAB_DUP]	BH5	BH6	BH6	BH7	BH7	BH8	BH8 - [LAB_DUP]	BH8	BH8 - [LAB_DUP]	BH9	BH9	BH9	BH10
	Envirolab	Indirect exposure	0.03-0.4	0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95	0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2	0.03-0.2	0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5	0.03-0.4	0.03-0.4	0.5-0.95	0.5-0.95	0.035-0.08	0.4-0.5	1.2-1.3	0.04-0.45
	Services	All land use	F: Silty Gravelly Sand	Laboratory Duplicate	F:Silty Sand	F: Silty Clay	F: Silty Gravlley Sand	F: Silty Sandy Clay	F: Silty Gravelly Sand	F: Silty Clay	F:Silty Gravelly Sand	F: Silty Clay	F: Gravelly Sand	Laboratory Duplicate	F: Silty Clay	F: Silty Gravelly Sand	F: Silty Clay	F: Gravelly Sand	F: Silty Clay	F: Silty Sand	Laboratory Duplicate	F: Gravelly Clay	Laboratory Duplicate	F: Gravelly Silty Sand	F: Gravelly Silty Sand	F: Silty Clay	F: Silty Gravelly Sand
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	<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
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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.3**	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	0.1	NSL	**0.5**	**0.5**	<0.1	<0.1	**0.5**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.1**	**0.1**	**0.4**	<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	<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
Perfluorooctanesulfonic acid PFOS	0.1	10	**5.1**	**4.8**	**0.5**	**0.2**	**7.8**	**0.3**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.9**	**1.0**	**1.3**	**0.8**	**2.3**	**1.0**	**1.4**	**0.8**
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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	**0.2**	**0.2**	<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	**0.4**	<0.1	<0.1	<0.1
Perfluoroheptanoic 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	<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
Perfluorooctanoic acid PFOA	0.1	NSL	**0.2**	**0.2**	<0.1	<0.1	**0.3**	<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**	**0.3**	**0.2**	**0.5**	<0.1	<0.1	<0.1
Perfluorononanoic 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	<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
Perfluorodecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5	<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	<5	<5	<5	<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	<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
6:2 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	<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
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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	<1	<1	<1	<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	<1	<1	<1	<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	<1	<1	<1	<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	<1	<1	<1	<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	<5	<5	<5	<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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.9**	**0.9**	<0.2	<0.2	**0.6**	**0.5**	<0.2	<0.2
Total Positive PFHxS & PFOS	0.1	NSL	**5.6**	**5.3**	**0.5**	**0.2**	**8.3**	**0.5**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.9**	**1.0**	**1.4**	**0.9**	**2.8**	**1.0**	**1.4**	**0.8**
Total Positive PFOS & PFOA	0.1	NSL	**5.3**	**5**	**0.5**	**0.2**	**8.0**	**0.3**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.0**	**1.1**	**1.6**	**1.0**	**2.8**	**1.0**	**1.4**	**0.8**
Total Positive PFAS	0.1	NSL	**6.1**	**5.8**	**0.5**	**0.2**	**8.8**	**0.5**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.9**	**2.1**	**1.7**	**1.1**	**4.9**	**1.5**	**1.4**	**0.8**

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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TABLE S11b
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - ECOLOGY
Units are µg/Kg unless stated otherwise.

	PQL	NEMP 2020	BH10	BH11	BH11	BH12	BH12 - [LAB_DUP]	BH12	BH13	BH13	BH14	BH14 - [LAB_DUP]	BH16	BH17	BH18	BH19	BH19	BH20	BH20	BH21	BH21	BH22	BH22	BH23	BH23	BH24	BH24
	Envirolab	Indirect exposure	1.5-1.7	0.03-0.3	0.5-0.7	0.05-0.23	0.05-0.23	1.7-1.95	0.5-0.95	1.5-1.7	0.02-0.12	0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0.02-0.4	0.5-0.95	0.02-0.3	0.5-0.95	0.04-0.15	0.7-0.95	0.1-0.15	0.3-0.5	0.02-0.3	0.5-0.95	0-0.1	0.8-0.95
	Services	All land use	F: Sandy Gravelly Clay	F: Silty Gravelly Sand	F: Silty Clay	F: Gravelly Sand	Laboratory Duplicate	F: Silty Clay	F: Silty Gravelly Clay	F: Silty Gravelly Clay	F: Gravelly Silty Sand	Laboratory Duplicate	F: Sandy Gravel	F: Sandy Gravel	F: Gravelly Silty Sand	F: Gravelly Silty Sand	F: Silty Clay	F: Silty Sand	F: Silty Clay	F: Silty Clay	F: Silty Clay	F: Gravelly Sand	F: Silty Clay	F: Silty Gravelly Sand	F: Sand	F: Silty Sand	F: Silty Clay
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	<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
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	<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
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	<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
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	<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
Perfluorooctanesulfonic acid PFOS	0.1	10	**0.5**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.2**	**3.0**	<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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	<0.1	<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	<0.1	<0.1
Perfluoroheptanoic 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	<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
Perfluorooctanoic acid PFOA	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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.3**	<0.1
Perfluorononanoic 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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.1
Perfluorodecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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	<0.5	<0.5	<0.5	<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	<5	<5	<5	<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	<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
6:2 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	<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
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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	<1	<1	<1	<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	<1	<1	<1	<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	<1	<1	<1	<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	<1	<1	<1	<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	<5	<5	<5	<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	<0.2	<0.2	<0.2	<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	<0.2	<0.2	<0.2	<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	**0.5**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.2**	**3.0**	<0.1
Total Positive PFOS & PFOA	0.1	NSL	**0.6**	**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	**1.2**	**3.3**	<0.1
Total Positive PFAS	0.1	NSL	**0.6**	**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	**1.2**	**3.5**	<0.1

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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TABLE S11c
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - ECOLOGY
Units are µg/Kg unless stated otherwise.

	PQL	NEMP 2020	BH25	BH26	BH27	BH27	BH28	BH28	BH28	BH29	BH29 - [LAB_DUP]	BH29	BH30	BH31	BH32	BH33	BH34	BH35	SDUP1	SDUP2	SDUP3	SDUP4	SDUP6	SDUP6 - [LAB_DUP]	SDUP8	SDUP9	SDUP10
	Envirolab	Indirect exposure	0.1-0.3	0.7-1	0.3-0.5	0.8-0.95	0-0.1	1.5-1.95	3-3.2	0.5-0.95	0.5-0.95	3-3.45	0-0.1	0.03-0.1	0.03-0.3	0.04-0.14	0.03-0.2	0-0.15	0.04-0.14	0-0.1	0.1-0.15	0.03-0.4	0.03-0.2	0.03-0.2	0.025-0.4	0.5-0.95	0.05-0.23
	Services	All land use	F: Silty Clay	XW Siltstone	F: Gravelly Silty Sand	F: Silty Clay	F: Clayey Sand	F: Silty Clay	F: Silty Clay	F: Silty Clay	Laboratory Duplicate	F: Silty Clay	F: Gravelly Sand	F: Gravelly Sand	F: Gravelly Sand	F: Gravelly Silty Sand	F: Gravelly Sand	F: Silty Clay	Duplicate of BH33	Duplicate of BH24	Duplicate of BH22	Duplicate of BH8	Duplicate of BH5	Laboratory Duplicate	Duplicate of BH6	Duplicate of BH2	Duplicate of BH12
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	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
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	<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
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	<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	**0.2**	<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	<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
Perfluorooctanesulfonic acid PFOS	0.1	10	<0.1	<0.1	**0.2**	<0.1	**0.6**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**1.4**	<0.1	<0.1	<0.1	<0.1	**1.4**	<0.1	**2.4**	<0.1	**0.9**	<0.1	<0.1	<0.1	**0.4**	<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	<0.2	<0.2	<0.2	<0.2	<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	**0.3**	<0.2	<0.2	<0.2	<0.2	<0.2	**0.3**	<0.2	<0.2	<0.2	<0.2	<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	**0.3**	<0.2	<0.2	<0.2	<0.2	<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	<0.1	<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	<0.1	<0.1	<0.1
Perfluoroheptanoic 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	<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
Perfluorooctanoic acid PFOA	0.1	NSL	<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	**0.4**	<0.1	**0.2**	<0.1	**0.1**	<0.1	<0.1	<0.1	**0.2**	<0.1
Perfluorononanoic acid	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	0.5	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
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	<5	<0.5	<0.5	<0.5	<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	<5	<5	<5	<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	<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
6:2 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	<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
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	<1	<0.2	<0.2	<0.2	<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	<1	<0.2	<0.2	<0.2	<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	<5	<1	<1	<1	<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	<5	<1	<1	<1	<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	<1	<1	<1	<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	<1	<1	<1	<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	<5	<5	<5	<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	<2	<0.2	<0.2	<0.2	<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	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.6**	<0.2	<0.2	<0.2	<0.2	<0.2
Total Positive PFHxS & PFOS	0.1	NSL	<0.1	<0.1	**0.2**	<0.1	**0.8**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**1.4**	<0.1	<0.1	<0.1	<0.1	**1.4**	<0.1	**2.4**	<0.1	**0.9**	<0.1	<0.1	<0.1	**0.5**	<0.1
Total Positive PFOS & PFOA	0.1	NSL	<0.1	<0.1	**0.2**	<0.1	**0.6**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**1.5**	<0.1	<0.1	<0.1	<0.1	**1.9**	<0.1	**2.6**	<0.1	**1.0**	<0.1	<0.1	<0.1	**0.5**	<0.1
Total Positive PFAS	0.1	NSL	<0.1	<0.1	**0.2**	<0.1	**1.1**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**2.1**	<0.1	<0.1	<0.1	<0.1	**2.4**	<0.1	**2.8**	<0.1	**1.6**	<0.1	<0.1	<0.1	**0.7**	<0.1

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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TABLE S12a
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - WASTE CLASSIFICATION
Units are µg/Kg unless stated otherwise.

	PQL			BH1	BH1 - [LAB_DUP]	BH1	BH1	BH2	BH2	BH3	BH3	BH4	BH4	BH5	BH5 - [LAB_DUP]	BH5	BH6	BH6	BH7	BH7	BH8	BH8 - [LAB_DUP]	BH8	BH8 - [LAB_DUP]	BH9	BH9	BH9	BH10
	Envirolab Services	SCC1	SCC2	0.03-0.4 F: Silty Gravelly Sand	0.03-0.4 Laboratory Duplicate	0.5-0.7 F:Silty Sand	1.5-1.7 F: Silty Clay	0.02-0.4 F: Silty Gravley Sand	0.5-0.95 F: Silty Sandy Clay	0.01-0.1 F: Silty Gravelly Sand	0.5-0.95 F: Silty Clay	0.02-0.3 F:Silty Gravelly Sand	0.5-0.95 F: Silty Clay	0.03-0.2 F: Gravelly Sand	0.03-0.2 Laboratory Duplicate	0.4-0.5 F: Silty Clay	0.025-0.4 F: Silty Gravelly Sand	0.5-0.95 F: Silty Clay	0.05-0.1 F: Gravelly Sand	0.3-0.5 F: Silty Clay	0.03-0.4 F: Silty Sand	0.03-0.4 Laboratory Duplicate	0.5-0.95 F: Gravelly Clay	0.5-0.95 Laboratory Duplicate	0.035-0.08 F: Gravelly Silty Sand	0.4-0.5 F: Gravelly Silty Sand	1.2-1.3 F: Silty Clay	0.04-0.45 F: Silty Gravelly Sand
PFAS Compound																												
Perfluorobutanesulfonic acid	0.1	NSL	NSL	<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	**0.1**	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	0.1	NSL	NSL	**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	**0.3**	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	0.1	NSL	NSL	**0.5**	**0.5**	<0.1	<0.1	**0.5**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.1**	**0.1**	**0.4**	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	0.1	NSL	NSL	**5.1**	**4.8**	**0.5**	**0.2**	**7.8**	**0.3**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.9**	**1.0**	**1.3**	**0.8**	**2.3**	**1.0**	**1.4**	**0.8**
Perfluorodecanesulfonic acid	0.2	NSL	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	**0.2**	**0.2**	<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	**0.4**	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	0.1	NSL	NSL	<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	**0.2**	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	0.1	18,000	72,000	**0.2**	**0.2**	<0.1	<0.1	**0.3**	<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**	**0.3**	**0.2**	**0.5**	<0.1	<0.1	<0.1
Perfluorononanoic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorotridecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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	NSL	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4:2 FTS	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
6:2 FTS	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
8:2 FTS	0.1	NSL	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	1	NSL	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	1	NSL	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	1	NSL	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	5	NSL	NSL	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MePerfluorooctanesulf-amid oacetic acid	0.2	NSL	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.9**	**0.9**	<0.2	<0.2	**0.6**	**0.5**	<0.2	<0.2
Total Positive PFHxS & PFOS	0.1	1800	7,200	**5.6**	**5.3**	**0.5**	**0.2**	**8.3**	**0.5**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.9**	**1.0**	**1.4**	**0.9**	**2.8**	**1.0**	**1.4**	**0.8**
Total Positive PFOS & PFOA	0.1	NSL	NSL	**5.3**	**5.0**	**0.5**	**0.2**	**8.0**	**0.3**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.0**	**1.1**	**1.6**	**1.0**	**2.8**	**1.0**	**1.4**	**0.8**
Total Positive PFAS	0.1	NSL	NSL	**6.1**	**5.8**	**0.5**	**0.2**	**8.8**	**0.5**	**0.5**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.9**	**2.1**	**1.7**	**1.1**	**4.9**	**1.5**	**1.4**	**0.8**

Positive PFAS Result	**bold**
Result above SCC1 Criteria	**Bold**
Result above SCC2 Criteria	**Bold**

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TABLE S12b
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - WASTE CLASSIFICATION
Units are µg/Kg unless stated otherwise.

	PQL			BH10	BH11	BH11	BH12	BH12 - [LAB_DUP]	BH12	BH13	BH13	BH14	BH14 - [LAB_DUP]	BH16	BH17	BH18	BH19	BH19	BH20	BH20	BH21	BH21	BH22	BH22	BH23	BH23	BH24	BH24
	Envirolab	SCC1	SCC2	1.5-1.7	0.03-0.3	0.5-0.7	0.05-0.23	0.05-0.23	1.7-1.95	0.5-0.95	1.5-1.7	0.02-0.12	0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0.02-0.4	0.5-0.95	0.02-0.3	0.5-0.95	0.04-0.15	0.7-0.95	0.1-0.15	0.3-0.5	0.02-0.3	0.5-0.95	0-0.1	0.8-0.95
	Services			F: Sandy Gravelly Clay	F: Silty Gravelly Sand	F: Silty Clay	F: Gravelly Sand	Laboratory Duplicate	F: Silty Clay	F: Silty Gravelly Clay	F: Silty Gravelly Clay	F: Gravelly Silty Sand	Laboratory Duplicate	F: Sandy Gravel	F: Sandy Gravel	F: Gravelly Silty Sand	F: Silty Gravelly Sand	F: Silty Clay	F: Silty Sand	F: Silty Clay	F: Silty Clay	F: Silty Clay	F: Gravelly Sand	F: Silty Clay	F: Silty Gravelly Sand	F: Sand	F: Silty Sand	F: Silty Clay
PFAS Compound																												
Perfluorobutanesulfonic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	0.1	NSL	NSL	**0.5**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.2**	**3.0**	<0.1
Perfluorodecanesulfonic acid	0.2	NSL	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	0.1	18,000	72,000	**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	<0.1	<0.1	**0.3**	<0.1
Perfluorononanoic acid	0.1	NSL	NSL	<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	<0.1	<0.1	**0.2**	<0.1
Perfluorodecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorotridecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<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	NSL	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4:2 FTS	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
6:2 FTS	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
8:2 FTS	0.1	NSL	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	1	NSL	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	1	NSL	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	1	NSL	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	5	NSL	NSL	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MePerfluorooctanesulf-amid oacetic acid	0.2	NSL	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	1800	7,200	**0.5**	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**1.2**	**3.0**	<0.1
Total Positive PFOS & PFOA	0.1	NSL	NSL	**0.6**	**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	**1.2**	**3.3**	<0.1
Total Positive PFAS	0.1	NSL	NSL	**0.6**	**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	**1.2**	**3.5**	<0.1

Postive PFAS Result **Bold**
Result above SCC1 Criteria **Bold**
Result above SCC2 Criteria **Bold**

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TABLE S12c
SUMMARY OF PFAS CONCENTRATIONS IN SOIL - WASTE CLASSIFICATION
Units are µg/Kg unless stated otherwise.

	PQL			BH25	BH26	BH27	BH27	BH28	BH28	BH28	BH29	BH29 - [LAB_DUP]	BH29	BH30	BH31	BH32	BH33	BH34	BH35	SDUP1	SDUP2	SDUP3	SDUP4	SDUP6	SDUP6 - [LAB_DUP]	SDUP8	SDUP9	SDUP10
	Envirolab	SCC1	SCC2	0.1-0.3	0.7-1	0.3-0.5	0.8-0.95	0-0.1	1.5-1.95	3-3.2	0.5-0.95	0.5-0.95	3-3.45	0-0.1	0.03-0.1	0.03-0.3	0.04-0.14	0.03-0.2	0-0.15	0.04-0.14	0-0.1	0.1-0.15	0.03-0.4	0.03-0.2	0.03-0.2	0.03-0.2	0.025-0.4	0.5-0.95	0.05-0.23
	Services			F: Silty Clay	XW Siltstone	F: Gravelly Silty Sand	F: Silty Clay	F: Clayey Sand	F: Silty Clay	F: Silty Clay	F: Silty Clay	Laboratory Duplicate	F: Silty Clay	F: Gravelly Sand	F: Gravelly Sand	F: Gravelly Sand	F: Gravelly Silty Sand	F: Gravelly Sand	F: Silty Clay	Duplicate of BH33	Duplicate of BH24	Duplicate of BH22	Duplicate of BH8	Duplicate of BH5	Laboratory Duplicate	Duplicate of BH6	Duplicate of BH2	Duplicate of BH12
PFAS Compound																												
Perfluorobutanesulfonic acid	0.1	NSL	NSL	<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	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	0.1	NSL	NSL	<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	<0.1	<0.1	**0.2**	<0.1
Perfluoroheptanesulfonic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	0.1	NSL	NSL	<0.1	<0.1	**0.2**	<0.1	**0.6**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**1.4**	<0.1	<0.1	<0.1	<0.1	**1.4**	<0.1	**2.4**	<0.1	**0.9**	<0.1	<0.1	<0.1	**0.4**	<0.1
Perfluorodecanesulfonic acid	0.2	NSL	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	**0.3**	<0.2	<0.2	<0.2	<0.2	<0.2	**0.3**	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.3**	<0.2	<0.2	<0.2	<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	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	0.1	18,000	72,000	<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	**0.4**	<0.1	**0.2**	<0.1	**0.1**	<0.1	<0.1	<0.1	**0.2**	<0.1
Perfluorononanoic acid	0.1	NSL	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorotridecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	5	NSL	NSL	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
4:2 FTS	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
6:2 FTS	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1
8:2 FTS	0.1	NSL	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.2	<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	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	1	NSL	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	1	NSL	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	1	NSL	NSL	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	5	NSL	NSL	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
MePerfluorooctanesulf-amid oacetic acid	0.2	NSL	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<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	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	**0.6**	<0.2	<0.2	<0.2	<0.2	<0.2
Total Positive PFHxS & PFOS	0.1	1800	7,200	<0.1	<0.1	**0.2**	<0.1	**0.8**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**1.4**	<0.1	<0.1	<0.1	<0.1	**1.4**	<0.1	**2.4**	<0.1	**0.9**	<0.1	<0.1	<0.1	**0.5**	<0.1
Total Positive PFOS & PFOA	0.1	NSL	NSL	<0.1	<0.1	**0.2**	<0.1	**0.6**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**1.5**	<0.1	<0.1	<0.1	<0.1	**1.9**	<0.1	**2.6**	<0.1	**1.0**	<0.1	<0.1	<0.1	**0.5**	<0.1
Total Positive PFAS	0.1	NSL	NSL	<0.1	<0.1	**0.2**	<0.1	**1.1**	**0.2**	**0.3**	**0.2**	**0.2**	**0.2**	**2.1**	<0.1	<0.1	<0.1	<0.1	**2.4**	<0.1	**2.8**	<0.1	**1.6**	<0.1	<0.1	<0.1	**0.7**	<0.1

Positive PFAS Result	**Bold**
Result above SCC1 Criteria	**Bold**
Result above SCC2 Criteria	**Bold**

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TABLE S13a
SUMMARY OF PFAS CONCENTRATIONS IN TCLP LEACHATE - WASTE CLASSIFICATION
Units are µg/L unless stated otherwise.

	PQL Envirolab Services	TCLP1	TCLP2	BH1 0.03-0.4	BH1 - [LAB_DUP] 0.03-0.4	BH1 0.5-0.7	BH1 1.5-1.7	BH2 0.02-0.4	BH2 0.5-0.95	BH3 0.01-0.1	BH3 0.5-0.95	BH4 0.02-0.3	BH4 0.5-0.95	BH5 0.03-0.2	BH5 - [LAB_DUP] 0.03-0.2	BH5 0.4-0.5	BH6 0.025-0.4	BH6 0.5-0.95	BH7 0.05-0.1	BH7 0.3-0.5	BH8 0.03-0.4	BH9 0.035-0.08	BH9 - [LAB_DUP] 0.035-0.08	BH10 0.5-0.95	BH11 0.03-0.3	BH11 0.5-0.7	BH12 0.05-0.23	BH12 - [LAB_DUP] 0.05-0.23	BH12 1.7-1.95	BH13 0.5-0.95
PFAS Compound																														
Perfluorobutanesulfonic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.02**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	0.01	NSL	NSL	**0.03**	**0.02**	<0.01	<0.01	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.02**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	0.01	NSL	NSL	**0.21**	**0.2**	**0.02**	<0.01	**0.4**	**0.01**	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.04**	**0.09**	**0.08**	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	0.01	NSL	NSL	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.02**	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	0.01	500	2,000	<0.01	<0.01	<0.01	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	0.05	NSL	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
N-Methyl perfluorooctane sulfonamide	0.05	NSL	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfon amide	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	0.05	NSL	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf-amid oacetic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Positive PFHxS & PFOS	0.01	50	200	**0.24**	**0.22**	**0.02**	<0.01	**0.42**	**0.01**	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.04**	**0.11**	**0.1**	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	0.01	NSL	NSL	**0.21**	**0.2**	**0.02**	<0.01	**0.41**	**0.01**	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.04**	**0.12**	**0.11**	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	0.01	NSL	NSL	**0.25**	**0.22**	**0.02**	<0.01	**0.44**	**0.01**	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.04**	**0.2**	**0.18**	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Positive PFAS Result **Bold**
Result above TCLP1 Criteria **Bold**
Result above TCLP2 Criteria **Bold**

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TABLE S13b
SUMMARY OF PFAS CONCENTRATIONS IN TCLP LEACHATE - WASTE CLASSIFICATION
Units are µg/L unless stated otherwise.

	PQL Envirolab Services	TCLP1	TCLP2	BH14 0.02-0.12	BH14 - [LAB_DUP] 0.02-0.12	BH16 0.01-0.2	BH17 0.05-0.15	BH18 0.01-0.15	BH19 0.02-0.4	BH19 0.5-0.95	BH20 0.02-0.3	BH21 0.04-0.15	BH21 0.7-0.95	BH22 0.1-0.15	BH23 0.02-0.3	BH23 0.5-0.95	BH24 0-0.1	BH24 0.8-0.95	BH25 0.1-0.3	BH26 0.7-1	BH27 0.3-0.5	BH28 0-0.1	BH28 1.5-1.95	BH29 0.5-0.95	BH29 3.3-3.45	BH30 0-0.1	BH31 0.03-0.1	BH32 0.03-0.3	BH33 0.04-0.14	BH34 0.03-0.2	BH34 - [LAB_DUP] 0.03-0.2	BH35 0-0.15
PFAS Compound																																
Perfluorobutanesulfonic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	0.01	500	2,000	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	0.05	NSL	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
N-Methyl perfluorooctane sulfonamide	0.05	NSL	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfon amide	0.1	NSL	NSL	<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	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	0.05	NSL	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	0.5	NSL	NSL	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf-amid oacetic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	0.02	NSL	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Positive PFHxS & PFOS	0.01	50	200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	0.01	NSL	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Positive PFAS Result **Bold**
Result above TCLP1 Criteria **Bold**
Result above TCLP2 Criteria **Bold**

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TABLE S14a
SUMMARY OF PFAS CONCENTRATIONS IN ASLP LEACHATE
Units are µg/L unless stated otherwise.

	PQL Envirolab Services	SAC	BH1 0.03-0.4	BH1 - [LAB_DUP] 0.03-0.4	BH1 0.5-0.7	BH1 1.5-1.7	BH2 0.02-0.4	BH2 0.5-0.95	BH3 0.01-0.1	BH3 0.5-0.95	BH4 0.02-0.3	BH4 0.5-0.95	BH5 0.03-0.2	BH5 - [LAB_DUP] 0.03-0.2	BH5 0.4-0.5	BH6 0.025-0.4	BH6 0.5-0.95	BH7 0.05-0.1	BH7 0.3-0.5	BH8 0.03-0.4	BH8 - [LAB_DUP] 0.03-0.4	BH9 0.035-0.08	BH10 0.5-0.95	BH11 0.03-0.3	BH11 0.5-0.7	BH12 0.05-0.23	BH12 - [LAB_DUP] 0.05-0.23	BH12 1.7-1.95	BH13 0.5-0.95
PFAS Compound																													
Perfluorobutanesulfonic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.04**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	0.01	NSL	**0.02**	**0.02**	<0.01	<0.01	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.04**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	0.01	NSL	**0.21**	**0.17**	**0.02**	<0.01	**0.33**	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	**0.11**	**0.03**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	0.01	NSL	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.05**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic 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	<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
Perfluorotetradecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	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	<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
N-Methyl perfluorooctane sulfonamide	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<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	<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
N-Me perfluorooctanesulfonamid oethanol	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf-amid oacetic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Positive PFHxS & PFOS	0.01	NSL	**0.23**	**0.19**	**0.02**	<0.01	**0.35**	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	**0.16**	**0.03**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	0.01	NSL	**0.21**	**0.17**	**0.02**	<0.01	**0.33**	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	**0.14**	**0.03**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	0.01	NSL	**0.24**	**0.19**	**0.02**	<0.01	**0.35**	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	**0.33**	**0.03**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Positive PFAS Result **Bold**

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TABLE S14b
SUMMARY OF PFAS CONCENTRATIONS IN ASLP LEACHATE
Units are µg/L unless stated otherwise.

	PQL Envirolab Services	SAC	BH14 0.02-0.12	BH14 - [LAB_DUP] 0.02-0.12	BH16 0.01-0.2	BH17 0.05-0.15	BH18 0.01-0.15	BH19 0.02-0.4	BH19 0.5-0.95	BH20 0.02-0.3	BH21 0.04-0.15	BH21 0.7-0.95	BH22 0.1-0.15	BH23 0.02-0.3	BH23 0.5-0.95	BH24 0-0.1	BH24 0.8-0.95	BH25 0.1-0.3	BH26 0.7-1	BH27 0.3-0.5	BH28 0-0.1	BH28 1.5-1.95	BH29 0.5-0.95	BH29 - [LAB_DUP] 0.5-0.95	BH29 3.3-3.45	BH29 - [LAB_DUP] 3.3-3.45	BH30 0-0.1	BH31 0.03-0.1	BH32 0.03-0.3	BH33 0.04-0.14	BH34 0.03-0.2	BH35 0-0.15
PFAS Compound																																
Perfluorobutanesulfonic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.02**
Perfluoropentanesulfonic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic 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	<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
Perfluorotetradecanoic 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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	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	<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
N-Methyl perfluorooctane sulfonamide	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<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	<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	<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	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<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	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf-amid oacetic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	0.02	NSL	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Positive PFHxS & PFOS	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.03**	**0.02**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	**0.02**

Positive PFAS Result **Bold**

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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						
			MW18	MW18 [LAB_DUP]	MW26	MW26 [LAB_DUP]	MW29	WDUP1	WDUP2
Inorganic Compounds and Parameters									
pH	-	6.5 - 8.5	5.8	NA	5	NA	6.3	NA	NA
Electrical Conductivity (µS/cm)	1	NSL	**4000**	NA	**2600**	NA	**1200**	NA	NA
Metals and Metalloids									
Arsenic (As III)	1	24	<1	<1	<1	NA	<1	<1	<1
Cadmium	0.1	0.2	<0.1	<0.1	**0.7**	NA	<0.1	**0.8**	<0.1
Chromium (SAC for Cr III adopted)	1	3.3	<1	<1	**1**	NA	<1	**1**	<1
Copper	1	1.4	**4**	**4**	**190**	NA	<1	**190**	**2**
Lead	1	3.4	<1	<1	**7**	NA	<1	**8**	<1
Total Mercury (inorganic)	0.05	0.06	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.05
Nickel	1	11	**100**	**100**	**250**	NA	**92**	**250**	**110**
Zinc	1	8	**400**	**400**	**1100**	NA	**59**	**1100**	**440**
Total Recoverable Hydrocarbons (TRH)									
TRH F1	10	NSL	<10	NA	<10	<10	<10	<10	<10
TRH F2	50	NSL	<50	NA	<50	NA	<50	<50	<50
TRH F3	100	NSL	<100	NA	<100	NA	<100	<100	<100
TRH F4	100	NSL	<100	NA	<100	NA	<100	<100	<100
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)									
Benzene	1	950	<1	NA	<1	<1	<1	<1	<1
Toluene	1	180	<1	NA	<1	<1	<1	<1	<1
Ethylbenzene	1	80	<1	NA	<1	<1	<1	<1	<1
m+p-xylene	2	75	<2	NA	<2	<2	<2	<2	<2
o-xylene	1	350	<1	NA	<1	<1	<1	<1	<1
Total xylenes	2	NSL	<2	NA	<2	<2	<2	<2	<2
Volatile Organic Compounds (VOCs), including chlorinated VOCs									
Dichlorodifluoromethane	10	NSL	<10	NA	<10	<10	<10	<10	<10
Chloromethane	10	NSL	<10	NA	<10	<10	<10	<10	<10
Vinyl Chloride	10	100	<10	NA	<10	<10	<10	<10	<10
Bromomethane	10	NSL	<10	NA	<10	<10	<10	<10	<10
Chloroethane	10	NSL	<10	NA	<10	<10	<10	<10	<10
Trichlorofluoromethane	10	NSL	<10	NA	<10	<10	<10	<10	<10
1,1-Dichloroethene	1	700	<1	NA	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,1-dichloroethane	1	90	<1	NA	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	1	NSL	<1	NA	<1	<1	<1	<1	<1
Bromochloromethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Chloroform	1	370	<1	NA	5	5	10	5	<1
2,2-dichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2-dichloroethane	1	1900	<1	NA	<1	<1	<1	<1	<1
1,1,1-trichloroethane	1	270	<1	NA	<1	<1	<1	<1	<1
1,1-dichloropropene	1	NSL	<1	NA	<1	<1	<1	<1	<1
Cyclohexane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Carbon tetrachloride	1	240	<1	NA	<1	<1	<1	<1	<1
Benzene	1	950	<1	NA	<1	<1	<1	<1	<1
Dibromomethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2-dichloropropane	1	900	<1	NA	<1	<1	<1	<1	<1
Trichloroethene	1	330	<1	NA	<1	<1	<1	<1	<1
Bromodichloromethane	1	NSL	<1	NA	**1**	**1**	<1	**1**	<1
trans-1,3-dichloropropene	1	NSL	<1	NA	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,1,2-trichloroethane	1	6500	<1	NA	<1	<1	<1	<1	<1
Toluene	1	180	<1	NA	<1	<1	<1	<1	<1
1,3-dichloropropane	1	1100	<1	NA	<1	<1	<1	<1	<1
Dibromochloromethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2-dibromoethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Tetrachloroethene	1	70	<1	NA	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Chlorobenzene	1	55	<1	NA	<1	<1	<1	<1	<1
Ethylbenzene	1	80	<1	NA	<1	<1	<1	<1	<1
Bromoform	1	NSL	<1	NA	<1	<1	<1	<1	<1
m+p-xylene	2	75	<2	NA	<2	<2	<2	<2	<2
Styrene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	1	400	<1	NA	<1	<1	<1	<1	<1
o-xylene	1	350	<1	NA	<1	<1	<1	<1	<1
1,2,3-trichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Isopropylbenzene	1	30	<1	NA	<1	<1	<1	<1	<1
Bromobenzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
n-propyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
2-chlorotoluene	1	NSL	<1	NA	<1	<1	<1	<1	<1
4-chlorotoluene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
Tert-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,3-dichlorobenzene	1	260	<1	NA	<1	<1	<1	<1	<1
Sec-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,4-dichlorobenzene	1	60	<1	NA	<1	<1	<1	<1	<1
4-isopropyl toluene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2-dichlorobenzene	1	160	<1	NA	<1	<1	<1	<1	<1
n-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	1	85	<1	NA	<1	<1	<1	<1	<1
Hexachlorobutadiene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	1	3	<1	NA	<1	<1	<1	<1	<1
Polycyclic Aromatic Hydrocarbons (PAHs)									
Naphthalene	0.1	16	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Acenaphthylene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Acenaphthene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Fluorene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Phenanthrene	0.1	0.6	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Anthracene	0.1	0.01	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Fluoranthene	0.1	1	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Pyrene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Benzo(a)anthracene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Chrysene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	0.2	NSL	<0.2	NA	<0.2	NA	<0.2	<0.2	<0.2
Benzo(a)pyrene	0.1	0.1	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	0.1	NSL	<0.1	NA	<0.1	NA	<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						
			MW18	MW18 [LAB_DUP]	MW26	MW26 [LAB_DUP]	MW29	WDUP1	WDUP2
Inorganic Compounds and Parameters									
pH	-	6.5 - 8.5	5.8	NA	5	NA	6.3	NA	NA
Electrical Conductivity (µS/cm)	1	NSL	**4000**	NA	**2600**	NA	**1200**	NA	NA
Metals and Metalloids									
Arsenic (As III)	1	100	<1	<1	<1	NA	<1	<1	<1
Cadmium	0.1	20	<0.1	<0.1	**0.7**	NA	<0.1	**0.8**	<0.1
Chromium (total)	1	500	<1	<1	**1**	NA	<1	**1**	<1
Copper	1	20000	**4**	**4**	**190**	NA	<1	**190**	**2**
Lead	1	100	<1	<1	**7**	NA	<1	**8**	<1
Total Mercury (inorganic)	0.05	10	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.05
Nickel	1	200	**100**	**100**	**250**	NA	**92**	**250**	**110**
Zinc	1	30000	**400**	**400**	**1100**	NA	**59**	**1100**	**440**
Total Recoverable Hydrocarbons (TRH)									
TRH F1	10	NSL	<10	NA	<10	<10	<10	<10	<10
TRH F2	50	NSL	<50	NA	<50	NA	<50	<50	<50
TRH F3	100	NSL	<100	NA	<100	NA	<100	<100	<100
TRH F4	100	NSL	<100	NA	<100	NA	<100	<100	<100
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)									
Benzene	1	10	<1	NA	<1	<1	<1	<1	<1
Toluene	1	8000	<1	NA	<1	<1	<1	<1	<1
Ethylbenzene	1	3000	<1	NA	<1	<1	<1	<1	<1
m+p-xylene	2	NSL	<2	NA	<2	<2	<2	<2	<2
o-xylene	1	NSL	<1	NA	<1	<1	<1	<1	<1
Total xylenes	2	6000	<2	NA	<2	<2	<2	<2	<2
Volatile Organic Compounds (VOCs), including chlorinated VOCs									
Dichlorodifluoromethane	10	NSL	<10	NA	<10	<10	<10	<10	<10
Chloromethane	10	NSL	<10	NA	<10	<10	<10	<10	<10
Vinyl Chloride	10	3	<10	NA	<10	<10	<10	<10	<10
Bromomethane	10	NSL	<10	NA	<10	<10	<10	<10	<10
Chloroethane	10	NSL	<10	NA	<10	<10	<10	<10	<10
Trichlorofluoromethane	10	NSL	<10	NA	<10	<10	<10	<10	<10
1,1-Dichloroethene	1	300	<1	NA	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	1	600	<1	NA	<1	<1	<1	<1	<1
1,1-dichloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	1	600	<1	NA	<1	<1	<1	<1	<1
Bromochloromethane	1	2500	<1	NA	<1	<1	<1	<1	<1
Chloroform	1		<1	NA	5	5	10	5	<1
2,2-dichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2-dichloroethane	1	30	<1	NA	<1	<1	<1	<1	<1
1,1,1-trichloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,1-dichloropropene	1	NSL	<1	NA	<1	<1	<1	<1	<1
Cyclohexane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Carbon tetrachloride	1	30	<1	NA	<1	<1	<1	<1	<1
Benzene	1	10	<1	NA	<1	<1	<1	<1	<1
Dibromomethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2-dichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Trichloroethene	1	NSL	<1	NA	<1	<1	<1	<1	<1
Bromodichloromethane	1	NSL	<1	NA	**1**	**1**	<1	**1**	<1
trans-1,3-dichloropropene	1	1000	<1	NA	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	1	1000	<1	NA	<1	<1	<1	<1	<1
1,1,2-trichloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Toluene	1	8000	<1	NA	<1	<1	<1	<1	<1
1,3-dichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Dibromochloromethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2-dibromoethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Tetrachloroethene	1	500	<1	NA	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Chlorobenzene	1	3000	<1	NA	<1	<1	<1	<1	<1
Ethylbenzene	1	3000	<1	NA	<1	<1	<1	<1	<1
Bromoform	1	NSL	<1	NA	<1	<1	<1	<1	<1
m+p-xylene	2	NSL	<2	NA	<2	<2	<2	<2	<2
Styrene	1	300	<1	NA	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1
o-xylene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2,3-trichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1
Isopropylbenzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
Bromobenzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
n-propyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
2-chlorotoluene	1	NSL	<1	NA	<1	<1	<1	<1	<1
4-chlorotoluene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
Tert-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,3-dichlorobenzene	1	200	<1	NA	<1	<1	<1	<1	<1
Sec-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,4-dichlorobenzene	1	400	<1	NA	<1	<1	<1	<1	<1
4-isopropyl toluene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2-dichlorobenzene	1	15000	<1	NA	<1	<1	<1	<1	<1
n-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	1	300	<1	NA	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	1		<1	NA	<1	<1	<1	<1	<1
Hexachlorobutadiene	1	7	<1	NA	<1	<1	<1	<1	<1
Polycyclic Aromatic Hydrocarbons (PAHs)									
Naphthalene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Acenaphthylene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Acenaphthene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Fluorene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Phenanthrene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Anthracene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Fluoranthene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Pyrene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Benzo(a)anthracene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Chrysene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	0.2	NSL	<0.2	NA	<0.2	NA	<0.2	<0.2	<0.2
Benzo(a)pyrene	0.1	0.1	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	0.1	NSL	<0.1	NA	<0.1	NA	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	0.1	NSL	<0.1	NA	<0.1	NA	<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 2023	SAMPLES					
					MW18	MW26	MW26 [LAB_DUP]	MW29	WDUP1	WDUP2
Total Recoverable Hydrocarbons (TRH)										
C_6-C_9 Aliphatics (assessed using F1)	10	-	100	-	<10	<10	<10	<10	<10	<10
>C_9-C_{14} Aliphatics (assessed using F2)	50	-	100	-	<50	<50	NA	<50	<50	<50
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)										
Benzene	1	1	-	-	<1	<1	<1	<1	<1	<1
Toluene	1	800	-	-	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	300	-	-	<1	<1	<1	<1	<1	<1
Total xylenes	2	600	-	-	<2	<2	<2	<2	<2	<2
Polycyclic Aromatic Hydrocarbons (PAHs)										
Naphthalene	1	-	-	6.1	<1	<1	<1	<1	<1	<1
Volatile Organic Compounds (VOCs), including chlorinated VOCs										
Dichlorodifluoromethane	10	-	-	-	<10	<10	<10	<10	<10	<10
Chloromethane	10	-	-	-	<10	<10	<10	<10	<10	<10
Vinyl Chloride	10	0.3	-	-	<10	<10	<10	<10	<10	<10
Bromomethane	10	-	-	-	<10	<10	<10	<10	<10	<10
Chloroethane	10	-	-	-	<10	<10	<10	<10	<10	<10
Trichlorofluoromethane	10	-	-	-	<10	<10	<10	<10	<10	<10
1,1-Dichloroethene	1	30	-	-	<1	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	1	60	-	-	<1	<1	<1	<1	<1	<1
1,1-dichloroethane	1	-	-	-	<1	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	1	60	-	-	<1	<1	<1	<1	<1	<1
Bromochloromethane	1	250	-	-	<1	<1	<1	<1	<1	<1
Chloroform	1		-	-	<1	**5**	**5**	**10**	**5**	<1
2,2-dichloropropane	1	-	-	-	<1	<1	<1	<1	<1	<1
1,2-dichloroethane	1	3	-	-	<1	<1	<1	<1	<1	<1
1,1,1-trichloroethane	1	-	-	-	<1	<1	<1	<1	<1	<1
1,1-dichloropropene	1	-	-	-	<1	<1	<1	<1	<1	<1
Cyclohexane	1	-	-	-	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	1	3	-	-	<1	<1	<1	<1	<1	<1
Benzene	1	1	-	-	<1	<1	<1	<1	<1	<1
Dibromomethane	1	-	-	-	<1	<1	<1	<1	<1	<1
1,2-dichloropropane	1	-	-	-	<1	<1	<1	<1	<1	<1
Trichloroethene	1	-	-	-	<1	<1	<1	<1	<1	<1
Bromodichloromethane	1	-	-	-	<1	**1**	**1**	<1	**1**	<1
trans-1,3-dichloropropene	1	100	-	-	<1	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	1	100	-	-	<1	<1	<1	<1	<1	<1
1,1,2-trichloroethane	1	-	-	-	<1	<1	<1	<1	<1	<1
Toluene	1	800	-	-	<1	<1	<1	<1	<1	<1
1,3-dichloropropane	1	-	-	-	<1	<1	<1	<1	<1	<1
Dibromochloromethane	1	-	-	-	<1	<1	<1	<1	<1	<1
1,2-dibromoethane	1	-	-	-	<1	<1	<1	<1	<1	<1
Tetrachloroethene	1	50	-	-	<1	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	1	-	-	-	<1	<1	<1	<1	<1	<1
Chlorobenzene	1	300	-	-	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	300	-	-	<1	<1	<1	<1	<1	<1
Bromoform	1	-	-	-	<1	<1	<1	<1	<1	<1
m+p-xylene	2	-	-	-	<2	<2	<2	<2	<2	<2
Styrene	1	30	-	-	<1	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	1	-	-	-	<1	<1	<1	<1	<1	<1
o-xylene	1	-	-	-	<1	<1	<1	<1	<1	<1
1,2,3-trichloropropane	1	-	-	-	<1	<1	<1	<1	<1	<1
Isopropylbenzene	1	-	-	-	<1	<1	<1	<1	<1	<1
Bromobenzene	1	-	-	-	<1	<1	<1	<1	<1	<1
n-propyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1
2-chlorotoluene	1	-	-	-	<1	<1	<1	<1	<1	<1
4-chlorotoluene	1	-	-	-	<1	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1
Tert-butyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1
1,3-dichlorobenzene	1	20	-	-	<1	<1	<1	<1	<1	<1
Sec-butyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1
1,4-dichlorobenzene	1	40	-	-	<1	<1	<1	<1	<1	<1
4-isopropyl toluene	1	-	-	-	<1	<1	<1	<1	<1	<1
1,2-dichlorobenzene	1	1500	-	-	<1	<1	<1	<1	<1	<1
n-butyl benzene	1	-	-	-	<1	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	1	-	-	-	<1	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	1	30	-	-	<1	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	1		-	-	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene	1	0.7	-	-	<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 2020 99% Freshwater	SAMPLES				
			MW18	MW26	MW29	WDUP1	WDUP2
PFAS Compound							
Perfluorobutanesulfonic acid	0.0004	NSL	<0.0004	**0.0005**	<0.0004	**0.0005**	<0.0004
Perfluoropentanesulfonic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	0.0002	NSL	<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
Perfluorooctanesulfonic acid PFOS	0.0002	0.00023	<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
Perfluorobutanoic acid	0.002	NSL	<0.004	<0.004	<0.02	<0.004	<0.002
Perfluoropentanoic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid	0.0004	NSL	**0.002**	**0.0009**	**0.0006**	**0.0009**	**0.002**
Perfluoroheptanoic acid	0.0004	NSL	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Perfluorooctanoic acid PFOA	0.0002	19	<0.0002	**0.0003**	**0.0002**	**0.0003**	<0.0002
Perfluorononanoic acid	0.001	NSL	<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
Perfluoroundecanoic acid	0.002	NSL	<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
Perfluorotridecanoic acid	0.01	NSL	<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
4:2 FTS	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 FTS	0.0004	NSL	**0.0066**	**0.002**	**0.0006**	**0.001**	**0.0064**
8:2 FTS	0.0004	NSL	<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
Perfluorooctane sulfonamide	0.01	NSL	<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
N-Ethyl perfluorooctanesulfon amide	0.1	NSL	<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
N-Et perfluorooctanesulfonamid oethanol	0.5	NSL	<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
EtPerfluorooctanesulf-amid oacetic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002
Total Positive PFHxS & PFOS	0.0002	NSL	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0002
Total Positive PFOS & PFOA	0.0002	NSL	<0.0002	**0.0003**	**0.0002**	**0.0003**	<0.0002
Total Positive PFAS	0.0002	NSL	**0.0086**	**0.0035**	**0.002**	**0.003**	**0.0084**

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 2020 Recreational	SAMPLES				
			MW18	MW26	MW29	WDUP1	WDUP2
PFAS Compound							
Perfluorobutanesulfonic acid	0.0004	NSL	<0.0004	**0.0005**	<0.0004	**0.0005**	<0.0004
Perfluoropentanesulfonic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	0.0002	NSL	<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
Perfluorooctanesulfonic acid PFOS	0.0002	NSL	<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
Perfluorobutanoic acid	0.002	NSL	<0.004	<0.004	<0.02	<0.004	<0.002
Perfluoropentanoic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid	0.0004	NSL	**0.002**	**0.0009**	**0.0006**	**0.0009**	**0.002**
Perfluoroheptanoic acid	0.0004	NSL	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Perfluorooctanoic acid PFOA	0.0002	10	<0.0002	**0.0003**	**0.0002**	**0.0003**	<0.0002
Perfluorononanoic acid	0.001	NSL	<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
Perfluoroundecanoic acid	0.002	NSL	<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
Perfluorotridecanoic acid	0.01	NSL	<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
4:2 FTS	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 FTS	0.0004	NSL	**0.0066**	**0.002**	**0.0006**	**0.001**	**0.0064**
8:2 FTS	0.0004	NSL	<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
Perfluorooctane sulfonamide	0.01	NSL	<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
N-Ethyl perfluorooctanesulfon amide	0.1	NSL	<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
N-Et perfluorooctanesulfonamid oethanol	0.5	NSL	<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
EtPerfluorooctanesulf-amid oacetic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002
Total Positive PFHxS & PFOS	0.0002	2	<0.0002	<0.0002	**0.0002**	<0.0002	<0.0002
Total Positive PFOS & PFOA	0.0002	NSL	<0.0002	**0.0003**	**0.0002**	**0.0003**	<0.0002
Total Positive PFAS	0.0002	NSL	**0.0086**	**0.0035**	**0.002**	**0.003**	**0.0084**

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 | 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 | 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 | 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 |
|---|---|---

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	BH33	0.04-0.14	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	SDUP1	0.04-0.14	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	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	nc
	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	nc
Intra laboratory duplicate	BH22	0.1-0.15	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	SDUP3	0.1-0.15	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	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	nc
	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	nc
Intra laboratory duplicate	BH5	0.03-0.2	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	SDUP6	0.03-0.2	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	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	nc
	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	nc
Intra laboratory duplicate	BH2	0.5-0.95	<0.1	<0.1	0.1	<0.1	0.3	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	0.5	0.3	0.5
	SDUP9	0.5-0.95	<0.1	<0.1	0.2	<0.1	0.4	<0.2	<0.2	<0.2	<0.1	<0.1	0.2	<0.1	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	0.5	0.5	0.7
	MEAN		nc	nc	0.15	nc	0.35	nc	nc	nc	nc	nc	0.125	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.5	0.4	0.6
	RPD %		nc	nc	67%	nc	29%	nc	nc	nc	nc	nc	120%	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0%	50%	33%
Inter laboratory duplicate	BH24	0-0.1	<0.1	<0.1	<0.1	<0.1	3	<0.2	<0.2	<0.2	<0.1	<0.1	0.3	0.2	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	3	3.3	3.5
	SDUP2	0-0.1	<0.1	<0.1	<0.1	<0.1	2.4	<0.2	<0.2	<0.2	<0.1	<0.1	0.2	0.2	<0.5	<0.5	<0.5	<0.5	<5	<0.1	<0.1	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	2.4	2.6	2.8
	MEAN		nc	nc	nc	nc	2.7	nc	nc	nc	nc	nc	0.25	0.2	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	2.7	2.95	3.15
	RPD %		nc	nc	nc	nc	22%	nc	nc	nc	nc	nc	40%	0%	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	22%	24%	22%
Inter laboratory duplicate	BH8	0.03-0.4	<0.1	<0.1	<0.1	<0.1	0.9	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	0.9	0.9	1	1.9
	SDUP4	0.03-0.4	<0.1	<0.1	<0.1	<0.1	0.9	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	0.6	0.9	1	1.6
	MEAN		nc	nc	nc	nc	0.9	nc	nc	nc	nc	nc	0.1	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.75	0.9	1	1.75
	RPD %		nc	nc	nc	nc	0%	nc	nc	nc	nc	nc	0%	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	40%	0%	0%	17%
Inter laboratory duplicate	BH6	0.025-0.4	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	SDUP8	0.025-0.4	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	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	nc	nc
	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	nc	nc
Inter laboratory duplicate	BH12	0.05-0.23	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	SDUP10	0.05-0.23	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	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	nc	nc
	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	nc	nc
Field Blank	TB-S1	-	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	27/11/2023																																	
Field Blank	TB-S2	-	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	4/12/2023																																	
Field Blank	TB-S3	-	<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	<0.2	<0.2	<1	<1	<1	<1	<5	<0.2	<0.2	<0.1	<0.1	<0.1
	3/01/2024																																	
Field Rinsate	FR-1-Auger	µg/L	-	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001
	28/11/2023																																	
Field Rinsate	FR-2-SPT	µg/L	-	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001
	4/12/2023																																	
Field Rinsate	FR-S3-SPT	µg/L	-	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001
	3/01/2024																																	
Field Rinsate	FR-S4-SA	µg/L	-	-	<0.001	-	<0.001	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	<0.001	<0.002	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.001
	3/01/2024																																	

Result outside of QA/QC acceptance criteria Value

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TABLE Q3
GROUNDWATER QA/QC SUMMARY

| | | Dichlorodifluoromethane | Chloromethane | Vinyl Chloride | Bromomethane | Chloroethane | Trichlorofluoromethane | 1,1-Dichloroethene | Trans-1,2-dichloroethene | 1,1-dichloroethane | Cis-1,2-dichloroethene | Bromochloromethane | Chloroform | 2,2-dichloropropane | 1,2-dichloroethane | 1,1,1-trichloroethane | 1,1-dichloropropene | Cyclohexane | Carbon tetrachloride | Benzene | Dibromomethane | 1,2-dichloropropane | Trichloroethene | Bromodichloromethane | trans-1,3-dichloropropene | cis-1,3-dichloropropene | 1,1,2-trichloroethane | Toluene | 1,3-dichloropropane | Dibromochloromethane | 1,2-dibromoethane | Tetrachloroethene | 1,1,1,2-tetrachloroethane | Chlorobenzene | Ethylbenzene | Bromoform | m+p-xylene | Styrene | 1,1,2,2-tetrachloroethane | o-xylene | 1,2,3-trichloropropane | Isopropylbenzene | Bromobenzene | n-propyl benzene | 2-chlorotoluene | 4-chlorotoluene | 1,3,5-trimethyl benzene | Tert-butyl benzene | 1,2,4-trimethyl benzene | 1,3-dichlorobenzene | Sec-butyl benzene | 1,4-dichlorobenzene | 4-isopropyl toluene | 1,2-dichlorobenzene | n-butyl benzene | 1,2-dibromo-3-chloropropane | 1,2,4-trichlorobenzene | Hexachlorobutadiene | 1,2,3-trichlorobenzene |
|---|---|---

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*	*0.002*	*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*	*0.0002*
PQL Envirolab VIC		*0.0004*	*0.001*	*0.0002*	*0.001*	*0.0002*	*0.002*	*0.002*	*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*	*0.0002*
Intra laboratory duplicate	MW26	0.0005	<0.001	<0.0002	<0.001	<0.0002	<0.002	<0.004	<0.002	0.0009	<0.0004	0.0003	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	0.002	<0.0004	<0.002	<0.01	<0.05	<0.1	<0.05	<0.5	<0.002	<0.002	<0.0002	0.0003	0.0035
	WDUP1	0.0005	<0.001	<0.0002	<0.001	<0.0002	<0.002	<0.004	<0.002	0.0009	<0.0004	0.0003	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	0.001	<0.0004	<0.002	<0.01	<0.05	<0.1	<0.05	<0.5	<0.002	<0.002	<0.0002	0.0003	0.003
	MEAN	0.0005	nc	nc	nc	nc	nc	nc	nc	0.0009	nc	0.0003	nc	nc	nc	nc	nc	nc	nc	0.0015	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.0003	0.0033
	RPD %	0%	nc	nc	nc	nc	nc	nc	nc	0%	nc	0%	nc	nc	nc	nc	nc	nc	nc	67%	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0%	15%
Inter laboratory duplicate	MW18	<0.0004	<0.001	<0.0002	<0.001	<0.0002	<0.002	<0.004	<0.002	0.002	<0.0004	<0.0002	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	0.0066	<0.0004	<0.002	<0.01	<0.05	<0.1	<0.05	<0.5	<0.002	<0.002	<0.0002	<0.0002	0.0086
	WDUP2	<0.0004	<0.001	<0.0002	<0.001	<0.0002	<0.002	<0.002	<0.002	0.002	<0.0004	<0.0002	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	0.0064	<0.0004	<0.002	<0.01	<0.05	<0.1	<0.05	<0.5	<0.002	<0.002	<0.0002	<0.0002	0.0084
	MEAN	nc	nc	nc	nc	nc	nc	nc	nc	0.002	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.0065	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	0.0085
	RPD %	nc	nc	nc	nc	nc	nc	nc	nc	0%	nc	nc	nc	nc	nc	nc	nc	nc	nc	3%	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	2%
Field Blank	TB-W1 12/12/2023	-	-	<0.0002	-	<0.0002	-	-	-	-	-	<0.0002	-	-	-	-	-	-	-	<0.0004	<0.0004	-	-	-	-	-	-	-	-	<0.0002	<0.0002	<0.0002

Result outside of QA/QC acceptance criteria Value

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Appendix D: Borehole Logs

JKEnvironments

ENVIRONMENTAL LOG

Log No. **BH1** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 57.4m

Date: 3/1/24 **Datum:** AHD

Plant Type: JK400 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 30mm.t	D			SCREEN: 5.80kg (<10L) 0.03-0.4m, NO FCF
										FILL: Silty gravelly sand, fine to medium grained, light brown, fine to medium grained igneous gravel.	M			SCREEN: 9.36kg (<10L) 0.4-1.0m, NO FCF
							1			FILL: Silty sand, fine to medium grained, grey, trace of sandstone cobbles, igneous gravel and metal fragments.				
										FILL: Silty clay, low to medium plasticity, brown, trace of igneous and sandstone gravel, and ash.	w<PL			SCREEN: 4.95kg (<10L) 1.0-1.7m, NO FCF
						N = 14 4,4,10			CI-CH	Silty CLAY: medium to high plasticity, grey and orange brown, trace of ironstone gravel.	w<PL			RESIDUAL
							2			END OF BOREHOLE AT 1.95m				
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Log No. **BH2** **1/1**

SDUP9: 0.5-0.95

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 57.4m

Date: 3/1/24 **Datum:** AHD

Plant Type: JK400 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 20mm.t	D			SCREEN: 6.05kg (<10L) 0.02-0.5m, NO FCF
										FILL: Silty gravelly sand, light brown, fine to medium grained igneous gravel.				
						N = 18 13,9,9	1			FILL: Silty sandy clay, low plasticity, brown, fine to medium grained sand, trace of igneous and sandstone gravel, slag, metal fragments and ash.	w<PL			SCREEN: 7.45kg (<10L) 0.5-1.5m, FCF1
						N = 4 3,2,2								SCREEN: 1.45kg (<10L) 1.5-1.7m, NO FCF
							2		CI-CH	Silty CLAY: medium to high plasticity, yellow brown and orange brown, trace of ironstone gravel.	w≈PL			RESIDUAL
										END OF BOREHOLE AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Log No. **BH3** **1/1**

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 56.3m

Date: 3/1/24 **Datum:** AHD

Plant Type: JK400 **Logged/Checked by:** H.W./T.H.

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						N = 4 1,2,2	0		-	ASPHALTIC CONCRETE: 10mm.t	M			INSUFFICIENT RETURN FOR BULK SCREEN
										FILL: Silty gravelly sand, fine to medium grained, brown, fine to medium grained igneous gravel, trace of ash.	w>PL			SCREEN: 4.45kg 0.1-1.1m, NO FCF
							1			FILL: Silty clay, medium to high plasticity, brown, trace of igneous and ironstone gravel, wood and ash.				SCREEN: 3.33kg 1.1-2.0m, NO FCF
						N = 4 1,2,2	2			END OF BOREHOLE AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No. **BH4** 1/1

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 58.1m

Date: 3/1/24 **Datum:** AHD

Plant Type: JK400 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 20mm.t	M			SCREEN: 4.53kg (<10L)
										FILL: Silty gravelly sand, fine to medium grained, brown, fine to medium grained igneous gravel.	w<PL			0.02-0.3m, NO FCF
	■		■	■	■	N = 12 6,5,7				FILL: Silty clay, medium to high plasticity, brown and orange brown, trace of igneous and ironstone gravel, and ash.				SCREEN: 5.45kg (<10L) 0.3-1.3m, NO FCF
							1							SCREEN: 5.10kg (<10L) 1.3-1.6m, NO FCF
	■		■	■		N = 13 8,6,7			CI-CH	Silty CLAY: medium to high plasticity, orange brown mottled red brown, trace of ironstone gravel.	w<PL			RESIDUAL
							2			END OF BOREHOLE AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No. BH5

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~58.5 m

Date: 3/1/24 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** Q.V./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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										-	ASPHALTIC CONCRETE: 30mm.t	D			APPEARS POORLY COMPACTED
											FILL: Gravelly sand, fine to coarse grained, dark grey and grey, fine to medium grained igneous and ironstone gravel, trace of clay nodules.	w>PL			SCREEN: 3.9kg (<10L) 0.03-0.23m, NO FCF
						N = 6 2,3,3	58				FILL: Silty clay, high plasticity, grey, brown and dark grey, with fine to medium grained igneous, ironstone and sandstone gravel, trace of fine to medium grained sand and ash.			200 210 220	SCREEN: 2.16kg (<10L) 0.23-0.5m, NO FCF
								1							INSUFFICIENT RETURN FOR BULK SCREEN
															SCREEN: 2.65kg (<10L) 1.0-2.0m, NO FCF
						N = 6 2,3,3	57							230 210 180	
								2		CH	Silty CLAY: high plasticity, light grey, orange brown and red brown, with fine to medium grained ironstone gravel.	w~PL	Hd		RESIDUAL
							56			-	Extremely Weathered siltstone: silty CLAY, low plasticity, light grey, grey and red brown, with fine to medium grained ironstone gravel.	XW	Hd		ASHFIELD SHALE
						N = 29 13,14,15		3						>600 >600	
							55				SILTSTONE: grey, dark grey and red brown, with occasional extremely weathered and iron indurated bands.	DW	VL		VERY LOW 'TC' BIT RESISTANCE
							54	4							
								5							
							53								
								6							
							52								VERY LOW TO LOW RESISTANCE

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ENVIRONMENTAL LOG

Log No.
BH5
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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~58.5 m

Date: 3/1/24 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** Q.V./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	RL (m AHD)	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
							51			-	SILTSTONE: grey, dark grey and red brown, with occasional extremely weathered and iron indurated bands. *(continued)*	DW	VL - L		
								8			SILTSTONE: dark grey and grey, with occasional iron indurated bands.		L - M		LOW TO MODERATE RESISTANCE
							50						M		MODERATE RESISTANCE
								9			REFER TO CORED BOREHOLE LOG				
							49								
								10							
							48								
								11							
							47								
								12							
							46								
								13							
							45								

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CORED ENVIRONMENTAL LOG

Log No. **BH5** **3 / 4**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~58.5 m

Date: 3/1/24 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** Q.V./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
		50			START CORING AT 8.56m						
80% RETURN					NO CORE 0.10m						
			9		SILTSTONE: dark grey and grey, bedded at 0-5°.	SW	M	0.30		(8.69m) J x 2, 90°, Ir, S, Fe Sn (8.78m) J, 30°, Ir, S, Fe Sn (8.92m) J, 90°, Ir, S, Fe Sn (9.07m) Be, 0°, P, S, Fe Vn (9.14m) J, 40°, C, S, Cn (9.26m) J, 90°, Ir, S, Fe Sn	
		49						0.60			
								0.60		(9.64m) J, 20°, C, S, Cn	
			10							(9.87m) J, 90°, Un, S, Fe Ct (10.04m) J, 20°, P, S, Cn (10.10m) J, 30°, Ir, S, Cn	
		48						0.50		(10.28m) J, 90°, C, S, Clay FILLED, 1 mm.t	
								0.60			
			11							(10.90m) J x 2, 10°, P, S, Clay FILLED, 2 mm.t	Ashfield Shale
		47						0.50		(11.40m) Be, 0°, P, S, Clay FILLED, 1 mm.t	
					LAMINITE: Siltstone, dark grey and grey, and Sandstone, fine grained, light grey, bedded at 0-10°.			0.90		(11.65m) J, 90°, C, S, Cn (11.87m) Be, 0°, P, S, Clay FILLED, 1 mm.t	
			12							(12.11m) XWS, 0°, 10 mm.t (12.25m) XWS, 0°, 25 mm.t	
		46						0.70		(12.39m) XWS, 0°, 10 mm.t (12.43m) XWS, 5°, 10 mm.t	
30% RETURN					SANDSTONE: fine to medium grained, light grey, with dark grey laminae and occasional siltstone bands, bedded at 0-15°.	FR	H	1.3		(12.63m) CS, 0°, 55 mm.t	
			13							(12.82m) J, 25°, Un, R, Cn (13.04m) Be, 0°, P, R, Cn (13.11m) Be, 0°, P, R, Clay FILLED, 1 mm.t	
		45						2.3			
								1.3			
								1.0			
			14							(14.25m) Be, 5°, P, S, Cn	Hawkesbury Sandstone
		44						2.5		(14.64m) Be, 15°, P, S, Cn	
								1.7			

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CORED ENVIRONMENTAL LOG

Log No. **BH5** **4 / 4**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~58.5 m

Date: 3/1/24 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** Q.V./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 DESCRIPTION Type, orientation, defect shape and roughness, defect coatings and seams, openness and thickness Specific / General	Formation
30% RETURN		43	16		SANDSTONE: fine to medium grained, light grey, with dark grey laminae and occasional siltstone bands, bedded at 0-15°. *(continued)*	FR	H	2.3 1.8 1.9 2.4 2.2		Hawkesbury Sandstone
		42								
			17		END OF ENVIRONMENTAL HOLE AT 16.98 m					
		41								
			18							
		40								
			19							
		39								
			20							
		38								
			21							
		37								

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ENVIRONMENTAL LOG

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Log No. BH6 **1/1**

SDUP8: 0.025-0.4

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 59.9m

Date: 3/1/24 **Datum:** AHD

Plant Type: JK400 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 25mm.t	D			SCREEN: 3.75kg (<10L) 0.025-0.4m, NO FCF
										FILL: Silty gravelly sand, fine to medium grained, light brown, fine to medium grained igneous gravel.	w<PL			SCREEN: 10.02kg 0.4-1.2m, NO FCF
						N = 17 5,9,8	1			FILL: Silty clay, low to medium plasticity, brown, trace of sandstone and ironstone gravel, sand and ash.				
									CI-CH	Silty CLAY: medium to high plasticity, grey and orange brown, trace of ironstone gravel.	w<PL			RESIDUAL
						N > 8 12,8/ 50mm REFUSAL	2		-	Extremely Weathered siltstone: silty gravelly CLAY, low to medium plasticity, grey, fine to medium grained siltstone gravel.	XW			ASHFIELD SHALE
										END OF BOREHOLE AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No.
BH7
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Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~61.1 m

Date: 5/1/24 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** J.F./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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							61			-	ASPHALTIC CONCRETE: 50mm.t				
											FILL: Gravelly sand, fine to medium grained, grey, fine to medium grained igneous gravel.	M			SCREEN: 5.39kg (<10L) 0.05-0.3m, NO FCF
												w<PL			SCREEN: 1.06kg (<10L) 0.3-1.2m, NO FCF
						N = 28 4,11,17					FILL: Silty clay, high plasticity, light grey and red brown, trace of fine to medium grained ironstone gravel.			>600 >600 >600	
							60	1							
										-	Extremely Weathered siltstone: silty CLAY, high plasticity, grey, with iron indurated bands.	XW	Hd		ASHFIELD SHALE
						N > 16 8,16/ 100mm REFUSAL								>600 >600 >600	
											SILTSTONE: grey, with iron indurated bands.	DW	VL		VERY LOW 'TC' BIT RESISTANCE WITH MEDIUM BANDS
							59	2							
							58	3			as above, but with extremely weathered and iron indurated bands.		L		LOW RESISTANCE WITH VERY LOW AND MEDIUM BANDS
							57	4							
							56	5			SILTSTONE: dark grey, with iron indurated bands.		L - M		LOW TO MODERATE RESISTANCE WITH VERY LOW BANDS
											REFER TO CORED BOREHOLE LOG				
							55	6							

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CORED ENVIRONMENTAL LOG

Log No. BH7 **2 / 3**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~61.1 m

Date: 5/1/24 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** J.F./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
		56			START CORING AT 5.42m						
98% RETURN					NO CORE 0.46m						
		55	6		SILTSTONE: dark grey, with grey laminae and red brown bands, bedded at 0-10°.	HW	L - M	0.20		(5.90m) Be, 0°, P, S, Fe Vn (5.91m) Be, 0°, P, S, Fe Vn (5.96m) Be, 0°, P, S, Fe Vn (5.97m) Be, 0°, P, S, Fe Vn (6.00m) Be, 0°, P, S, Fe Vn (6.01m) Be, 0°, P, S, Fe Vn (6.03m) Be, 0°, P, S, Fe Ct (6.04m) Be, 0°, P, S, Fe Vn (6.11m) Be, 0°, P, S, Fe Vn (6.31m) Cr, 0°, 10 mm.t (6.38m) Be, 10°, P, S, Fe Vn (6.40m) Cr, 0°, 10 mm.t (6.42m) Be, 10°, Ir, S, Fe Vn (6.46m) Be, 0°, P, S, Fe Vn (6.47m) Be, 0°, P, S, Fe Vn (6.49m) Cr, 0°, 10 mm.t (6.52m) Cr, 0°, 10 mm.t (6.55m) Be, 5°, P, S, Fe Vn (6.55m) Be, 0°, P, S, Fe Vn (6.63m) J, 15°, P, S, Fe Vn (6.64m) Be, 0°, P, S, Fe Ct (6.73m) Cr, 0°, 70 mm.t (6.81m) Cr, 0°, 10 mm.t (6.85m) Be, 0°, P, S, Fe Vn (6.93m) Cr, 0°, 80 mm.t (7.00m) Be, 5°, P, S, Fe Ct (7.07m) Cr, 5°, 10 mm.t (7.10m) Be, 10°, P, S, Fe Vn (7.14m) Cr, 0°, 10 mm.t (7.34m) J, 65°, Un, S, Cn (7.51m) Cr, 0°, 90 mm.t (7.60m) Jh, 20°, P (7.61m) Be, 0°, P, S, Fe Vn (7.64m) Be, 5°, P, S, Fe Vn (7.68m) Be, 0°, P, S, Fe Vn (7.75m) Cr, 10°, 6 mm.t (7.81m) Cr, 0°, 6 mm.t (7.88m) Be, 0°, P, S, Fe Vn (7.90m) Be, 0°, P, S, Fe Vn (8.16m) Be, 10°, P, S, Fe Vn (8.19m) J, 25°, P, S, Cn (8.27m) J, 40°, P, S, Cn (8.31m) J, 35°, P, S, Fe Vn (8.36m) J, 40°, P, S, Fe Vn (8.43m) J, 75°, P, S, Fe Vn (8.48m) Cr, 0°, 70 mm.t (8.79m) J, 30°, Ir, S, Cn (9.40m) J, 60°, P, S, Cn (9.46m) Jh, 60°, P (9.52m) J, 70°, P, S, Cn (9.58m) J, 30°, P, S, Cn (9.69m) J, 60°, P, S, Cn (9.72m) J, 25°, P, S, Cn (9.82m) J, 20°, P, S, Cn (10.02m) J, 80°, P, S, Cn (10.16m) J x 2, 80°, P, S, Cn (10.26m) J, 80°, P, S, Cn (10.49m) J, 30°, P, S, Clay Vn (11.14m) J, 75°, P, S, Cn (11.30m) J, 75°, P, S, Cn (11.36m) CS, 0°, 15 mm.t (11.40m) Jh, 65°, P	Ashfield Shale
		54	7			MW	M	0.50			
		53	8		SILTSTONE: dark grey, with grey laminae, bedded at 0-10°.	SW	M - H	0.40 2.0 1.1			
		52	9					1.0			
		51	10					0.70 1.0			
		50	11					2.3 0.60 1.2			

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CORED ENVIRONMENTAL LOG

Log No. BH7 3 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~61.1 m

Date: 5/1/24 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** J.F./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
98% RETURN		49			SILTSTONE: dark grey, with grey laminae, bedded at 0-10°. *(continued)*	SW	M - H	1.5			Ashfield Shale
								0.80		(12.71m) Be, 0°, P, S, Clay FILLED	
										(12.84m) XWS, 0°, 5 mm.t	
								1.4		(12.98m) Jh, 85°, P	
		48	13		LAMINITE: Siltstone, dark grey and grey, and Sandstone, fine to medium grained, light grey, bedded at 0-10°.			0.60		(13.24m) Be, 5°, P, R, Cb Vn	
								1.6			
		47	14					1.8			
								2.0		(14.66m) CS, 10°, 10 mm.t	
										(14.76m) Be, 5°, P, R, Clay Vn	
		46	15		SANDSTONE: fine to medium grained, grey, with dark grey laminae, bedded at 0-5°.			1.0		(15.06m) Be, 0°, P, S, Clay Vn	
										(15.29m) Be, 0°, P, R, Clay Vn	
										(15.44m) J, 65°, P, R, Cn	
					as above, but fine grained and dark grey.			2.1		(15.67m) Be, 5°, P, R, Clay Vn	
		45	16					0.60		(16.11m) Be, 0°, P, S, Clay Vn	
					SANDSTONE: fine to medium grained, grey, bedded at 0-5°.					(16.20m) Be, 0°, P, S, Clay Vn	
					END OF ENVIRONMENTAL HOLE AT 16.26 m						
		44	17								
		43	18								

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ENVIRONMENTAL LOG

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Log No. BH8 **1/1**

SDUP4: 0.03-0.4

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 61.9m

Date: 4/12/23 **Datum:** AHD

Plant Type: JK330 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 30mm.t	M			SCREEN: 5.50kg (<10L) 0.03-0.4m, NO FCF
										FILL: Silty sand, fine to medium grained, brown, trace of igneous gravel.	w≈PL			SCREEN: 5.93kg (<10L) 0.4-1.4m, NO FCF
						N = 13 7,5,8	1			FILL: Gravelly clay, low plasticity, brown, fine to medium grained, sub-angular igneous and ironstone gravel, trace of sand and ash.				
						N = 23 5,10,13	2		CI-CH	Silty CLAY: medium to high plasticity, yellow brown and orange brown, trace of ironstone gravel.	w<PL			RESIDUAL
							3		-	Extremely Weathered sandstone: silty CLAY, low to medium plasticity, orange brown.	XW			HAWKESBURY SANDSTONE
										SANDSTONE: orange brown.	DW			GROUNDWATER MONITORING WELL INSTALLED TO 5.6m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 2.6m TO 5.6m. CASING 0.03m TO 2.6m. 2mm SAND FILTER PACK 2.5m TO 5.6m. BENTONITE SEAL 2.0m TO 2.5m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							4							
							5							
							6			END OF BOREHOLE AT 6.0m				
							7							

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ENVIRONMENTAL LOG

Log No.
BH9
1 / 4

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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~62.3 m

Date: 4/12/23 TO 5/12/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	ASS	ASB	SAL	DB	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							62			-	ASPHALTIC CONCRETE: 35mm.t FILL: Gravelly silty sand, fine to coarse grained, grey brown, fine to medium grained igneous and ironstone gravel.	M			SCREEN: 3.0kg (<10L) 0.035-0.4m, NO FCF
						N=SPT 8/ 50mm REFUSAL					as above, but dark grey.				SCREEN: 3.56kg (<10L) 0.4-0.8m, NO FCF
							61	1			FILL: Silty clay, low plasticity, grey and brown, trace of fine grained igneous gravel and fine to medium grained sand.	w>PL			APPEARS POORLY COMPACTED POSSIBLY REWORKED NATURAL SCREEN: 4.73kg (<10L) 0.8-1.7m, NO FCF
						N = 8 2,3,5				CH	Silty CLAY: high plasticity, light grey mottled red brown, trace of fine to medium grained ironstone gravel, root fibres and ash.	w>PL	(St - VSt)	180 200 220	RESIDUAL
							60	2				w<PL	Hd		VERY LOW 'TC' BIT RESISTANCE WITH SOIL RESISTANCE
						N > 30 14,15,15/ 50mm REFUSAL	59	3						>600 >600 >600	
								4		-	Extremely Weathered siltstone: gravelly silty CLAY, medium plasticity, grey and red brown, with ironstone bands.	XW	Hd		ASHFIELD SHALE LOW RESISTANCE BANDED WITH SOIL RESISTANCE
							58	5			SILTSTONE: dark grey, with extremely weathered bands and iron indurated bands.	DW	VL - L		MODERATE RESISTANCE BANDED WITH SOIL RESISTANCE
							57	6							LOW RESISTANCE BANDED WITH SOIL RESISTANCE
							56								

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ENVIRONMENTAL LOG

Log No. BH9 2 / 4

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~62.3 m

Date: 4/12/23 TO 5/12/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	ASS	ASB	SAL	DB	Field Tests	RL (m AHD)	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
										-	SILTSTONE: dark grey, with extremely weathered bands and iron indurated bands.	DW	VL - L		MODERATE RESISTANCE
							55				REFER TO CORED BOREHOLE LOG				
								8							
							54								
								9							
							53								
								10							
							52								
								11							
							51								
								12							
							50								
								13							
							49								

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CORED ENVIRONMENTAL LOG

Log No. **BH9** **3 / 4**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~62.3 m

Date: 4/12/23 TO 5/12/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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
					START CORING AT 7.15m						
90% RETURN		55	8		SILTSTONE: dark grey, bedded at 0-5°.	SW	M	0.50		(7.18m) J, 65°, P, S, Clay FILLED (7.25m) Jh, 20 - 30°, St, S, Fe Vn, x 2 (7.29m) Jh, 10 - 20°, Un, S, Fe Vn (7.34m) J, 10°, P, S, Cn (7.41m) J, 20°, St, S, Cn, x 2 (7.45m) J, 40 - 60°, P, S, Cn, x 2 (7.51m) Be, 0°, P, S, Fe Ct, and Clay, FILLED (7.54m) J, 45°, P, S, Fe Ct, and Clay, FILLED x 2 (7.58m) Be, 0°, S, Fe Vn (7.60m) J, 15°, P, S, Clay FILLED (7.64m) Be, P, S, Clay FILLED (7.74m) Be, P, S, Clay FILLED (7.88m) XWS, 0°, 40 mm.t (7.91m) J, 45°, P, S, Fe Sn	Ashfield Shale
		54				FR		0.40			
								0.70			
										(8.41m) Be, 0°, P, S, Fe Sn (8.49m) J, 50°, P, S, Fe Sn	
										(8.61m) J, 30°, P, S, Cn (8.68m) J, 40°, P, S, Cn	
		53	9					0.90			
								1.0			
										(9.60m) J, 90°, P, S, Cn	
		52	10					0.90		(10.20m) J, 30 - 40°, P, S, Cn, x 2 (10.24m) J, 25°, P, S, Cn (10.28m) Ji, 30°, P, S, Cn (10.30m) J, 80°, P, S, Cn (10.31m) J, 15°, P, S, Cn (10.39m) J, 30°, P, S, Cn (10.49m) J, 20°, P, S, Cn (10.68m) J, 40°, P, S, Cn	
								0.60			
		51	11							(10.96m) J, 80°, P, S, Cn	
								0.70			
										(11.34m) J, 30°, P, S, Cn (11.40m) J, 55°, C, S, Cn	
										(11.58m) J, 90°, Ir, S, Cn	
								0.60			
		50	12							(12.00m) J, 90°, C, S, Cn	
								0.70			
								0.40			
		49	13					1.0			
								0.80			
								1.2			
					LAMINITE: as below.		H			(13.89m) Be, 0°, P, S, Clay FILLED, 6 mm.t	

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CORED ENVIRONMENTAL LOG

Log No.
BH9
4 / 4

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~62.3 m

Date: 4/12/23 TO 5/12/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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
90% RETURN		48	15		LAMINITE: Siltstone, dark grey, and Sandstone, fine to medium grained, light grey, bedded at 0-5°.	FR	H	2.6, 1.2, 2.7, 1.6, 4.4, 1.5, 2.5		(13.99m) CS, 0°, 15 mm.t (14.07m) Be, 0°, P, S, Clay FILLED, 7 mm.t (14.15m) XWS, 0°, 7 mm.t	Ashfield Shale
		47									
		46	16								
		45	17		END OF ENVIRONMENTAL HOLE AT 16.48 m						
		44	18								
		43	19								
		42	20								

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ENVIRONMENTAL LOG

Log No. **BH10** **1/1**

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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 62.5m

Date: 4/12/23 **Datum:** AHD

Plant Type: JK330 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 40mm.t	M			SCREEN: 6.65kg (<10L) 0.04-0.45m, NO FCF
						N = 16 4,9,7				FILL: Silty gravelly sand, fine to medium grained, brown, fine to medium grained, sub-angular igneous gravel.	w≈PL			SCREEN: 7.15kg (<10L) 0.45-1.45m, NO FCF
							1			FILL: Sandy clay, low plasticity, brown, fine to medium grained sand, trace of sandstone gravel, tile fragments and slag.				
						N = 24 3,8,16								INSUFFICIENT RETURN FOR BULK SCREEN
							2		-	Extremely Weathered sandstone: silty CLAY, low to medium plasticity, orange brown.	XW			HAWKESBURY SANDSTONE
										END OF BOREHOLE AT 2.5m				
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No. **BH11** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 62.6m

Date: 3/1/24 **Datum:** AHD

Plant Type: JK400 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 30mm.t	D			SCREEN: 2.50kg (<10L)
										FILL: Silty gravelly sand, fine to medium grained, light brown, fine to medium grained igneous gravel.	w<PL			0.03-0.3m, NO FCF
						N = 12 5,5,7				FILL: Silty clay, low to medium plasticity, brown, trace of sandstone and ironstone gravel, and ash.	w<PL			SCREEN: 8.95kg (<10L) 0.3-0.7m, NO FCF
							1		CI-CH	Silty CLAY: medium to high plasticity, grey and orange brown, trace of ironstone gravel.				RESIDUAL
						N > 8 15,8/ 50mm REFUSAL			-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey, with distinctly weathered siltstone bands.	XW			ASHFIELD SHALE
							2			END OF BOREHOLE AT 1.7m				
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No.
BH12
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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~65.0 m

Date: 4/1/24 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** J.F./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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										-	ASPHALTIC CONCRETE: 50mm.t FILL: Gravelly sand, fine to medium grained, dark grey and brown, fine to medium grained sandstone, ironstone and igneous gravel, trace of clay nodules.	M			APPEARS WELL COMPACTED SCREEN: 3.5kg (<10L) 0.05-0.5m, NO FCF SCREEN: 2.6kg (<10L) 0.5-1.0m, NO FCF SCREEN: 2.4kg (<10L) 1.0-1.4m, NO FCF
						N = 14 5,5,9	64	1							
						N = 11 5,4,7	63	2			FILL: Silty clay, high plasticity, orange brown and dark grey, trace of fine to medium grained igneous and ironstone gravel.	w>PL		340 320 300	SCREEN: 3.23kg (<10L) 1.4-2.0m, NO FCF INSUFFICIENT RETURN FOR BULK SCREEN
						N > 21 9,9,12/ 100mm REFUSAL	62	3		-	Extremely Weathered siltstone: silty CLAY, high plasticity, grey and red brown, with iron indurated bands.	XW	Hd	>600 >600 >600	ASHFIELD SHALE
							61	4			SILTSTONE: grey, with iron indurated bands.	DW	L		LOW 'TC' BIT RESISTANCE WITH MEDIUM BANDS
							60	5			as above, but dark grey, with extremely weathered bands.				LOW RESISTANCE WITH VERY LOW BANDS
							59	6							

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ENVIRONMENTAL LOG

Log No.
BH12
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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~65.0 m

Date: 4/1/24 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** J.F./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	RL (m AHD)	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
										-	SILTSTONE: dark grey, with iron indurated and extremely weathered bands.	DW	L		
							57	8			SILTSTONE: dark grey, with iron indurated bands.				LOW RESISTANCE
							56	9							
							55	10					L - M		LOW TO MODERATE RESISTANCE
											REFER TO CORED BOREHOLE LOG				'TC' BIT REFUSAL
							54	11							
							53	12							
							52	13							

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CORED ENVIRONMENTAL LOG

Log No. **BH12** **3 / 4**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~65.0 m

Date: 4/1/24 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** J.F./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 Type, orientation, defect shape and roughness, defect coatings and seams, openness and thickness Specific / General	Formation
					START CORING AT 10.32m						
98% RETURN		54	11		SILTSTONE: dark grey, with grey laminae, bedded at 0-5°.	SW	H	1.2 0.50		(10.73m) Be, 5°, P, S, Clay Ct (10.78m) Cr, 0°, 50 mm.t (10.85m) J, 85°, P, S, Fe Vn (10.93m) Cr, 0°, 90 mm.t	Ashfield Shale
						FR		1.3		(11.38m) J, 70°, P, S, Cn (11.39m) J, 60°, P, S, Cn	
		53	12					1.7		(11.74m) J, 60°, P, S, Cn	
								1.7		(12.12m) J, 40°, P, S, Cn (12.18m) J, 85°, P, S, Cn	
								2.1		(12.68m) J, 65°, P, S, Cn (12.81m) Cr, 0°, 10 mm.t (12.90m) J, 60°, P, S, Cn	
		52	13					2.0			
								2.3			
		51	14					1.8		(14.11m) J, 70°, P, S, Cn (14.20m) Be, 0°, P, S, Clay Ct	
								1.0		(14.51m) J, 25°, P, S, Clay Vn	
		50	15					1.3			
								0.90		(15.81m) CS, 0°, 50 mm.t (15.92m) Cr, 0°, 150 mm.t	
		49	16		LAMINITE: Siltstone, dark grey and grey, and Sandstone: fine to medium grained, light grey, bedded at 0-15°.	SW	M	0.90		(16.09m) J, 75°, P, R, Cn	
								1.1		(16.34m) Cr, 0°, 30 mm.t (16.50m) Cr, 10°, 15 mm.t (16.64m) Be, 15°, P, R, Clay Vn (16.64m) J, 90°, P, S, Cn (16.85m) Be, 10°, P, R, Clay Ct	

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CORED ENVIRONMENTAL LOG

Log No. **BH12** **4 / 4**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~65.0 m

Date: 4/1/24 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** J.F./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 (Type, orientation, defect shape and roughness, defect coatings and seams, openness and thickness) Specific / General	Formation
					LAMINITE: Siltstone, dark grey and grey, and Sandstone: fine to medium grained, light grey, bedded at 0-15°.	SW	M	0.40			
					END OF ENVIRONMENTAL HOLE AT 17.20 m						
		47	18								
		46	19								
		45	20								
		44	21								
		43	22								
		42	23								

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ENVIRONMENTAL LOG

Log No. **BH13** 1/1

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 65.6m

Date: 4/12/23 **Datum:** AHD

Plant Type: JK330 **Logged/Checked by:** H.W./T.H.

Groundwater Record	SAMPLES ES	ASS	ASB	PFAS	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						N = 11 6,6,5	0		-	ASPHALTIC CONCRETE: 30mm.t	M			SCREEN: 3.95kg (<10L) 0.03-0.4m, NO FCF
										FILL: Silty sand, fine to medium grained, grey, trace of igneous gravel.	w≈PL			SCREEN: 9.9kg 0.3-1.3m, NO FCF
							1			FILL: Silty gravelly clay, low to medium plasticity, brown, fine to medium grained, sub-angular igneous gravel, trace of slag.				SCREEN: 2.75kg (<10L) 1.3-1.7m, NO FCF
						N = 19 3,9,10			-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, yellow brown and orange brown, with distinctly weathered silstone bands, trace of ironstone bands.	XW			ASHFIELD SHALE
							2							
										END OF BOREHOLE AT 2.8m				
							3							
							4							
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ENVIRONMENTAL LOG

Log No.
BH14
1 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~65.8 m

Date: 28/11/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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										-	ASPHALTIC CONCRETE: 18mm.t	D			SCREEN: 3.68kg (<10L) 0.02-0.3m, NO FCF
											FILL: Gravelly silty sand, fine to coarse grained, grey, fine to medium grained igneous gravel, trace of slag.				
										CL-CI		w>PL	VSt		RESIDUAL
						N = 9 3,3,6					Gravelly silty CLAY: low to medium plasticity, grey, light grey and red brown, fine to medium grained siltstone and ironstone gravel.			250 290 350	
							65	1							
										-	Extremely Weathered siltstone: gravelly silty CLAY, high plasticity, light grey and red brown, with very low to low strength siltstone bands and ironstone bands.	XW	Hd		ASHFIELD SHALE VERY LOW 'TC' BIT RESISTANCE
							64	2							
											LAMINITE: Sandstone, fine grained, light grey, with dark grey sandstone laminae.	DW	L		LOW TO MODERATE RESISTANCE BANDED WITH SOIL RESISTANCE
											REFER TO CORED BOREHOLE LOG				
							63	3							
							62	4							
							61	5							
							60	6							
							59								

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CORED ENVIRONMENTAL LOG

Log No. BH14 2 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~65.8 m

Date: 28/11/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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
					START CORING AT 2.55m						
		63	3		NO CORE 0.36m						
		62	4		Extremely Weathered siltstone: gravelly silty CLAY, low plasticity, light grey and grey, fine to medium grained siltstone and ironstone gravel.	XW	Hd				Ashfield Shale
		61	5		NO CORE 0.26m						
85% RETURN		60	6		SILTSTONE: dark grey, with light grey laminae, bedded at 0-10°.	SW	L	0.40	20	(4.83-5.83m) Bex multiple, 0 - 5°, P, R, Fe Sn, ~50mm spacing (4.83-5.83m) XWS, 0 - 5°, 10-15mm.t (5.40-5.90m) J x 6, 20 - 55°, P, R, Fe Sn	Ashfield Shale
		59	7					0.60		(5.83-7.00m) XWSx multiple, 0 - 5°, 10-50mm.t	
		58	8					0.20 0.40		(7.12-7.52m) XWS x 4, 0 - 5°, 10-30mm.t (7.00-8.18m) Bex multiple, 0 - 5°, P, R, Cn, or Fe, Sn	
		57					M	1.2 0.80 0.80	60 20	(7.70m) J, 85°, P, R, Fe Sn (7.88-8.03m) XWS x 2, 3°, 5-10mm.t (8.16-8.37m) XWS x 2, 0°, 2-5mm.t	

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CORED ENVIRONMENTAL LOG

Log No. BH14 3 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~65.8 m

Date: 28/11/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./O.F.

Depth (m)	RL (m AHD)	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 Spacing (mm)	Defect Description (Specific / General)
10	56	SILTSTONE: dark grey, with light grey laminae, bedded at 0-10°. *(continued)*	SW	M	0.80	600 200 60 20	(9.00m) J, 85°, P, R, Fe Sn (9.03m) XWS, 5°, 5 mm.t (8.18-10.00m) Bex multiple, 0 - 5°, P, R, Fe Sn
					0.70		
							(9.47-10.00m) J x 5, 60 - 70°, P, R, Fe Sn
					0.50		(10.03m) Ji, 35°, P, R, Fe Sn (10.08-10.36m) Be x 8, 0 - 5°, P, R, Cn, or Fe, Sn
11	55			M - H	1.6		(10.56m) Be, 3°, P, R, Fe Sn (10.56-11.04m) J x 2, 75°, P, R, Fe Sn
12	54				1.6		(11.00-12.00m) J x 2, 75 - 85°, P, R, Cn (11.42-11.92m) Cr x 3, 10°, 20-60mm.t
						600 200 60 20	(12.24m) J, 60°, P, R, Cn (12.36m) Cr, 5°, 140 mm.t
13	53				1.0		(12.63m) J, 80°, P, R, Cn (12.90m) J, 80 - 90°, Un, R, Cn
							(13.49m) Cr, 13°, 20 mm.t
14	52				0.80		
		as above, but with grey, fine grained sandstone bands, bedded at 0-5°.			0.70		(14.10m) J, 80°, P, R, Cn (14.18m) J, 80°, P, R, Cn
					0.60		
15	51	END OF ENVIRONMENTAL HOLE AT 15.00 m					(14.75m) Be, 10°, Ir, R, Cn (15.00m) J, 35°, P, R, Cn
	50					600 200 60 20	

Water Loss\Level: 85% RETURN

Barrel Lift

Graphic Log

Point Load Strength Index scale: VL 0.1, L 0.3, M 1, H 3, VH 10, EH

Formation: Ashfield Shale

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ENVIRONMENTAL LOG

Log No. **BH16** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 66.2m

Date: 27/11/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked by:** H.W./T.H.

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 COMPLETION	■		■				0		-	ASPHALTIC CONCRETE: 10mm.t	D			INSUFFICIENT RETURN FOR BULK SCREEN ASHFIELD SHALE
	■		■						-	FILL: Sandy gravel, fine to medium grained, sub-angular igneous, brown, fine to medium grained sand.	XW			
	■		■				1			Extremely Weathered siltstone: silty CLAY, low to medium plasticity, brown, with distinctly weathered siltstone bands.				
	■		■							END OF BOREHOLE AT 1.5m				
							2							
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No. **BH17** 1/1

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 68.5m

Date: 27/11/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked by:** L.R./T.H.

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		-	ASPHALTIC CONCRETE: 50mm.t				SCREEN: 3.3kg (<10L)
										FILL: Sandy gravel, fine to medium grained, sub-angular igneous, brown,				0.05-0.4m, NO FCF
	■		■						-	fine to medium grained sand.	XW			ASHFIELD SHALE
	■		■				1			Extremely Weathered siltstone: silty CLAY, low to medium plasticity, brown, with distinctly weathered siltstone bands.				
										END OF BOREHOLE AT 1.5m				
							2							
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No.
BH18
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Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~68.0 m

Date: 27/11/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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										-	ASPHALTIC CONCRETE: 20mm.t	D			SCREEN: 5.4kg (<10L) 0.01-0.2m, NO FCF
										-	FILL: Gravelly silty sand, fine to coarse grained, grey, fine to medium grained igneous gravel, and slag.	XW	Hd		RESIDUAL
											Extremely Weathered siltstone: gravelly silty CLAY, low plasticity, red brown, fine to medium grained siltstone and ironstone gravel.	DW	L - M		ASHFIELD SHALE MODERATE 'V' BIT RESISTANCE BANDED WITH LOW RESISTANCE
							67	1			SILTSTONE: grey, with ironstone bands and fine grained sandstone bands.				
											REFER TO CORED BOREHOLE LOG				GROUNWATER MONITORING WELL INSTALLED TO 13.1m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 1.1m TO 13.1m. CASING 0.1m TO 1.1m. 2mm SAND FILTER PACK 0.5m TO 13.1m. BENTONITE SEAL 0.1m TO 0.5m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							66	2							
							65	3							
							64	4							
							63	5							
							62	6							

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CORED ENVIRONMENTAL LOG

Log No. BH18 2 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~68.0 m

Date: 27/11/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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) DESCRIPTION Type, orientation, defect shape and roughness, defect coatings and seams, openness and thickness Specific / General	Formation
					START CORING AT 1.15m					
					NO CORE 0.40m					
		66	2		Extremely Weathered siltstone: gravelly silty CLAY, low plasticity, grey, fine to medium grained siltstone and ironstone gravel, with low to medium strength siltstone and ironstone bands.	XW	Hd	0.60 0.30 0.30		Ashfield Shale
		65	3		NO CORE 0.28m					
ON 30/11/23 85% RETURN ON 12/12/23		64	4		LAMINITE: Siltstone, grey, bedded with Sandstone, fine grained, bedded at 0-5°.	MW	L	0.30 0.30 0.50 0.20 0.30	(3.38m) J, 80°, Ir, Vr, Fe Sn (3.33-3.57m) Be x 10, 0°, P, Vr, Fe Sn (3.53m) J, 60°, P, Vr, Cn (3.57m) Be, 0°, C, R, Cn (3.61-3.66m) Be x 4, 0°, P, R, Cn (3.71m) Be x 3, 3°, P, Vr, Fe Sn (3.79-3.91m) Be x 3, 5°, P, R, Fe Sn (4.05m) J, 65°, P, Vr, Fe Sn (4.10m) Be x 3, 5°, P, R, Cn (4.18m) J, 85°, St, Vr, Fe Sn (4.20-4.45m) Be x 10, 3 - 5°, P, Vr, Fe Sn (4.52m) Be, 0°, C, Vr, XW FILLED, 3 mm.t (4.68-4.98m) Be x 5, P, Vr, Fe Sn (4.92-5.20m) XWS x 4, 0 - 3°, 3 mm.t (5.32m) XWS, 5°, 35 mm.t (5.41m) Be, 0°, P, Vr, Fe Sn (5.51m) Be, 0°, P, R, Fe Sn, & XW, FILLED 2mm.t (5.56m) Be, 0°, P, R, XW FILLED, 2 mm.t (5.62m) XWS, 2°, 7 mm.t (5.64m) J, 60°, St, Vr, XW FILLED, 5 mm.t (5.66m) Ji, 60°, St, Vr, Fe Sn (5.68m) Be x 2, 0°, P, R, Fe Sn (5.71-5.74m) Be x 3, 0°, P, Vr, Fe Sn (5.76m) Be x 5, 3°, P, Vr, Fe Sn (5.81m) Be, 0°, P, R, Fe Sn (5.88m) XWS, 3°, 10 mm.t (5.95m) J, 70°, P, R, Fe Sn (6.02m) Be, 5°, P, Vr, Fe Sn (6.05m) XWS, 10°, 5 mm.t (6.10m) XWS, 7°, 15 mm.t (6.18m) J, 20°, P, R, Fe Sn (6.22m) Be, 5°, P, R, Fe Sn (6.32m) J, 60°, P, Vr, Fe Sn (6.38m) Be, 15°, P, R, Cn (6.47m) J, 10°, P, R, Fe Sn (6.50m) Be, 10°, P, R, Fe Sn (6.67-6.70m) Be x 2, 20°, P, R, Fe Sn (6.78m) J, 60°, P, Vr, Fe Sn, & XW, FILLED 15mm.t (7.13m) Be, 0°, P, R, Fe Sn (7.20-7.30m) J x 2, 65°, P, R, Cn (6.80-7.82m) J x 6, 50 - 80°, P, R, Fe Sn (7.39m) Be, 10°, P, R, Fe Sn (7.40m) Be, 10°, Ir, Vr, Cn (7.61m) J, 40°, P, Vr, Cn	Ashfield Shale
		62	6		SILTSTONE: grey, with fine grained sandstone laminae, bedded at 0-10°.	SW	M	0.90 0.40 0.70		
		61	7				M - H	1.4		

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CORED ENVIRONMENTAL LOG

Log No. BH18 3 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~68.0 m

Date: 27/11/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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 $I_s(50)$	SPACING (mm)	DEFECT DETAILS DESCRIPTION Type, orientation, defect shape and roughness, defect coatings and seams, openness and thickness Specific / General	Formation
85% RETURN		59	9		SILTSTONE: grey, with fine grained sandstone laminae, bedded at 0-10°. *(continued)*	SW	M - H	1.1 1.0 2.1		(8.15m) J, 80°, P, R, Cn (8.30m) J, 70°, P, R, XW FILLED, 4 mm.t (8.44m) J, 80°, P, R, Cn (8.56m) J, 60°, P, R, Cn (8.66m) J, 60°, C, Vr, XW FILLED, 3 mm.t (8.73m) J, 60°, P, R, Cn (8.78m) J, 70°, P, R, Cn (8.96m) J, 70°, P, R, Cn (9.07m) J, 45°, P, Vr, Cn (9.19m) J, 80°, St, Vr, Cn	Ashfield Shale
					NO CORE 0.12m						
		58 57 56 55	10 11 12 13		SILTSTONE: grey, with fine grained sandstone laminae, bedded at 0-10°.	SW	M	0.80 0.70 1.8 0.90 0.80 0.50 0.70 0.90		(9.67m) J, 40°, P, R, Cn (9.77m) J, 75°, St, Vr, Cn (9.86-9.99m) J x 3, 45°, P, R, Cn (10.35m) J, 70°, P, R, Cn (10.86m) J, 50°, P, R, Cn (11.14m) J x 2, 75°, P, R, Cn (11.52m) J x 2, 60°, P, R, Cn (11.76m) Be, 0°, P, R, Sand FILLED, 1 mm.t (11.88m) J, 45°, C, R, Cn (11.97m) J, 80°, Ir, R, Cn (12.12m) J, 50°, P, R, Cn (12.70m) J, 10°, P, R, Cn (13.00m) J, 50°, P, R, Cn	Ashfield Shale
		54	14		END OF ENVIRONMENTAL HOLE AT 13.07 m						

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ENVIRONMENTAL LOG

Log No. BH19 1/1

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 64.6m

Date: 3/1/24 **Datum:** AHD

Plant Type: JK400 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 20mm.t	D			SCREEN: 4.90kg (<10L) 0.02-0.4m, NO FCF
										FILL: Silty gravelly sand, fine to medium grained, light brown, fine to medium grained igneous gravel.	w<PL			SCREEN: 6.74kg (<10L) 0.4-1.4m, NO FCF
						N = 16 8,10,6	1			FILL: Silty clay, low to medium plasticity, brown and orange brown, trace of sandstone and igneous gravel, and ash.				
						N = 8 4,3,5	2							SCREEN: 6.30kg (<10L) 1.4-2.4m, NO FCF
														SCREEN: 4.10kg (<10L) 2.4-2.8m, NO FCF
						N > 11 7,11/ 50mm REFUSAL	3		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light brown and grey.	XW			ASHFIELD SHALE
										END OF BOREHOLE AT 3.5m				
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No. **BH20** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 65.4m

Date: 4/12/23 **Datum:** AHD

Plant Type: JK330 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 20mm.t	M			SCREEN: 6.35kg 0.02-0.5m, NO FCF
										FILL: Silty sand, fine to medium grained, grey, fine to medium grained, sub-angular igneous gravel.				
						N = 14 6,7,7				FILL: Silty clay, low to medium plasticity, orange brown, trace of igneous and sandstone gravel.	w<PL			SCREEN: 11.40kg 0.5-1.5m, NO FCF
							1							
						N = 13 4,6,7								SCREEN: 6.75kg (<10L) 1.5-2.1m, NO FCF
							2		-	Extremely Weathered sandstone: silty CLAY, low to medium plasticity, yellow brown and orange brown, trace of sand.	XW			HAWKESBURY SANDSTONE
										END OF BOREHOLE AT 2.8m				
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No.
BH21
1 / 4

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~65.0 m

Date: 3/1/24 TO 4/1/24 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** Q.V./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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										-	ASPHALTIC CONCRETE: 40mm.t FILL: Silty clay, low to medium plasticity, light grey, brown and red brown, with fine to medium grained sand and fine to medium grained igneous and ironstone gravel.	w<PL			APPEARS WELL COMPACTED SCREEN: 2.3kg (<10L) 0.04-0.5m, NO FCF TOO FRIABLE FOR HP TESTING SCREEN: 3.05kg (<10L) 0.5-1.0m, NO FCF SCREEN: 2.01kg (<10L) 1.0-1.5m, NO FCF TOO FRIABLE FOR HP TESTING SCREEN: 3.02kg (<10L) 1.5-2.0m, NO FCF
						N = 19 5,8,11	64	1							
						N = 11 5,5,6	63	2		CL-Cl	Silty CLAY: low to medium plasticity, light grey, orange brown and red brown, with fine to medium grained ironstone gravel.	w~PL	Hd		RESIDUAL
						N > 11 10,11/ 100mm REFUSAL	62	3		-	Extremely Weathered siltstone: silty CLAY, low plasticity, light grey and red brown, with fine to medium grained ironstone gravel.	XW	Hd	>600 >600	ASHFIELD SHALE
							61	4			SILTSTONE: grey, dark grey and red brown, with occasional extremely weathered and iron indurated bands.	DW	VL - L		VERY LOW TO LOW 'TC' BIT RESISTANCE
							60	5							
							59	6					L		LOW RESISTANCE

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ENVIRONMENTAL LOG

Log No. BH21 2 / 4

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~65.0 m

Date: 3/1/24 TO 4/1/24 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** Q.V./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	RL (m AHD)	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
										-	SILTSTONE: dark grey and grey.	DW	L - M		LOW TO MODERATE RESISTANCE
											REFER TO CORED BOREHOLE LOG				
							57	8							
							56	9							
							55	10							
							54	11							
							53	12							
							52	13							

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CORED ENVIRONMENTAL LOG

Log No. BH21 3 / 4

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~65.0 m

Date: 3/1/24 TO 4/1/24 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** Q.V./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 $I_s(50)$	SPACING (mm)	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
					START CORING AT 7.59m						
0% RETURN		57	8		SILTSTONE: dark grey, with red brown bands and grey laminae, bedded at 0-5°.	HW	L - M	0.40, 0.20		(7.64m) Be, 5°, P, S, Clay Vn; (7.69m) Cr, 0°, 15 mm.t; (7.74m) Cr, 5°, 25 mm.t; (7.79m) Be, 5°, P, S, Clay Ct; (7.84m) Cr, 5°, 30 mm.t; (7.87m) CS, 5°, 10 mm.t; (7.89m) J, 60°, P, S, Cn; (7.98m) J, 40°, Ir, S, Cn; (8.05m) XWS, 0°, 10 mm.t; (8.07m) Be, 0°, P, S, Fe Ct; (8.12m) Be, 0°, P, S, Clay Vn; (8.16m) Cr, 0°, 10 mm.t; (8.25m) J, 25°, P, S, Clay Ct; (8.39m) J, 70°, P, S, Clay Vn; (8.60m) Cr, 0°, 430 mm.t	
							VL - L	0.50			
98% RETURN		56	9		SILTSTONE: dark grey, with grey laminae, bedded at 0-5°.	FR	M	0.50, 0.80, 0.90		(8.88m) Cr, 5°, 25 mm.t; (9.32m) J, 40°, P, S, Cn; (9.49m) Cr, 0°, 10 mm.t; (9.56m) Cr, 0°, 5 mm.t	Ashfield Shale
		55	10				M - H	1.0	200 60 20	(10.17m) J, 30°, P, S, Cn	
		54	11					0.80, 1.6		(10.51m) J x 2, 90°, P, S, Cn; (10.62m) Cr, 0°, 15 mm.t; (10.65m) J, 25°, P, S, Cn; (10.82m) J, 40°, P, S, Cn; (10.89m) J, 30°, P, S, Clay FILLED; (10.98m) J, 25°, P, S, Cn; (11.15m) J, 10°, P, S, Cn; (11.28m) J x 2, 90°, P, S, Cn; (11.32m) Cr, 0°, 30 mm.t	
		53	12					1.1, 1.3		(12.48m) J, 25°, P, S, Cn; (12.55m) J, 55°, P, S, Cn	
		52	13					0.60, 1.0		(12.97m) Be, 0°, P, S, Clay Ct; (13.12m) Cr, 0°, 15 mm.t; (13.42m) J, 40°, P, S, Cn; (13.55m) Be, 5°, P, S, Clay Vn; (13.63m) J, 15°, P, S, Cn	
								0.70	600 200 60 20		

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CORED ENVIRONMENTAL LOG

Log No.
BH21
4 / 4

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~65.0 m

Date: 3/1/24 TO 4/1/24 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** Q.V./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 (Type, orientation, defect shape and roughness, defect coatings and seams, openness and thickness) Specific / General	Formation
98% RETURN		50	15		SILTSTONE: dark grey, with grey laminae, bedded at 0-5°. *(continued)*	FR	M - H	0.80		(14.41m) Be, 0°, P, S, Clay Ct	Ashfield Shale
										(14.70m) Be, 0°, P, S, Clay Ct	
								0.80			
								1.0			
								1.6		(15.66m) J, 25°, Ir, S, Cn	
								0.60		(15.92m) CS, 0°, 30 mm.t	
		49	16		LAMINITE: Siltstone, dark grey and grey, and Sandstone, fine to medium grained, light grey, bedded at 0-10°.					(16.12m) Be, 0°, P, R, Cn	
								0.70		(16.24m) CS, 0°, 30 mm.t	
								1.2		(16.72m) J, 30°, P, R, Cn	
										(16.90m) Be, 5°, P, R, Clay Ct	
		48	17					0.40		(17.22m) Cr, 0°, 3 mm.t	
								1.5			
										(17.80m) Be, 5°, P, R, Clay Ct	
		47	18					0.80		(17.84m) Jh, 70°, C	
										(18.09m) CS, 0°, 4 mm.t	
					END OF ENVIRONMENTAL HOLE AT 18.09 m						
		46	19								
		45	20								

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ENVIRONMENTAL LOG

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Log No. BH22 **1/1**

SDUP3: 0.1-0.15

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 64.2m

Date: 4/12/23 **Datum:** AHD

Plant Type: JK **Logged/Checked by:** L.R./T.H.

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 COMPLETION							0		-	ASPHALTIC CONCRETE: 40mm.t	D			SCREEN: 3.47kg (<10L) 0.04-0.2m, NO FCF
										FILL: Gravelly sand, fine to coarse grained, grey brown, with fine to medium grained igneous gravel, trace of sandstone gravel, clay nodules, slag and glass fragments.	w<PL			SCREEN: 5.7kg (<10L) 0.2-0.6m, NO FCF
						N = 20 8,8,12			-		XW			ASHFIELD SHALE
							1			FILL: Silty clay, low plasticity, red brown, trace of igneous, ironstone and sandstone gravel, and clay nodules.				
										Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light brown and grey, trace of ironstone bands.				
										END OF BOREHOLE AT 1.5m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. BH23 **1/1**

SDUP7: 0.02-0.3

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 65.6m

Date: 3/1/24 **Datum:** AHD

Plant Type: JK400 **Logged/Checked by:** H.W./T.H.

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						N = 10 5,5,5	0		-	ASPHALTIC CONCRETE: 20mm.t	D			SCREEN: 3.15kg (<10L) 0.02-0.3m, NO FCF
										FILL: Silty gravelly sand, fine to medium grained, light brown, fine to medium grained igneous gravel.	D			SCREEN: 4.0kg (<10L) 0.3-1.0m, NO FCF
							1			FILL: Sand, fine to medium grained, yellow brown, trace of igneous gravel, metal and plastic fragments.				SCREEN: 11.30kg 1.0-1.4m, NO FCF
										END OF BOREHOLE AT 1.4m				TERMINATED DUE TO POSSIBLE SERVICE
							2							
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No.
BH24
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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~65.7 m

Date: 30/11/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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						N = 9 3,4,5	65	1			FILL: Silty sand, fine to coarse grained, brown, with clay nodules, trace of fine grained ironstone, fine to medium grained sandstone gravel, slag, roots and root fibres.	M w~PL			GRASS COVER APPEARS WELL COMPACTED SCREEN: 13.15kg 0-0.1m, NO FCF
											FILL: Silty clay, medium plasticity, red brown, dark grey and light grey, trace of fine to medium grained ironstone, sandstone and siltstone gravel, ash and root fibres.				SCREEN: 5.5kg (<10L) 0.2-1.0m, NO FCF INSUFFICIENT RETURN FOR BULK SCREEN
						N > 25 8,13,12/ 100mm REFUSAL	64	2		CL-Cl	Gravelly silty CLAY: low to medium plasticity, light grey and red brown, fine to medium grained siltstone and ironstone gravel.	w<PL	Hd	>600 >600	RESIDUAL
							63	3							
							62	4							
							61	5		-	Extremely Weathered siltstone: gravelly silty CLAY, low plasticity, grey, fine to medium grained siltstone and ironstone gravel.	XW	Hd		ASHFIELD SHALE VERY LOW 'TC' BIT RESISTANCE BANDED WITH SOIL RESISTANCE
							60	6							
							59				SILTSTONE: grey, with grey laminae and extremely weathered bands.	DW	VL - L		

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ENVIRONMENTAL LOG

Log No.
BH24
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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~65.7 m

Date: 30/11/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	RL (m AHD)	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
											SILTSTONE: grey, with grey laminae and extremely weathered bands.	DW	VL - L		
											REFER TO CORED BOREHOLE LOG				
							58	8							
							57	9							
							56	10							
							55	11							
							54	12							
							53	13							
							52								

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CORED ENVIRONMENTAL LOG

Log No. BH24 3 / 3

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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~65.7 m

Date: 30/11/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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
					START CORING AT 7.09m			VL -0.1, L -0.3, M -1, H -3, VH -10, EH	600, 200, 60, 20		
		58			Extremely Weathered siltstone: gravelly silty CLAY or silty clayey GRAVEL, fine to coarse grained siltstone gravel, dark grey, low plasticity, with fine to medium grained ironstone gravel.	XW	Hd				
			8		SILTSTONE: dark grey, with brown and grey laminae, bedded at 0-10°.	SW	VL - L	0.30		(8.03m) Be, 5°, P, R, Cn (8.09-8.11m) Be x 2, 3°, P, R, Fe Sn (8.13m) XWS, 3°, 11 mm.t (8.12-8.21m) Be x 5, 0 - 5°, P, R, Fe Sn (8.23-8.30m) Be x 6, 0 - 10°, P, R, Fe Sn	
							L - M	0.20		(8.39m) Cr, 5°, 10 mm.t	
		57								(8.51m) J, 40°, Ir, Vr, Cn (8.60m) J x 2, 85°, St, Vr, Cn (8.71m) J, 25°, P, R, Cn	
			9							(8.86m) XWS, 20°, Cr, 150 mm.t (8.92m) J x 2, 50 - 85°, P, R, Cn	
						FR	M	0.90			
		56								(9.51m) J, 70°, P, R, Cn (9.58m) J, 70°, P, R, Cn (9.70m) Be, 10°, P, R, Cn (9.78m) J, 25°, P, R, Cn (9.86m) J, 30°, P, R, Cn	
			10					1.0			
								0.90			
		55						0.80		(10.64m) Ji, 70°, P, R, Cn	
			11					0.60		(11.22m) J, 55°, P, R, Cn (11.40m) J, 50°, P, R, Cn (11.45m) J, 25°, P, R, Cn (11.48m) J, 20°, P, R, Cn	
		54						0.60			
			12					0.80		(11.98m) J x 2, 50°, P, R, Cn (12.02m) J, 50°, P, R, Cn (12.10m) J, 25°, P, R, Cn	Ashfield Shale
					END OF ENVIRONMENTAL HOLE AT 12.22 m						
		53									
			13								
		52									

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ENVIRONMENTAL LOG

Log No. **BH25** 1/1

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 65.5m

Date: 4/12/23 **Datum:** AHD

Plant Type: JK330 **Logged/Checked by:** H.W./T.H.

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			CONCRETE: 100mm.t				
									-	FILL: Silty clay, medium to high plasticity, brown, trace of igneous and ironstone gravel, sand and root fibres.	w>PL			SCREEN: 3.27kg (<10L) 0.1-0.3m, NO FCF
									CI-CH		w≈PL			
						N > 26 5,16, 10/50mm REFUSAL				Silty CLAY: medium to high plasticity, yellow brown mottled orange brown.				RESIDUAL
							1		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, yellow brown and orange brown, with distinctly weathered siltstone bands.	XW			HAWKESBURY SANDSTONE
										END OF BOREHOLE AT 1.3m				
							2							
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No.
BH26
1 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~65.4 m

Date: 30/11/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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							65				CONCRETE: 400mm.t				8mm DIA. REINFORCEMENT, 140mm TOP COVER
											CONCRETE: 280mm.t				NO REINFORCEMENT OBSERVED
								1		-	Extremely Weathered siltstone: gravelly silty CLAY, low plasticity, light grey and orange brown, fine to medium grained siltstone and ironstone gravel.	XW	Hd		ASHFIELD SHALE AFFECTED BY WATER INTRODUCED DURING DIATUBE CORING VERY LOW 'TC' BIT RESISTANCE
							64								
								2							
							63								
											SILTSTONE: grey, with extremely weathered bands.	DW	VL - L		LOW RESISTANCE BANDED WITH SOIL RESISTANCE
							62	3							
								4							
							61				REFER TO CORED BOREHOLE LOG				GROUNDWATER MONITORING WELL INSTALLED TO 14.2m CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 2.2m TO 14.2m. CASING 0.1m TO 2.2m. 2mm SAND FILTER PACK 1.5m TO 14.2m. BENTONITE SEAL 0.1m TO 1.5m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
								5							
							60								
								6							
							59								

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CORED ENVIRONMENTAL LOG

Log No. **BH26** **2 / 3**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~65.4 m

Date: 30/11/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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 Type, orientation, defect shape and roughness, defect coatings and seams, openness and thickness Specific / General	Formation
					START CORING AT 4.20m						
					NO CORE 0.15m						
		61	5		SILTSTONE: dark grey, with grey laminae, bedded at 0-10°, with extremely weathered bands bedded at 0-10°.	MW	EL - VL			(4.30-5.42m) Be x multiple, 0 - 10°, P, R, Fe Sn (4.30-5.42m) XWS x multiple, 0 - 10°, 20-100mm.t	
		60			Extremely Weathered siltstone: gravelly silty CLAY, low plasticity, dark grey, fine to medium grained siltstone gravel.	XW	Hd				
		59	6		SILTSTONE: dark grey, with grey laminae, bedded at 0-10°.	SW	M	0.60		(6.08m) Be, 5°, P, R, Fe Sn (6.10m) J x 3, 15 - 20°, P, R, Fe Sn (6.12m) Be, 5°, P, R, Fe Sn (6.15m) Ji, 60°, P, R, Fe Sn (6.20m) J, 20°, P, R, Cn	
		58	7					0.80 0.80		(6.56m) J, 85°, St, R, Cn (6.67m) Be, 0°, P, Vr, Fe Sn (6.73m) XWS, 5°, 6 mm.t (6.75m) XWS, 5°, 5 mm.t (7.14m) J, 30°, P, R, Cn (7.17m) J, 75°, P, R, Cn (7.44m) J, 40°, P, R, Cn (7.49m) J, 45°, P, R, Cn	
85% RETURN		57	8			FR	M - H	0.90 1.8		(7.70m) Be, 8°, P, R, Cn (7.77m) J, 65°, P, R, Cn (7.83m) J, 25°, P, R, Cn (7.98m) J, 25°, P, R, Cn (8.02m) J, 30°, P, R, Cn (8.06m) Be, 5°, P, R, Cn	
		56	9					1.0 0.70 0.90		(8.49m) XWS, 10°, 6 mm.t (8.52m) J, 60°, P, R, Cn (8.56m) J, 65°, P, R, Cn (8.61m) J, 20°, C, R, Cn (8.73m) J, 30°, P, R, Cn (8.76m) J, 60°, P, R, Cn (8.81m) J, 25°, P, R, Cn (8.88m) J, 40°, P, R, Cn (9.03m) J, 25°, P, R, Cn (9.55m) J, 15°, P, R, Cn (9.67m) J, 20°, P, R, Cn (9.74m) J, 85°, C, R, Cn (9.80m) J, 20°, P, R, Cn (9.88m) J, 75°, P, R, Cn	
ON 5/12/23 ON 12/12/23		55	10					1.0 1.3		(10.38m) J, 45°, P, R, Cn	Ashfield Shale

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CORED ENVIRONMENTAL LOG

Log No. BH26 3 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~65.4 m

Date: 30/11/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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 (Type, orientation, defect shape and roughness, defect coatings and seams, openness and thickness)	Formation
85% RETURN		54	12		SILTSTONE: dark grey, with grey laminae, bedded at 0-10°. *(continued)*	FR	M - H	0.80		(11.30m) Be, 10°, P, R, Cn (11.35m) XWS, 0°, 15 mm.t	
		53	13		SANDSTONE: fine to medium grained, grey, bedded at 0-10°, with dark grey siltstone laminae, bedded at 0-10°, and siltstone bands.		M	0.50 0.90 0.90 0.40		(12.30m) Be, 15°, Un, R, Cn (12.48m) Be, 10°, P, R, Cn (12.60m) J, 70°, St, R, Cn (13.30m) Be x 2, 5°, P, R, Cn (13.39m) Be, 5°, P, R, Cn (13.40m) Be, 5°, P, R, Cn (13.44m) Be, 10°, Ir, R, Cn (13.48m) Be, 5°, P, R, Cn (13.52m) Be, 5°, P, R, Cn (13.58m) J, 80°, P, R, Cn (13.61m) XWS, 0°, 15 mm.t (13.70m) XWS, 0°, 10 mm.t (13.77m) Be, 10°, P, R, Cn (13.80m) Be, 10°, P, R, Cn (13.99m) XWS, 0°, 10 mm.t	Hawkesbury Sandstone
		52	14					0.80			
					SANDSTONE: fine to medium grained, light grey, with dark grey laminae, bedded at 0-10°.		M - H	1.4			
		51	15		END OF ENVIRONMENTAL HOLE AT 14.20 m						
		50	16								
		49	17								
		48									

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ENVIRONMENTAL LOG

Log No.
BH27
1 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~63.0 m

Date: 4/12/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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											CONCRETE: 140mm.t				8mm DIA. REINFORCEMENT, 50mm TOP COVER
										-	FILL: Gravelly silty sand, fine to coarse grained, brown, fine to medium grained igneous gravel, trace of plastic fragments.	M			APPEARS WELL COMPACTED
						N = 14 4,5,9					FILL: Silty clay, medium plasticity, red brown and orange brown, trace of fine to medium grained sand, fine grained igneous and ironstone gravel, and root fibres.	w~PL		>600 >600 >600	SCREEN: 2.1kg (<10L) 0.14-0.5m, NO FCF
							62	1							SCREEN: 3.1kg (<10L) 0.5-1.0m, NO FCF
															INSUFFICIENT RETURN FOR BULK SCREEN
						N > 31 10,16,15/ 100mm REFUSAL				-	Extremely Weathered siltstone: silty CLAY, medium plasticity, light grey mottled red brown, with fine to medium grained siltstone and ironstone gravel, and root fibres.	XW	Hd	>600 >600 >600	ASHFIELD SHALE VERY LOW 'TC' BIT RESISTANCE
							61	2							
						N > 14 12,14/ 100mm REFUSAL	60	3							
							59	4			SILTSTONE: dark grey, with iron indurated bands and extremely weathered bands.	DW	EL - VL		LOW RESISTANCE BANDED WITH SOIL RESISTANCE
							58	5					VL - L		
							57	6			SILTSTONE: dark grey, with grey laminae.		L - M		LOW TO MODERATE RESISTANCE BANDED WITH VERY LOW RESISTANCE

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REFER TO CORED BOREHOLE LOG

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CORED ENVIRONMENTAL LOG

Log No. **BH27** **2 / 3**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~63.0 m

Date: 4/12/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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
85% RETURN		55	8		SILTSTONE: dark grey, with iron indurated bands of low to medium strength and extremely weathered bands, bedded at 0-10°, with grey laminae, undulating at 5-10°. START CORING AT 7.00m	MW	EL - VL	0.10		(7.15m) Jh, 35°, P, Vr, Fe Sn	
										(7.42m) Jh, 70°, P, Vr, Fe Sn	
										(7.00-8.00m) XWS x 6, 5°, 5-50mm.t	
										(7.00-8.00m) Be x multiple, 0 - 5°, P, R, Fe Sn	
										(7.54m) Jh, 70°, P, Vr, Fe Sn	
										(7.61m) J, 75°, P, R, Fe Sn	
										(7.67m) Jh, 35°, P, Vr, Fe Sn	
								0.50			
					SILTSTONE: dark grey, with grey laminae, bedded at 0-10°.	SW	L - M	0.20		(8.14m) Ji x 3, 40 - 50°, P, R, Fe Sn	
										(8.08-8.25m) Be x 3, 0 - 5°, P, R, Fe Sn	
										(8.30m) Be, 10°, P, R, Fe Sn	
										(8.35m) Be, 8°, P, R, Fe Sn	
										(8.40m) J, 40°, P, R, Fe Sn	
										(8.49m) Ji, 80°, P, R, Fe Sn	
								0.50		(8.55m) XWS, 5°, 28 mm.t	
										(8.56-8.67m) Be x 2, 5 - 10°, P, R, Fe Sn	
										(8.69-8.83m) Be x 2, 10°, P, R, Fe Sn	
		54	9			SW	M - H			(8.87m) J, 80°, P, R, Cn	
								1.3		(9.02m) Cr, 0°, 30 mm.t	
										(9.23m) J, 50°, P, R, Cn	
										(9.50m) J, 75°, P, R, Cn	
						FR		0.70			
		53	10					0.60			
										(10.50m) J, 70°, P, R, Cn	
		52	11					0.80			
								1.2			
								1.0			
		51	12							(12.05m) J, 80°, P, R, Cn	
								1.2		(12.50m) J, 70°, P, R, Cn	
										(12.56m) J, 40°, P, R, Cn	
								0.80			
		50	13							(13.08m) J, 70°, P, R, Cn	
								0.60		(13.33m) J, 30°, P, R, Cn	
								1.0			
										(13.88m) J, 80°, P, R, Cn	Ashfield Shale

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CORED ENVIRONMENTAL LOG

Log No. BH27 3 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~63.0 m

Date: 4/12/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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 Type, orientation, defect shape and roughness, defect coatings and seams, openness and thickness Specific / General	Formation
85% RETURN		48	15		SILTSTONE: dark grey, with grey laminae, bedded at 0-10°. *(continued)*	FR	M - H			(14.05m) Cr, 5°, 110 mm.t (14.22m) J, 50°, P, R, Cn (14.37m) J, 80°, Un, R, Cn	
					LAMINITE: Siltstone, dark grey, with Sandstone, fine grained, light grey, with fine to medium grained sandstone bands, and siltstone lenses, bedded at 0-10°.			0.30 1.4 0.80		(14.83m) J, 40°, P, Vr, Cn	Hawkesbury Sandstone
		47	16				H	1.4 2.8 2.6		(15.38m) XWS, 5°, 10 mm.t (15.44m) Be, 0°, P, R, Cn (15.51m) Be, 5°, Un, R, Cn (15.54m) Be, 5°, P, R, Cn (15.86m) Be, 0°, P, R, Cn (15.91m) Be, 0°, P, R, Cn (15.92m) Be, 5°, P, R, Cn	
		46	17					2.7 1.0 1.1 1.5		(17.26m) J, 70°, P, Vr, Cn (17.38m) XWS, 0°, 16 mm.t (17.68m) J, 60°, P, R, Cn	
		45	18		END OF ENVIRONMENTAL HOLE AT 17.84 m						
		44	19								
		43	20								

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ENVIRONMENTAL LOG

Log No. **BH28** 1/1

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 63.7m

Date: 5/12/23 **Datum:** AHD

Plant Type: JK330 **Logged/Checked by:** H.W./T.H.

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: Clayey sand, fine to medium grained, brown, trace of clay nodules.	M w<PL			GRASS COVER
						N = 12 5,5,7	1			FILL: Silty clay, low to medium plasticity, brown, trace of igneous and sandstone gravel, sand, glass fragments and ash.				SCREEN: 10.40kg 0-0.1m, NO FCF SCREEN: 2.55kg (<10L) 0.1-1.1m, NO FCF SCREEN: 6.18kg (<10L) 1.1-2.1m, NO FCF
						N = 18 6,9,9	2							SCREEN: 6.18kg (<10L) 2.1-3.0m, NO FCF
						N = 16 8,8,8	3		CI-CH	Silty CLAY: medium to high plasticity, yellow brown mottled orange brown.	w≈PL			SCREEN: 3.20kg (<10L) 3.0-3.2m, NO FCF RESIDUAL
							4			END OF BOREHOLE AT 4.0m				
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No.
BH29
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Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~63.0 m

Date: 5/12/23 **Datum:** AHD

Plant Type: JK330 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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 clayey sand, fine to medium grained, grey brown, trace of clay nodules.	D w<PL			GRASS COVER SCREEN: 8.7kg (<10L) 0-0.1m, NO FCF
						N = 11 4,5,6	62	1			FILL: Silty clay, low plasticity, brown, grey and red brown, trace of fine grained siltstone and ironstone gravel, fine to medium grained sand, construction rubble, ash and root fibres.			500 >600	APPEARS WELL COMPACTED SCREEN: 4.0kg (<10L) 0.1-1.0m, NO FCF SCREEN: 3.7kg (<10L) 1.0-2.0m, NO FCF
						N = 18 3,8,10	61	2						>600 550	
						N = 12 2,6,6	60	3							SCREEN: 4.15kg (<10L) 2.0-3.0m, NO FCF INSUFFICIENT RETURN FOR BULK SCREEN
							59	4		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, light grey and red brown, with ironstone bands, trace of fine grained siltstone.	XW	Hd		LOW 'TC' BIT RESISTANCE BANDED WITH SOIL RESISTANCE ASHFIELD SHALE
							58	5							
							57	6			SILTSTONE: dark grey, with grey laminae, extremely weathered bands and iron indurated bands.	DW	VL - L		LOW TO MODERATE RESISTANCE BANDED WITH SOIL RESISTANCE

ON 6/12/23

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ENVIRONMENTAL LOG

Log No. BH29 2 / 4

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~63.0 m

Date: 5/12/23 **Datum:** AHD

Plant Type: JK330 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	RL (m AHD)	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel Density	Hand Penetrometer Readings (kPa)	Remarks
										-	SILTSTONE: dark grey, with grey laminae, extremely weathered bands and iron indurated bands. *(continued)*	DW	VL - L		
													L		LOW TO MODERATE RESISTANCE
							55	8							
							54	9					L - M		MODERATE RESISTANCE
											REFER TO CORED BOREHOLE LOG				GROUNDWATER MONITORING WELL INSTALLED TO 19.0m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 5.5m TO 19.0m. CASING 0.1m TO 5.5m. 2mm SAND FILTER PACK 4.0m TO 19.0m. BENTONITE SEAL 0.1m TO 4.0m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							53	10							
							52	11							
							51	12							
							50	13							

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CORED ENVIRONMENTAL LOG

Log No.
BH29
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Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~63.0 m

Date: 5/12/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK330 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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 9.75m						
		53	10		SILTSTONE: dark grey, with grey laminae, bedded at 0-10°.	FR	M - H	1.1		(9.80m) CS, 5°, 60 mm.t (9.92m) XWS, 3°, 20 mm.t	Ashfield Shale
										(10.10m) Be, 0°, C, R, Cn (10.17m) XWS, 0°, 30 mm.t (10.26m) Be, 0°, P, R, Fe Sn	
										(10.48m) XWS, 3°, 140 mm.t	
										(10.68m) Be, 5°, P, R, XW FILLED, 1 mm.t	
										(10.85m) Be, 3°, P, R, XW FILLED, 2 mm.t	
		52	11					1.6 2.4		(11.12m) XWS, 5°, 3 mm.t (11.14-11.30m) XWS x 5, 5°, 5-20mm.t	
								0.50			
										(11.35-11.82m) XWS x 4, 5°, 14-40mm.t	
								0.60			
										(11.91m) XWS, 0°, 45 mm.t	
		51	12							(12.09m) J, 75°, P, R, Cn	
								1.0		(12.38m) XWS, 3°, 60 mm.t	
	90% RETURN									(12.68-12.79m) J x 2, 30 - 35°, P, R, Cn	
		50	13					0.90		(12.98-13.03m) XWS, 0 - 5°, 15-30mm.t	
ON 12/12/23								1.1			
										(13.50m) Be, 0°, P, R, Cn (13.58m) XWS, 3°, 13 mm.t	
										(13.71m) J, 20°, Ir, Vr, Cn	
										(13.80m) J, 40°, P, R, Cn (13.80m) J, 20°, P, R, Cn	
		49	14					0.90			
								1.1			
										(14.42m) Be, 3°, P, R, Cn	
								0.70			
										(14.75m) J, 40°, P, R, Cn (14.83m) J, 25°, P, Vr, Cn (14.92m) XWS, 0°, 125 mm.t	
		48	15								
								0.70			
										(15.46m) XWS, 0°, 7 mm.t	
										(15.67m) XWS, 0°, 60 mm.t	
								0.80		(15.86m) J, 85°, P, R, Cn	

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CORED ENVIRONMENTAL LOG

Log No. BH29 4 / 4

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~63.0 m

Date: 5/12/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK330 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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
90% RETURN		46	17		SILTSTONE: dark grey, with grey laminae, bedded at 0-10°. *(continued)*	FR	M - H	1.0, 0.80, 1.1		(16.05m) Be, 0°, P, R, Cn	Ashfield Shale
		45	18		LAMINITE: Sandstone, fine to medium grained, light grey, interbedded with Siltstone, dark grey, bedded at 0-10°.		H	1.6, 2.0			Hawkesbury Sandstone
		44	19				H - VH	3.6, 3.6			
					END OF ENVIRONMENTAL HOLE AT 19.24 m						
		43	20								
		42	21								
		41	22								

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

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ENVIRONMENTAL LOG

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Log No. **BH30** **1/1**

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** HAND AUGER **R.L. Surface:** ≈ 59.0m

Date: 5/12/23 **Datum:** AHD

Plant Type: - **Logged/Checked by:** L.R./T.H.

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 COMPLETION	■		■	■	■		0			FILL: Gravelly sand, fine to medium grained, light brown, fine to medium grained, sub-angular ironstone gravel, trace of clay nodules, roots and root fibres.	D			SCREEN: 11.7kg 0-0.1m, NO FCF
										END OF BOREHOLE AT 0.1m				HAND AUGER REFUSAL
							1							
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **BH31** **1/1**

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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 65.3m

Date: 4/12/23 **Datum:** AHD

Plant Type: JK330 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 30mm.t	M			SCREEN: 3.75kg (<10L)
									-	FILL: Gravelly sand, fine to medium grained, dark grey, fine to medium grained, sub-angular igneous gravel.	XW			0.03-0.1m, NO FCF
	■		■							Extremely Weathered siltstone: silty CLAY, low to medium plasticity, yellow brown and orange brown, with distinctly weathered siltstone bands, trace of ironstone bands.				ASHFIELD SHALE
	■			■			1			END OF BOREHOLE AT 1.2m				
							2							
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No. **BH32** **1/1**

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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 65.8m

Date: 5/12/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked by:** H.W./T.H.

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		-	ASPHALTIC CONCRETE: 30mm.t	M			SCREEN: 4.0kg (<10L)
									-	FILL: Gravelly sand, fine to medium grained, grey, fine to medium grained, sub-angular igneous gravel.	XW			0.03-0.3m, NO FCF
										Extremely Weathered siltstone: silty gravelly CLAY, low to medium plasticity, grey and orange brown, trace of ironstone bands.				ASHFIELD SHALE
							1			as above, but grey.				
										END OF BOREHOLE AT 1.5m				
							2							
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No.
BH33
1 / 3

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ~66.0 m

Date: 28/11/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked By:** C.S.Y./O.F.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	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										-	ASPHALTIC CONCRETE: 18mm.t	D			SCREEN: 0.935kg (<10L) 0.04-0.2m, NO FCF
										-	FILL: Gravelly silty sand, fine to medium grained, grey, fine to medium grained igneous gravel, and slag.	XW	Hd		ASHFIELD SHALE
											Extremely Weathered siltstone: gravelly silty CLAY, low plasticity, red brown and light grey, fine to medium grained siltstone and ironstone gravel.				VERY LOW 'V' BIT RESISTANCE
							65	1			as above, but grey.				
							64	2			Extremely Weathered siltstone: gravelly silty CLAY, low plasticity, grey, with ironstone bands and very low to low strength siltstone bands.				LOW RESISTANCE
							63	3			SILTSTONE: grey, with extremely weathered bands and ironstone bands.	DW	VL - L		LOW RESISTANCE BANDED WITH SOIL RESISTANCE
							62	4							
							61	5			REFER TO CORED BOREHOLE LOG				
							60	6							

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CORED ENVIRONMENTAL LOG

Log No. **BH33** **2 / 3**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~66.0 m

Date: 28/11/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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 $I_s(50)$	SPACING (mm)	DEFECT DETAILS: DESCRIPTION (Specific / General)	Formation
					START CORING AT 4.37m						
85% RETURN		61	5		SILTSTONE: dark grey, with light grey laminae, bedded at 0-10°, with clay seams and extremely weathered and iron indurated bands.	SW	L / L - M	0.20, 0.40, 0.40		(4.40m) XWS, 3°, 30 mm.t (4.43m) CS, 3°, 25 mm.t (4.47m) XWS, 4°, 25 mm.t (4.51m) Be, 3°, P, Vr, XW FILLED, 2 mm.t (4.55m) Be, 5°, P, R, Cn (4.64m) Be x 2, 5°, P, Vr, Fe Sn (4.66m) CS, 5°, 30 mm.t (4.71m) CS, 5°, 10 mm.t (4.79-4.95m) Be x 3, 5°, P, Vr, Fe Sn (5.04-5.14m) Be x 2, 5°, P, Vr, Fe Sn (5.28-5.32m) Be x 2, 3°, P, R, Fe Sn (5.42m) Be, 3°, P, R, Fe Sn	Ashfield Shale
		60	6		SILTSTONE: dark grey, with light grey laminae, bedded at 0-10°.	FR	M - H	1.5, 0.70, 1.2, 0.80		(5.62-5.90m) Be x 3, 5°, P, R, Fe Sn (5.94-6.10m) Be x 2, 3°, P, R, Fe Sn (6.36m) XWS, 3°, 1 mm.t (6.42m) J, 75°, St, R, Fe Sn (6.52m) Be, 3°, P, R, Fe Sn (6.53m) XWS, 0°, 8 mm.t (6.63-6.65m) Be x 2, 5°, P, R, Cn	
		59	7					1.2	60, 20	(7.07m) J, 85°, St, R, Cn (7.14-7.28m) Be x 2, 5°, P, R, Fe Sn (7.37m) J, 60°, P, R, Fe Sn (7.52m) Be, 5°, P, R, XW FILLED, 3 mm.t (7.56-7.60m) Be x 2, 5°, C, R, Cn	
		58	8					0.90, 1.1		(7.80m) XWS, 5°, 10 mm.t (8.17m) J, 20°, P, R, Cn (8.32m) Be, 15°, P, R, Siltstone gravel FILLED, 2 mm.t	
		57	9					1.2, 1.1		(9.04m) Ji, 35°, St, R, Cn (9.14m) Be, 0°, P, R, Clay Vn	
		56	10					0.70, 1.1		(9.95m) J, 70°, P, R, Cn	
								1.9, 0.90, 0.80	200, 60, 20	(10.15m) J, 25°, P, R, Cn (10.20m) J x 2, 40 - 45°, C, R, Cn (10.30m) Ji, 30°, P, Vr, Cn (10.32m) J, 25°, P, R, Cn (10.47m) J, 20°, P, R, Cn (10.52m) J, 30°, C, R, Cn (10.90m) Be, 5°, P, R, XW gravel FILLED, 1 mm.t	

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CORED ENVIRONMENTAL LOG

Log No. BH33 3 / 3

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Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Core Size:** NMLC **R.L. Surface:** ~66.0 m

Date: 28/11/23 **Inclination:** VERTICAL **Datum:** AHD

Plant Type: JK500 **Bearing:** N/A **Logged/Checked By:** C.S.Y./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
85% RETURN					SILTSTONE: dark grey, with light grey laminae, bedded at 0-10°. *(continued)*	FR	M - H	0.50		(11.10m) J, 80°, P, R, Cn (11.14m) Be, 5°, C, R, Cn (11.31m) Be, 5°, C, R, Cn (11.53m) Be, 7°, P, Vr, Cn (11.60m) J, 85°, P, Vr, Cn	
		54	12		LAMINITE: Sandstone, fine to medium grained, light grey, with Siltstone, dark grey, bedded at 0-10° and undulating at 10°.			0.40 1.3		(11.80m) Be, 5°, Un, R, Cn (11.82m) XWS, 7°, 20 mm.t	Ashfield Shale
		53	13					0.40 0.40 0.60		(12.52m) Be, 3°, P, R, Cn (12.66-12.98m) Be x 4, 3°, P, R, Cn (13.03-13.24m) Be x 4, 3 - 5°, P, R, Cn (13.30m) XWS, 5°, 7 mm.t (13.43m) J, 25°, P, R, Cn (13.52m) Be, 3°, P, R, Cn	
		52	14		END OF ENVIRONMENTAL HOLE AT 13.55 m						
		51	15								
		50	16								
		49	17								

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ENVIRONMENTAL LOG

Log No. **BH34** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** SPIRAL AUGER **R.L. Surface:** ≈ 65.9m

Date: 5/12/23 **Datum:** AHD

Plant Type: JK500 **Logged/Checked by:** H.W./T.H.

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 COMPLETION							0		-	ASPHALTIC CONCRETE: 30mm.t	M			SCREEN: 3.95kg (<10L) 0.03-0.2m, NO FCF
									CI-CH	FILL: Gravelly sand, fine to medium grained, grey, fine to medium grained, sub-angular igneous gravel.	w<PL			RESIDUAL
						N > 24 6,14, 10/50mm REFUSAL			-	Silty CLAY: medium to high plasticity, grey, trace of ironstone gravel.	XW			ASHFIELD SHALE
							1			Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey.				
										END OF BOREHOLE AT 1.5m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **BH35** **1/1**

Client: TTW

Project: PROPOSED S5 DATA CENTRE

Location: 269 LANE COVE ROAD, MACQUARIE PARK, NSW

Job No.: E36466PR **Method:** HAND AUGER **R.L. Surface:** ≈ 63.0m

Date: 5/1/24 **Datum:** AHD

Plant Type: - **Logged/Checked by:** L.R./T.H.

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 COMPLETION	■		■				0			FILL: Silty clay, low to medium plasticity, dark brown, trace of fine to coarse grained sandstone gravel, and plastic fragments.	w<PL			GRASS COVER SCREEN: 10.3kg 0-0.15m, NO FCF
										END OF BOREHOLE AT 0.15m				
							1							
							2							
							3							
							4							
							5							
							6							
							7							

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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:

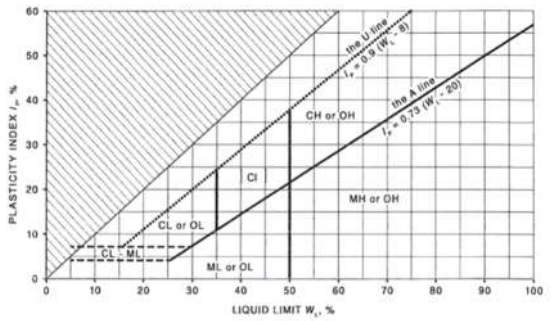
1 For a coarse grained soil with a fines content between 5% and 12%, the soil is given a dual classification comprising the two group symbols separated by a dash; for example, for a poorly graded gravel with between 5% and 12% silt fines, the classification is GP-GM.

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	Vane shear reading in kPa of undrained shear strength.
	PID = 100	Photoionisation detector reading in ppm (soil sample headspace test).
Moisture Condition (Fine Grained Soils)	w > PL	Moisture content estimated to be greater than plastic limit.
	$w \approx$ PL	Moisture content estimated to be approximately equal to plastic limit.
	w < PL	Moisture content estimated to be less than plastic limit.
	$w \approx$ LL	Moisture content estimated to be near liquid limit.
	w > LL	Moisture content estimated to be wet of liquid limit.
(Coarse Grained Soils)	D	DRY – runs freely through fingers.
	M	MOIST – does not run freely but no free water visible on soil surface.
	W	WET – free water visible on soil surface.
Strength (Consistency) Cohesive Soils	VS	VERY SOFT – unconfined compressive strength ≤ 25kPa.
	S	SOFT – unconfined compressive strength > 25kPa and ≤ 50kPa.
	F	FIRM – unconfined compressive strength > 50kPa and ≤ 100kPa.
	St	STIFF – unconfined compressive strength > 100kPa and ≤ 200kPa.
	VSt	VERY STIFF – unconfined compressive strength > 200kPa and ≤ 400kPa.
	Hd	HARD – unconfined compressive strength > 400kPa.
	Fr	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	VERY LOOSE – Density Index (I_D) Range (%) ≤ 15 – SPT 'N' Value Range (Blows/300mm) 0 – 4
	L	LOOSE – > 15 and ≤ 35 – 4 – 10
	MD	MEDIUM DENSE – > 35 and ≤ 65 – 10 – 30
	D	DENSE – > 65 and ≤ 85 – 30 – 50
	VD	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 Reports & COC Documents

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 339235

Client Details

Client	JK Environments
Attention	C Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E36446PR, Macquarie Park**
Number of Samples	26 Soil, 1 Water
Date samples received	01/12/2023
Date completed instructions received	01/12/2023

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	11/12/2023
Date of Issue	11/12/2023

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Stuart Chen
Authorised by Asbestos Approved Signatory: Stuart Chen

Results Approved By
Amanda Chui, Air Toxics Team Leader
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Liam Timmins, Organics Supervisor
Loren Bardwell, Development Chemist
Sean McAlary, Chemist
Stuart Chen, Analyst/Reporting coordinator
Tim Toll, Chemist (FAS)

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	05/12/2023	05/12/2023	05/12/2023	05/12/2023	05/12/2023
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	93	99	100	89	93

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		339235-19	339235-21	339235-24	339235-25	339235-26
Your Reference	UNITS	BH26	BH33	SDUP1	TB-S1	TS-S1
Depth		0.7-1	0.04-0.14	-	-	-
Date Sampled		30/11/2023	28/11/2023	28/11/2023	27/11/2023	27/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	05/12/2023	05/12/2023	05/12/2023	05/12/2023	05/12/2023
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	100%
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	100%
Ethylbenzene	mg/kg	<1	<1	<1	<1	99%
m+p-xylene	mg/kg	<2	<2	<2	<2	100%
o-Xylene	mg/kg	<1	<1	<1	<1	99%
Naphthalene	mg/kg	<1	<1	<1	<1	[NA]
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	[NA]
Surrogate aaa-Trifluorotoluene	%	99	100	94	100	93

svTRH (C10-C40) in Soil						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
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	370	120	130
Total +ve TRH (C10-C36)	mg/kg	<50	<50	370	120	130
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	310	<100	130
TRH >C_{34} -C_{40}	mg/kg	<100	<100	480	210	200
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	790	210	330
Surrogate o-Terphenyl	%	89	87	90	89	84

svTRH (C10-C40) in Soil					
Our Reference		339235-19	339235-21	339235-24	339235-25
Your Reference	UNITS	BH26	BH33	SDUP1	TB-S1
Depth		0.7-1	0.04-0.14	-	-
Date Sampled		30/11/2023	28/11/2023	28/11/2023	27/11/2023
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	140	150	<100
Total +ve TRH (C10-C36)	mg/kg	<50	140	150	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	220	240	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	220	350	<50
Surrogate o-Terphenyl	%	83	89	88	93

PAHs in Soil						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	86	93	84	88	90

PAHs in Soil					
Our Reference		339235-19	339235-21	339235-24	339235-25
Your Reference	UNITS	BH26	BH33	SDUP1	TB-S1
Depth		0.7-1	0.04-0.14	-	-
Date Sampled		30/11/2023	28/11/2023	28/11/2023	27/11/2023
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023	04/12/2023	06/12/2023
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	86	90	90	84

Organochlorine Pesticides in soil						
Our Reference		339235-1	339235-4	339235-11	339235-14	339235-19
Your Reference	UNITS	BH14	BH16	BH18	BH24	BH26
Depth		0.02-0.12	0.01-0.2	0.01-0.15	0-0.1	0.7-1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	30/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
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
Surrogate 4-Chloro-3-NBTF	%	84	86	84	83	79

Organochlorine Pesticides in soil			
Our Reference		339235-21	339235-24
Your Reference	UNITS	BH33	SDUP1
Depth		0.04-0.14	-
Date Sampled		28/11/2023	28/11/2023
Type of sample		Soil	Soil
Date extracted	-	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023
alpha-BHC	mg/kg	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	86	85

Organophosphorus Pesticides in Soil						
Our Reference		339235-1	339235-4	339235-11	339235-14	339235-19
Your Reference	UNITS	BH14	BH16	BH18	BH24	BH26
Depth		0.02-0.12	0.01-0.2	0.01-0.15	0-0.1	0.7-1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	30/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
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	%	84	86	84	83	79

Organophosphorus Pesticides in Soil			
Our Reference		339235-21	339235-24
Your Reference	UNITS	BH33	SDUP1
Depth		0.04-0.14	-
Date Sampled		28/11/2023	28/11/2023
Type of sample		Soil	Soil
Date extracted	-	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023
Dichlorvos	mg/kg	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	86	85

PCBs in Soil						
Our Reference		339235-1	339235-4	339235-11	339235-14	339235-19
Your Reference	UNITS	BH14	BH16	BH18	BH24	BH26
Depth		0.02-0.12	0.01-0.2	0.01-0.15	0-0.1	0.7-1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	30/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
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	%	89	90	89	88	85

PCBs in Soil			
Our Reference		339235-21	339235-24
Your Reference	UNITS	BH33	SDUP1
Depth		0.04-0.14	-
Date Sampled		28/11/2023	28/11/2023
Type of sample		Soil	Soil
Date extracted	-	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	89	89

Acid Extractable metals in soil						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	05/12/2023	05/12/2023	05/12/2023	05/12/2023	05/12/2023
Arsenic	mg/kg	<4	6	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	10	9	11	14
Copper	mg/kg	76	65	71	64	14
Lead	mg/kg	2	5	3	12	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	61	64	48	63	6
Zinc	mg/kg	41	38	37	84	33

Acid Extractable metals in soil					
Our Reference		339235-19	339235-21	339235-24	339235-25
Your Reference	UNITS	BH26	BH33	SDUP1	TB-S1
Depth		0.7-1	0.04-0.14	-	-
Date Sampled		30/11/2023	28/11/2023	28/11/2023	27/11/2023
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	05/12/2023	05/12/2023	05/12/2023	05/12/2023
Arsenic	mg/kg	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	10	10	3
Copper	mg/kg	51	64	64	<1
Lead	mg/kg	14	4	4	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	74	60	<1
Zinc	mg/kg	8	40	36	1

Moisture						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	05/12/2023	05/12/2023	05/12/2023	05/12/2023	05/12/2023
Moisture	%	5.7	5.0	3.3	2.6	18

Moisture					
Our Reference		339235-19	339235-21	339235-24	339235-25
Your Reference	UNITS	BH26	BH33	SDUP1	TB-S1
Depth		0.7-1	0.04-0.14	-	-
Date Sampled		30/11/2023	28/11/2023	28/11/2023	27/11/2023
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	05/12/2023	05/12/2023	05/12/2023	05/12/2023
Moisture	%	20	3.4	2.9	0.9

Asbestos ID - soils NEPM - ASB-001						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	07/12/2023	07/12/2023	07/12/2023	07/12/2023	07/12/2023
Sample mass tested	g	804.42	987.17	966.28	1,217.86	662.82
Sample Description	-	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Brown fine-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 ID - soils NEPM - ASB-001			
Our Reference		339235-19	339235-21
Your Reference	UNITS	BH26	BH33
Depth		0.7-1	0.04-0.14
Date Sampled		30/11/2023	28/11/2023
Type of sample		Soil	Soil
Date analysed	-	07/12/2023	07/12/2023
Sample mass tested	g	929.66	971.12
Sample Description	-	Grey coarse-grained soil & rocks	Grey 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

PFAS in Soils Extended						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
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	<0.1	<0.1	<0.1	<0.1	3.0
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	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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*	%	101	100	103	103	102
Surrogate $^{13}C_2$ *PFOA*	%	98	97	104	104	106
Extracted ISTD $^{13}C_3$ *PFBS*	%	98	96	97	97	92
Extracted ISTD $^{18}O_2$ *PFHxS*	%	105	104	104	107	105
Extracted ISTD $^{13}C_4$ *PFOS*	%	104	103	102	100	97

PFAS in Soils Extended						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	104	101	102	102	97
Extracted ISTD $^{13}C_3$ *PFPeA*	%	106	103	101	101	103
Extracted ISTD $^{13}C_2$ *PFHxA*	%	106	104	103	104	102
Extracted ISTD $^{13}C_4$ *PFHpA*	%	100	96	99	99	95
Extracted ISTD $^{13}C_4$ *PFOA*	%	113	108	107	107	101
Extracted ISTD $^{13}C_5$ *PFNA*	%	101	104	102	99	97
Extracted ISTD $^{13}C_2$ *PFDA*	%	108	102	111	102	107
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	114	111	109	108	88
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	110	101	108	104	103
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	107	93	101	93	88
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	105	100	101	101	129
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	109	106	113	108	122
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	120	111	127	111	#
Extracted ISTD $^{13}C_8$ *FOSA*	%	113	109	112	111	87
Extracted ISTD d_3 *N MeFOSA*	%	113	108	109	109	97
Extracted ISTD d_5 *N EtFOSA*	%	108	105	106	108	104
Extracted ISTD d_7 *N MeFOSE*	%	124	123	127	123	116
Extracted ISTD d_9 *N EtFOSE*	%	126	118	137	140	148
Extracted ISTD d_3 *N MeFOSAA*	%	109	106	115	106	#
Extracted ISTD d_5 *N EtFOSAA*	%	116	108	123	108	105
Total Positive PFHxS & PFOS	µg/kg	<0.1	<0.1	<0.1	<0.1	3.0
Total Positive PFOS & PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	3.3
Total Positive PFAS	µg/kg	<0.1	<0.1	<0.1	<0.1	3.5

PFAS in Soils Extended					
Our Reference		339235-19	339235-21	339235-24	339235-25
Your Reference	UNITS	BH26	BH33	SDUP1	TB-S1
Depth		0.7-1	0.04-0.14	-	-
Date Sampled		30/11/2023	28/11/2023	28/11/2023	27/11/2023
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Date analysed	-	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	102	101	102	103
Surrogate $^{13}C_2$ *PFOA*	%	97	97	98	97
Extracted ISTD $^{13}C_3$ *PFBS*	%	86	98	96	98
Extracted ISTD $^{18}O_2$ *PFHxS*	%	98	105	104	107
Extracted ISTD $^{13}C_4$ *PFOS*	%	93	105	103	102

PFAS in Soils Extended					
Our Reference		339235-19	339235-21	339235-24	339235-25
Your Reference	UNITS	BH26	BH33	SDUP1	TB-S1
Depth		0.7-1	0.04-0.14	-	-
Date Sampled		30/11/2023	28/11/2023	28/11/2023	27/11/2023
Type of sample		Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	92	102	99	102
Extracted ISTD $^{13}C_3$ *PFPeA*	%	94	101	98	103
Extracted ISTD $^{13}C_2$ *PFHxA*	%	93	106	103	106
Extracted ISTD $^{13}C_4$ *PFHpA*	%	88	99	98	101
Extracted ISTD $^{13}C_4$ *PFOA*	%	102	111	108	115
Extracted ISTD $^{13}C_5$ *PFNA*	%	91	100	104	109
Extracted ISTD $^{13}C_2$ *PFDA*	%	95	108	109	111
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	105	124	124	113
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	95	113	116	117
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	70	97	100	102
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	89	102	101	106
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	101	118	118	122
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	105	142	151	132
Extracted ISTD $^{13}C_8$ *FOSA*	%	99	111	107	107
Extracted ISTD d_3 *N MeFOSA*	%	99	112	106	103
Extracted ISTD d_5 *N EtFOSA*	%	96	111	103	103
Extracted ISTD d_7 *N MeFOSE*	%	124	128	109	110
Extracted ISTD d_9 *N EtFOSE*	%	122	142	112	112
Extracted ISTD d_3 *N MeFOSAA*	%	99	125	134	124
Extracted ISTD d_5 *N EtFOSAA*	%	99	137	138	123
Total Positive PFHxS & PFOS	µg/kg	<0.1	<0.1	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1
Total Positive PFAS	µg/kg	<0.1	<0.1	<0.1	<0.1

PAHs in TCLP (USEPA 1311)						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	7.5	8.6	8.6	8.6	8.4
pH of soil TCLP (after HCl)	pH units	1.7	1.7	1.7	1.7	1.7
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	5.2	5.3	5.3	5.3	5.2
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Naphthalene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	70	79	81	78	79

PAHs in TCLP (USEPA 1311)			
Our Reference		339235-19	339235-21
Your Reference	UNITS	BH26	BH33
Depth		0.7-1	0.04-0.14
Date Sampled		30/11/2023	28/11/2023
Type of sample		Soil	Soil
pH of soil for fluid# determ.	pH units	7.2	8.4
pH of soil TCLP (after HCl)	pH units	1.7	1.7
Extraction fluid used		1	1
pH of final Leachate	pH units	5.1	5.2
Date extracted	-	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023
Naphthalene in TCLP	mg/L	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	80	80

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/12/2023	07/12/2023	07/12/2023	07/12/2023	07/12/2023
Date analysed	-	07/12/2023	07/12/2023	07/12/2023	07/12/2023	07/12/2023
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	0.03	0.03	0.04	0.03	0.02
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.07	0.08	0.1	0.1	<0.02
Zinc	mg/L	0.04	0.03	0.04	0.04	0.04

Metals from Leaching Fluid pH 2.9 or 5			
Our Reference		339235-19	339235-21
Your Reference	UNITS	BH26	BH33
Depth		0.7-1	0.04-0.14
Date Sampled		30/11/2023	28/11/2023
Type of sample		Soil	Soil
Date extracted	-	07/12/2023	07/12/2023
Date analysed	-	07/12/2023	07/12/2023
Arsenic	mg/L	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01
Copper	mg/L	0.42	0.03
Lead	mg/L	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005
Nickel	mg/L	<0.02	0.08
Zinc	mg/L	0.04	0.03

PFAS in TCLP Extended						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	06/12/2023	06/12/2023	06/12/2023	06/12/2023	06/12/2023
Date analysed	-	06/12/2023	06/12/2023	06/12/2023	06/12/2023	06/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	0.02
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	101	98	98	101	100
Surrogate $^{13}C_2$ *PFOA*	%	110	108	97	102	106
Extracted ISTD $^{13}C_3$ *PFBS*	%	103	98	99	99	105
Extracted ISTD $^{18}O_2$ *PFHxS*	%	108	103	102	102	100
Extracted ISTD $^{13}C_4$ *PFOS*	%	102	104	101	100	101

PFAS in TCLP Extended						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	93	90	89	90	95
Extracted ISTD $^{13}C_3$ *PFPeA*	%	102	100	100	99	104
Extracted ISTD $^{13}C_2$ *PFHxA*	%	99	98	98	100	110
Extracted ISTD $^{13}C_4$ *PFHpA*	%	104	99	103	101	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	100	102	102	102	104
Extracted ISTD $^{13}C_5$ *PFNA*	%	124	119	130	119	128
Extracted ISTD $^{13}C_2$ *PFDA*	%	117	116	110	121	122
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	123	123	122	128	135
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	114	106	107	107	110
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	106	104	104	104	105
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	94	96	91	94	113
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	108	105	105	92	107
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	135	124	143	122	130
Extracted ISTD $^{13}C_8$ *FOSA*	%	113	111	115	109	113
Extracted ISTD d_3 *N MeFOSA*	%	104	102	103	101	99
Extracted ISTD d_5 *N EtFOSA*	%	103	102	104	107	102
Extracted ISTD d_7 *N MeFOSE*	%	112	106	112	110	115
Extracted ISTD d_9 *N EtFOSE*	%	103	99	100	101	100
Extracted ISTD d_3 *N MeFOSAA*	%	113	109	107	113	118
Extracted ISTD d_5 *N EtFOSAA*	%	119	117	125	109	128
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	0.02
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	0.02
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	0.02

PFAS in TCLP Extended			
Our Reference		339235-19	339235-21
Your Reference	UNITS	BH26	BH33
Depth		0.7-1	0.04-0.14
Date Sampled		30/11/2023	28/11/2023
Type of sample		Soil	Soil
Date prepared	-	06/12/2023	06/12/2023
Date analysed	-	06/12/2023	06/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5
MePerfluorooctanesulf- amid oacetic aci	µg/L	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	97	103
Surrogate $^{13}C_2$ *PFOA*	%	106	104
Extracted ISTD $^{13}C_3$ *PFBS*	%	104	96
Extracted ISTD $^{18}O_2$ *PFHxS*	%	106	100
Extracted ISTD $^{13}C_4$ *PFOS*	%	102	102

PFAS in TCLP Extended			
Our Reference		339235-19	339235-21
Your Reference	UNITS	BH26	BH33
Depth		0.7-1	0.04-0.14
Date Sampled		30/11/2023	28/11/2023
Type of sample		Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	89	90
Extracted ISTD $^{13}C_3$ *PFPeA*	%	98	103
Extracted ISTD $^{13}C_2$ *PFHxA*	%	100	99
Extracted ISTD $^{13}C_4$ *PFHpA*	%	97	101
Extracted ISTD $^{13}C_4$ *PFOA*	%	98	100
Extracted ISTD $^{13}C_5$ *PFNA*	%	125	118
Extracted ISTD $^{13}C_2$ *PFDA*	%	111	128
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	125	133
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	108	96
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	95	102
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	92	91
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	103	107
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	133	127
Extracted ISTD $^{13}C_8$ *FOSA*	%	111	111
Extracted ISTD d_3 *N MeFOSA*	%	104	102
Extracted ISTD d_5 *N EtFOSA*	%	104	108
Extracted ISTD d_7 *N MeFOSE*	%	115	112
Extracted ISTD d_9 *N EtFOSE*	%	97	96
Extracted ISTD d_3 *N MeFOSAA*	%	101	115
Extracted ISTD d_5 *N EtFOSAA*	%	122	125
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01

PAHs in Water Leach						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
pH of final Leachate	pH units	8.4	8.4	7.6	8.1	7.8
Naphthalene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	75	73	65	72	71

PAHs in Water Leach			
Our Reference		339235-19	339235-21
Your Reference	UNITS	BH26	BH33
Depth		0.7-1	0.04-0.14
Date Sampled		30/11/2023	28/11/2023
Type of sample		Soil	Soil
Date extracted	-	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023
pH of final Leachate	pH units	7.7	8.5
Naphthalene in ASLP	µg/L	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1
Acenaphthene in ASLP	µg/L	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	<0.1
Phenanthrene in ASLP	µg/L	<0.1	<0.1
Anthracene in ASLP	µg/L	<0.1	<0.1
Fluoranthene in ASLP	µg/L	<0.1	<0.1
Pyrene in ASLP	µg/L	<0.1	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1	<0.1
Chrysene in ASLP	µg/L	<0.1	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	72	69

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/12/2023	07/12/2023	07/12/2023	07/12/2023	07/12/2023
Date analysed	-	07/12/2023	07/12/2023	07/12/2023	07/12/2023	07/12/2023
pH of final Leachate	pH units	9.1	9.1	8.6	8.5	8.4
Arsenic	µg/L	<1	<1	<1	<1	<1
Cadmium	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	µg/L	<1	<1	<1	<1	1
Copper	µg/L	2	<1	<1	<1	1
Lead	µg/L	<1	<1	<1	<1	<1
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	3	<1	1	<1	<1
Zinc	µg/L	3	1	2	2	4

Metals from Neutral Leaching Fluid ICPMS			
Our Reference		339235-19	339235-21
Your Reference	UNITS	BH26	BH33
Depth		0.7-1	0.04-0.14
Date Sampled		30/11/2023	28/11/2023
Type of sample		Soil	Soil
Date extracted	-	07/12/2023	07/12/2023
Date analysed	-	07/12/2023	07/12/2023
pH of final Leachate	pH units	7.8	8.6
Arsenic	µg/L	2	<1
Cadmium	µg/L	<0.1	<0.1
Chromium	µg/L	<1	1
Copper	µg/L	1	<1
Lead	µg/L	1	1
Mercury	µg/L	<0.05	<0.05
Nickel	µg/L	<1	1
Zinc	µg/L	<1	2

PFAS in ASLP Extended						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	06/12/2023	06/12/2023	06/12/2023	06/12/2023	06/12/2023
Date analysed	-	06/12/2023	06/12/2023	06/12/2023	06/12/2023	06/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	0.02
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	100	95	98	98	95
Surrogate $^{13}C_2$ PFOA	%	99	103	107	102	106
Extracted ISTD $^{13}C_3$ *PFBS*	%	100	98	97	105	102
Extracted ISTD $^{18}O_2$ *PFHxS*	%	104	100	103	103	102
Extracted ISTD $^{13}C_4$ *PFOS*	%	105	108	104	105	111

PFAS in ASLP Extended						
Our Reference		339235-1	339235-4	339235-8	339235-11	339235-14
Your Reference	UNITS	BH14	BH16	BH17	BH18	BH24
Depth		0.02-0.12	0.01-0.2	0.05-0.15	0.01-0.15	0-0.1
Date Sampled		28/11/2023	27/11/2023	27/11/2023	27/11/2023	30/11/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	114	113	114	111	112
Extracted ISTD $^{13}C_3$ *PFPeA*	%	116	115	115	114	113
Extracted ISTD $^{13}C_2$ *PFHxA*	%	104	101	102	101	104
Extracted ISTD $^{13}C_4$ *PFHpA*	%	104	101	100	105	104
Extracted ISTD $^{13}C_4$ *PFOA*	%	118	112	112	116	116
Extracted ISTD $^{13}C_5$ *PFNA*	%	109	109	109	109	109
Extracted ISTD $^{13}C_2$ *PFDA*	%	116	118	115	118	118
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	117	115	120	122	129
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	131	130	134	134	141
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	109	114	113	106	115
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	98	107	98	96	96
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	125	124	128	131	131
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	143	132	134	140	143
Extracted ISTD $^{13}C_8$ *FOSA*	%	108	111	111	107	110
Extracted ISTD d_3 *N MeFOSA*	%	109	107	107	107	105
Extracted ISTD d_5 *N EtFOSA*	%	101	102	105	98	101
Extracted ISTD d_7 *N MeFOSE*	%	105	109	105	99	105
Extracted ISTD d_9 *N EtFOSE*	%	101	107	102	103	106
Extracted ISTD d_3 *N MeFOSAA*	%	123	121	124	122	122
Extracted ISTD d_5 *N EtFOSAA*	%	120	115	120	118	118
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	0.02
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	0.02
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	0.02

PFAS in ASLP Extended			
Our Reference		339235-19	339235-21
Your Reference	UNITS	BH26	BH33
Depth		0.7-1	0.04-0.14
Date Sampled		30/11/2023	28/11/2023
Type of sample		Soil	Soil
Date prepared	-	06/12/2023	06/12/2023
Date analysed	-	06/12/2023	06/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	100	101
Surrogate $^{13}C_2$ PFOA	%	106	102
Extracted ISTD $^{13}C_3$ *PFBS*	%	105	103
Extracted ISTD $^{18}O_2$ *PFHxS*	%	103	104
Extracted ISTD $^{13}C_4$ *PFOS*	%	104	108

PFAS in ASLP Extended			
Our Reference		339235-19	339235-21
Your Reference	UNITS	BH26	BH33
Depth		0.7-1	0.04-0.14
Date Sampled		30/11/2023	28/11/2023
Type of sample		Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	112	113
Extracted ISTD $^{13}C_3$ *PFPeA*	%	113	115
Extracted ISTD $^{13}C_2$ *PFHxA*	%	104	105
Extracted ISTD $^{13}C_4$ *PFHpA*	%	103	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	117	118
Extracted ISTD $^{13}C_5$ *PFNA*	%	111	109
Extracted ISTD $^{13}C_2$ *PFDA*	%	117	117
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	122	124
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	132	134
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	107	113
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	107	108
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	129	133
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	148	146
Extracted ISTD $^{13}C_8$ *FOSA*	%	109	107
Extracted ISTD d_3 *N MeFOSA*	%	103	109
Extracted ISTD d_5 *N EtFOSA*	%	101	102
Extracted ISTD d_7 *N MeFOSE*	%	105	104
Extracted ISTD d_9 *N EtFOSE*	%	102	100
Extracted ISTD d_3 *N MeFOSAA*	%	122	122
Extracted ISTD d_5 *N EtFOSAA*	%	120	115
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01

vTRH(C6-C10)/BTEXN in Water		
Our Reference		339235-27
Your Reference	UNITS	FR-1-Auger
Depth		-
Date Sampled		28/11/2023
Type of sample		Water
Date extracted	-	04/12/2023
Date analysed	-	05/12/2023
TRH C_6 - C_9	µg/L	85
TRH C_6 - C_{10}	µg/L	110
TRH C_6 - C_{10} less BTEX (F1)	µg/L	110
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	%	96
Surrogate Toluene-d8	%	99
Surrogate 4-Bromofluorobenzene	%	88

svTRH (C10-C40) in Water		
Our Reference		339235-27
Your Reference	UNITS	FR-1-Auger
Depth		-
Date Sampled		28/11/2023
Type of sample		Water
Date extracted	-	05/12/2023
Date analysed	-	06/12/2023
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	<100
TRH C_{29} - C_{36}	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	<50
TRH >C_{10} - C_{16}	µg/L	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50
TRH >C_{16} - C_{34}	µg/L	<100
TRH >C_{34} - C_{40}	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	<50
Surrogate o-Terphenyl	%	89

PAHs in Water		
Our Reference	UNITS	339235-27
Your Reference		FR-1-Auger
Depth		-
Date Sampled		28/11/2023
Type of sample		Water
Date extracted	-	05/12/2023
Date analysed	-	06/12/2023
Naphthalene	µg/L	<0.1
Acenaphthylene	µg/L	<0.1
Acenaphthene	µg/L	<0.1
Fluorene	µg/L	<0.1
Phenanthrene	µg/L	<0.1
Anthracene	µg/L	<0.1
Fluoranthene	µg/L	<0.1
Pyrene	µg/L	<0.1
Benzo(a)anthracene	µg/L	<0.1
Chrysene	µg/L	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2
Benzo(a)pyrene	µg/L	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5
Total +ve PAH's	µg/L	<0.1
Surrogate p-Terphenyl-d14	%	102

Metals in Waters - Acid extractable		
Our Reference		339235-27
Your Reference	UNITS	FR-1-Auger
Depth		-
Date Sampled		28/11/2023
Type of sample		Water
Date prepared	-	05/12/2023
Date analysed	-	05/12/2023
Arsenic - Total	mg/L	<0.05
Cadmium - Total	mg/L	<0.01
Chromium - Total	mg/L	<0.01
Copper - Total	mg/L	0.5
Lead - Total	mg/L	<0.03
Mercury - Total	mg/L	<0.0005
Nickel - Total	mg/L	<0.02
Zinc - Total	mg/L	<0.02

PFAS in Water LOW LEVEL Short		
Our Reference		339235-27
Your Reference	UNITS	FR-1-Auger
Depth		-
Date Sampled		28/11/2023
Type of sample		Water
Date prepared	-	07/12/2023
Date analysed	-	07/12/2023
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	<0.001
Perfluorooctanoic acid PFOA	µg/L	<0.001
6:2 FTS	µg/L	<0.001
8:2 FTS	µg/L	<0.002
Surrogate $^{13}C_8$ *PFOS*	%	90
Surrogate $^{13}C_2$ *PFOA*	%	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%	93
Extracted ISTD $^{13}C_4$ *PFOS*	%	110
Extracted ISTD $^{13}C_4$ *PFOA*	%	130
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	174
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	#
Total Positive PFHxS & PFOS	µg/L	<0.001
Total Positive PFOA & PFOS	µg/L	<0.001
Total Positive PFAS	µg/L	<0.001

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) **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-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
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.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-021	Determination of Mercury by Cold Vapour AAS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Metals-022	Determination of various metals by ICP-MS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.
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	Leachates are extracted 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. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.

Method ID	Methodology Summary
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-022/025 ASLP	ASLP Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.
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.
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 5.4 Table B-15 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.

Method ID	Methodology Summary
Org-029A	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 5.4Table B-15 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. TOPA analyses use a pre-spiked, labelled internal standard PFAS precursor to assess the oxidation efficiency. The efficiency of removal by oxidation is recorded in the report. Additionally, dilutions applied (if required) to ensure sufficient precursor oxidation are also recorded and are available on request. 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-2	339235-4
Date extracted	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Date analysed	-			05/12/2023	1	05/12/2023	05/12/2023		05/12/2023	05/12/2023
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	103	80
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	103	80
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	103	80
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	97	75
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	101	78
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	108	84
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	106	82
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	95	1	93	106	13	99	79

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339235-4
Date extracted	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Date analysed	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	123	118
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	120	122
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	100	109
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	123	118
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	120	122
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	100	109
Surrogate o-Terphenyl	%		Org-020	85	1	89	88	1	136	98

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339235-4
Date extracted	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Date analysed	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	101
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	99
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	116	118
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	106
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	98
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	93	93
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	91	91
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	106	102
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	83	1	86	89	3	87	87

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339235-4
Date extracted	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Date analysed	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	104
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	100
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	103
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	122	107
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	116	120
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	125	115
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	128	120
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	90
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	98
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	129	115
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	80	1	84	83	1	86	87

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339235-4
Date extracted	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Date analysed	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	127	113
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	104
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	97	87
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	93
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	106
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	80
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	90
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	80	1	84	83	1	86	87

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339235-4
Date extracted	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Date analysed	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	127	120
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	88	1	89	89	0	90	90

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339235-4
Date prepared	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Date analysed	-			05/12/2023	1	05/12/2023	05/12/2023		05/12/2023	05/12/2023
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	107	78
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	103	70
Chromium	mg/kg	1	Metals-020	<1	1	10	9	11	113	80
Copper	mg/kg	1	Metals-020	<1	1	76	53	36	110	100
Lead	mg/kg	1	Metals-020	<1	1	2	2	0	113	75
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	127	123
Nickel	mg/kg	1	Metals-020	<1	1	61	57	7	105	75
Zinc	mg/kg	1	Metals-020	<1	1	41	31	28	105	#

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	339235-4
Date prepared	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Date analysed	-			04/12/2023	1	04/12/2023	04/12/2023		04/12/2023	04/12/2023
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	91	99
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	88	102
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	90	107
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	93	108
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	89	104
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	103	112
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	87	102
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	90	102
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	87	102
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	83	98
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	84	96
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	88	109
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	87	99
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	99	106
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	87	93
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	94	99
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	1	<5	<5	0	90	111
4:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	89	102
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	86	98
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	90	102
10:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	97	98
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	94	110
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	91	103
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	1	<1	<1	0	89	101
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	1	<1	<1	0	91	90
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	1	<5	<5	0	86	92
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	88	105
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	86	100
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	101	1	101	101	0	100	101
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	101	1	98	98	0	100	104

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	339235-4
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	98	1	98	98	0	94	97
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	99	1	105	107	2	100	102
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	98	1	104	102	2	101	100
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	100	1	104	103	1	99	102
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	100	1	106	102	4	97	100
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	99	1	106	109	3	101	101
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	98	1	100	102	2	98	97
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	100	1	113	108	5	104	104
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	102	1	101	104	3	102	98
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	103	1	108	105	3	103	105
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	117	1	114	110	4	110	113
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	110	1	110	104	6	111	102
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	109	1	107	101	6	123	94
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	112	1	105	102	3	101	98
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	106	1	109	110	1	105	102
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	113	1	120	115	4	113	111
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	101	1	113	109	4	103	102
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	101	1	113	111	2	110	107
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	100	1	108	109	1	112	107
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	104	1	124	127	2	112	123

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	339235-4
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	104	1	126	128	2	121	125
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	109	1	109	109	0	107	102
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	106	1	116	113	3	112	107

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			[NT]	[NT]	[NT]	[NT]	[NT]	04/12/2023	[NT]
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	04/12/2023	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	89	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	86	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	88	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	90	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	90	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	88	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	88	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	86	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	88	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	88	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	84	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	82	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	87	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	90	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	96	[NT]
4:2 FTS	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	91	[NT]
6:2 FTS	µg/kg	0.1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	86	[NT]
8:2 FTS	µg/kg	0.2	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	87	[NT]
10:2 FTS	µg/kg	0.2	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	94	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	89	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	89	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	95	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	91	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	92	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	87	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	103	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	[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-2	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	106	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	113	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	115	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	118	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	101	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Date analysed	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	77	[NT]
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	81	[NT]
Fluorene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	76	[NT]
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	80	[NT]
Anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	84	[NT]
Pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	79	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	66	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	<0.0002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	90	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	107	[NT]	[NT]	[NT]	[NT]	80	[NT]

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			07/12/2023	1	07/12/2023	07/12/2023		07/12/2023	[NT]
Date analysed	-			07/12/2023	1	07/12/2023	07/12/2023		07/12/2023	[NT]
Arsenic	mg/L	0.05	Metals-020	<0.05	1	<0.05	<0.05	0	110	[NT]
Cadmium	mg/L	0.01	Metals-020	<0.01	1	<0.01	<0.01	0	116	[NT]
Chromium	mg/L	0.01	Metals-020	<0.01	1	<0.01	<0.01	0	115	[NT]
Copper	mg/L	0.01	Metals-020	<0.01	1	0.03	0.02	40	120	[NT]
Lead	mg/L	0.03	Metals-020	<0.03	1	<0.03	<0.03	0	117	[NT]
Mercury	mg/L	0.0005	Metals-021	<0.0005	1	<0.0005	<0.0005	0	114	[NT]
Nickel	mg/L	0.02	Metals-020	<0.02	1	0.07	0.03	80	115	[NT]
Zinc	mg/L	0.02	Metals-020	<0.02	1	0.04	<0.02	67	108	[NT]

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339235-4
Date prepared	-			06/12/2023	1	06/12/2023	06/12/2023		06/12/2023	06/12/2023
Date analysed	-			06/12/2023	1	06/12/2023	06/12/2023		06/12/2023	06/12/2023
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	111	112
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	107	116
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	104	112
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	101	109
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	111	116
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	82	85
Perfluorobutanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	107	110
Perfluoropentanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	102	103
Perfluorohexanoic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	106	106
Perfluoroheptanoic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	105	105
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	107	110
Perfluorononanoic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	107	112
Perfluorodecanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	96	100
Perfluoroundecanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	101	102
Perfluorododecanoic acid	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	114	112
Perfluorotridecanoic acid	µg/L	0.1	Org-029	<0.1	1	<0.1	<0.1	0	118	118
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	<0.5	1	<0.5	<0.5	0	110	109
4:2 FTS	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	106	101
6:2 FTS	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	111	110
8:2 FTS	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	98	105
10:2 FTS	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	120	119
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	<0.1	1	<0.1	<0.1	0	109	118
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	117	117
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	<0.1	1	<0.1	<0.1	0	104	105
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	106	108
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	1	<0.5	<0.5	0	126	127
MePerfluorooctanesulf- amid oacetic aci	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	116	110
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	107	107
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	100	1	101	103	2	99	103
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	100	1	110	104	6	101	111

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339235-4
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	106	1	103	101	2	99	98
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	104	1	108	105	3	106	102
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	103	1	102	97	5	101	100
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	96	1	93	90	3	91	86
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	106	1	102	101	1	100	97
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	101	1	99	96	3	96	97
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	101	1	104	100	4	99	100
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	96	1	100	97	3	94	95
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	120	1	124	122	2	118	116
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	119	1	117	105	11	119	115
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	119	1	123	130	6	119	119
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	114	1	114	110	4	101	108
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	111	1	106	99	7	108	107
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	94	1	94	87	8	90	96
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	115	1	108	102	6	101	98
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	135	1	135	132	2	138	130
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	114	1	113	109	4	108	105
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	103	1	104	101	3	99	99
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	104	1	103	104	1	103	100
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	111	1	112	111	1	106	109

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339235-4
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	100	1	103	98	5	98	95
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	110	1	113	106	6	108	111
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	121	1	119	124	4	113	118

QUALITY CONTROL: PAHs in Water Leach						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Date analysed	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	123	[NT]
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	129	[NT]
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	121	[NT]
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	119	[NT]
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	127	[NT]
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	117	[NT]
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Benzo(bjk)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	119	[NT]
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022/025 ASLP	127	[NT]	[NT]	[NT]	[NT]	129	[NT]

QUALITY CONTROL: Metals from Neutral Leaching Fluid ICPMS						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339235-4
Date extracted	-			07/12/2023	1	07/12/2023	07/12/2023		07/12/2023	07/12/2023
Date analysed	-			07/12/2023	1	07/12/2023	07/12/2023		07/12/2023	07/12/2023
Arsenic	µg/L	1	Metals-022	<1	1	<1	<1	0	104	98
Cadmium	µg/L	0.1	Metals-022	<0.1	1	<0.1	<0.1	0	106	97
Chromium	µg/L	1	Metals-022	<1	1	<1	<1	0	94	93
Copper	µg/L	1	Metals-022	<1	1	2	<1	67	100	94
Lead	µg/L	1	Metals-022	<1	1	<1	<1	0	96	94
Mercury	µg/L	0.05	Metals-021	<0.05	1	<0.05	<0.05	0	95	89
Nickel	µg/L	1	Metals-022	<1	1	3	1	100	96	95
Zinc	µg/L	1	Metals-022	<1	1	3	1	100	114	95

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339235-4
Date prepared	-			06/12/2023	1	06/12/2023	06/12/2023		06/12/2023	06/12/2023
Date analysed	-			06/12/2023	1	06/12/2023	06/12/2023		06/12/2023	06/12/2023
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	109	100
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	105	107
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	108	107
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	110	108
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	102	106
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	80	80
Perfluorobutanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	103	103
Perfluoropentanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	100	101
Perfluorohexanoic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	109	104
Perfluoroheptanoic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	101	100
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	96	97
Perfluorononanoic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	117	109
Perfluorodecanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	98	100
Perfluoroundecanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	102	101
Perfluorododecanoic acid	µg/L	0.05	Org-029A	<0.05	1	<0.05	<0.05	0	102	104
Perfluorotridecanoic acid	µg/L	0.1	Org-029A	<0.1	1	<0.1	<0.1	0	101	102
Perfluorotetradecanoic acid	µg/L	0.5	Org-029A	<0.5	1	<0.5	<0.5	0	109	106
4:2 FTS	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	109	106
6:2 FTS	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	94	98
8:2 FTS	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	102	114
10:2 FTS	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	119	135
Perfluorooctane sulfonamide	µg/L	0.1	Org-029A	<0.1	1	<0.1	<0.1	0	108	110
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029A	<0.05	1	<0.05	<0.05	0	111	110
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029A	<0.1	1	<0.1	<0.1	0	113	110
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029A	<0.05	1	<0.05	<0.05	0	104	101
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029A	<0.5	1	<0.5	<0.5	0	104	108
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	119	115
EtPerfluorooctanesulf-amid oacetic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	108	98
Surrogate $^{13}C_8$ PFOS	%		Org-029A	98	1	100	93	7	94	102
Surrogate $^{13}C_2$ PFOA	%		Org-029A	100	1	99	105	6	100	103

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339235-4
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029A	98	1	100	98	2	92	97
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029A	102	1	104	101	3	100	100
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029A	105	1	105	108	3	107	100
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029A	114	1	114	114	0	110	111
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029A	117	1	116	114	2	110	111
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029A	101	1	104	102	2	98	102
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029A	102	1	104	103	1	96	99
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029A	118	1	118	112	5	112	112
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029A	105	1	109	110	1	102	106
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029A	119	1	116	117	1	114	113
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029A	121	1	117	121	3	118	118
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029A	130	1	131	132	1	124	123
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029A	107	1	109	108	1	105	108
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029A	98	1	98	105	7	97	98
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029A	119	1	125	120	4	117	117
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029A	142	1	143	141	1	133	121
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029A	106	1	108	108	0	106	103
Extracted ISTD d_3 *N MeFOSA*	%		Org-029A	108	1	109	108	1	105	104
Extracted ISTD d_5 *N EtFOSA*	%		Org-029A	99	1	101	103	2	98	100
Extracted ISTD d_7 *N MeFOSE*	%		Org-029A	104	1	105	107	2	98	99

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339235-4
Extracted ISTD d_9 *N EtFOSE*	%		Org-029A	104	1	101	98	3	104	98
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029A	116	1	123	123	0	108	110
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029A	123	1	120	119	1	111	123

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			04/12/2023	[NT]	[NT]	[NT]	[NT]	04/12/2023	[NT]
Date analysed	-			05/12/2023	[NT]	[NT]	[NT]	[NT]	05/12/2023	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	102	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	99	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	97	[NT]	[NT]	[NT]	[NT]	97	[NT]
Surrogate Toluene-d8	%		Org-023	89	[NT]	[NT]	[NT]	[NT]	103	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	106	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	339235-27
Date extracted	-			05/12/2023	[NT]	[NT]	[NT]	[NT]	05/12/2023	05/12/2023
Date analysed	-			05/12/2023	[NT]	[NT]	[NT]	[NT]	05/12/2023	06/12/2023
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	108	92
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	106	97
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	78
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	108	92
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	106	97
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	78
Surrogate o-Terphenyl	%		Org-020	89	[NT]	[NT]	[NT]	[NT]	92	83

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339235-27
Date extracted	-			[NT]	[NT]	[NT]	[NT]	[NT]	05/12/2023	05/12/2023
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	06/12/2023	06/12/2023
Naphthalene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	115	129
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]	109	117
Fluorene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	116	129
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	114	120
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]	119	125
Pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	113	125
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]	106	109
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]	138	139
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	111	[NT]	[NT]	[NT]	[NT]	102	96

QUALITY CONTROL: Metals in Waters - Acid extractable						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			05/12/2023	[NT]	[NT]	[NT]	[NT]	05/12/2023	[NT]
Date analysed	-			05/12/2023	[NT]	[NT]	[NT]	[NT]	05/12/2023	[NT]
Arsenic - Total	mg/L	0.05	Metals-020	<0.05	[NT]	[NT]	[NT]	[NT]	115	[NT]
Cadmium - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	109	[NT]
Chromium - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	111	[NT]
Copper - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	110	[NT]
Lead - Total	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	116	[NT]
Mercury - Total	mg/L	0.0005	Metals-021	<0.0005	[NT]	[NT]	[NT]	[NT]	90	[NT]
Nickel - Total	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	114	[NT]
Zinc - Total	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	111	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			07/12/2023	[NT]	[NT]	[NT]	[NT]	07/12/2023	[NT]
Date analysed	-			07/12/2023	[NT]	[NT]	[NT]	[NT]	07/12/2023	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	93	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	97	[NT]
6:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	93	[NT]
8:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	91	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	83	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	120	[NT]	[NT]	[NT]	[NT]	132	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	141	[NT]	[NT]	[NT]	[NT]	192	[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.

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Report Comments

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).

8 metals in soil - # Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

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.

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	C Ridley

Sample Login Details

Your reference	E36446PR, Macquarie Park
Envirolab Reference	339235
Date Sample Received	01/12/2023
Date Instructions Received	01/12/2023
Date Results Expected to be Reported	08/12/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	26 Soil, 1 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:

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
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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 metalsin soil	Asbestos ID - soils NEPM - ASB-001	PFAS in Soils Extended	PAHs in TCLP (USEPA 1311)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PFAS in TCLP Extended	PAHs in TCLP pH Neutral	Metals from Neutral Leaching Fluid ICPMS	PFAS in ASLP Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters -Acid extractable	PFAS in Water LOW LEVEL Short	On Hold
BH14-0.02-0.12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH14-0.3-0.4																													✓
BH14-0.7-0.95																													✓
BH16-0.01-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH16-0.5-0.7																													✓
BH16-0.8-1																													✓
BH16-1.3-1.5																													✓
BH17-0.05-0.15	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH17-0.5-0.7																													✓
BH17-0.8-1																													✓
BH18-0.01-0.15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH18-0.3-0.5																													✓
BH18-0.8-1																													✓
BH24-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH24-0.3-0.5																													✓
BH24-0.8-0.95																													✓
BH24-1.7-1.95																													✓
BH24-2.7-3																													✓
BH26-0.7-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH26-1.4-1.6																													✓

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
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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 metalsin soil	Asbestos ID - soils NEPM - ASB-001	PFAS in Soils Extended	PAHs in TCLP (USEPA 1311)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PFAS in TCLP Extended	PAHs in TCLP pH Neutral	Metals from Neutral Leaching Fluid ICPMS	PFAS in ASLP Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters -Acid extractable	PFAS in Water LOW LEVEL Short	On Hold
BH33-0.04-0.14	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH33-0.14-0.5																													✓
BH33-0.7-1																													✓
SDUP1	✓	✓	✓	✓	✓	✓	✓		✓																				
TB-S1	✓	✓	✓				✓		✓																				
TS-S1	✓																												
FR-1-Auger																								✓	✓	✓	✓	✓	

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

ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E36446PR Date Results Required: STANDARD Page: 1 of 2	FROM: JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Craig Ridley cridley@jkenvironments.com.au

Location:	Macquarie Park, NSW
Sampler:	LR/OB/HW

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals	ASLP PFAS	BTEX	PFAS (low level, short)
28/11/2023	1	BH14	0.02-0.12	G, A, PFAS	1.4	F: Sandy Gravel			X			X		X	X	X		
28/11/2023	2	BH14	0.3-0.4	G, A, PFAS	2.1	Silty Clay												
28/11/2023	3	BH14	0.7-0.95	G, A, PFAS	1.6	Silty Clay												
27/11/2023	4	BH16	0.01-0.2	G, A, PFAS	2.4	F: Sandy Gravel			X			X		X	X	X		
27/11/2023	5	BH16	0.5-0.7	G, A, PFAS	1.5	Siltstone												
27/11/2023	6	BH16	0.8-1	G, A, PFAS	1.6	Siltstone												
27/11/2023	7	BH16	1.3-1.5	G, PFAS	0	Siltstone												
27/11/2023	8	BH17	0.05-0.15	G, A, PFAS	1.6	F: Sandy Gravel		X				X	X	X	X	X		
27/11/2023	9	BH17	0.5-0.7	G, A, PFAS	1.7	Siltstone												
27/11/2023	10	BH17	0.8-1	G, A, PFAS	2.4	Siltstone												
27/11/2023	11	BH18	0.01-0.15	G, A, PFAS	1.7	F: Sandy Gravel			X			X		X	X	X		
27/11/2023	12	BH18	0.3-0.5	G, A, PFAS	1.6	Siltstone												
27/11/2023	13	BH18	0.8-1	G, A, PFAS	1.7	Siltstone												
30/11/2023	14	BH24	0-0.1	G, A, PFAS	2.4	F: Silty Sand			X			X		X	X	X		
30/11/2023	15	BH24	0.3-0.5	G, A, PFAS	2.8	F: Silty Clay												
30/11/2023	16	BH24	0.8-0.95	G, A, PFAS	2.2	F: Silty Clay												
30/11/2023	17	BH24	1.7-1.95	G, A, PFAS	3.1	Gravelly Silty Clay												
30/11/2023	18	BH24	2.7-3	G, A, PFAS	2.2	Gravelly Silty Clay												
30/11/2023	19	BH26	0.7-1	G, A, PFAS	2.5	Siltstone			X			X		X	X	X		
30/11/2023	20	BH26	1.4-1.6	G, A, PFAS	1.6	Siltstone												
28/11/2023	21	BH33	0.04-0.14	G, A, PFAS	1.2	F: Sandy Gravel			X			X		X	X	X		
28/11/2023	22	BH33	0.14-0.5	G, A, PFAS	1.2	Siltstone												
28/11/2023	23	BH33	0.7-1	G, A, PFAS	1	Siltstone												
28/11/2023	24	SDUP1	-	G, A, PFAS	-	Duplicate				X		X						
30/11/2023	~~25~~	SDUP2	-	G, A, PFAS	-	Duplicate				X		X	SEND TO VIC					

Remarks (comments/detection limits required): ASLP - DI leachate	Sample Containers: G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By:	Date:	Time:	Received By:	Date:
LR	1/12/23	1420	Paul	1/12/23

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

Job No: 339235

Date Received: 1/12/23
Time Received: 1420
Received By: Paul
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

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: E36446PR Date Results Required: STANDARD Page: 2 of 2	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Craig Ridley cridley@jkenvironments.com.au

Location:	Macquarie Park, NSW	Sample Preserved in Esky on Ice
Sampler:	LR/OB/HW	Tests Required

	Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals	ASLP PFAS	BTEX	PFAS (low level, short)
25	27/11/2023	[illegible]	TB-S1	-	G, PFAS	-	Trip Blank					X	X						
26	27/11/2023	[illegible]	TS-S1	-	V	-	Trip Spike											X	
27	28/11/2023	[illegible]	FR-1-Auger	-	#	-	Rinsate					X							X

339235
1/12/23 1420
Pau1

Remarks (comments/detection limits required):	Sample Containers:
Please test FR1-Auger for total metals	G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By:	Date:	Time:	Received By:	Date:
LR	1/12/23	1420	Paul R	1/12/23

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 339235-A

Client Details

Client	JK Environments
Attention	C Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E36446PR, Macquarie Park**
Number of Samples	Additional analysis
Date samples received	01/12/2023
Date completed instructions received	19/12/2023

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	03/01/2024
Date of Issue	03/01/2024

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

Results Approved By
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Jenny He, Senior Chemist
Liam Timmins, Organics Supervisor
Loren Bardwell, Development Chemist
Lucy Zhu, Asbestos Supervisor
Sean McAlary, Chemist (FAS)
Tim Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	20/12/2023
Date analysed	-	22/12/2023
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	88

svTRH (C10-C40) in Soil		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	20/12/2023
Date analysed	-	21/12/2023
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	110
TRH C_{29} - C_{36}	mg/kg	190
Total +ve TRH (C10-C36)	mg/kg	300
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	220
TRH >C_{34} -C_{40}	mg/kg	280
Total +ve TRH (>C10-C40)	mg/kg	500
Surrogate o-Terphenyl	%	80

PAHs in Soil		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	20/12/2023
Date analysed	-	21/12/2023
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	0.1
Benzo(a)anthracene	mg/kg	0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	0.3
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	93

Organochlorine Pesticides in soil		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	20/12/2023
Date analysed	-	21/12/2023
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
Surrogate 4-Chloro-3-NBTF	%	99

Organophosphorus Pesticides in Soil		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	20/12/2023
Date analysed	-	21/12/2023
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	%	99

PCBs in Soil		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	20/12/2023
Date analysed	-	21/12/2023
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	%	97

Misc Inorg - Soil					
Our Reference		339235-A-1	339235-A-4	339235-A-11	339235-A-21
Your Reference	UNITS	BH14	BH16	BH18	BH33
Depth		0.02-0.12	0.01-0.2	0.01-0.15	0.04-0.14
Date Sampled		28/11/2023	27/11/2023	27/11/2023	28/11/2023
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	02/01/2024	02/01/2024	02/01/2024	02/01/2024
Date analysed	-	02/01/2024	02/01/2024	02/01/2024	02/01/2024
pH 1:5 soil:$CaCl_2$	pH Units	8.2	8.1	8.1	8.0

Acid Extractable metals in soil		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date prepared	-	28/12/2023
Date analysed	-	02/01/2024
Arsenic	mg/kg	8
Cadmium	mg/kg	<0.4
Chromium	mg/kg	18
Copper	mg/kg	5
Lead	mg/kg	21
Mercury	mg/kg	<0.1
Nickel	mg/kg	5
Zinc	mg/kg	11

CEC					
Our Reference		339235-A-1	339235-A-4	339235-A-11	339235-A-21
Your Reference	UNITS	BH14	BH16	BH18	BH33
Depth		0.02-0.12	0.01-0.2	0.01-0.15	0.04-0.14
Date Sampled		28/11/2023	27/11/2023	27/11/2023	28/11/2023
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Date analysed	-	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Exchangeable Ca	meq/100g	18	18	20	19
Exchangeable K	meq/100g	0.3	0.3	0.3	0.3
Exchangeable Mg	meq/100g	0.7	1.0	1.8	1.8
Exchangeable Na	meq/100g	0.5	0.8	0.6	0.8
Cation Exchange Capacity	meq/100g	20	20	23	22

PFAS in Soils Extended		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date prepared	-	21/12/2023
Date analysed	-	21/12/2023
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	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
Perfluorononanoic acid	µg/kg	<0.1
Perfluorodecanoic acid	µg/kg	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	<0.5
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*	%	89
Surrogate $^{13}C_2$ *PFOA*	%	99
Extracted ISTD $^{13}C_3$ *PFBS*	%	111
Extracted ISTD $^{18}O_2$ *PFHxS*	%	105
Extracted ISTD $^{13}C_4$ *PFOS*	%	113

PFAS in Soils Extended		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	115
Extracted ISTD $^{13}C_3$ *PFPeA*	%	106
Extracted ISTD $^{13}C_2$ *PFHxA*	%	105
Extracted ISTD $^{13}C_4$ *PFHpA*	%	115
Extracted ISTD $^{13}C_4$ *PFOA*	%	101
Extracted ISTD $^{13}C_5$ *PFNA*	%	121
Extracted ISTD $^{13}C_2$ *PFDA*	%	106
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	28
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	115
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	84
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	116
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	113
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	117
Extracted ISTD $^{13}C_8$ *FOSA*	%	125
Extracted ISTD d_3 *N MeFOSA*	%	96
Extracted ISTD d_5 *N EtFOSA*	%	103
Extracted ISTD d_7 *N MeFOSE*	%	131
Extracted ISTD d_9 *N EtFOSE*	%	105
Extracted ISTD d_3 *N MeFOSAA*	%	117
Extracted ISTD d_5 *N EtFOSAA*	%	111
Total Positive PFHxS & PFOS	µg/kg	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1
Total Positive PFAS	µg/kg	<0.1

Moisture		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date prepared	-	20/12/2023
Date analysed	-	21/12/2023
Moisture	%	18

Asbestos ID - soils NEPM - ASB-001		
Our Reference	UNITS	339235-A-16
Your Reference		BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date analysed	-	02/01/2024
Sample mass tested	g	505.62
Sample Description	-	Brown clayey soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected
Total Asbestos[#1]	g/kg	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected
ACM >7mm Estimation*	g	–
FA and AF Estimation*	g	–
ACM >7mm Estimation*	%(w/w)	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001

PAHs in TCLP (USEPA 1311)		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
pH of soil for fluid# determ.	pH units	7.5
pH of soil TCLP (after HCl)	pH units	1.5
Extraction fluid used		1
pH of final Leachate	pH units	4.9
Date extracted	-	22/12/2023
Date analysed	-	27/12/2023
Naphthalene in TCLP	mg/L	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001
Fluorene in TCLP	mg/L	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001
Anthracene in TCLP	mg/L	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001
Pyrene in TCLP	mg/L	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001
Chrysene in TCLP	mg/L	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	75

Metals from Leaching Fluid pH 2.9 or 5		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	02/01/2024
Date analysed	-	02/01/2024
Arsenic	mg/L	<0.05
Cadmium	mg/L	<0.01
Chromium	mg/L	<0.01
Copper	mg/L	<0.01
Lead	mg/L	<0.03
Mercury	mg/L	<0.0005
Nickel	mg/L	<0.02
Zinc	mg/L	<0.02

PFAS in TCLP Extended		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date prepared	-	21/12/2023
Date analysed	-	21/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02
Perfluorobutanoic acid	µg/L	<0.02
Perfluoropentanoic acid	µg/L	<0.02
Perfluorohexanoic acid	µg/L	<0.01
Perfluoroheptanoic acid	µg/L	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01
Perfluorononanoic acid	µg/L	<0.01
Perfluorodecanoic acid	µg/L	<0.02
Perfluoroundecanoic acid	µg/L	<0.02
Perfluorododecanoic acid	µg/L	<0.05
Perfluorotridecanoic acid	µg/L	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5
4:2 FTS	µg/L	<0.01
6:2 FTS	µg/L	<0.01
8:2 FTS	µg/L	<0.02
10:2 FTS	µg/L	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5
MePerfluorooctanesulf- amid oacetic aci	µg/L	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	103
Surrogate $^{13}C_2$ *PFOA*	%	97
Extracted ISTD $^{13}C_3$ *PFBS*	%	92
Extracted ISTD $^{18}O_2$ *PFHxS*	%	98
Extracted ISTD $^{13}C_4$ *PFOS*	%	98

PFAS in TCLP Extended		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	92
Extracted ISTD $^{13}C_3$ *PFPeA*	%	95
Extracted ISTD $^{13}C_2$ *PFHxA*	%	97
Extracted ISTD $^{13}C_4$ *PFHpA*	%	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	111
Extracted ISTD $^{13}C_5$ *PFNA*	%	103
Extracted ISTD $^{13}C_2$ *PFDA*	%	99
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	118
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	113
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	85
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	90
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	118
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	116
Extracted ISTD $^{13}C_8$ *FOSA*	%	100
Extracted ISTD d_3 *N MeFOSA*	%	97
Extracted ISTD d_5 *N EtFOSA*	%	94
Extracted ISTD d_7 *N MeFOSE*	%	95
Extracted ISTD d_9 *N EtFOSE*	%	92
Extracted ISTD d_3 *N MeFOSAA*	%	108
Extracted ISTD d_5 *N EtFOSAA*	%	118
Total Positive PFHxS & PFOS	µg/L	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01
Total Positive PFAS	µg/L	<0.01

PAHs in Water Leach		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	22/12/2023
Date analysed	-	27/12/2023
pH of final Leachate	pH units	5.7
Naphthalene in ASLP	µg/L	<0.1
Acenaphthylene in ASLP	µg/L	<0.1
Acenaphthene in ASLP	µg/L	<0.1
Fluorene in ASLP	µg/L	<0.1
Phenanthrene in ASLP	µg/L	<0.1
Anthracene in ASLP	µg/L	<0.1
Fluoranthene in ASLP	µg/L	<0.1
Pyrene in ASLP	µg/L	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1
Chrysene in ASLP	µg/L	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1
Surrogate p-Terphenyl-d_{14}	%	85

Metals from Neutral Leaching Fluid ICPMS		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	02/01/2024
Date analysed	-	02/01/2024
pH of final Leachate	pH units	5.7
Arsenic	µg/L	9
Cadmium	µg/L	0.2
Chromium	µg/L	26
Copper	µg/L	7
Lead	µg/L	27
Mercury	µg/L	<0.05
Nickel	µg/L	7
Zinc	µg/L	15

PFAS in ASLP Extended		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Date prepared	-	21/12/2023
Date analysed	-	21/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02
Perfluorobutanoic acid	µg/L	<0.02
Perfluoropentanoic acid	µg/L	<0.02
Perfluorohexanoic acid	µg/L	<0.01
Perfluoroheptanoic acid	µg/L	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01
Perfluorononanoic acid	µg/L	<0.01
Perfluorodecanoic acid	µg/L	<0.02
Perfluoroundecanoic acid	µg/L	<0.02
Perfluorododecanoic acid	µg/L	<0.05
Perfluorotridecanoic acid	µg/L	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5
4:2 FTS	µg/L	<0.01
6:2 FTS	µg/L	<0.01
8:2 FTS	µg/L	<0.02
10:2 FTS	µg/L	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02
Surrogate $^{13}C_8$ PFOS	%	98
Surrogate $^{13}C_2$ PFOA	%	100
Extracted ISTD $^{13}C_3$ *PFBS*	%	86
Extracted ISTD $^{18}O_2$ *PFHxS*	%	96
Extracted ISTD $^{13}C_4$ *PFOS*	%	96

PFAS in ASLP Extended		
Our Reference		339235-A-16
Your Reference	UNITS	BH24
Depth		0.8-0.95
Date Sampled		30/11/2023
Type of sample		Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	101
Extracted ISTD $^{13}C_3$ *PFPeA*	%	101
Extracted ISTD $^{13}C_2$ *PFHxA*	%	96
Extracted ISTD $^{13}C_4$ *PFHpA*	%	95
Extracted ISTD $^{13}C_4$ *PFOA*	%	99
Extracted ISTD $^{13}C_5$ *PFNA*	%	96
Extracted ISTD $^{13}C_2$ *PFDA*	%	96
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	105
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	108
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	86
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	95
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	106
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	97
Extracted ISTD $^{13}C_8$ *FOSA*	%	98
Extracted ISTD d_3 *N MeFOSA*	%	97
Extracted ISTD d_5 *N EtFOSA*	%	91
Extracted ISTD d_7 *N MeFOSE*	%	95
Extracted ISTD d_9 *N EtFOSE*	%	89
Extracted ISTD d_3 *N MeFOSAA*	%	105
Extracted ISTD d_5 *N EtFOSAA*	%	106
Total Positive PFHxS & PFOS	µg/L	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01
Total Positive PFAS	µg/L	<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) **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-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
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.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.
Metals-021	Determination of Mercury by Cold Vapour AAS following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Metals-022	Determination of various metals by ICP-MS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.
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	Leachates are extracted 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 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-022/025 ASLP	ASLP Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.
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.
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 5.4 Table B-15 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.

Method ID	Methodology Summary
Org-029A	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 5.4Table B-15 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. TOPA analyses use a pre-spiked, labelled internal standard PFAS precursor to assess the oxidation efficiency. The efficiency of removal by oxidation is recorded in the report. Additionally, dilutions applied (if required) to ensure sufficient precursor oxidation are also recorded and are available on request. 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	[NT]
Date extracted	-			20/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Date analysed	-			22/12/2023	[NT]	[NT]	[NT]	[NT]	22/12/2023	[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]	103	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	108	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	97	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	92	[NT]	[NT]	[NT]	[NT]	89	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			20/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Date analysed	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	21/12/2023	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	109	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	129	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	109	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	129	[NT]
Surrogate o-Terphenyl	%		Org-020	80	[NT]	[NT]	[NT]	[NT]	87	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			20/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Date analysed	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	21/12/2023	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	118	[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]	116	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	114	[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]	106	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	109	[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]	116	[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]	133	[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	96	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			20/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Date analysed	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	21/12/2023	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	124	[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]	116	[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]	92	[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]	125	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	114	[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]	122	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	134	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	133	[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]	109	[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]	113	[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	104	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			20/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Date analysed	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	21/12/2023	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	133	[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]	109	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	131	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	137	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	122	[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]	132	[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]	132	[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	104	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			20/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Date analysed	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	21/12/2023	[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]	120	[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]	92	[NT]

QUALITY CONTROL: Misc Inorg - Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			02/01/2024	[NT]	[NT]	[NT]	[NT]	02/01/2024	[NT]
Date analysed	-			02/01/2024	[NT]	[NT]	[NT]	[NT]	02/01/2024	[NT]
pH 1:5 soil:$CaCl_2$	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	101	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			28/12/2023	[NT]	[NT]	[NT]	[NT]	28/12/2023	[NT]
Date analysed	-			02/01/2024	[NT]	[NT]	[NT]	[NT]	02/01/2024	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	99	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	95	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	126	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: CEC					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			03/01/2024	[NT]	[NT]	[NT]	[NT]	03/01/2024	[NT]
Date analysed	-			03/01/2024	[NT]	[NT]	[NT]	[NT]	03/01/2024	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Date analysed	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	70	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	88	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	87	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	108	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	113	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	96	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	73	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	103	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	111	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	113	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	79	[NT]	[NT]	[NT]	[NT]	73	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	117	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	119	[NT]	[NT]	[NT]	[NT]	120	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	116	[NT]	[NT]	[NT]	[NT]	118	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	120	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	126	[NT]	[NT]	[NT]	[NT]	119	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	132	[NT]	[NT]	[NT]	[NT]	127	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	119	[NT]	[NT]	[NT]	[NT]	117	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	129	[NT]	[NT]	[NT]	[NT]	120	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	111	[NT]	[NT]	[NT]	[NT]	107	[NT]

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			22/12/2023	[NT]	[NT]	[NT]	[NT]	22/12/2023	[NT]
Date analysed	-			27/12/2023	[NT]	[NT]	[NT]	[NT]	27/12/2023	[NT]
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	134	[NT]
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	135	[NT]
Fluorene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	132	[NT]
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	126	[NT]
Anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	123	[NT]
Pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	130	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	127	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	<0.0002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	126	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	84	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			02/01/2024	[NT]	[NT]	[NT]	[NT]	02/01/2024	[NT]
Date analysed	-			02/01/2024	[NT]	[NT]	[NT]	[NT]	02/01/2024	[NT]
Arsenic	mg/L	0.05	Metals-020	<0.05	[NT]	[NT]	[NT]	[NT]	111	[NT]
Cadmium	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	102	[NT]
Chromium	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
Copper	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	104	[NT]
Lead	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	102	[NT]
Mercury	mg/L	0.0005	Metals-021	<0.0005	[NT]	[NT]	[NT]	[NT]	106	[NT]
Nickel	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	101	[NT]
Zinc	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	21/12/2023	[NT]
Date analysed	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	21/12/2023	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	115	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	115	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	90	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	114	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	119	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	118	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	121	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	111	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	122	[NT]
4:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	109	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	111	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	112	[NT]
10:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	130	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	120	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	116	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	118	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	111	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	118	[NT]
MePerfluorooctanesulf- amid oacetic aci	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	123	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	112	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PFAS in TCLP Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	90	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	88	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	106	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	106	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	113	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	80	[NT]	[NT]	[NT]	[NT]	76	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	85	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	123	[NT]	[NT]	[NT]	[NT]	106	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	129	[NT]	[NT]	[NT]	[NT]	119	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	90	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	90	[NT]

QUALITY CONTROL: PFAS in TCLP Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	88	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	114	[NT]

QUALITY CONTROL: PAHs in Water Leach					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			22/12/2023	[NT]	[NT]	[NT]	[NT]	22/12/2023	[NT]
Date analysed	-			27/12/2023	[NT]	[NT]	[NT]	[NT]	27/12/2023	[NT]
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	135	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	132	[NT]
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	126	[NT]
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	123	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	130	[NT]
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	127	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(bjk)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	<0.2	[NT]	[NT]	[NT]	[NT]	126	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022/025 ASLP	84	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: Metals from Neutral Leaching Fluid ICPMS					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			02/01/2024	[NT]	[NT]	[NT]	[NT]	02/01/2024	[NT]
Date analysed	-			02/01/2024	[NT]	[NT]	[NT]	[NT]	02/01/2024	[NT]
Arsenic	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Cadmium	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Chromium	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Copper	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Lead	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Mercury	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	82	[NT]
Nickel	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Zinc	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	21/12/2023	[NT]
Date analysed	-			21/12/2023	[NT]	[NT]	[NT]	[NT]	21/12/2023	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	127	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	119	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	115	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	117	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029A	<0.02	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029A	<0.02	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029A	<0.02	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	114	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	112	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	125	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029A	<0.02	[NT]	[NT]	[NT]	[NT]	122	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029A	<0.02	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029A	<0.05	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029A	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029A	<0.5	[NT]	[NT]	[NT]	[NT]	123	[NT]
4:2 FTS	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	123	[NT]
6:2 FTS	µg/L	0.01	Org-029A	<0.01	[NT]	[NT]	[NT]	[NT]	118	[NT]
8:2 FTS	µg/L	0.02	Org-029A	<0.02	[NT]	[NT]	[NT]	[NT]	122	[NT]
10:2 FTS	µg/L	0.02	Org-029A	<0.02	[NT]	[NT]	[NT]	[NT]	132	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029A	<0.1	[NT]	[NT]	[NT]	[NT]	119	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029A	<0.05	[NT]	[NT]	[NT]	[NT]	118	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029A	<0.1	[NT]	[NT]	[NT]	[NT]	117	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029A	<0.05	[NT]	[NT]	[NT]	[NT]	115	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029A	<0.5	[NT]	[NT]	[NT]	[NT]	117	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029A	<0.02	[NT]	[NT]	[NT]	[NT]	129	[NT]
EtPerfluorooctanesulf-amid oacetic acid	µg/L	0.02	Org-029A	<0.02	[NT]	[NT]	[NT]	[NT]	113	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029A	102	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029A	101	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: PFAS in ASLP Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029A	88	[NT]	[NT]	[NT]	[NT]	83	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029A	93	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029A	95	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029A	103	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029A	102	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029A	93	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029A	100	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029A	101	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029A	100	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029A	98	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029A	105	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029A	107	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029A	95	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029A	90	[NT]	[NT]	[NT]	[NT]	85	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029A	108	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029A	110	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029A	102	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029A	101	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029A	97	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029A	97	[NT]	[NT]	[NT]	[NT]	88	[NT]

QUALITY CONTROL: PFAS in ASLP Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029A	88	[NT]	[NT]	[NT]	[NT]	90	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029A	110	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029A	108	[NT]	[NT]	[NT]	[NT]	98	[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.

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Report Comments

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).

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.

MISC_INORG_DRY:pH:Samples were out of the recommended holding time for this analysis.

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	C Ridley

Sample Login Details

Your reference	E36446PR, Macquarie Park
Envirolab Reference	339235-A
Date Sample Received	01/12/2023
Date Instructions Received	19/12/2023
Date Results Expected to be Reported	03/01/2024

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
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:

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	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	Misc Inorg - Soil	Acid Extractable metalsin soil	CEC	PFAS in Soils Extended	Asbestos ID - soils NEPM - ASB-001	PAHs in TCLP (USEPA 1311)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PFAS in TCLP Extended	PAHs in Water Leach	Metals from Neutral Leaching Fluid ICPMS	PFAS in ASLP Extended	On Hold
BH14-0.02-0.12							✓		✓																
BH14-0.3-0.4																									✓
BH14-0.7-0.95																									✓
BH16-0.01-0.2							✓		✓																
BH16-0.5-0.7																									✓
BH16-0.8-1																									✓
BH16-1.3-1.5																									✓
BH17-0.05-0.15																									✓
BH17-0.5-0.7																									✓
BH17-0.8-1																									✓
BH18-0.01-0.15							✓		✓																
BH18-0.3-0.5																									✓
BH18-0.8-1																									✓
BH24-0-0.1																									✓
BH24-0.3-0.5																									✓
BH24-0.8-0.95	✓	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH24-1.7-1.95																									✓
BH24-2.7-3																									✓
BH26-0.7-1																									✓
BH26-1.4-1.6																									✓

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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	Misc Inorg - Soil	Acid Extractable metalsin soil	CEC	PFAS in Soils Extended	Asbestos ID - soils NEPM - ASB-001	PAHs in TCLP (USEPA 1311)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PFAS in TCLP Extended	PAHs in Water Leach	Metals from Neutral Leaching Fluid ICPMS	PFAS in ASLP Extended	On Hold
BH33-0.04-0.14							✓		✓																
BH33-0.14-0.5																									✓
BH33-0.7-1																									✓
SDUP1																									✓
TB-S1																									✓
TS-S1																									✓
FR-1-Auger																									✓

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: Craig Ridley <CRidley@jkenvironments.com.au>
Sent: Tuesday, 19 December 2023 4:44 PM
To: Greta Petzold
Cc: Samplereceipt
Subject: RE: Results for Registration 339235 E36446PR, Macquarie Park

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 Greta,

Can we please arrange for the following additional analysis to be undertaken:

	Sample ID	Test Required
1	BH14 (0.02-0.12)	pH ($CaCl_2$) and CEC
4	BH16 (0.01-0.2)	pH ($CaCl_2$) and CEC
11	BH18 (0.01-0.15)	pH ($CaCl_2$) and CEC
16	BH24 (0.8-0.95)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
21	BH33 (0.04-0.14)	pH ($CaCl_2$) and CEC

For the ASLP, please use DI water.
Any issues, please call.

ELS REF: 339235-A
TAT: STANDARD
DUE: 3/1/24
AB.

Regards
Craig Ridley
Associate | Environmental Scientist

T: +612 9888 5000
D: 0421 856 992
E: CRidley@jkenvironments.com.au
www.jkenvironments.com.au

PO Box 976
NORTH RYDE BC NSW 1670
115 Wicks Road
MACQUARIE PARK NSW 2113

JKEnvironments

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From: Greta Petzold <GPetzold@envirolab.com.au>
Sent: Monday, 11 December 2023 5:36 PM
To: Craig Ridley <CRidley@jkenvironments.com.au>
Subject: Results for Registration 339235 E36446PR, Macquarie Park

This message originated outside the JKG network. If this looks to be from a staff member, it is likely to be malicious (spam/phish attack). Do not click links of open attachments unless you recognise the sender and know the content is safe.

Please refer to attached for:
a copy of the Certificate of Analysis
a copy of the COC/paperwork received from you
an Excel or .csv file containing the results

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 41047

Client Details

Client	JK Environments
Attention	Craig Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E36446PR**
Number of Samples	1 Soil
Date samples received	05/12/2023
Date completed instructions received	05/12/2023

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	11/12/2023
Date of Issue	11/12/2023

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Chris De Luca, Assistant Lab Manager
Josh Williams, Organics & LC Supervisor
Tara White, Metals Team Leader
Tianna Milburn, Senior Chemist

Authorised By
Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		41047-1
Your Reference	UNITS	SDUP2
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	05/12/2023
Date analysed	-	08/12/2023
vTRH C_6 - C_9	mg/kg	<25
vTRH C_6 - C_{10}	mg/kg	<25
TRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total BTEX	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	77

TRH Soil C10-C40 NEPM		
Our Reference		41047-1
Your Reference	UNITS	SDUP2
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	05/12/2023
Date analysed	-	07/12/2023
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	80

PAHs in Soil		
Our Reference		41047-1
Your Reference	UNITS	SDUP2
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	05/12/2023
Date analysed	-	06/12/2023
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j&k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d_{14}	%	92

OCP in Soil		
Our Reference		41047-1
Your Reference	UNITS	SDUP2
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	05/12/2023
Date analysed	-	06/12/2023
alpha-BHC	mg/kg	<0.1
Hexachlorobenzene	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
Total +ve reported Aldrin + Dieldrin	mg/kg	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	82

OP in Soil		
Our Reference		41047-1
Your Reference	UNITS	SDUP2
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	05/12/2023
Date analysed	-	06/12/2023
Azinphos-methyl	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Dichlorovos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Ethion	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Coumaphos	mg/kg	<0.1
Disulfoton	mg/kg	<0.1
Fenamiphos	mg/kg	<0.1
Fenthion	mg/kg	<0.1
Methidathion	mg/kg	<0.1
Mevinphos	mg/kg	<0.1
Methyl Parathion	mg/kg	<0.1
Phorate	mg/kg	<0.1
Phosalone	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	82

PCBs in Soil		
Our Reference		41047-1
Your Reference	UNITS	SDUP2
Date Sampled		30/11/2023
Type of sample		Soil
Date extracted	-	05/12/2023
Date analysed	-	06/12/2023
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	%	94

Acid Extractable metals in soil		
Our Reference		41047-1
Your Reference	UNITS	SDUP2
Date Sampled		30/11/2023
Type of sample		Soil
Date digested	-	07/12/2023
Date analysed	-	07/12/2023
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	12
Copper	mg/kg	13
Lead	mg/kg	17
Mercury	mg/kg	<0.1
Nickel	mg/kg	7
Zinc	mg/kg	33

PFAS in Soil Extended		
Our Reference		41047-1
Your Reference	UNITS	SDUP2
Date Sampled		30/11/2023
Type of sample		Soil
Date prepared	-	08/12/2023
Date analysed	-	08/12/2023
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	2.4
Perfluorodecanesulfonic acid	µg/kg	<0.2
Perfluorobutanoic acid	µg/kg	<0.2
Perfluoropentanoic acid	µg/kg	<0.2
Perfluorohexanoic acid	µg/kg	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.2
Perfluorononanoic acid	µg/kg	0.2
Perfluorodecanoic acid	µg/kg	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	<0.5
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	%	83
Surrogate $^{13}C_2$ PFOA	%	84
Extracted ISTD $^{13}C_3$ *PFBS*	%	87
Extracted ISTD $^{18}O_2$ *PFHxS*	%	104
Extracted ISTD $^{13}C_4$ *PFOS*	%	107
Extracted ISTD $^{13}C_4$ *PFBA*	%	84

PFAS in Soil Extended		
Our Reference		41047-1
Your Reference	UNITS	SDUP2
Date Sampled		30/11/2023
Type of sample		Soil
Extracted ISTD $^{13}C_3$ *PFPeA*	%	87
Extracted ISTD $^{13}C_2$ *PFHxA*	%	93
Extracted ISTD $^{13}C_4$ *PFHpA*	%	93
Extracted ISTD $^{13}C_4$ *PFOA*	%	113
Extracted ISTD $^{13}C_5$ *PFNA*	%	99
Extracted ISTD $^{13}C_2$ *PFDA*	%	119
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	96
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	134
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	135
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	85
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	112
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	#
Extracted ISTD $^{13}C_8$ *FOSA*	%	112
Extracted ISTD d_3 *N MeFOSA*	%	92
Extracted ISTD d_5 *NEtFOSA*	%	87
Extracted ISTD d_7 *N MeFOSE*	%	80
Extracted ISTD d_9 *N EtFOSE*	%	103
Extracted ISTD d_3 *N MeFOSAA*	%	116
Extracted ISTD d_5 *N EtFOSAA*	%	68
Total Positive PFHxS & PFOS	µg/kg	2.4
Total Positive PFOS & PFOA	µg/kg	2.6
Total Positive PFAS	µg/kg	2.8

Moisture		
Our Reference		41047-1
Your Reference	UNITS	SDUP2
Date Sampled		30/11/2023
Type of sample		Soil
Date prepared	-	06/12/2023
Date analysed	-	07/12/2023
Moisture	%	18

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105°C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	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	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or analysed by 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	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Note, For OCs 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.

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. 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. 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. 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-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 5.4 Table B-15 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	41047-1
Date extracted	-			05/12/2023	1	05/12/2023	05/12/2023		05/12/2023	05/12/2023
Date analysed	-			08/12/2023	1	08/12/2023	08/12/2023		08/12/2023	08/12/2023
vTRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	82	81
vTRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	82	81
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	73	72
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	80	79
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	83	81
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	88	86
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	88	85
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	77	1	77	82	6	86	84

QUALITY CONTROL: TRH Soil C10-C40 NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			05/12/2023	[NT]	[NT]	[NT]	[NT]	05/12/2023	[NT]
Date analysed	-			06/12/2023	[NT]	[NT]	[NT]	[NT]	06/12/2023	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	111	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	113	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	120	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	111	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	113	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	120	[NT]
Surrogate o-Terphenyl	%		Org-020	86	[NT]	[NT]	[NT]	[NT]	88	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			05/12/2023	[NT]	[NT]	[NT]	[NT]	05/12/2023	[NT]
Date analysed	-			06/12/2023	[NT]	[NT]	[NT]	[NT]	06/12/2023	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	84	[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]	80	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	86	[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]	82	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[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]	82	[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]	84	[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-d_{14}	%		Org-022/025	106	[NT]	[NT]	[NT]	[NT]	84	[NT]

QUALITY CONTROL: OCP in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			05/12/2023	[NT]	[NT]	[NT]	[NT]	05/12/2023	[NT]
Date analysed	-			06/12/2023	[NT]	[NT]	[NT]	[NT]	06/12/2023	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Hexachlorobenzene	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]	74	[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]	94	[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]	92	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	72	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[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]	78	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[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]	74	[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]	60	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022/025	96	[NT]	[NT]	[NT]	[NT]	80	[NT]

QUALITY CONTROL: OP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			05/12/2023	[NT]	[NT]	[NT]	[NT]	05/12/2023	[NT]
Date analysed	-			06/12/2023	[NT]	[NT]	[NT]	[NT]	06/12/2023	[NT]
Azinphos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	72	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Diazinon	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Dichlorovos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	72	[NT]
Fenitrothion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	70	[NT]
Malathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methyl Parathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022/025	96	[NT]	[NT]	[NT]	[NT]	80	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			05/12/2023	[NT]	[NT]	[NT]	[NT]	05/12/2023	[NT]
Date analysed	-			06/12/2023	[NT]	[NT]	[NT]	[NT]	06/12/2023	[NT]
Aroclor 1016	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	73	[NT]
Aroclor 1260	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-fluorobiphenyl	%		Org-022/025	104	[NT]	[NT]	[NT]	[NT]	86	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			07/12/2023	[NT]	[NT]	[NT]	[NT]	07/12/2023	[NT]
Date analysed	-			07/12/2023	[NT]	[NT]	[NT]	[NT]	07/12/2023	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	105	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	104	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: PFAS in Soil Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Perfluorohexanesulfonic acid PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	114	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	88	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	95	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
N-Ethyl perfluorooctanesulfon -amide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	93	[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]	93	[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]	117	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029	111	[NT]	[NT]	[NT]	[NT]	111	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	89	[NT]
Extracted ISTD $^{13}C_3$ PFBS	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	95	[NT]

QUALITY CONTROL: PFAS in Soil Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	88	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD d_5 *NEtFOSA*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	106	[NT]

QUALITY CONTROL: PFAS in Soil Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	90	[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.

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Report Comments

PFAS: 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).

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Craig Ridley

Sample Login Details

Your reference	E36446PR
Envirolab Reference	41047
Date Sample Received	05/12/2023
Date Instructions Received	05/12/2023
Date Results Expected to be Reported	11/12/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18.3
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams	Chris De Luca
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: cdeluca@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	OCP in Soil	OP in Soil	PCBsin Soil	Acid Extractable metalsin soil
SDUP2	✓	✓	✓	✓	✓	✓	✓

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.

SAMPLE AND CHAIN OF CUSTODY FORM

ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E36446PR Date Results Required: STANDARD Page: 1 of 2	FROM: JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Craig Ridley cridley@jkenvironments.com.au

Location: Macquarie Park, NSW

Sampler: LR/OB/HW

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals	ASLP PFAS	BTEX	PFAS (low level, short)
28/11/2023	1	BH14	0.02-0.12	G, A, PFAS	1.4	F: Sandy Gravel			X			X		X	X	X		
28/11/2023	2	BH14	0.3-0.4	G, A, PFAS	2.1	Silty Clay												
28/11/2023	3	BH14	0.7-0.95	G, A, PFAS	1.6	Silty Clay												
27/11/2023	4	BH16	0.01-0.2	G, A, PFAS	2.4	F: Sandy Gravel			X			X		X	X	X		
27/11/2023	5	BH16	0.5-0.7	G, A, PFAS	1.5	Siltstone												
27/11/2023	6	BH16	0.8-1	G, A, PFAS	1.6	Siltstone												
27/11/2023	7	BH16	1.3-1.5	G, PFAS	0	Siltstone												
27/11/2023	8	BH17	0.05-0.15	G, A, PFAS	1.6	F: Sandy Gravel		X				X	X	X	X	X		
27/11/2023	9	BH17	0.5-0.7	G, A, PFAS	1.7	Siltstone												
27/11/2023	10	BH17	0.8-1	G, A, PFAS	2.4	Siltstone												
27/11/2023	11	BH18	0.01-0.15	G, A, PFAS	1.7	F: Sandy Gravel			X			X		X	X	X		
27/11/2023	12	BH18	0.3-0.5	G, A, PFAS	1.6	Siltstone												
27/11/2023	13	BH18	0.8-1	G, A, PFAS	1.7	Siltstone												
30/11/2023	14	BH24	0-0.1	G, A, PFAS	2.4	F: Silty Sand			X			X		X	X			
30/11/2023	15	BH24	0.3-0.5	G, A, PFAS	2.8	F: Silty Clay												
30/11/2023	16	BH24	0.8-0.95	G, A, PFAS	2.2	F: Silty Clay												
30/11/2023	17	BH24	1.7-1.95	G, A, PFAS	3.1	Gravelly Silty Clay												
30/11/2023	18	BH24	2.7-3	G, A, PFAS	2.2	Gravelly Silty Clay												
30/11/2023	19	BH26	0.7-1	G, A, PFAS	2.5	Siltstone			X			X		X	X	X		
30/11/2023	20	BH26	1.4-1.6	G, A, PFAS	1.6	Siltstone												
28/11/2023	21	BH33	0.04-0.14	G, A, PFAS	1.2	F: Sandy Gravel			X			X		X	X	X		
28/11/2023	22	BH33	0.14-0.5	G, A, PFAS	1.2	Siltstone												
28/11/2023	23	BH33	0.7-1	G, A, PFAS	1	Siltstone												
28/11/2023	24	SDUP1	-	G, A, PFAS	-	Duplicate				X		X						
30/11/2023	25	SDUP2	-	G, A, PFAS	-	Duplicate				X		X	SEND TO VIC					

Remarks (comments/detection limits required):

ASLP - DI leachate

Sample Containers:

G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle

A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By:	Date:	Time:	Received By:	Date:
LR	1/12/23	1420	Paul	1/12/23

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

Job No: 339235

Date Received: 1/12/23

Time Received: 1420

Received By: Paul

Temp: Cool/Ambient

Cooling: Ice/Icepack

Relinquished by ECS SYD Grace Zhang 04/12/23 1200

ENVIROLAB Envirolab Services 12 Research Drive Croydon South VIC 3136 Ph: (03) 9763 2500

Job No: 410647

Date Received: 5/12/23

Time Received: 12:10pm

Received By: AG

Temp: Cool/Ambient 18.3

Cooling: Ice/Icepack

Security: Intact/Broken/None

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 339695

Client Details

Client	JK Environments
Attention	C Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E36446PR, Macquarie Park NSW**
Number of Samples	64 Soil
Date samples received	07/12/2023
Date completed instructions received	07/12/2023

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	14/12/2023
Date of Issue	14/12/2023

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

Results Approved By
Amanda Chui, LC/Air Toxics Supervisor
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Liam Timmins, Organics Supervisor
Loren Bardwell, Development Chemist
Lucy Zhu, Asbestos Supervisor
Sean McAlary, Chemist (FAS)

Authorised By
Nancy Zhang, Laboratory Manager

PFAS in Soils Extended						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Perfluorobutanesulfonic acid	µg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	0.4	<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	0.9	2.3	0.8	<0.1	<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	0.4	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.1	0.5	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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	0.9	0.6	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	102	100	98	92	97
Surrogate $^{13}C_2$ *PFOA*	%	90	95	90	89	90
Extracted ISTD $^{13}C_3$ *PFBS*	%	97	93	92	86	97
Extracted ISTD $^{18}O_2$ *PFHxS*	%	104	108	106	103	116
Extracted ISTD $^{13}C_4$ *PFOS*	%	104	106	105	108	114

PFAS in Soils Extended						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	98	95	99	95	107
Extracted ISTD $^{13}C_3$ *PFPeA*	%	101	101	105	107	115
Extracted ISTD $^{13}C_2$ *PFHxA*	%	98	98	99	94	107
Extracted ISTD $^{13}C_4$ *PFHpA*	%	99	98	97	99	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	112	108	105	98	113
Extracted ISTD $^{13}C_5$ *PFNA*	%	99	88	83	81	92
Extracted ISTD $^{13}C_2$ *PFDA*	%	103	101	90	92	103
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	98	89	48	70	87
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	120	120	63	108	129
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	125	109	105	105	130
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	104	105	99	99	108
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	118	136	112	109	117
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	137	131	90	94	113
Extracted ISTD $^{13}C_8$ *FOSA*	%	125	127	98	129	134
Extracted ISTD d_3 *N MeFOSA*	%	91	89	92	97	111
Extracted ISTD d_5 *N EtFOSA*	%	93	98	105	112	120
Extracted ISTD d_7 *N MeFOSE*	%	137	130	168	166	177
Extracted ISTD d_9 *N EtFOSE*	%	135	164	194	#	#
Extracted ISTD d_3 *N MeFOSAA*	%	115	108	74	111	131
Extracted ISTD d_5 *N EtFOSAA*	%	123	111	80	93	118
Total Positive PFHxS & PFOS	µg/kg	0.9	2.8	0.8	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	1.0	2.8	0.8	<0.1	<0.1
Total Positive PFAS	µg/kg	1.9	4.9	0.8	<0.1	<0.1

PFAS in Soils Extended						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
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	<0.1	<0.1	0.2	0.6	0.2
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2	<0.2	0.3	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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*	%	97	99	96	99	95
Surrogate $^{13}C_2$ *PFOA*	%	89	93	94	95	95
Extracted ISTD $^{13}C_3$ *PFBS*	%	97	95	94	95	93
Extracted ISTD $^{18}O_2$ *PFHxS*	%	114	108	107	104	105
Extracted ISTD $^{13}C_4$ *PFOS*	%	114	108	110	102	106

PFAS in Soils Extended						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	107	99	99	101	99
Extracted ISTD $^{13}C_3$ *PFPeA*	%	114	105	107	104	103
Extracted ISTD $^{13}C_2$ *PFHxA*	%	108	102	100	103	105
Extracted ISTD $^{13}C_4$ *PFHpA*	%	105	97	99	97	99
Extracted ISTD $^{13}C_4$ *PFOA*	%	116	106	106	107	106
Extracted ISTD $^{13}C_5$ *PFNA*	%	97	88	93	95	89
Extracted ISTD $^{13}C_2$ *PFDA*	%	109	97	105	102	98
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	94	89	82	100	82
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	128	114	114	112	112
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	139	120	119	114	104
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	104	103	101	107	101
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	119	114	116	125	136
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	123	104	117	125	139
Extracted ISTD $^{13}C_8$ *FOSA*	%	139	128	128	108	106
Extracted ISTD d_3 *N MeFOSA*	%	114	106	107	98	92
Extracted ISTD d_5 *N EtFOSA*	%	121	112	113	98	96
Extracted ISTD d_7 *N MeFOSE*	%	186	173	174	128	123
Extracted ISTD d_9 *N EtFOSE*	%	#	#	#	140	143
Extracted ISTD d_3 *N MeFOSAA*	%	127	113	114	115	110
Extracted ISTD d_5 *N EtFOSAA*	%	120	100	106	100	89
Total Positive PFHxS & PFOS	µg/kg	<0.1	<0.1	0.2	0.8	0.2
Total Positive PFOS & PFOA	µg/kg	<0.1	<0.1	0.2	0.6	0.2
Total Positive PFAS	µg/kg	<0.1	<0.1	0.2	1.1	0.2

PFAS in Soils Extended						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
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	0.2	1.4	<0.1	<0.1	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	0.3	<0.2	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	0.3	<0.2	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<2	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<5	<0.5	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<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	<1	<0.2	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<1	<0.2	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<5	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<5	<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	<2	<0.2	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	99	94	93	97	98
Surrogate $^{13}C_2$ *PFOA*	%	96	95	93	94	92
Extracted ISTD $^{13}C_3$ *PFBS*	%	87	98	93	98	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%	102	103	110	112	109
Extracted ISTD $^{13}C_4$ *PFOS*	%	102	94	114	113	109

PFAS in Soils Extended						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	95	93	106	105	103
Extracted ISTD $^{13}C_3$ *PFPeA*	%	102	98	114	111	107
Extracted ISTD $^{13}C_2$ *PFHxA*	%	99	99	105	110	104
Extracted ISTD $^{13}C_4$ *PFHpA*	%	96	86	104	104	103
Extracted ISTD $^{13}C_4$ *PFOA*	%	103	76	106	110	109
Extracted ISTD $^{13}C_5$ *PFNA*	%	87	39	91	92	93
Extracted ISTD $^{13}C_2$ *PFDA*	%	98	32	103	104	101
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	61	#	89	96	88
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	104	#	114	114	120
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	74	#	117	120	121
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	97	98	102	100	96
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	118	68	118	114	108
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	144	32	111	107	105
Extracted ISTD $^{13}C_8$ *FOSA*	%	102	20	122	124	123
Extracted ISTD d_3 *N MeFOSA*	%	91	29	100	107	105
Extracted ISTD d_5 *N EtFOSA*	%	95	48	106	110	107
Extracted ISTD d_7 *N MeFOSE*	%	131	64	141	147	143
Extracted ISTD d_9 *N EtFOSE*	%	146	89	171	174	157
Extracted ISTD d_3 *N MeFOSAA*	%	95	#	126	119	118
Extracted ISTD d_5 *N EtFOSAA*	%	83	#	101	105	108
Total Positive PFHxS & PFOS	µg/kg	0.2	1.4	<0.1	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	0.2	1.5	<0.1	<0.1	<0.1
Total Positive PFAS	µg/kg	0.2	2.1	<0.1	<0.1	<0.1

PFAS in Soils Extended			
Our Reference		339695-59	339695-61
Your Reference	UNITS	SDUP3	TB-S2
Depth		-	-
Date Sampled		04/12/2023	04/12/2023
Type of sample		Soil	Soil
Date prepared	-	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	98	97
Surrogate $^{13}C_2$ *PFOA*	%	91	94
Extracted ISTD $^{13}C_3$ *PFBS*	%	96	90
Extracted ISTD $^{18}O_2$ *PFHxS*	%	111	103
Extracted ISTD $^{13}C_4$ *PFOS*	%	111	103

PFAS in Soils Extended			
Our Reference		339695-59	339695-61
Your Reference	UNITS	SDUP3	TB-S2
Depth		-	-
Date Sampled		04/12/2023	04/12/2023
Type of sample		Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	104	97
Extracted ISTD $^{13}C_3$ *PFPeA*	%	110	102
Extracted ISTD $^{13}C_2$ *PFHxA*	%	107	96
Extracted ISTD $^{13}C_4$ *PFHpA*	%	104	97
Extracted ISTD $^{13}C_4$ *PFOA*	%	110	101
Extracted ISTD $^{13}C_5$ *PFNA*	%	95	86
Extracted ISTD $^{13}C_2$ *PFDA*	%	101	94
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	96	84
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	124	107
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	122	116
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	104	91
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	116	110
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	115	101
Extracted ISTD $^{13}C_8$ *FOSA*	%	124	112
Extracted ISTD d_3 *N MeFOSA*	%	108	98
Extracted ISTD d_5 *N EtFOSA*	%	110	102
Extracted ISTD d_7 *N MeFOSE*	%	146	142
Extracted ISTD d_9 *N EtFOSE*	%	171	149
Extracted ISTD d_3 *N MeFOSAA*	%	121	113
Extracted ISTD d_5 *N EtFOSAA*	%	110	98
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 Soil						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	94	100	103	97

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	98	96	81	112

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	91	93	98	104	86

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		339695-59	339695-61	339695-62
Your Reference	UNITS	SDUP3	TB-S2	TS-S2
Depth		-	-	-
Date Sampled		04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023	11/12/2023
TRH C_6 - C_9	mg/kg	<25	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	109%
Toluene	mg/kg	<0.5	<0.5	110%
Ethylbenzene	mg/kg	<1	<1	106%
m+p-xylene	mg/kg	<2	<2	105%
o-Xylene	mg/kg	<1	<1	106%
Naphthalene	mg/kg	<1	<1	[NA]
Total +ve Xylenes	mg/kg	<1	<1	[NA]
Surrogate aaa-Trifluorotoluene	%	107	110	89

svTRH (C10-C40) in Soil						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023	11/12/2023	11/12/2023	11/12/2023
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	170	160	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	260	240	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	430	410	<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	320	310	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	300	280	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	620	580	<50	<50	<50
Surrogate o-Terphenyl	%	98	97	83	86	82

svTRH (C10-C40) in Soil						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
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	%	83	83	85	89	85

svTRH (C10-C40) in Soil						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023	12/12/2023	11/12/2023	11/12/2023
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	220	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	270	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	480	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	63	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	63	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	350	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	160	180	<100	110
Total +ve TRH (>C10-C40)	mg/kg	<50	580	180	<50	110
Surrogate o-Terphenyl	%	89	96	82	91	92

svTRH (C10-C40) in Soil			
Our Reference		339695-59	339695-61
Your Reference	UNITS	SDUP3	TB-S2
Depth		-	-
Date Sampled		04/12/2023	04/12/2023
Type of sample		Soil	Soil
Date extracted	-	11/12/2023	11/12/2023
Date analysed	-	11/12/2023	11/12/2023
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	100	<50
Surrogate o-Terphenyl	%	87	84

PAHs in Soil						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	0.4	<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	1.2	2.3	2.2	<0.1	<0.1
Anthracene	mg/kg	0.3	0.4	0.5	<0.1	<0.1
Fluoranthene	mg/kg	2.2	3.4	4.5	<0.1	<0.1
Pyrene	mg/kg	2.5	3.4	3.5	<0.1	<0.1
Benzo(a)anthracene	mg/kg	1.3	1.2	1.9	<0.1	<0.1
Chrysene	mg/kg	1	1.0	1.6	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	2	2	2.6	<0.2	<0.2
Benzo(a)pyrene	mg/kg	1.1	0.97	1.6	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.4	0.5	0.7	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	0.1	0.2	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.8	0.7	1	<0.1	<0.1
Total +ve PAH's	mg/kg	13	16	21	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	1.6	1.5	2.4	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	1.6	1.5	2.4	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.6	1.5	2.4	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	94	82	86	97	91

PAHs in Soil						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
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	0.2
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	0.2
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	0.2
Total +ve PAH's	mg/kg	<0.05	<0.05	0.2	<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	%	92	100	90	92	89

PAHs in Soil						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
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	%	97	92	93	97	94

PAHs in Soil			
Our Reference		339695-59	339695-61
Your Reference	UNITS	SDUP3	TB-S2
Depth		-	-
Date Sampled		04/12/2023	04/12/2023
Type of sample		Soil	Soil
Date extracted	-	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023
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	%	95	99

Organochlorine Pesticides in soil						
Our Reference		339695-1	339695-12	339695-21	339695-25	339695-44
Your Reference	UNITS	BH8	BH10	BH20	BH22	BH29
Depth		0.03-0.4	0.5-0.95	0.02-0.3	0.1-0.15	0.5-0.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
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
Surrogate 4-Chloro-3-NBTF	%	89	92	93	93	89

Organophosphorus Pesticides in Soil						
Our Reference		339695-1	339695-12	339695-21	339695-25	339695-44
Your Reference	UNITS	BH8	BH10	BH20	BH22	BH29
Depth		0.03-0.4	0.5-0.95	0.02-0.3	0.1-0.15	0.5-0.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
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	%	89	92	93	93	89

PCBs in Soil						
Our Reference		339695-1	339695-12	339695-21	339695-25	339695-44
Your Reference	UNITS	BH8	BH10	BH20	BH22	BH29
Depth		0.03-0.4	0.5-0.95	0.02-0.3	0.1-0.15	0.5-0.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
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	95	96	94	92

Acid Extractable metals in soil						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023
Arsenic	mg/kg	23	<4	9	6	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	15	13	11	9
Copper	mg/kg	39	20	15	16	39
Lead	mg/kg	25	47	18	13	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	13	9	4	12	45
Zinc	mg/kg	40	35	17	10	29

Acid Extractable metals in soil						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023
Arsenic	mg/kg	<4	7	5	6	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	13	19	11	18
Copper	mg/kg	75	5	19	14	19
Lead	mg/kg	3	19	20	38	39
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	72	5	13	6	10
Zinc	mg/kg	36	5	35	56	43

Acid Extractable metals in soil						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	13/12/2023	13/12/2023	13/12/2023	13/12/2023	13/12/2023
Arsenic	mg/kg	8	6	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	22	14	9	11	12
Copper	mg/kg	7	18	58	66	68
Lead	mg/kg	24	52	5	4	4
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	6	57	76	75
Zinc	mg/kg	25	55	47	43	48

Acid Extractable metals in soil					
Our Reference		339695-59	339695-61	339695-65	339695-66
Your Reference	UNITS	SDUP3	TB-S2	BH8 - [TRIPLICATE]	BH29 - [TRIPLICATE]
Depth		-	-	0.03-0.4	0.5-0.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	13/12/2023	13/12/2023	13/12/2023	13/12/2023
Arsenic	mg/kg	<4	<4	7	17
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	3	15	31
Copper	mg/kg	50	<1	28	9
Lead	mg/kg	3	3	27	25
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	61	<1	10	13
Zinc	mg/kg	30	2	39	39

Moisture						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Moisture	%	11	8.6	11	9.7	4.4

Moisture						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Moisture	%	5.1	15	12	19	12

Moisture						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/12/2023	11/12/2023	11/12/2023	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Moisture	%	18	8.2	4.5	2.8	5.1

Moisture			
Our Reference		339695-59	339695-61
Your Reference	UNITS	SDUP3	TB-S2
Depth		-	-
Date Sampled		04/12/2023	04/12/2023
Type of sample		Soil	Soil
Date prepared	-	11/12/2023	11/12/2023
Date analysed	-	12/12/2023	12/12/2023
Moisture	%	6.7	2.1

Asbestos ID - soils NEPM - ASB-001						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Sample mass tested	g	874.67	885.83	804.34	777.49	981.63
Sample Description	-	Grey fine-grained soil & rocks	Grey fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Grey fine-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*	-	Chrysotile	Chrysotile	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	0.0444	0.0117	–	–	–
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 ID - soils NEPM - ASB-001						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Sample mass tested	g	1,002.17	769.11	279.79	634.94	665.03
Sample Description	-	Grey fine-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 ID - soils NEPM - ASB-001						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Sample mass tested	g	632.2	560.61	108.85	1,225.73	1,012.25
Sample Description	-	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Grey fine-grained soil & rocks	Grey fine-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

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
pH of soil for fluid# determ.	pH units	10.7	10.8	9.8	9.0	9.1
pH of soil TCLP (after HCl)	pH units	4.1	3.1	2.1	1.9	2.0
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	9.7	10.4	5.2	5.1	5.9
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	0.01	0.02	<0.01	<0.01	<0.01
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
pH of soil for fluid# determ.	pH units	9.1	8.9	8.7	8.8	8.7
pH of soil TCLP (after HCl)	pH units	2.0	1.9	2.0	2.0	2.0
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	5.8	5.3	5.7	5.0	5.1
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.06	<0.02	<0.02	<0.02	<0.02

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
pH of soil for fluid# determ.	pH units	8.5	6.2	6.6	7.8	7.6
pH of soil TCLP (after HCl)	pH units	2.0	2.0	2.0	2.0	2.0
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	5.1	5.0	6.0	6.2	5.7
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	<0.02	<0.02	0.03	0.04	0.03

PAHs in TCLP (USEPA 1311)						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Naphthalene in TCLP	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	0.0005	0.003	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	0.0002	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	0.0006	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	0.0002	0.0005	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	0.0008	0.0041	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	90	91	91	82	89

PAHs in TCLP (USEPA 1311)						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Naphthalene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	99	98	83	94	107

PAHs in TCLP (USEPA 1311)						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Naphthalene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	108	88	116	110	116

PFAS in TCLP Extended						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	0.02	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	0.02	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.04	0.09	0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	0.03	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	0.02	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	0.03	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	97	99	96	102	100
Surrogate $^{13}C_2$ *PFOA*	%	105	102	102	97	101
Extracted ISTD $^{13}C_3$ *PFBS*	%	99	98	100	102	101
Extracted ISTD $^{18}O_2$ *PFHxS*	%	97	100	101	102	102
Extracted ISTD $^{13}C_4$ *PFOS*	%	115	116	115	112	114

PFAS in TCLP Extended						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	114	116	116	108	112
Extracted ISTD $^{13}C_3$ *PFPeA*	%	116	121	121	112	118
Extracted ISTD $^{13}C_2$ *PFHxA*	%	105	105	108	107	105
Extracted ISTD $^{13}C_4$ *PFHpA*	%	109	112	108	115	114
Extracted ISTD $^{13}C_4$ *PFOA*	%	128	130	133	126	128
Extracted ISTD $^{13}C_5$ *PFNA*	%	120	127	122	124	122
Extracted ISTD $^{13}C_2$ *PFDA*	%	145	153	151	138	144
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	162	162	159	147	152
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	177	188	185	169	173
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	111	119	110	124	111
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	106	106	102	105	99
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	174	198	#	164	176
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	#	#	#	196	197
Extracted ISTD $^{13}C_8$ *FOSA*	%	117	121	122	119	119
Extracted ISTD d_3 *N MeFOSA*	%	108	113	116	109	113
Extracted ISTD d_5 *N EtFOSA*	%	101	104	100	102	103
Extracted ISTD d_7 *N MeFOSE*	%	108	102	109	104	109
Extracted ISTD d_9 *N EtFOSE*	%	111	118	122	119	120
Extracted ISTD d_3 *N MeFOSAA*	%	127	129	136	134	137
Extracted ISTD d_5 *N EtFOSAA*	%	128	132	134	125	128
Total Positive PFHxS & PFOS	µg/L	0.04	0.11	0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	0.04	0.12	0.01	<0.01	<0.01
Total Positive PFAS	µg/L	0.04	0.20	0.01	<0.01	<0.01

PFAS in TCLP Extended						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	100	97	100	95	97
Surrogate $^{13}C_2$ *PFOA*	%	101	99	101	101	100
Extracted ISTD $^{13}C_3$ *PFBS*	%	103	102	99	102	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%	103	104	103	106	103
Extracted ISTD $^{13}C_4$ *PFOS*	%	114	113	112	118	114

PFAS in TCLP Extended						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	115	109	109	110	112
Extracted ISTD $^{13}C_3$ *PFPeA*	%	117	113	114	117	118
Extracted ISTD $^{13}C_2$ *PFHxA*	%	109	104	106	105	103
Extracted ISTD $^{13}C_4$ *PFHpA*	%	115	112	112	109	110
Extracted ISTD $^{13}C_4$ *PFOA*	%	127	121	126	126	130
Extracted ISTD $^{13}C_5$ *PFNA*	%	127	118	123	118	120
Extracted ISTD $^{13}C_2$ *PFDA*	%	148	136	146	144	144
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	157	139	152	155	159
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	179	160	180	173	173
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	123	120	120	115	116
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	109	102	109	100	99
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	165	149	167	175	158
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	#	178	190	#	178
Extracted ISTD $^{13}C_8$ *FOSA*	%	120	114	120	118	116
Extracted ISTD d_3 *N MeFOSA*	%	115	107	113	113	111
Extracted ISTD d_5 *N EtFOSA*	%	103	103	104	100	102
Extracted ISTD d_7 *N MeFOSE*	%	111	108	104	107	109
Extracted ISTD d_9 *N EtFOSE*	%	117	115	116	118	113
Extracted ISTD d_3 *N MeFOSAA*	%	135	122	120	133	129
Extracted ISTD d_5 *N EtFOSAA*	%	137	122	126	124	125
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

PFAS in TCLP Extended						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	97	98	91	98	95
Surrogate $^{13}C_2$ *PFOA*	%	100	102	102	103	106
Extracted ISTD $^{13}C_3$ *PFBS*	%	99	99	100	100	102
Extracted ISTD $^{18}O_2$ *PFHxS*	%	104	101	101	106	104
Extracted ISTD $^{13}C_4$ *PFOS*	%	117	116	118	114	120

PFAS in TCLP Extended						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	116	112	112	112	112
Extracted ISTD $^{13}C_3$ *PFPeA*	%	120	119	115	116	117
Extracted ISTD $^{13}C_2$ *PFHxA*	%	102	104	106	105	105
Extracted ISTD $^{13}C_4$ *PFHpA*	%	110	108	110	110	109
Extracted ISTD $^{13}C_4$ *PFOA*	%	129	126	120	121	125
Extracted ISTD $^{13}C_5$ *PFNA*	%	124	115	113	120	120
Extracted ISTD $^{13}C_2$ *PFDA*	%	147	144	133	141	144
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	158	137	137	149	142
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	180	168	160	172	174
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	115	126	120	125	117
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	105	108	96	96	104
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	174	173	147	147	161
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	#	187	168	170	181
Extracted ISTD $^{13}C_8$ *FOSA*	%	117	117	117	121	117
Extracted ISTD d_3 *N MeFOSA*	%	114	109	108	113	109
Extracted ISTD d_5 *N EtFOSA*	%	105	101	100	104	100
Extracted ISTD d_7 *N MeFOSE*	%	105	105	109	114	108
Extracted ISTD d_9 *N EtFOSE*	%	116	115	116	125	119
Extracted ISTD d_3 *N MeFOSAA*	%	123	117	125	119	124
Extracted ISTD d_5 *N EtFOSAA*	%	127	118	114	121	128
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
pH of final Leachate	pH units	10.7	10.8	6.8	5.6	8.2
Arsenic	µg/L	<1	2	14	<1	1
Cadmium	µg/L	<0.1	<0.1	0.4	<0.1	<0.1
Chromium	µg/L	5	9	88	3	4
Copper	µg/L	2	2	18	<1	2
Lead	µg/L	<1	<1	55	3	3
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	<1	<1	15	<1	3
Zinc	µg/L	1	<1	31	1	21

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
pH of final Leachate	pH units	8.7	6.7	8.8	6.7	6.1
Arsenic	µg/L	<1	7	5	5	5
Cadmium	µg/L	<0.1	0.1	0.1	0.1	0.1
Chromium	µg/L	<1	27	30	17	28
Copper	µg/L	<1	2	7	8	7
Lead	µg/L	<1	16	18	13	16
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	1	3	5	4	7
Zinc	µg/L	2	6	21	34	23

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
pH of final Leachate	pH units	5.7	5.4	6.5	9.3	8.4
Arsenic	µg/L	11	1	<1	<1	<1
Cadmium	µg/L	0.2	0.1	<0.1	<0.1	<0.1
Chromium	µg/L	47	6	3	<1	2
Copper	µg/L	8	7	3	<1	2
Lead	µg/L	22	7	2	<1	1
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	9	2	3	<1	2
Zinc	µg/L	38	32	5	2	2

PAHs in Water Leach						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Naphthalene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene in ASLP	µg/L	0.57	2.9	<0.1	<0.1	<0.1
Anthracene in ASLP	µg/L	0.14	0.34	<0.1	<0.1	<0.1
Fluoranthene in ASLP	µg/L	0.22	0.58	<0.1	<0.1	<0.1
Pyrene in ASLP	µg/L	0.40	0.59	<0.1	<0.1	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	102	91	90	97	89

PAHs in Water Leach						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Naphthalene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	93	89	85	81	82

PAHs in Water Leach						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Naphthalene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	92	78	87	88	70

PFAS in ASLP Extended						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	0.02	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	0.04	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	0.04	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.03	0.11	0.03	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	0.05	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	0.03	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	0.03	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	99	94	96	93	96
Surrogate $^{13}C_2$ PFOA	%	104	99	99	100	103
Extracted ISTD $^{13}C_3$ *PFBS*	%	98	98	96	96	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%	102	104	102	102	103
Extracted ISTD $^{13}C_4$ *PFOS*	%	114	121	113	119	113

PFAS in ASLP Extended						
Our Reference		339695-1	339695-5	339695-12	339695-17	339695-21
Your Reference	UNITS	BH8	BH9	BH10	BH13	BH20
Depth		0.03-0.4	0.035-0.08	0.5-0.95	0.5-0.95	0.02-0.3
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	120	112	116	119	115
Extracted ISTD $^{13}C_3$ *PFPeA*	%	119	121	114	116	115
Extracted ISTD $^{13}C_2$ *PFHxA*	%	99	102	101	102	97
Extracted ISTD $^{13}C_4$ *PFHpA*	%	104	104	106	106	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	121	130	119	119	115
Extracted ISTD $^{13}C_5$ *PFNA*	%	114	118	114	114	108
Extracted ISTD $^{13}C_2$ *PFDA*	%	133	141	129	135	122
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	135	149	139	137	134
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	157	165	153	161	141
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	126	128	135	138	127
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	98	110	101	103	96
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	135	156	122	125	123
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	152	176	132	158	145
Extracted ISTD $^{13}C_8$ *FOSA*	%	118	117	118	120	114
Extracted ISTD d_3 *N MeFOSA*	%	113	113	115	112	111
Extracted ISTD d_5 *N EtFOSA*	%	104	102	106	109	105
Extracted ISTD d_7 *N MeFOSE*	%	112	108	110	111	109
Extracted ISTD d_9 *N EtFOSE*	%	116	121	123	121	115
Extracted ISTD d_3 *N MeFOSAA*	%	128	133	125	122	125
Extracted ISTD d_5 *N EtFOSAA*	%	127	135	126	126	122
Total Positive PFHxS & PFOS	µg/L	0.03	0.16	0.03	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	0.03	0.14	0.03	<0.01	<0.01
Total Positive PFAS	µg/L	0.03	0.33	0.03	<0.01	<0.01

PFAS in ASLP Extended						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	96	98	93	98	98
Surrogate $^{13}C_2$ PFOA	%	98	99	104	99	100
Extracted ISTD $^{13}C_3$ *PFBS*	%	95	99	99	95	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%	102	98	102	103	104
Extracted ISTD $^{13}C_4$ *PFOS*	%	114	109	118	109	113

PFAS in ASLP Extended						
Our Reference		339695-25	339695-29	339695-33	339695-37	339695-39
Your Reference	UNITS	BH22	BH25	BH27	BH28	BH28
Depth		0.1-0.15	0.1-0.3	0.3-0.5	0-0.1	1.5-1.95
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	117	113	115	115	119
Extracted ISTD $^{13}C_3$ *PFPeA*	%	115	111	116	115	116
Extracted ISTD $^{13}C_2$ *PFHxA*	%	94	96	100	101	101
Extracted ISTD $^{13}C_4$ *PFHpA*	%	104	105	104	104	103
Extracted ISTD $^{13}C_4$ *PFOA*	%	122	113	115	119	125
Extracted ISTD $^{13}C_5$ *PFNA*	%	114	107	110	111	111
Extracted ISTD $^{13}C_2$ *PFDA*	%	129	118	127	129	132
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	132	124	131	133	143
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	149	132	148	147	153
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	124	115	120	133	122
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	97	102	110	94	101
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	126	129	121	124	144
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	150	149	147	150	161
Extracted ISTD $^{13}C_8$ *FOSA*	%	115	113	116	114	118
Extracted ISTD d_3 *N MeFOSA*	%	112	109	110	106	108
Extracted ISTD d_5 *N EtFOSA*	%	102	101	102	103	98
Extracted ISTD d_7 *N MeFOSE*	%	108	104	106	109	105
Extracted ISTD d_9 *N EtFOSE*	%	114	115	113	115	112
Extracted ISTD d_3 *N MeFOSAA*	%	124	123	126	124	130
Extracted ISTD d_5 *N EtFOSAA*	%	129	122	118	130	133
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

PFAS in ASLP Extended						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Date analysed	-	12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	95	97	94	99	91
Surrogate $^{13}C_2$ PFOA	%	103	98	101	98	99
Extracted ISTD $^{13}C_3$ *PFBS*	%	95	100	99	96	97
Extracted ISTD $^{18}O_2$ *PFHxS*	%	105	104	106	103	104
Extracted ISTD $^{13}C_4$ *PFOS*	%	114	115	115	112	119

PFAS in ASLP Extended						
Our Reference		339695-44	339695-48	339695-49	339695-52	339695-55
Your Reference	UNITS	BH29	BH30	BH31	BH32	BH34
Depth		0.5-0.95	0-0.1	0.03-0.1	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	119	111	116	118	117
Extracted ISTD $^{13}C_3$ *PFPeA*	%	117	119	114	115	116
Extracted ISTD $^{13}C_2$ *PFHxA*	%	98	102	100	100	101
Extracted ISTD $^{13}C_4$ *PFHpA*	%	105	104	107	102	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	120	126	116	119	123
Extracted ISTD $^{13}C_5$ *PFNA*	%	115	114	114	110	116
Extracted ISTD $^{13}C_2$ *PFDA*	%	129	130	121	117	126
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	145	137	138	133	140
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	162	150	143	151	151
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	130	137	128	125	123
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	95	115	90	98	95
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	129	131	125	132	130
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	161	169	145	143	159
Extracted ISTD $^{13}C_8$ *FOSA*	%	118	118	119	116	120
Extracted ISTD d_3 *N MeFOSA*	%	115	112	109	111	111
Extracted ISTD d_5 *N EtFOSA*	%	105	108	104	102	105
Extracted ISTD d_7 *N MeFOSE*	%	115	111	107	106	110
Extracted ISTD d_9 *N EtFOSE*	%	119	124	118	116	123
Extracted ISTD d_3 *N MeFOSAA*	%	122	130	110	120	124
Extracted ISTD d_5 *N EtFOSAA*	%	127	121	122	118	122
Total Positive PFHxS & PFOS	µg/L	<0.01	0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	0.01	<0.01	<0.01	<0.01

vTRH(C6-C10)/BTEXN in Water		
Our Reference	UNITS	339695-63
Your Reference		FR-2-SPT
Depth		-
Date Sampled		04/12/2023
Type of sample		Soil
Date extracted	-	10/12/2023
Date analysed	-	11/12/2023
TRH C_6 - C_9	µg/L	51
TRH C_6 - C_{10}	µg/L	51
TRH C_6 - C_{10} less BTEX (F1)	µg/L	51
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	%	96
Surrogate Toluene-d8	%	98
Surrogate 4-Bromofluorobenzene	%	102

svTRH (C10-C40) in Water		
Our Reference		339695-63
Your Reference	UNITS	FR-2-SPT
Depth		-
Date Sampled		04/12/2023
Type of sample		Soil
Date extracted	-	11/12/2023
Date analysed	-	12/12/2023
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	<100
TRH C_{29} - C_{36}	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	<50
TRH >C_{10} - C_{16}	µg/L	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50
TRH >C_{16} - C_{34}	µg/L	<100
TRH >C_{34} - C_{40}	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	<50
Surrogate o-Terphenyl	%	78

PAHs in Water		
Our Reference		339695-63
Your Reference	UNITS	FR-2-SPT
Depth		-
Date Sampled		04/12/2023
Type of sample		Soil
Date extracted	-	11/12/2023
Date analysed	-	11/12/2023
Naphthalene	µg/L	<0.1
Acenaphthylene	µg/L	<0.1
Acenaphthene	µg/L	<0.1
Fluorene	µg/L	<0.1
Phenanthrene	µg/L	<0.1
Anthracene	µg/L	<0.1
Fluoranthene	µg/L	<0.1
Pyrene	µg/L	<0.1
Benzo(a)anthracene	µg/L	<0.1
Chrysene	µg/L	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2
Benzo(a)pyrene	µg/L	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5
Total +ve PAH's	µg/L	<0.1
Surrogate p-Terphenyl-d14	%	79

Metals in Waters - Acid extractable		
Our Reference		339695-63
Your Reference	UNITS	FR-2-SPT
Depth		-
Date Sampled		04/12/2023
Type of sample		Soil
Date prepared	-	11/12/2023
Date analysed	-	11/12/2023
Arsenic - Total	mg/L	<0.05
Cadmium - Total	mg/L	<0.01
Chromium - Total	mg/L	<0.01
Copper - Total	mg/L	0.5
Lead - Total	mg/L	<0.03
Mercury - Total	mg/L	<0.0005
Nickel - Total	mg/L	<0.02
Zinc - Total	mg/L	0.04

PFAS in Water LOW LEVEL Short		
Our Reference		339695-63
Your Reference	UNITS	FR-2-SPT
Depth		-
Date Sampled		04/12/2023
Type of sample		Soil
Date prepared	-	11/12/2023
Date analysed	-	11/12/2023
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	<0.001
Perfluorooctanoic acid PFOA	µg/L	<0.001
6:2 FTS	µg/L	<0.001
8:2 FTS	µg/L	<0.002
Surrogate $^{13}C_8$ *PFOS*	%	98
Surrogate $^{13}C_2$ *PFOA*	%	105
Extracted ISTD $^{18}O_2$ *PFHxS*	%	83
Extracted ISTD $^{13}C_4$ *PFOS*	%	92
Extracted ISTD $^{13}C_4$ *PFOA*	%	110
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	157
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	195
Total Positive PFHxS & PFOS	µg/L	<0.001
Total Positive PFOA & PFOS	µg/L	<0.001
Total Positive PFAS	µg/L	<0.001

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) **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-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
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.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-021	Determination of Mercury by Cold Vapour AAS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Metals-022	Determination of various metals by ICP-MS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.
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	Leachates are extracted 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. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.

Method ID	Methodology Summary
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-022/025 ASLP	ASLP Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.
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.
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 5.4 Table B-15 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.

Method ID	Methodology Summary
Org-029A	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 5.4Table B-15 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. TOPA analyses use a pre-spiked, labelled internal standard PFAS precursor to assess the oxidation efficiency. The efficiency of removal by oxidation is recorded in the report. Additionally, dilutions applied (if required) to ensure sufficient precursor oxidation are also recorded and are available on request. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339695-12
Date prepared	-			12/12/2023	1	12/12/2023	12/12/2023		11/12/2023	11/12/2023
Date analysed	-			12/12/2023	1	12/12/2023	12/12/2023		11/12/2023	11/12/2023
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	99	98
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	90	86
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	96	102
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	96	102
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	0.9	1.0	11	95	95
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	97	95
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	96	98
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	92	96
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	96	97
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	95	94
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	0.1	0.1	0	90	75
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	98	108
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	98	86
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	100	93
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	88	85
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	104	99
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	1	<5	<5	0	92	79
4:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	96	93
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	85	90
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	94	99
10:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	91	82
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	104	117
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	95	98
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	1	<1	<1	0	94	84
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	1	<1	<1	0	88	88
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	1	<5	<5	0	82	67
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	93	76
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	0.9	0.9	0	99	110
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	101	1	102	100	2	100	97
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	101	1	90	93	3	98	88

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339695-12
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	106	1	97	94	3	101	89
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	109	1	104	107	3	109	102
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	106	1	104	107	3	108	106
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	111	1	98	99	1	106	97
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	112	1	101	102	1	109	104
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	110	1	98	98	0	109	96
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	109	1	99	99	0	105	95
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	112	1	112	107	5	109	103
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	105	1	99	91	8	102	84
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	110	1	103	103	0	104	95
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	110	1	98	96	2	104	67
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	119	1	120	119	1	116	98
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	118	1	125	117	7	128	108
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	110	1	104	100	4	104	98
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	119	1	118	121	3	112	107
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	118	1	137	131	4	118	98
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	117	1	125	126	1	118	107
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	110	1	91	93	2	107	97
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	109	1	93	98	5	108	105
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	126	1	137	132	4	132	165

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339695-12
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	117	1	135	154	13	139	197
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	124	1	115	112	3	118	106
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	113	1	123	112	9	111	92

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	44	12/12/2023	12/12/2023		[NT]	[NT]
Date analysed	-			[NT]	44	12/12/2023	12/12/2023		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	[NT]	44	0.2	0.2	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	[NT]	44	<0.2	<0.2	0	[NT]	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	[NT]	44	<0.2	<0.2	0	[NT]	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	[NT]	44	<0.2	<0.2	0	[NT]	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	[NT]	44	<0.5	<0.5	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	[NT]	44	<0.5	<0.5	0	[NT]	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	[NT]	44	<0.5	<0.5	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	[NT]	44	<0.5	<0.5	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	[NT]	44	<5	<5	0	[NT]	[NT]
4:2 FTS	µg/kg	0.1	Org-029	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
6:2 FTS	µg/kg	0.1	Org-029	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
8:2 FTS	µg/kg	0.2	Org-029	[NT]	44	<0.2	<0.2	0	[NT]	[NT]
10:2 FTS	µg/kg	0.2	Org-029	[NT]	44	<0.2	<0.2	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	44	<1	<1	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	44	<1	<1	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	[NT]	44	<1	<1	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	[NT]	44	<1	<1	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	[NT]	44	<5	<5	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	[NT]	44	<0.2	<0.2	0	[NT]	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	[NT]	44	<0.2	<0.2	0	[NT]	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	44	99	97	2	[NT]	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	44	96	93	3	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	[NT]	44	87	89	2	[NT]	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	[NT]	44	102	102	0	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	[NT]	44	102	105	3	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	[NT]	44	95	95	0	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	[NT]	44	102	106	4	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	[NT]	44	99	98	1	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	[NT]	44	96	96	0	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	[NT]	44	103	106	3	[NT]	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	[NT]	44	87	85	2	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	[NT]	44	98	91	7	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	[NT]	44	61	50	20	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	[NT]	44	104	101	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	[NT]	44	74	64	14	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	[NT]	44	97	103	6	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	[NT]	44	118	136	14	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	[NT]	44	144	150	4	[NT]	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	[NT]	44	102	103	1	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	[NT]	44	91	86	6	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	[NT]	44	95	92	3	[NT]	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	[NT]	44	131	140	7	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	44	146	149	2	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	44	95	92	3	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	44	83	77	8	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339695-12
Date extracted	-			11/12/2023	1	11/12/2023	11/12/2023		11/12/2023	11/12/2023
Date analysed	-			11/12/2023	1	11/12/2023	11/12/2023		11/12/2023	11/12/2023
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	100	109
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	100	109
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	102	112
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	98	108
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	97	107
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	101	109
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	101	112
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	91	1	94	100	6	91	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]	44	11/12/2023	11/12/2023		[NT]	[NT]
Date analysed	-			[NT]	44	11/12/2023	11/12/2023		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	44	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	44	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	44	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	44	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	44	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	44	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	44	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	44	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	44	91	87	4	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339695-12
Date extracted	-			11/12/2023	1	11/12/2023	11/12/2023		11/12/2023	11/12/2023
Date analysed	-			11/12/2023	1	12/12/2023	12/12/2023		11/12/2023	11/12/2023
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	117	113
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	170	140	19	111	106
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	260	230	12	71	93
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	117	113
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	320	270	17	111	106
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	300	290	3	71	93
Surrogate o-Terphenyl	%		Org-020	85	1	98	89	10	99	101

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	44	11/12/2023	11/12/2023		[NT]	[NT]
Date analysed	-			[NT]	44	11/12/2023	11/12/2023		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	44	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	44	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	44	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	44	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	44	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	44	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	44	89	87	2	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339695-12
Date extracted	-			11/12/2023	1	11/12/2023	11/12/2023		11/12/2023	11/12/2023
Date analysed	-			12/12/2023	1	12/12/2023	12/12/2023		12/12/2023	12/12/2023
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	100
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	90
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	98
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	1.2	1.2	0	103	#
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.3	0.4	29	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	2.2	2.3	4	97	#
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	2.5	2.4	4	100	#
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	1.3	1.3	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	1	1.0	0	98	#
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	2	2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	1.1	0.98	12	111	#
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.4	0.4	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.2	67	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	0.8	0.7	13	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	99	1	94	95	1	93	86

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	44	11/12/2023	11/12/2023		[NT]	[NT]
Date analysed	-			[NT]	44	12/12/2023	12/12/2023		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	44	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	44	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	44	97	93	4	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339695-12
Date extracted	-			11/12/2023	1	11/12/2023	11/12/2023		11/12/2023	11/12/2023
Date analysed	-			12/12/2023	1	12/12/2023	12/12/2023		12/12/2023	12/12/2023
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	102
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	106
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	105	103
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	104
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	105
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	113	113
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	128
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	133	130
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	104
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	96
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	92	1	89	90	1	94	92

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	44	11/12/2023	11/12/2023		[NT]	[NT]
Date analysed	-			[NT]	44	12/12/2023	12/12/2023		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	44	89	93	4	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339695-12
Date extracted	-			11/12/2023	1	11/12/2023	11/12/2023		11/12/2023	11/12/2023
Date analysed	-			12/12/2023	1	12/12/2023	12/12/2023		12/12/2023	12/12/2023
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	93
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	109	109
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	110
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	116	118
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	109
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	101
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	119
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	92	1	89	90	1	94	92

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	44	11/12/2023	11/12/2023		[NT]	[NT]
Date analysed	-			[NT]	44	12/12/2023	12/12/2023		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	44	89	93	4	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	339695-12
Date extracted	-			11/12/2023	1	11/12/2023	11/12/2023		11/12/2023	11/12/2023
Date analysed	-			12/12/2023	1	12/12/2023	12/12/2023		12/12/2023	12/12/2023
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	114	82
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	99	1	96	95	1	95	92

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	44	11/12/2023	11/12/2023		[NT]	[NT]
Date analysed	-			[NT]	44	12/12/2023	12/12/2023		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	44	92	91	1	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	339695-12
Date prepared	-			11/12/2023	1	11/12/2023	11/12/2023		11/12/2023	11/12/2023
Date analysed	-			13/12/2023	1	13/12/2023	13/12/2023		13/12/2023	13/12/2023
Arsenic	mg/kg	4	Metals-020	<4	1	23	15	42	108	92
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	103	87
Chromium	mg/kg	1	Metals-020	<1	1	16	15	6	109	91
Copper	mg/kg	1	Metals-020	<1	1	39	68	54	108	119
Lead	mg/kg	1	Metals-020	<1	1	25	24	4	111	91
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	105	104
Nickel	mg/kg	1	Metals-020	<1	1	13	11	17	105	92
Zinc	mg/kg	1	Metals-020	<1	1	40	41	2	103	81

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	44	11/12/2023	11/12/2023		[NT]	[NT]
Date analysed	-			[NT]	44	13/12/2023	13/12/2023		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	44	8	35	126	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	44	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	44	22	41	60	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	44	7	15	73	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	44	24	33	32	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	44	4	20	133	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	44	25	60	82	[NT]	[NT]

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-21
Date extracted	-			12/12/2023	5	12/12/2023	12/12/2023		12/12/2023	12/12/2023
Date analysed	-			12/12/2023	5	12/12/2023	12/12/2023		12/12/2023	12/12/2023
Arsenic	mg/L	0.05	Metals-020	<0.05	5	<0.05	<0.05	0	104	106
Cadmium	mg/L	0.01	Metals-020	<0.01	5	<0.01	<0.01	0	99	98
Chromium	mg/L	0.01	Metals-020	<0.01	5	0.02	0.02	0	96	100
Lead	mg/L	0.03	Metals-020	<0.03	5	<0.03	<0.03	0	97	103
Mercury	mg/L	0.0005	Metals-021	<0.0005	5	<0.0005	<0.0005	0	116	101
Nickel	mg/L	0.02	Metals-020	<0.02	5	<0.02	<0.02	0	102	104

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	55	12/12/2023	12/12/2023		[NT]	[NT]
Date analysed	-			[NT]	55	12/12/2023	12/12/2023		[NT]	[NT]
Arsenic	mg/L	0.05	Metals-020	[NT]	55	<0.05	<0.05	0	[NT]	[NT]
Cadmium	mg/L	0.01	Metals-020	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Chromium	mg/L	0.01	Metals-020	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Lead	mg/L	0.03	Metals-020	[NT]	55	<0.03	<0.03	0	[NT]	[NT]
Mercury	mg/L	0.0005	Metals-021	[NT]	55	<0.0005	<0.0005	0	[NT]	[NT]
Nickel	mg/L	0.02	Metals-020	[NT]	55	0.03	0.02	40	[NT]	[NT]

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-17
Date extracted	-			14/12/2023	5	14/12/2023	14/12/2023		14/12/2023	14/12/2023
Date analysed	-			14/12/2023	5	14/12/2023	14/12/2023		14/12/2023	14/12/2023
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	<0.0001	<0.0001	0	80	100
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	<0.0001	<0.0001	0	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	<0.0001	<0.0001	0	77	92
Fluorene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	<0.0001	<0.0001	0	77	96
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	0.003	0.003	0	81	106
Anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	0.0002	0.0002	0	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	0.0006	0.0006	0	81	110
Pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	0.0005	0.0005	0	76	109
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	<0.0001	<0.0001	0	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	<0.0001	<0.0001	0	89	90
Benzo(bjk)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	<0.0002	5	<0.0002	<0.0002	0	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	<0.0001	<0.0001	0	64	107
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	<0.0001	<0.0001	0	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	5	<0.0001	<0.0001	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	82	5	91	88	3	88	105

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-21
Date prepared	-			12/12/2023	5	12/12/2023	12/12/2023		12/12/2023	12/12/2023
Date analysed	-			12/12/2023	5	12/12/2023	12/12/2023		12/12/2023	12/12/2023
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	5	<0.01	<0.01	0	96	99
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	<0.01	5	0.02	0.02	0	95	97
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	5	0.02	0.02	0	94	99
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	<0.01	5	<0.01	<0.01	0	103	107
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	5	0.09	0.08	12	94	87
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	<0.02	5	<0.02	<0.02	0	61	63
Perfluorobutanoic acid	µg/L	0.02	Org-029	<0.02	5	<0.02	<0.02	0	96	96
Perfluoropentanoic acid	µg/L	0.02	Org-029	<0.02	5	<0.02	<0.02	0	93	91
Perfluorohexanoic acid	µg/L	0.01	Org-029	<0.01	5	0.03	0.02	40	99	97
Perfluoroheptanoic acid	µg/L	0.01	Org-029	<0.01	5	0.02	0.01	67	96	98
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	5	0.03	0.02	40	88	93
Perfluorononanoic acid	µg/L	0.01	Org-029	<0.01	5	<0.01	<0.01	0	107	111
Perfluorodecanoic acid	µg/L	0.02	Org-029	<0.02	5	<0.02	<0.02	0	91	90
Perfluoroundecanoic acid	µg/L	0.02	Org-029	<0.02	5	<0.02	<0.02	0	87	87
Perfluorododecanoic acid	µg/L	0.05	Org-029	<0.05	5	<0.05	<0.05	0	87	92
Perfluorotridecanoic acid	µg/L	0.1	Org-029	<0.1	5	<0.1	<0.1	0	93	93
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	<0.5	5	<0.5	<0.5	0	100	105
4:2 FTS	µg/L	0.01	Org-029	<0.01	5	<0.01	<0.01	0	101	101
6:2 FTS	µg/L	0.01	Org-029	<0.01	5	<0.01	<0.01	0	88	91
8:2 FTS	µg/L	0.02	Org-029	<0.02	5	<0.02	<0.02	0	105	112
10:2 FTS	µg/L	0.02	Org-029	<0.02	5	<0.02	<0.02	0	134	91
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	<0.1	5	<0.1	<0.1	0	99	97
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	5	<0.05	<0.05	0	101	103
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	<0.1	5	<0.1	<0.1	0	102	102
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	5	<0.05	<0.05	0	81	78
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	5	<0.5	<0.5	0	84	81
MePerfluorooctanesulf- amid oacetic aci	µg/L	0.02	Org-029	<0.02	5	<0.02	<0.02	0	100	105
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	<0.02	5	<0.02	<0.02	0	99	99
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	96	5	99	98	1	102	97
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	104	5	102	101	1	100	107

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-21
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	103	5	98	100	2	96	100
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	103	5	100	100	0	103	100
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	113	5	116	117	1	110	116
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	105	5	116	115	1	106	109
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	110	5	121	121	0	109	114
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	104	5	105	109	4	100	103
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	109	5	112	111	1	109	106
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	120	5	130	133	2	121	117
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	119	5	127	124	2	119	113
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	149	5	153	149	3	141	141
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	159	5	162	162	0	153	147
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	172	5	188	186	1	175	170
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	116	5	119	117	2	126	120
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	99	5	106	115	8	98	100
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	165	5	198	192	3	144	146
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	197	5	#	#		198	168
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	117	5	121	122	1	116	117
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	108	5	113	114	1	110	110
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	101	5	104	105	1	100	102
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	102	5	102	107	5	109	109

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-21
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	112	5	118	121	3	113	117
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	127	5	129	119	8	127	118
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	132	5	132	140	6	127	131

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	55	12/12/2023	12/12/2023		[NT]	[NT]
Date analysed	-			[NT]	55	12/12/2023	12/12/2023		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	[NT]	55	<0.02	<0.02	0	[NT]	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029	[NT]	55	<0.02	<0.02	0	[NT]	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029	[NT]	55	<0.02	<0.02	0	[NT]	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029	[NT]	55	<0.02	<0.02	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029	[NT]	55	<0.02	<0.02	0	[NT]	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029	[NT]	55	<0.05	<0.05	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029	[NT]	55	<0.1	<0.1	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	[NT]	55	<0.5	<0.5	0	[NT]	[NT]
4:2 FTS	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
6:2 FTS	µg/L	0.01	Org-029	[NT]	55	<0.01	<0.01	0	[NT]	[NT]
8:2 FTS	µg/L	0.02	Org-029	[NT]	55	<0.02	<0.02	0	[NT]	[NT]
10:2 FTS	µg/L	0.02	Org-029	[NT]	55	<0.02	<0.02	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	[NT]	55	<0.1	<0.1	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	[NT]	55	<0.05	<0.05	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	[NT]	55	<0.1	<0.1	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	[NT]	55	<0.05	<0.05	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	[NT]	55	<0.5	<0.5	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic aci	µg/L	0.02	Org-029	[NT]	55	<0.02	<0.02	0	[NT]	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	[NT]	55	<0.02	<0.02	0	[NT]	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	55	95	92	3	[NT]	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	55	106	103	3	[NT]	[NT]

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	[NT]	55	102	100	2	[NT]	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	[NT]	55	104	104	0	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	[NT]	55	120	116	3	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	[NT]	55	112	113	1	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	[NT]	55	117	117	0	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	[NT]	55	105	102	3	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	[NT]	55	109	108	1	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	[NT]	55	125	121	3	[NT]	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	[NT]	55	120	121	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	[NT]	55	144	143	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	[NT]	55	142	141	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	[NT]	55	174	165	5	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	[NT]	55	117	129	10	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	[NT]	55	104	99	5	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	[NT]	55	161	166	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	[NT]	55	181	176	3	[NT]	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	[NT]	55	117	118	1	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	[NT]	55	109	109	0	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	[NT]	55	100	103	3	[NT]	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	[NT]	55	108	107	1	[NT]	[NT]

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	55	119	124	4	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	55	124	127	2	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	55	128	120	6	[NT]	[NT]

QUALITY CONTROL: Metals from Neutral Leaching Fluid ICPMS					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-17
Date extracted	-			14/12/2023	5	14/12/2023	14/12/2023		14/12/2023	14/12/2023
Date analysed	-			14/12/2023	5	14/12/2023	14/12/2023		14/12/2023	14/12/2023
Arsenic	µg/L	1	Metals-022	<1	5	2	2	0	111	102
Cadmium	µg/L	0.1	Metals-022	<0.1	5	<0.1	<0.1	0	114	105
Chromium	µg/L	1	Metals-022	<1	5	9	9	0	111	110
Copper	µg/L	1	Metals-022	<1	5	2	2	0	102	100
Lead	µg/L	1	Metals-022	<1	5	<1	<1	0	106	91
Mercury	µg/L	0.05	Metals-021	<0.05	5	<0.05	<0.05	0	90	81
Nickel	µg/L	1	Metals-022	<1	5	<1	<1	0	110	107
Zinc	µg/L	1	Metals-022	<1	5	<1	2	67	104	110

QUALITY CONTROL: Metals from Neutral Leaching Fluid ICPMS					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	55	14/12/2023	14/12/2023		[NT]	[NT]
Date analysed	-			[NT]	55	14/12/2023	14/12/2023		[NT]	[NT]
Arsenic	µg/L	1	Metals-022	[NT]	55	<1	<1	0	[NT]	[NT]
Cadmium	µg/L	0.1	Metals-022	[NT]	55	<0.1	<0.1	0	[NT]	[NT]
Chromium	µg/L	1	Metals-022	[NT]	55	2	<1	67	[NT]	[NT]
Copper	µg/L	1	Metals-022	[NT]	55	2	<1	67	[NT]	[NT]
Lead	µg/L	1	Metals-022	[NT]	55	1	<1	0	[NT]	[NT]
Mercury	µg/L	0.05	Metals-021	[NT]	55	<0.05	<0.05	0	[NT]	[NT]
Nickel	µg/L	1	Metals-022	[NT]	55	2	<1	67	[NT]	[NT]
Zinc	µg/L	1	Metals-022	[NT]	55	2	2	0	[NT]	[NT]

QUALITY CONTROL: PAHs in Water Leach						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			14/12/2023	[NT]	[NT]	[NT]	[NT]	14/12/2023	[NT]
Date analysed	-			14/12/2023	[NT]	[NT]	[NT]	[NT]	14/12/2023	[NT]
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	87	[NT]
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	79	[NT]
Benzo(bjk)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022/025 ASLP	88	[NT]	[NT]	[NT]	[NT]	87	[NT]

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-5
Date prepared	-			11/12/2023	1	12/12/2023	12/12/2023		11/12/2023	11/12/2023
Date analysed	-			11/12/2023	1	12/12/2023	12/12/2023		11/12/2023	11/12/2023
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	99	95
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	96	99
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	99	98
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	106	104
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029A	<0.01	1	0.03	0.02	40	95	87
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	73	68
Perfluorobutanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	102	95
Perfluoropentanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	97	96
Perfluorohexanoic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	99	95
Perfluoroheptanoic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	101	96
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	92	86
Perfluorononanoic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	112	109
Perfluorodecanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	97	96
Perfluoroundecanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	94	87
Perfluorododecanoic acid	µg/L	0.05	Org-029A	<0.05	1	<0.05	<0.05	0	89	87
Perfluorotridecanoic acid	µg/L	0.1	Org-029A	<0.1	1	<0.1	<0.1	0	90	86
Perfluorotetradecanoic acid	µg/L	0.5	Org-029A	<0.5	1	<0.5	<0.5	0	103	102
4:2 FTS	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	110	101
6:2 FTS	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	88	93
8:2 FTS	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	92	95
10:2 FTS	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	113	106
Perfluorooctane sulfonamide	µg/L	0.1	Org-029A	<0.1	1	<0.1	<0.1	0	102	97
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029A	<0.05	1	<0.05	<0.05	0	101	98
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029A	<0.1	1	<0.1	<0.1	0	104	101
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029A	<0.05	1	<0.05	<0.05	0	89	86
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029A	<0.5	1	<0.5	<0.5	0	90	86
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	115	106
EtPerfluorooctanesulf-amid oacetic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	101	91
Surrogate $^{13}C_8$ PFOS	%		Org-029A	98	1	99	97	2	97	93
Surrogate $^{13}C_2$ PFOA	%		Org-029A	97	1	104	99	5	100	102

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-5
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029A	95	1	98	93	5	95	96
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029A	105	1	102	100	2	104	103
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029A	114	1	114	114	0	112	121
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029A	117	1	120	117	3	114	108
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029A	113	1	119	116	3	110	112
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029A	99	1	99	97	2	97	97
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029A	104	1	104	103	1	102	102
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029A	123	1	121	120	1	120	121
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029A	110	1	114	108	5	111	112
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029A	128	1	133	122	9	127	124
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029A	136	1	135	132	2	135	138
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029A	154	1	157	149	5	153	154
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029A	132	1	126	116	8	118	127
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029A	98	1	98	94	4	92	111
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029A	128	1	135	136	1	134	133
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029A	155	1	152	150	1	160	153
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029A	115	1	118	116	2	111	112
Extracted ISTD d_3 *N MeFOSA*	%		Org-029A	110	1	113	109	4	108	112
Extracted ISTD d_5 *N EtFOSA*	%		Org-029A	107	1	104	102	2	99	103
Extracted ISTD d_7 *N MeFOSE*	%		Org-029A	108	1	112	109	3	106	104

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-5
Extracted ISTD d_9 *N EtFOSE*	%		Org-029A	114	1	116	115	1	112	116
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029A	121	1	128	123	4	121	118
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029A	129	1	127	119	7	126	125

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	44	12/12/2023	12/12/2023		[NT]	[NT]
Date analysed	-			[NT]	44	12/12/2023	12/12/2023		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029A	[NT]	44	<0.02	<0.02	0	[NT]	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029A	[NT]	44	<0.02	<0.02	0	[NT]	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029A	[NT]	44	<0.02	<0.02	0	[NT]	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029A	[NT]	44	<0.02	<0.02	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029A	[NT]	44	<0.02	<0.02	0	[NT]	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029A	[NT]	44	<0.05	<0.05	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029A	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029A	[NT]	44	<0.5	<0.5	0	[NT]	[NT]
4:2 FTS	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
6:2 FTS	µg/L	0.01	Org-029A	[NT]	44	<0.01	<0.01	0	[NT]	[NT]
8:2 FTS	µg/L	0.02	Org-029A	[NT]	44	<0.02	<0.02	0	[NT]	[NT]
10:2 FTS	µg/L	0.02	Org-029A	[NT]	44	<0.02	<0.02	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029A	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029A	[NT]	44	<0.05	<0.05	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029A	[NT]	44	<0.1	<0.1	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029A	[NT]	44	<0.05	<0.05	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029A	[NT]	44	<0.5	<0.5	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029A	[NT]	44	<0.02	<0.02	0	[NT]	[NT]
EtPerfluorooctanesulf-amid oacetic acid	µg/L	0.02	Org-029A	[NT]	44	<0.02	<0.02	0	[NT]	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029A	[NT]	44	95	103	8	[NT]	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029A	[NT]	44	103	99	4	[NT]	[NT]

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029A	[NT]	44	95	94	1	[NT]	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029A	[NT]	44	105	103	2	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029A	[NT]	44	114	110	4	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029A	[NT]	44	119	118	1	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029A	[NT]	44	117	114	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029A	[NT]	44	98	99	1	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029A	[NT]	44	105	104	1	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029A	[NT]	44	120	123	2	[NT]	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029A	[NT]	44	115	112	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029A	[NT]	44	129	130	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029A	[NT]	44	145	135	7	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029A	[NT]	44	162	158	2	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029A	[NT]	44	130	130	0	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029A	[NT]	44	95	105	10	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029A	[NT]	44	129	136	5	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029A	[NT]	44	161	169	5	[NT]	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029A	[NT]	44	118	117	1	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029A	[NT]	44	115	110	4	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029A	[NT]	44	105	102	3	[NT]	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029A	[NT]	44	115	111	4	[NT]	[NT]

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029A	[NT]	44	119	118	1	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029A	[NT]	44	122	130	6	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029A	[NT]	44	127	131	3	[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	-			10/12/2023	[NT]	[NT]	[NT]	[NT]	10/12/2023	[NT]
Date analysed	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	87	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	83	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	84	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	89	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	85	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	94	[NT]	[NT]	[NT]	[NT]	92	[NT]
Surrogate Toluene-d8	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	103	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Date analysed	-			12/12/2023	[NT]	[NT]	[NT]	[NT]	12/12/2023	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	92	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	96	[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]	92	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	96	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate o-Terphenyl	%		Org-020	83	[NT]	[NT]	[NT]	[NT]	80	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Date extracted	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Date analysed	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Naphthalene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	120	[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]	102	[NT]
Fluorene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	105	[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]	105	[NT]
Pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[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]	104	[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]	103	[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	95	[NT]	[NT]	[NT]	[NT]	95	[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	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Date analysed	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Arsenic - Total	mg/L	0.05	Metals-020	<0.05	[NT]	[NT]	[NT]	[NT]	106	[NT]
Cadmium - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	105	[NT]
Chromium - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	102	[NT]
Copper - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	110	[NT]
Lead - Total	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	102	[NT]
Mercury - Total	mg/L	0.0005	Metals-021	<0.0005	[NT]	[NT]	[NT]	[NT]	97	[NT]
Nickel - Total	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	104	[NT]
Zinc - Total	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	101	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Date analysed	-			11/12/2023	[NT]	[NT]	[NT]	[NT]	11/12/2023	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	94	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	90	[NT]
6:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	103	[NT]
8:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	103	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	117	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	124	[NT]	[NT]	[NT]	[NT]	116	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	149	[NT]	[NT]	[NT]	[NT]	132	[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.

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Report Comments

PAHs in Soil - # Percent recovery for the matrix spike is not possible to report due to interference from analytes (other than those being tested) in sample 339695-12.

PAHs in Soil - The RPD for duplicate results is accepted due to the non homogenous nature of sample 339695-1.

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 339695-1 for Cu. Therefore a triplicate result has been issued as laboratory sample number 339695-65.
- The laboratory RPD acceptance criteria has been exceeded for 339695-44 for As, Cr, Cu, Ni and Zn. Therefore a triplicate result has been issued as laboratory sample number 339695-66.

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.

Factual description of asbestos identified in the soil samples: NEPM
Sample 339695-1; Chrysotile asbestos identified in 0.2958g of fibre cement material >7mm
Sample 339695-5; Chrysotile asbestos identified in 0.0146g of fibrous matted material

Note: All samples analysed as received. However, sample 339695-33 was below the minimum recommended 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

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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	C Ridley

Sample Login Details

Your reference	E36446PR, Macquarie Park NSW
Envirolab Reference	339695
Date Sample Received	07/12/2023
Date Instructions Received	07/12/2023
Date Results Expected to be Reported	14/12/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	64 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	11
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:

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
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Sample ID	PFAS in Soils Extended	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 metalsin soil	Asbestos ID - soils NEPM - ASB-001	Metals from Leaching Fluid pH 2.9 or 5	PAHs in TCLP (USEPA 1311)	PFAS in TCLP Extended	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters -Acid extractable	PFAS in Water LOW LEVEL Short	On Hold
BH8-0.03-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH8-0.5-0.95																					✓
BH8-1.6-1.95																					✓
BH8-3-3.2																					✓
BH9-0.035-0.08	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓						
BH9-0.4-0.5																					✓
BH9-0.6-0.7																					✓
BH9-1.2-1.3																					✓
BH9-1.7-1.95																					✓
BH9-2.3-2.5																					✓
BH10-0.04-0.45																					✓
BH10-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH10-1.5-1.7																					✓
BH10-1.7-1.95																					✓
BH10-2.3-2.5																					✓
BH13-0.03-0.3																					✓
BH13-0.5-0.95	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓						
BH13-1.5-17																					✓
BH13-1.7-1.95																					✓
BH13-2.4-2.5																					✓

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Sample ID	PFAS in Soils Extended	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 metalsin soil	Asbestos ID - soils NEPM - ASB-001	Metals from Leaching Fluid pH 2.9 or 5	PAHs in TCLP (USEPA 1311)	PFAS in TCLP Extended	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters -Acid extractable	PFAS in Water LOW LEVEL Short	On Hold
BH20-0.02-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH20-0.5-0.95																					✓
BH20-1.5-1.95																					✓
BH20-2.5-2.8																					✓
BH22-0.1-0.15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH22-0.3-0.5																					✓
BH22-0.6-0.95																					✓
BH22-1.4-1.5																					✓
BH25-0.1-0.3	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓						
BH25-0.4-0.7																					✓
BH25-1-1.3																					✓
BH27-0.14-0.23																					✓
BH27-0.3-0.5	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓						
BH27-0.8-0.95																					✓
BH27-1.8-1.95																					✓
BH27-2.3-2.5																					✓
BH28-0-0.1	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓						
BH28-0.5-0.95																					✓
BH28-1.5-1.95	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓						
BH28-3-3.2																					✓

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Sample ID	PFAS in Soils Extended	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 metalsin soil	Asbestos ID - soils NEPM - ASB-001	Metals from Leaching Fluid pH 2.9 or 5	PAHs in TCLP (USEPA 1311)	PFAS in TCLP Extended	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters -Acid extractable	PFAS in Water LOW LEVEL Short	On Hold
BH28-3.2-3.45																					✓
BH28-3.8-4																					✓
BH29-0-0.1																					✓
BH29-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH29-1.5-1.95																					✓
BH29-3-3.45																					✓
BH29-4.1-4.5																					✓
BH30-0-0.1	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓						
BH31-0.03-0.1	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓						
BH31-0.4-0.6																					✓
BH31-1-1.2																					✓
BH32-0.03-0.3	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓						
BH32-0.5-0.7																					✓
BH32-1.3-1.5																					✓
BH34-0.03-0.2	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓						
BH34-0.2-0.5																					✓
BH34-0.6-0.95																					✓
BH34-1.3-1.5																					✓
SDUP3	✓	✓	✓	✓				✓													
SDUP5																					✓

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Sample ID	PFAS in Soils Extended	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 metalsin soil	Asbestos ID - soils NEPM - ASB-001	Metals from Leaching Fluid pH 2.9 or 5	PAHs in TCLP (USEPA 1311)	PFAS in TCLP Extended	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters -Acid extractable	PFAS in Water LOW LEVEL Short	On Hold
TB-S2	✓	✓	✓	✓				✓													
TS-S2		✓																			
FR-2-SPT																✓	✓	✓	✓	✓	
BH29-5.4-5.5																					✓

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: E36446PR Date Results Required: STANDARD Page: 1 of 3	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Craig Ridley cridley@jkenvironments.com.au

Location: Macquarie Park, NSW

Sampler: LR/HW

Sample Preserved in Esky on Ice

Tests Required

	Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals	ASLP PFAS	BTEX	PFAS (low level, short)
1	4/12/2023		BH8	0.03-0.4	G, PFAS, A	1	Fill			X			X		X	X	X		
2	4/12/2023		BH8	0.5-0.95	G, PFAS, A	2.2	Fill												
3	4/12/2023		BH8	1.6-1.95	G, PFAS, A	3.4	Natural												
* 4	4/12/2023		BH8	3-3.2	G, PFAS	0.1	Natural												
5	4/12/2023		BH9	0.035-0.08	G, PFAS, A	0.8	Fill		X				X	X	X	X	X		
6	4/12/2023		BH9	0.4-0.5	G, PFAS, A	1.3	Fill												
7	4/12/2023		BH9	0.6-0.7	G, PFAS, A	0.6	Fill												
8	4/12/2023		BH9	1.2-1.3	G, PFAS, A	1	Fill												
* 9	4/12/2023		BH9	1.7-1.95	G, PFAS	0	Natural												
* 10	4/12/2023		BH9	2.3-2.5	G, PFAS	0.1	Natural												
11	4/12/2023		BH10	0.04-0.45	G, PFAS, A	1.8	Fill												
12	4/12/2023		BH10	0.5-0.95	G, PFAS, A	1.8	Fill			X			X		X	X	X		
13	4/12/2023		BH10	1.5-1.7	G, PFAS, A	1	Fill												
* 14	4/12/2023		BH10	1.7-1.95	G, PFAS	0	Natural												
* 15	4/12/2023		BH10	2.3-2.5	G, PFAS	0	Natural												
16	4/12/2023		BH13	0.03-0.3	G, PFAS, A	1	Fill												
17	4/12/2023		BH13	0.5-0.95	G, PFAS, A	1.4	Fill		X				X	X	X	X	X		
18	4/12/2023		BH13	1.5-1.7	G, PFAS, A	0.8	Fill												
* 19	4/12/2023		BH13	1.7-1.95	G, PFAS	0.1	Natural												
20	4/12/2023		BH13	2.4-2.5	G, PFAS, A	1.8	Natural												
21	4/12/2023		BH20	0.02-0.3	G, PFAS, A	1.3	Fill			X			X		X	X	X		
22	4/12/2023		BH20	0.5-0.95	G, PFAS, A	0.9	Fill												
23	4/12/2023		BH20	1.5-1.95	G, PFAS, A	1	Fill												
24	4/12/2023		BH20	2.5-2.8	G, PFAS, A	2.7	Natural												
25	4/12/2023		BH22	0.1-0.15	G, PFAS, A	0.6	Fill			X			X		X	X	X		

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle
A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By:	Date:	Time:	Received By:	Date:
LR	7/12/23	1500		7/12/23

ENVIROLAB

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

Job No: 339695

Date Received: 7/12/23
Time Received: 15:00
Received By:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

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: Alleen	JKE Job Number: E36446PR Date Results Required: STANDARD Page: 2 of 3	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Craig Ridley cridley@jkenvironments.com.au

Location:	Macquarie Park, NSW	Sample Preserved in Esky on Ice
Sampler:	LR/HW	Tests Required

	Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals	ASLP PFAS	BTEX	PFAS (low level, short)
26	4/12/2023		BH22	0.3-0.5	G, PFAS, A	0.7	Fill												
27	4/12/2023		BH22	0.6-0.95	G, PFAS, A	1	Natural												
28	4/12/2023		BH22	1.4-1.5	G, PFAS	0	Natural												
29	4/12/2023		BH25	0.1-0.3	G, PFAS, A	2.1	Fill		X				X	X	X	X	X		
30	4/12/2023		BH25	0.4-0.7	G, PFAS	0.2	Natural												
31	4/12/2023		BH25	1-1.3	G, PFAS	0	Natural												
32	4/12/2023		BH27	0.14-0.23	G, PFAS, A	1	Fill												
33	4/12/2023		BH27	0.3-0.5	G, PFAS, A	1.2	Fill		X				X	X	X	X	X		
34	4/12/2023		BH27	0.8-0.95	G, PFAS, A	1.2	Fill												
35	4/12/2023		BH27	1.8-1.95	G, PFAS	0	Natural												
36	4/12/2023		BH27	2.3-2.5	G, PFAS	0	Natural												
37	5/12/2023		BH28	0-0.1	G, PFAS, A	0.6	Fill		X				X	X	X	X	X		
38	5/12/2023		BH28	0.5-0.95	G, PFAS, A	1.1	Fill												
39	5/12/2023		BH28	1.5-1.95	G, PFAS, A	0.9	Fill		X				X	X	X	X	X		
40	5/12/2023		BH28	3-3.2	G, PFAS	0.1	Fill												
41	5/12/2023		BH28	3.2-3.45	G, PFAS, A	1.8	Natural												
42	5/12/2023		BH28	3.8-4	G, PFAS, A	0.9	Natural												
43	5/12/2023		BH29	0-0.1	G, PFAS, A	0.5	Fill												
44	5/12/2023		BH29	0.5-0.95	G, PFAS, A	1.5	Fill			X			X		X	X	X		
45	5/12/2023		BH29	1.5-1.95	G, PFAS	0.1	Fill												
46	5/12/2023		BH29	3-3.45	G, PFAS, A	1.4	Fill												
47	5/12/2023		BH29	4.1-4.5	G, PFAS	0	Natural												
48	5/12/2023		BH30	0-0.1	G, PFAS, A	1.5	Fill		X				X	X	X	X	X		
49	4/12/2023		BH31	0.03-0.1	G, PFAS, A	2.2	Fill		X				X	X	X	X	X		
50	4/12/2023		BH31	0.4-0.6	G, PFAS, A	2.6	Natural												

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By:	Date:	Time:	Received By:	Date:
LR	7/12/23			

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: E36446PR Date Results Required: STANDARD Page: 3 of 3	**FROM:** JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Craig Ridley cridley@jkenvironments.com.au

Location:	Macquarie Park, NSW						Sample Preserved in Esky on Ice														
Sampler:	LR/HW						Tests Required														
	Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals	ASLP PFAS	BTEX	PFAS (low level, short)
51	4/12/2023		BH31	1-1.2	G, PFAS	0.1	Natural												
52	5/12/2023		BH32	0.03-0.3	G, PFAS, A	1.1	Fill		X				X	X	X	X	X		
53	5/12/2023		BH32	0.5-0.7	G, PFAS, A	0.9	Natural												
54	5/12/2023		BH32	1.3-1.5	G, PFAS, A	0.9	Natural												
55	5/12/2023		BH34	0.03-0.2	G, PFAS, A	0.4	Fill		X				X	X	X	X	X		
56	5/12/2023		BH34	0.2-0.5	G, PFAS, A	0.9	Natural												
57	5/12/2023		BH34	0.6-0.95	G, PFAS	0	Natural												
58	5/12/2023		BH34	1.3-1.5	G, PFAS	0	Natural												
59	4/12/2023		SDUP3	-	G, PFAS	-	Duplicate					X	X						
-	4/12/2023		SDUP4	-	G,PFAS	-	Duplicate					X	X		SEND TO VIC				
60	5/12/2023		SDUP5	-	G, PFAS	-	Duplicate												
61	4/12/2023		TB-S2	-	G, PFAS	-	Trip Blank					X	X						
62	4/12/2023		TS-S2	-	V	-	Trip Spike											X	
63	4/12/2023		FR-2-SPT	-	#	-	Rinsate					X							X
64	BH29			3-4-5.5															

Remarks (comments/detection limits required):

Please test FR2-SPT for total metals

Sample Containers:
G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle
A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By:	Date:	Time:	Received By:	Date:
LR	7/12/23			

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 339695-A

Client Details

Client	JK Environments
Attention	C Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E36446PR, Macquarie Park NSW**
Number of Samples	Additional analysis
Date samples received	07/12/2023
Date completed instructions received	19/12/2023

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	03/01/2024
Date of Issue	09/01/2024
Reissue Details	This report replaces R00 created on 04/01/2024 due to: revised report with additional PFAS TCLP results.

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

Results Approved By
Amanda Chui, LC/Air Toxics Supervisor
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Liam Timmins, Organics Supervisor
Loren Bardwell, Development Chemist
Lucy Zhu, Asbestos Supervisor
Nick Sarlamis, Assistant Operation Manager
Sean McAlary, Chemist (FAS)
Tim Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
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	%	87	85	86	85	87

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
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	%	86	88	86	85	89

svTRH (C10-C40) in Soil						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	23/12/2023	23/12/2023	23/12/2023	23/12/2023	23/12/2023
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	78	75	75	75	76

svTRH (C10-C40) in Soil						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	23/12/2023	23/12/2023	23/12/2023	23/12/2023	23/12/2023
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	72	78	77	76	76

PAHs in Soil						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
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	0.3	0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.6	0.2	0.1	<0.1
Pyrene	mg/kg	<0.1	0.6	0.2	0.2	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.5	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.3	0.05	0.07	<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	3.2	0.5	0.4	<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	96	96	89	95

PAHs in Soil						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
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	0.4	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.5	<0.1	1	<0.1
Pyrene	mg/kg	<0.1	0.7	<0.1	0.9	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.4	<0.1	0.5	<0.1
Chrysene	mg/kg	<0.1	0.4	<0.1	0.4	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.7	<0.2	0.6	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.4	<0.05	0.4	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.2	<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	0.2	<0.1
Total +ve PAH's	mg/kg	<0.05	3.5	<0.05	4.5	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	0.6	<0.5	0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	0.6	<0.5	0.6	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	0.7	<0.5	0.6	<0.5
Surrogate p-Terphenyl-d14	%	100	97	98	96	90

Organochlorine Pesticides in soil						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
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
Surrogate 4-Chloro-3-NBTF	%	87	89	86	91	90

Organochlorine Pesticides in soil						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
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
Surrogate 4-Chloro-3-NBTF	%	94	87	87	85	84

Organophosphorus Pesticides in Soil						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
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	%	87	89	86	91	90

Organophosphorus Pesticides in Soil						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
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	%	94	87	87	85	84

PCBs in Soil						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
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	%	88	90	88	91	88

PCBs in Soil						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
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	%	89	89	90	88	85

Misc Inorg - Soil				
Our Reference		339695-A-25	339695-A-52	339695-A-55
Your Reference	UNITS	BH22	BH32	BH34
Depth		0.1-0.15	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil
Date prepared	-	02/01/2024	02/01/2024	02/01/2024
Date analysed	-	02/01/2024	02/01/2024	02/01/2024
pH 1:5 soil:$CaCl_2$	pH Units	7.9	8.2	7.8

CEC				
Our Reference		339695-A-25	339695-A-52	339695-A-55
Your Reference	UNITS	BH22	BH32	BH34
Depth		0.1-0.15	0.03-0.3	0.03-0.2
Date Sampled		04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil
Date prepared	-	03/01/2024	03/01/2024	03/01/2024
Date analysed	-	03/01/2024	03/01/2024	03/01/2024
Exchangeable Ca	meq/100g	11	19	9.7
Exchangeable K	meq/100g	0.2	0.3	0.2
Exchangeable Mg	meq/100g	2.0	1.8	3.0
Exchangeable Na	meq/100g	0.2	1	0.6
Cation Exchange Capacity	meq/100g	13	22	14

Acid Extractable metals in soil						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
Date analysed	-	03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Arsenic	mg/kg	8	5	5	9	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	15	12	18	9
Copper	mg/kg	15	11	11	14	6
Lead	mg/kg	19	24	19	23	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	6	6	6	2
Zinc	mg/kg	14	39	15	26	3

Acid Extractable metals in soil						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
Date analysed	-	03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Arsenic	mg/kg	<4	6	10	12	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	17	35	33	16
Copper	mg/kg	10	12	7	28	14
Lead	mg/kg	12	20	23	47	51
Mercury	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Nickel	mg/kg	6	12	2	14	7
Zinc	mg/kg	4	16	3	65	56

Acid Extractable metals in soil		
Our Reference		339695-A-67
Your Reference	UNITS	BH29 - [TRIPLICATE]
Depth		3-3.45
Date Sampled		04/12/2023
Type of sample		Soil
Date prepared	-	27/12/2023
Date analysed	-	03/01/2024
Arsenic	mg/kg	4
Cadmium	mg/kg	0.6
Chromium	mg/kg	39
Copper	mg/kg	35
Lead	mg/kg	200
Mercury	mg/kg	<0.1
Nickel	mg/kg	30
Zinc	mg/kg	110

PFAS in Soils Extended						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	22/12/2023	22/12/2023	22/12/2023	22/12/2023	22/12/2023
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	1.3	1.0	1.4	0.5	<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	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.3	<0.1	<0.1	0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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	0.5	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	103	100	104	96	105
Surrogate $^{13}C_2$ *PFOA*	%	87	79	87	84	90
Extracted ISTD $^{13}C_3$ *PFBS*	%	87	82	83	88	83
Extracted ISTD $^{18}O_2$ *PFHxS*	%	107	95	101	102	103
Extracted ISTD $^{13}C_4$ *PFOS*	%	107	101	101	110	103

PFAS in Soils Extended						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	92	81	85	89	88
Extracted ISTD $^{13}C_3$ *PFPeA*	%	114	101	107	116	114
Extracted ISTD $^{13}C_2$ *PFHxA*	%	106	96	100	106	104
Extracted ISTD $^{13}C_4$ *PFHpA*	%	103	97	96	108	102
Extracted ISTD $^{13}C_4$ *PFOA*	%	115	113	105	113	105
Extracted ISTD $^{13}C_5$ *PFNA*	%	99	94	91	90	90
Extracted ISTD $^{13}C_2$ *PFDA*	%	117	107	111	92	110
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	104	56	66	15	96
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	122	118	95	44	123
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	99	96	97	82	94
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	105	94	96	112	94
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	123	123	112	139	116
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	114	128	101	93	96
Extracted ISTD $^{13}C_8$ *FOSA*	%	98	91	81	67	93
Extracted ISTD d_3 *N MeFOSA*	%	107	98	95	62	104
Extracted ISTD d_5 *N EtFOSA*	%	111	102	106	88	109
Extracted ISTD d_7 *N MeFOSE*	%	92	81	85	70	89
Extracted ISTD d_9 *N EtFOSE*	%	120	102	112	105	122
Extracted ISTD d_3 *N MeFOSAA*	%	115	137	104	79	107
Extracted ISTD d_5 *N EtFOSAA*	%	105	105	88	45	95
Total Positive PFHxS & PFOS	µg/kg	1.4	1.0	1.4	0.5	<0.1
Total Positive PFOS & PFOA	µg/kg	1.6	1.0	1.4	0.6	<0.1
Total Positive PFAS	µg/kg	1.7	1.5	1.4	0.6	<0.1

PFAS in Soils Extended						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	22/12/2023	22/12/2023	22/12/2023	22/12/2023	22/12/2023
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	<0.1	<0.1	<0.1	0.3	0.2
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	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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*	%	100	102	98	101	100
Surrogate $^{13}C_2$ *PFOA*	%	84	83	87	85	91
Extracted ISTD $^{13}C_3$ *PFBS*	%	89	91	88	84	88
Extracted ISTD $^{18}O_2$ *PFHxS*	%	102	107	99	101	102
Extracted ISTD $^{13}C_4$ *PFOS*	%	109	106	109	103	106

PFAS in Soils Extended						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	93	92	93	88	91
Extracted ISTD $^{13}C_3$ *PFPeA*	%	110	116	111	108	115
Extracted ISTD $^{13}C_2$ *PFHxA*	%	101	103	98	98	102
Extracted ISTD $^{13}C_4$ *PFHpA*	%	103	104	101	94	104
Extracted ISTD $^{13}C_4$ *PFOA*	%	115	116	107	104	106
Extracted ISTD $^{13}C_5$ *PFNA*	%	97	95	95	91	98
Extracted ISTD $^{13}C_2$ *PFDA*	%	110	112	98	109	108
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	97	106	88	96	86
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	119	125	110	119	121
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	103	98	96	96	98
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	101	107	103	96	111
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	123	132	113	115	143
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	108	126	96	106	133
Extracted ISTD $^{13}C_8$ *FOSA*	%	97	99	96	97	94
Extracted ISTD d_3 *N MeFOSA*	%	106	105	104	103	94
Extracted ISTD d_5 *N EtFOSA*	%	111	110	107	105	102
Extracted ISTD d_7 *N MeFOSE*	%	91	89	89	90	85
Extracted ISTD d_9 *N EtFOSE*	%	109	112	116	112	112
Extracted ISTD d_3 *N MeFOSAA*	%	122	129	95	91	135
Extracted ISTD d_5 *N EtFOSAA*	%	113	124	78	85	95
Total Positive PFHxS & PFOS	µg/kg	<0.1	<0.1	<0.1	0.3	0.2
Total Positive PFOS & PFOA	µg/kg	<0.1	<0.1	<0.1	0.3	0.2
Total Positive PFAS	µg/kg	<0.1	0.1	<0.1	0.3	0.2

Moisture						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	22/12/2023	22/12/2023	22/12/2023	22/12/2023	22/12/2023
Moisture	%	13	11	19	14	27

Moisture						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/12/2023	21/12/2023	21/12/2023	21/12/2023	21/12/2023
Date analysed	-	22/12/2023	22/12/2023	22/12/2023	22/12/2023	22/12/2023
Moisture	%	10	11	33	31	<0.1

Asbestos ID - soils NEPM - ASB-001						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023	27/12/2023
Sample mass tested	g	558.31	650	778.07	811.51	798.94
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 ID - soils NEPM - ASB-001					
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	27/12/2023	27/12/2023	27/12/2023	27/12/2023
Sample mass tested	g	940.18	851.65	647.17	707
Sample Description	-	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
Trace Analysis	-	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
Asbestos ID in soil <0.1g/kg*	-	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
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/01/2024	02/01/2024	02/01/2024	02/01/2024	02/01/2024
Date analysed	-	02/01/2024	02/01/2024	02/01/2024	02/01/2024	02/01/2024
pH of soil for fluid# determ.	pH units	7.5	10.7	7.6	6.2	6.3
pH of soil TCLP (after HCl)	pH units	1.6	1.9	1.6	1.6	1.6
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	5.0	6.3	5.1	5.0	5.0
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01	0.02	<0.01	<0.01
Copper	mg/L	<0.01	0.01	<0.01	<0.01	<0.01
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Zinc	mg/L	<0.02	0.02	0.09	0.04	<0.02

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/01/2024	02/01/2024	02/01/2024	02/01/2024	02/01/2024
Date analysed	-	02/01/2024	02/01/2024	02/01/2024	02/01/2024	02/01/2024
pH of soil for fluid# determ.	pH units	6.7	7.0	7.4	7.8	7.8
pH of soil TCLP (after HCl)	pH units	1.6	1.6	1.6	1.6	1.6
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	4.9	5.0	4.9	4.9	5.0
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.03	<0.02	<0.02	<0.02	<0.02
Zinc	mg/L	<0.02	<0.02	<0.02	<0.02	0.04

PAHs in TCLP (USEPA 1311)						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	29/12/2023	29/12/2023	29/12/2023	29/12/2023	29/12/2023
Date analysed	-	02/01/2024	02/01/2024	02/01/2024	02/01/2024	02/01/2024
Naphthalene in TCLP	mg/L	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	0.001	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	0.0004	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	0.0003	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	0.0021	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	96	93	94	80	87

PAHs in TCLP (USEPA 1311)						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	29/12/2023	29/12/2023	29/12/2023	29/12/2023	29/12/2023
Date analysed	-	02/01/2024	02/01/2024	02/01/2024	02/01/2024	02/01/2024
Naphthalene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	0.0001	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	80	88	90	92	92

PFAS in TCLP Extended						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/12/2023	28/12/2023	28/12/2023	28/12/2023	28/12/2023
Date analysed	-	28/12/2023	28/12/2023	28/12/2023	28/12/2023	28/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.03	0.04	0.03	0.02	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	102	101	98	99	100
Surrogate $^{13}C_2$ *PFOA*	%	102	107	104	105	103
Extracted ISTD $^{13}C_3$ *PFBS*	%	95	90	89	91	96
Extracted ISTD $^{18}O_2$ *PFHxS*	%	97	98	97	99	100
Extracted ISTD $^{13}C_4$ *PFOS*	%	99	102	99	103	101

PFAS in TCLP Extended						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	104	100	99	102	102
Extracted ISTD $^{13}C_3$ *PFPeA*	%	109	105	101	107	107
Extracted ISTD $^{13}C_2$ *PFHxA*	%	95	92	95	94	95
Extracted ISTD $^{13}C_4$ *PFHpA*	%	100	106	100	104	102
Extracted ISTD $^{13}C_4$ *PFOA*	%	104	100	100	102	104
Extracted ISTD $^{13}C_5$ *PFNA*	%	105	102	100	104	106
Extracted ISTD $^{13}C_2$ *PFDA*	%	109	114	100	118	111
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	107	110	103	105	108
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	121	119	113	115	121
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	96	92	68	91	96
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	94	102	88	93	91
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	105	116	105	109	102
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	111	107	107	109	102
Extracted ISTD $^{13}C_8$ *FOSA*	%	103	104	98	102	102
Extracted ISTD d_3 *N MeFOSA*	%	105	106	96	101	105
Extracted ISTD d_5 *N EtFOSA*	%	97	98	87	95	97
Extracted ISTD d_7 *N MeFOSE*	%	101	95	95	99	99
Extracted ISTD d_9 *N EtFOSE*	%	101	98	92	104	103
Extracted ISTD d_3 *N MeFOSAA*	%	115	115	102	118	114
Extracted ISTD d_5 *N EtFOSAA*	%	107	109	98	100	111
Total Positive PFHxS & PFOS	µg/L	0.03	0.04	0.03	0.02	<0.01
Total Positive PFOS & PFOA	µg/L	0.05	0.04	0.03	0.02	<0.01
Total Positive PFAS	µg/L	0.05	0.04	0.03	0.02	<0.01

PFAS in TCLP Extended						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/12/2023	28/12/2023	28/12/2023	28/12/2023	08/01/2024
Date analysed	-	28/12/2023	28/12/2023	28/12/2023	28/12/2023	08/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	102	97	102	98	97
Surrogate $^{13}C_2$ *PFOA*	%	103	100	100	101	98
Extracted ISTD $^{13}C_3$ *PFBS*	%	93	90	92	91	102
Extracted ISTD $^{18}O_2$ *PFHxS*	%	95	99	95	94	102
Extracted ISTD $^{13}C_4$ *PFOS*	%	97	100	98	105	102

PFAS in TCLP Extended						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	104	102	92	104	86
Extracted ISTD $^{13}C_3$ *PFPeA*	%	108	108	102	105	108
Extracted ISTD $^{13}C_2$ *PFHxA*	%	97	96	100	97	103
Extracted ISTD $^{13}C_4$ *PFHpA*	%	104	107	97	105	119
Extracted ISTD $^{13}C_4$ *PFOA*	%	101	107	99	106	109
Extracted ISTD $^{13}C_5$ *PFNA*	%	105	107	98	107	105
Extracted ISTD $^{13}C_2$ *PFDA*	%	106	115	103	114	111
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	106	116	102	109	110
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	121	120	94	124	110
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	87	83	68	92	71
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	97	90	98	87	89
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	107	103	102	114	120
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	109	122	109	113	117
Extracted ISTD $^{13}C_8$ *FOSA*	%	105	102	107	101	101
Extracted ISTD d_3 *N MeFOSA*	%	103	98	96	102	99
Extracted ISTD d_5 *N EtFOSA*	%	92	91	95	98	92
Extracted ISTD d_7 *N MeFOSE*	%	101	97	102	101	100
Extracted ISTD d_9 *N EtFOSE*	%	98	97	113	103	100
Extracted ISTD d_3 *N MeFOSAA*	%	119	117	97	114	108
Extracted ISTD d_5 *N EtFOSAA*	%	109	114	112	107	107
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	0.01	<0.01

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Date analysed	-	03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
pH of final Leachate	pH units	7.5	10.7	6.7	6.5	6.9
Arsenic	µg/L	7	4	6	3	3
Cadmium	µg/L	0.2	<0.1	0.2	0.1	0.1
Chromium	µg/L	25	4	20	6	12
Copper	µg/L	13	7	19	3	2
Lead	µg/L	24	7	39	4	11
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	10	1	4	1	2
Zinc	µg/L	16	<1	20	3	3

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Date analysed	-	03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
pH of final Leachate	pH units	8.0	7.8	7.4	7.7	7.2
Arsenic	µg/L	3	14	<1	5	5
Cadmium	µg/L	0.2	0.4	<0.1	<0.1	0.4
Chromium	µg/L	25	72	<1	17	16
Copper	µg/L	8	14	<1	4	34
Lead	µg/L	16	29	<1	20	44
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	5	12	<1	3	4
Zinc	µg/L	6	22	2	9	65

PAHs in Water Leach						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/01/2024	29/12/2023	29/12/2023	29/12/2023	29/12/2023
Date analysed	-	03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Naphthalene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene in ASLP	µg/L	0.22	0.15	<0.1	<0.1	<0.1
Anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene in ASLP	µg/L	0.22	0.41	<0.1	<0.1	<0.1
Pyrene in ASLP	µg/L	0.13	0.27	<0.1	<0.1	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	85	92	86	96	74

PAHs in Water Leach						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	29/12/2023	29/12/2023	04/01/2024	29/12/2023	04/01/2024
Date analysed	-	03/01/2024	03/01/2024	04/01/2024	03/01/2024	04/01/2024
Naphthalene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	84	76	88	73	91

PFAS in ASLP Extended						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/12/2023	28/12/2023	28/12/2023	28/12/2023	28/12/2023
Date analysed	-	28/12/2023	28/12/2023	28/12/2023	28/12/2023	28/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.02	0.02	0.02	0.02	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	100	95	100	99	103
Surrogate $^{13}C_2$ PFOA	%	95	98	100	99	97
Extracted ISTD $^{13}C_3$ *PFBS*	%	99	98	97	98	98
Extracted ISTD $^{18}O_2$ *PFHxS*	%	110	105	105	110	107
Extracted ISTD $^{13}C_4$ *PFOS*	%	110	117	111	114	112

PFAS in ASLP Extended						
Our Reference		339695-A-2	339695-A-6	339695-A-8	339695-A-13	339695-A-18
Your Reference	UNITS	BH8	BH9	BH9	BH10	BH13
Depth		0.5-0.95	0.4-0.5	1.2-1.3	1.5-1.7	1.5-17
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	111	112	111	110	113
Extracted ISTD $^{13}C_3$ *PFPeA*	%	119	120	119	122	118
Extracted ISTD $^{13}C_2$ *PFHxA*	%	103	106	106	106	101
Extracted ISTD $^{13}C_4$ *PFHpA*	%	121	118	116	122	115
Extracted ISTD $^{13}C_4$ *PFOA*	%	118	119	117	124	119
Extracted ISTD $^{13}C_5$ *PFNA*	%	115	115	111	119	111
Extracted ISTD $^{13}C_2$ *PFDA*	%	111	115	112	124	118
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	117	115	113	128	113
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	120	124	117	130	119
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	91	94	87	93	81
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	98	99	102	110	110
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	122	122	126	125	116
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	113	126	113	145	116
Extracted ISTD $^{13}C_8$ *FOSA*	%	112	112	108	111	110
Extracted ISTD d_3 *N MeFOSA*	%	109	107	106	106	106
Extracted ISTD d_5 *N EtFOSA*	%	105	103	100	104	103
Extracted ISTD d_7 *N MeFOSE*	%	107	105	104	112	105
Extracted ISTD d_9 *N EtFOSE*	%	111	107	108	103	107
Extracted ISTD d_3 *N MeFOSAA*	%	120	119	115	115	118
Extracted ISTD d_5 *N EtFOSAA*	%	115	118	115	116	115
Total Positive PFHxS & PFOS	µg/L	0.02	0.02	0.02	0.02	<0.01
Total Positive PFOS & PFOA	µg/L	0.02	0.02	0.02	0.02	<0.01
Total Positive PFAS	µg/L	0.02	0.02	0.02	0.02	<0.01

PFAS in ASLP Extended						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/12/2023	28/12/2023	28/12/2023	28/12/2023	28/12/2023
Date analysed	-	28/12/2023	28/12/2023	28/12/2023	28/12/2023	28/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	91	100	96	97	103
Surrogate $^{13}C_2$ PFOA	%	103	99	101	101	98
Extracted ISTD $^{13}C_3$ *PFBS*	%	103	103	104	100	102
Extracted ISTD $^{18}O_2$ *PFHxS*	%	108	112	111	107	108
Extracted ISTD $^{13}C_4$ *PFOS*	%	120	114	119	119	117

PFAS in ASLP Extended						
Our Reference		339695-A-22	339695-A-26	339695-A-34	339695-A-40	339695-A-46
Your Reference	UNITS	BH20	BH22	BH27	BH28	BH29
Depth		0.5-0.95	0.3-0.5	0.8-0.95	3-3.2	3-3.45
Date Sampled		04/12/2023	04/12/2023	04/12/2023	04/12/2023	04/12/2023
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	114	113	110	107	107
Extracted ISTD $^{13}C_3$ *PFPeA*	%	123	118	119	124	128
Extracted ISTD $^{13}C_2$ *PFHxA*	%	104	112	103	112	116
Extracted ISTD $^{13}C_4$ *PFHpA*	%	119	118	122	127	126
Extracted ISTD $^{13}C_4$ *PFOA*	%	120	118	116	121	127
Extracted ISTD $^{13}C_5$ *PFNA*	%	114	111	110	115	112
Extracted ISTD $^{13}C_2$ *PFDA*	%	118	113	115	125	123
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	113	116	112	119	122
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	123	128	123	132	136
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	90	84	93	92	91
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	96	107	109	107	113
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	130	123	120	136	124
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	121	118	120	119	126
Extracted ISTD $^{13}C_8$ *FOSA*	%	111	112	113	110	110
Extracted ISTD d_3 *N MeFOSA*	%	111	108	107	113	119
Extracted ISTD d_5 *N EtFOSA*	%	106	103	107	104	107
Extracted ISTD d_7 *N MeFOSE*	%	109	105	116	110	110
Extracted ISTD d_9 *N EtFOSE*	%	116	109	112	113	119
Extracted ISTD d_3 *N MeFOSAA*	%	116	117	115	125	120
Extracted ISTD d_5 *N EtFOSAA*	%	122	121	112	122	125
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<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) **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-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
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.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.
Metals-021	Determination of Mercury by Cold Vapour AAS following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Metals-022	Determination of various metals by ICP-MS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.
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	Leachates are extracted 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 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-022/025 ASLP	ASLP Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.
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.
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 5.4 Table B-15 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.

Method ID	Methodology Summary
Org-029A	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 5.4Table B-15 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. TOPA analyses use a pre-spiked, labelled internal standard PFAS precursor to assess the oxidation efficiency. The efficiency of removal by oxidation is recorded in the report. Additionally, dilutions applied (if required) to ensure sufficient precursor oxidation are also recorded and are available on request. 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-20	339695-A-6
Date extracted	-			21/12/2023	2	21/12/2023	21/12/2023		21/12/2023	21/12/2023
Date analysed	-			27/12/2023	2	27/12/2023	27/12/2023		27/12/2023	27/12/2023
TRH C_6 - C_9	mg/kg	25	Org-023	<25	2	<25	<25	0	100	94
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	2	<25	<25	0	100	94
Benzene	mg/kg	0.2	Org-023	<0.2	2	<0.2	<0.2	0	102	95
Toluene	mg/kg	0.5	Org-023	<0.5	2	<0.5	<0.5	0	98	92
Ethylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	94	88
m+p-xylene	mg/kg	2	Org-023	<2	2	<2	<2	0	103	97
o-Xylene	mg/kg	1	Org-023	<1	2	<1	<1	0	108	100
Naphthalene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	89	2	87	89	2	89	86

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]	46	21/12/2023	21/12/2023		[NT]	[NT]
Date analysed	-			[NT]	46	27/12/2023	27/12/2023		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	46	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	46	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	46	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	46	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	46	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	46	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	46	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	46	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	46	89	85	5	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-20	339695-A-6
Date extracted	-			21/12/2023	2	21/12/2023	21/12/2023		21/12/2023	21/12/2023
Date analysed	-			23/12/2023	2	23/12/2023	23/12/2023		23/12/2023	23/12/2023
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	2	<50	<50	0	111	107
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	2	<100	<100	0	101	102
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	2	<100	<100	0	86	104
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	2	<50	<50	0	111	107
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	2	<100	<100	0	101	102
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	2	<100	<100	0	86	104
Surrogate o-Terphenyl	%		Org-020	76	2	78	75	4	80	80

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	46	21/12/2023	21/12/2023		[NT]	[NT]
Date analysed	-			[NT]	46	23/12/2023	23/12/2023		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	46	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	46	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	46	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	46	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	46	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	46	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	46	76	73	4	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-20	339695-A-6
Date extracted	-			21/12/2023	2	21/12/2023	21/12/2023		21/12/2023	21/12/2023
Date analysed	-			27/12/2023	2	27/12/2023	27/12/2023		27/12/2023	27/12/2023
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	114	116
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	114	116
Fluorene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	116	118
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	121	#
Anthracene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	114	#
Pyrene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	115	#
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	113	#
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	2	<0.05	<0.05	0	117	#
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	95	2	95	102	7	95	88

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	46	21/12/2023	21/12/2023		[NT]	[NT]
Date analysed	-			[NT]	46	27/12/2023	27/12/2023		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	46	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	46	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	46	90	93	3	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-20	339695-A-6
Date extracted	-			21/12/2023	2	21/12/2023	21/12/2023		21/12/2023	21/12/2023
Date analysed	-			27/12/2023	2	27/12/2023	27/12/2023		27/12/2023	27/12/2023
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	119	114
HCB	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	125	120
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	105	103
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	130	130
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	118	118
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	125	130
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	130	138
Endrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	114	136
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	104	104
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	112	108
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	89	2	87	86	1	87	87

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	46	21/12/2023	21/12/2023		[NT]	[NT]
Date analysed	-			[NT]	46	27/12/2023	27/12/2023		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	46	84	87	4	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-20	339695-A-6
Date extracted	-			21/12/2023	2	21/12/2023	21/12/2023		21/12/2023	21/12/2023
Date analysed	-			27/12/2023	2	27/12/2023	27/12/2023		27/12/2023	27/12/2023
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	112	105
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	118	121
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	100	100
Malathion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	123	118
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	122	122
Fenthion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	86	97
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	122	122
Phosalone	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	89	2	87	86	1	87	87

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	46	21/12/2023	21/12/2023		[NT]	[NT]
Date analysed	-			[NT]	46	27/12/2023	27/12/2023		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	46	84	87	4	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-20	339695-A-6
Date extracted	-			21/12/2023	2	21/12/2023	21/12/2023		21/12/2023	21/12/2023
Date analysed	-			27/12/2023	2	27/12/2023	27/12/2023		27/12/2023	27/12/2023
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	118	102
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	91	2	88	91	3	87	87

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	46	21/12/2023	21/12/2023		[NT]	[NT]
Date analysed	-			[NT]	46	27/12/2023	27/12/2023		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	46	85	89	5	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			02/01/2024	[NT]	[NT]	[NT]	[NT]	02/01/2024	[NT]
Date analysed	-			02/01/2024	[NT]	[NT]	[NT]	[NT]	02/01/2024	[NT]
pH 1:5 soil:$CaCl_2$	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	101	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-52
Date prepared	-			03/01/2024	25	03/01/2024	03/01/2024		03/01/2024	03/01/2024
Date analysed	-			03/01/2024	25	03/01/2024	03/01/2024		03/01/2024	03/01/2024
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	25	11	9.3	17	115	#
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	25	0.2	0.2	0	104	100
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	25	2.0	1.9	5	103	114
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	25	0.2	0.2	0	94	96

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-20	339695-A-6
Date prepared	-			27/12/2023	2	27/12/2023	27/12/2023		27/12/2023	27/12/2023
Date analysed	-			03/01/2024	2	03/01/2024	03/01/2024		03/01/2024	03/01/2024
Arsenic	mg/kg	4	Metals-020	<4	2	8	6	29	101	102
Cadmium	mg/kg	0.4	Metals-020	<0.4	2	<0.4	<0.4	0	98	87
Chromium	mg/kg	1	Metals-020	<1	2	17	19	11	106	98
Copper	mg/kg	1	Metals-020	<1	2	15	17	12	101	105
Lead	mg/kg	1	Metals-020	<1	2	19	22	15	102	91
Mercury	mg/kg	0.1	Metals-021	<0.1	2	<0.1	<0.1	0	112	94
Nickel	mg/kg	1	Metals-020	<1	2	10	14	33	99	89
Zinc	mg/kg	1	Metals-020	<1	2	14	20	35	101	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]	46	27/12/2023	27/12/2023		[NT]	[NT]
Date analysed	-			[NT]	46	03/01/2024	03/01/2024		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	46	4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	46	<0.4	2	133	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	46	16	39	84	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	46	14	30	73	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	46	51	110	73	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	46	7	30	124	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	46	56	99	55	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	339695-A-6
Date prepared	-			21/12/2023	2	21/12/2023	21/12/2023		21/12/2023	21/12/2023
Date analysed	-			22/12/2023	2	22/12/2023	22/12/2023		22/12/2023	22/12/2023
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	105	97
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	93	91
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	2	0.1	0.1	0	99	96
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	103	105
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	2	1.3	0.8	48	100	90
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	2	<0.2	<0.2	0	92	64
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	2	<0.2	<0.2	0	101	100
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	2	<0.2	<0.2	0	96	89
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	99	99
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	97	96
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	2	0.3	0.2	40	91	80
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	104	100
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	2	<0.5	<0.5	0	85	85
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	2	<0.5	<0.5	0	98	96
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	2	<0.5	<0.5	0	97	80
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	2	<0.5	<0.5	0	86	85
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	2	<5	<5	0	99	88
4:2 FTS	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	92	93
6:2 FTS	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	87	80
8:2 FTS	µg/kg	0.2	Org-029	<0.2	2	<0.2	<0.2	0	99	97
10:2 FTS	µg/kg	0.2	Org-029	<0.2	2	<0.2	<0.2	0	93	77
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	2	<1	<1	0	108	116
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	2	<1	<1	0	99	99
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	2	<1	<1	0	93	83
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	2	<1	<1	0	117	111
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	2	<5	<5	0	105	97
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	2	<0.2	<0.2	0	85	77
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	2	<0.2	<0.2	0	102	113
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	103	2	103	101	2	103	104
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	95	2	87	85	2	91	86

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	339695-A-6
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	94	2	87	87	0	91	82
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	112	2	107	108	1	107	96
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	106	2	107	108	1	106	99
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	99	2	92	89	3	98	87
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	116	2	114	114	0	115	110
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	111	2	106	105	1	109	96
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	110	2	103	100	3	102	97
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	112	2	115	114	1	107	107
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	107	2	99	96	3	101	93
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	113	2	117	116	1	110	104
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	109	2	104	98	6	102	25
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	110	2	122	121	1	107	103
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	92	2	99	103	4	82	96
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	108	2	105	104	1	108	94
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	117	2	123	126	2	117	117
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	112	2	114	114	0	107	116
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	108	2	98	97	1	99	88
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	104	2	107	106	1	109	90
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	98	2	111	111	0	108	100
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	100	2	92	91	1	88	83

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	339695-A-6
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	112	2	120	125	4	104	108
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	112	2	115	113	2	115	122
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	111	2	105	103	2	105	74

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-6
Date extracted	-			02/01/2024	2	02/01/2024	02/01/2024		02/01/2024	02/01/2024
Date analysed	-			02/01/2024	2	02/01/2024	02/01/2024		02/01/2024	02/01/2024
Arsenic	mg/L	0.05	Metals-020	<0.05	2	<0.05	<0.05	0	111	105
Cadmium	mg/L	0.01	Metals-020	<0.01	2	<0.01	<0.01	0	102	90
Chromium	mg/L	0.01	Metals-020	<0.01	2	<0.01	<0.01	0	103	96
Copper	mg/L	0.01	Metals-020	<0.01	2	<0.01	<0.01	0	104	98
Lead	mg/L	0.03	Metals-020	<0.03	2	<0.03	<0.03	0	102	92
Mercury	mg/L	0.0005	Metals-021	<0.0005	2	<0.0005	<0.0005	0	106	97
Nickel	mg/L	0.02	Metals-020	<0.02	2	<0.02	<0.02	0	101	91
Zinc	mg/L	0.02	Metals-020	<0.02	2	<0.02	<0.02	0	98	88

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-6
Date extracted	-			29/12/2023	2	29/12/2023	29/12/2023		29/12/2023	29/12/2023
Date analysed	-			02/01/2024	2	02/01/2024	02/01/2024		02/01/2024	02/01/2024
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	100	100
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	85	92
Fluorene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	89	93
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	86	90
Anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	86	90
Pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	85	87
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	78	89
Benzo(bjk)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	<0.0002	2	<0.0002	<0.0002	0	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	84	87
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	2	<0.0001	<0.0001	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	92	2	96	94	2	95	92

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	46	29/12/2023	29/12/2023		[NT]	[NT]
Date analysed	-			[NT]	46	02/01/2024	02/01/2024		[NT]	[NT]
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Fluorene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Pyrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	[NT]	46	<0.0002	<0.0002	0	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	[NT]	46	<0.0001	<0.0001	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	46	92	77	18	[NT]	[NT]

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-6
Date prepared	-			28/12/2023	2	28/12/2023	29/12/2023		28/12/2023	28/12/2023
Date analysed	-			28/12/2023	2	28/12/2023	29/12/2023		28/12/2023	28/12/2023
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	111	102
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	110	106
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	106	103
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	107	108
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	2	0.03	0.04	29	107	99
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	86	77
Perfluorobutanoic acid	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	109	101
Perfluoropentanoic acid	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	102	100
Perfluorohexanoic acid	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	108	102
Perfluoroheptanoic acid	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	106	104
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	2	0.01	0.01	0	109	101
Perfluorononanoic acid	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	112	106
Perfluorodecanoic acid	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	100	97
Perfluoroundecanoic acid	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	107	97
Perfluorododecanoic acid	µg/L	0.05	Org-029	<0.05	2	<0.05	<0.05	0	98	87
Perfluorotridecanoic acid	µg/L	0.1	Org-029	<0.1	2	<0.1	<0.1	0	94	86
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	<0.5	2	<0.5	<0.5	0	111	110
4:2 FTS	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	106	114
6:2 FTS	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	104	100
8:2 FTS	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	112	109
10:2 FTS	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	126	128
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	<0.1	2	<0.1	<0.1	0	117	105
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	2	<0.05	<0.05	0	108	102
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	<0.1	2	<0.1	<0.1	0	113	103
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	2	<0.05	<0.05	0	100	97
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	2	<0.5	<0.5	0	106	99
MePerfluorooctanesulf- amid oacetic aci	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	122	111
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	105	97
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	98	2	102	95	7	99	98
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	101	2	102	103	1	100	102

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-6
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	90	2	95	92	3	89	93
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	101	2	97	96	1	97	96
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	103	2	99	103	4	98	100
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	103	2	104	103	1	98	99
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	103	2	109	103	6	103	100
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	101	2	95	97	2	96	99
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	101	2	100	101	1	103	98
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	102	2	104	102	2	100	100
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	103	2	105	104	1	100	103
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	109	2	109	110	1	106	108
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	111	2	107	110	3	107	113
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	118	2	121	121	0	114	118
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	90	2	96	94	2	86	91
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	102	2	94	92	2	99	86
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	105	2	105	110	5	103	106
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	109	2	111	113	2	111	115
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	102	2	103	102	1	96	100
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	107	2	105	104	1	100	100
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	94	2	97	96	1	92	96
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	98	2	101	93	8	95	95

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-6
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	102	2	101	96	5	92	99
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	113	2	115	112	3	100	111
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	107	2	107	114	6	106	113

QUALITY CONTROL: Metals from Neutral Leaching Fluid ICPMS					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-6
Date extracted	-			03/01/2024	2	03/01/2024	03/01/2024		03/01/2024	03/01/2024
Date analysed	-			03/01/2024	2	03/01/2024	03/01/2024		03/01/2024	03/01/2024
Arsenic	µg/L	1	Metals-022	<1	2	7	8	13	112	107
Cadmium	µg/L	0.1	Metals-022	<0.1	2	0.2	0.2	0	115	107
Chromium	µg/L	1	Metals-022	<1	2	25	33	28	99	99
Copper	µg/L	1	Metals-022	<1	2	13	15	14	104	103
Lead	µg/L	1	Metals-022	<1	2	24	30	22	105	98
Mercury	µg/L	0.05	Metals-021	<0.05	2	<0.05	<0.05	0	82	81
Nickel	µg/L	1	Metals-022	<1	2	10	13	26	104	104
Zinc	µg/L	1	Metals-022	<1	2	16	21	27	100	114

QUALITY CONTROL: Metals from Neutral Leaching Fluid ICPMS					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	46	03/01/2024	03/01/2024		[NT]	[NT]
Date analysed	-			[NT]	46	03/01/2024	03/01/2024		[NT]	[NT]
Arsenic	µg/L	1	Metals-022	[NT]	46	5	6	18	[NT]	[NT]
Cadmium	µg/L	0.1	Metals-022	[NT]	46	0.4	0.4	0	[NT]	[NT]
Chromium	µg/L	1	Metals-022	[NT]	46	16	21	27	[NT]	[NT]
Copper	µg/L	1	Metals-022	[NT]	46	34	31	9	[NT]	[NT]
Lead	µg/L	1	Metals-022	[NT]	46	44	38	15	[NT]	[NT]
Mercury	µg/L	0.05	Metals-021	[NT]	46	<0.05	<0.05	0	[NT]	[NT]
Nickel	µg/L	1	Metals-022	[NT]	46	4	5	22	[NT]	[NT]
Zinc	µg/L	1	Metals-022	[NT]	46	65	71	9	[NT]	[NT]

QUALITY CONTROL: PAHs in Water Leach						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-6
Date extracted	-			29/12/2023	2	02/01/2024	29/12/2023		29/12/2023	29/12/2023
Date analysed	-			03/01/2024	2	03/01/2024	03/01/2024		03/01/2024	03/01/2024
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	100	94
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	96	95
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	102	92
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	0.22	0.16	32	97	116
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	0.22	0.20	10	92	94
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	0.13	0.12	8	92	89
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	81	89
Benzo(bjk)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	127	106
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022/025 ASLP	85	2	85	100	16	96	98

QUALITY CONTROL: PAHs in Water Leach						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	46	04/01/2024	04/01/2024		[NT]	[NT]
Date analysed	-			[NT]	46	04/01/2024	04/01/2024		[NT]	[NT]
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Benzo(bjk)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	[NT]	46	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022/025 ASLP	[NT]	46	91	87	4	[NT]	[NT]

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-6
Date prepared	-			28/12/2023	2	28/12/2023	28/12/2023		28/12/2023	28/12/2023
Date analysed	-			28/12/2023	2	28/12/2023	28/12/2023		28/12/2023	28/12/2023
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029A	<0.01	2	<0.01	<0.01	0	113	105
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029A	<0.01	2	<0.01	<0.01	0	100	97
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029A	<0.01	2	<0.01	<0.01	0	102	103
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029A	<0.01	2	<0.01	<0.01	0	99	101
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029A	<0.01	2	0.02	0.02	0	107	101
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029A	<0.02	2	<0.02	<0.02	0	89	85
Perfluorobutanoic acid	µg/L	0.02	Org-029A	<0.02	2	<0.02	<0.02	0	103	103
Perfluoropentanoic acid	µg/L	0.02	Org-029A	<0.02	2	<0.02	<0.02	0	104	102
Perfluorohexanoic acid	µg/L	0.01	Org-029A	<0.01	2	<0.01	<0.01	0	110	105
Perfluoroheptanoic acid	µg/L	0.01	Org-029A	<0.01	2	<0.01	<0.01	0	106	118
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029A	<0.01	2	<0.01	<0.01	0	102	96
Perfluorononanoic acid	µg/L	0.01	Org-029A	<0.01	2	<0.01	<0.01	0	108	108
Perfluorodecanoic acid	µg/L	0.02	Org-029A	<0.02	2	<0.02	<0.02	0	101	103
Perfluoroundecanoic acid	µg/L	0.02	Org-029A	<0.02	2	<0.02	<0.02	0	104	105
Perfluorododecanoic acid	µg/L	0.05	Org-029A	<0.05	2	<0.05	<0.05	0	98	101
Perfluorotridecanoic acid	µg/L	0.1	Org-029A	<0.1	2	<0.1	<0.1	0	103	111
Perfluorotetradecanoic acid	µg/L	0.5	Org-029A	<0.5	2	<0.5	<0.5	0	108	109
4:2 FTS	µg/L	0.01	Org-029A	<0.01	2	<0.01	<0.01	0	112	121
6:2 FTS	µg/L	0.01	Org-029A	<0.01	2	<0.01	<0.01	0	95	103
8:2 FTS	µg/L	0.02	Org-029A	<0.02	2	<0.02	<0.02	0	117	108
10:2 FTS	µg/L	0.02	Org-029A	<0.02	2	<0.02	<0.02	0	120	114
Perfluorooctane sulfonamide	µg/L	0.1	Org-029A	<0.1	2	<0.1	<0.1	0	108	106
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029A	<0.05	2	<0.05	<0.05	0	108	108
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029A	<0.1	2	<0.1	<0.1	0	106	107
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029A	<0.05	2	<0.05	<0.05	0	99	99
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029A	<0.5	2	<0.5	<0.5	0	101	106
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029A	<0.02	2	<0.02	<0.02	0	108	122
EtPerfluorooctanesulf-amid oacetic acid	µg/L	0.02	Org-029A	<0.02	2	<0.02	<0.02	0	106	105
Surrogate $^{13}C_8$ PFOS	%		Org-029A	93	2	100	98	2	98	93
Surrogate $^{13}C_2$ PFOA	%		Org-029A	100	2	95	95	0	104	95

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-6
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029A	99	2	99	102	3	96	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029A	108	2	110	109	1	109	109
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029A	116	2	110	117	6	109	117
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029A	114	2	111	112	1	112	109
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029A	118	2	119	116	3	113	119
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029A	107	2	103	105	2	100	106
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029A	117	2	121	120	1	121	113
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029A	117	2	118	123	4	112	120
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029A	110	2	115	111	4	107	109
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029A	117	2	111	114	3	116	116
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029A	118	2	117	118	1	113	112
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029A	128	2	120	125	4	116	121
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029A	93	2	91	91	0	84	90
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029A	111	2	98	104	6	100	98
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029A	127	2	122	132	8	130	128
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029A	119	2	113	110	3	114	135
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029A	110	2	112	112	0	104	108
Extracted ISTD d_3 *N MeFOSA*	%		Org-029A	114	2	109	110	1	107	109
Extracted ISTD d_5 *N EtFOSA*	%		Org-029A	108	2	105	106	1	101	103
Extracted ISTD d_7 *N MeFOSE*	%		Org-029A	114	2	107	111	4	105	103

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	339695-A-6
Extracted ISTD d_9 *N EtFOSE*	%		Org-029A	114	2	111	107	4	111	103
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029A	119	2	120	118	2	117	108
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029A	115	2	115	118	3	114	116

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	46	28/12/2023	28/12/2023		[NT]	[NT]
Date analysed	-			[NT]	46	28/12/2023	28/12/2023		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029A	[NT]	46	<0.02	<0.02	0	[NT]	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029A	[NT]	46	<0.02	<0.02	0	[NT]	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029A	[NT]	46	<0.02	<0.02	0	[NT]	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029A	[NT]	46	<0.02	<0.02	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029A	[NT]	46	<0.02	<0.02	0	[NT]	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029A	[NT]	46	<0.05	<0.05	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029A	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029A	[NT]	46	<0.5	<0.5	0	[NT]	[NT]
4:2 FTS	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
6:2 FTS	µg/L	0.01	Org-029A	[NT]	46	<0.01	<0.01	0	[NT]	[NT]
8:2 FTS	µg/L	0.02	Org-029A	[NT]	46	<0.02	<0.02	0	[NT]	[NT]
10:2 FTS	µg/L	0.02	Org-029A	[NT]	46	<0.02	<0.02	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029A	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029A	[NT]	46	<0.05	<0.05	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029A	[NT]	46	<0.1	<0.1	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029A	[NT]	46	<0.05	<0.05	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029A	[NT]	46	<0.5	<0.5	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029A	[NT]	46	<0.02	<0.02	0	[NT]	[NT]
EtPerfluorooctanesulf-amid oacetic acid	µg/L	0.02	Org-029A	[NT]	46	<0.02	<0.02	0	[NT]	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029A	[NT]	46	103	95	8	[NT]	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029A	[NT]	46	98	96	2	[NT]	[NT]

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029A	[NT]	46	102	102	0	[NT]	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029A	[NT]	46	108	110	2	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029A	[NT]	46	117	122	4	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029A	[NT]	46	107	112	5	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029A	[NT]	46	128	127	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029A	[NT]	46	116	107	8	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029A	[NT]	46	126	123	2	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029A	[NT]	46	127	128	1	[NT]	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029A	[NT]	46	112	112	0	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029A	[NT]	46	123	124	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029A	[NT]	46	122	118	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029A	[NT]	46	136	128	6	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029A	[NT]	46	91	84	8	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029A	[NT]	46	113	109	4	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029A	[NT]	46	124	120	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029A	[NT]	46	126	121	4	[NT]	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029A	[NT]	46	110	107	3	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029A	[NT]	46	119	112	6	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029A	[NT]	46	107	110	3	[NT]	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029A	[NT]	46	110	105	5	[NT]	[NT]

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029A	[NT]	46	119	116	3	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029A	[NT]	46	120	117	3	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029A	[NT]	46	125	118	6	[NT]	[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.

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Report Comments

Holding time exceedance

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).

PFAS TCLP - Insuffient sample for PFAS TCLP prepation of sample 339695-A-46. Subsampled from glass bottle.

PAHs in Soil - # Percent recovery for the surrogate/matrix spike is not possible to report due to interference from analytes (other than those being tested) in sample/s 339695-a-6ms.

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.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 339695-A-46 for Cr, Cu, Pb, Ni & Zn. Therefore a triplicate result has been issued as laboratory sample number 339695-A-67.

CEC - # High spike recovery was obtained for this sample. The sample was re-digested and re-spiked and the high recovery was confirmed. This is due to matrix interferences. However, an acceptable recovery was obtained for the LCS.

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	C Ridley

Sample Login Details

Your reference	E36446PR, Macquarie Park NSW
Envirolab Reference	339695-A
Date Sample Received	07/12/2023
Date Instructions Received	19/12/2023
Date Results Expected to be Reported	03/01/2024

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)	11
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Holding time exceedance TRH/BTEX, PAH, OCP, OPP

No bag received for BH28/3-3.2 - no asbestos testing as per client

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	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	Misc Inorg - Soil	CEC	Acid Extractable metalsin soil	PFAS in Soils Extended	Asbestos ID - soils NEPM - ASB-001	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PAHs in TCLP (USEPA 1311)	PFAS in TCLP Extended	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	On Hold
BH8-0.03-0.4																													✓
BH8-0.5-0.95	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH8-1.6-1.95																													✓
BH8-3-3.2																													✓
BH9-0.035-0.08																													✓
BH9-0.4-0.5	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH9-0.6-0.7																													✓
BH9-1.2-1.3	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH9-1.7-1.95																													✓
BH9-2.3-2.5																													✓
BH10-0.04-0.45																													✓
BH10-0.5-0.95																													✓
BH10-1.5-1.7	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH10-1.7-1.95																													✓
BH10-2.3-2.5																													✓
BH13-0.03-0.3																													✓
BH13-0.5-0.95																													✓
BH13-1.5-17	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH13-1.7-1.95																													✓
BH13-2.4-2.5																													✓

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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	Misc Inorg - Soil	CEC	Acid Extractable metalsin soil	PFAS in Soils Extended	Asbestos ID - soils NEPM - ASB-001	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PAHs in TCLP (USEPA 1311)	PFAS in TCLP Extended	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	On Hold
BH20-0.02-0.3																													✓
BH20-0.5-0.95	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH20-1.5-1.95																													✓
BH20-2.5-2.8																													✓
BH22-0.1-0.15							✓	✓																					
BH22-0.3-0.5	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH22-0.6-0.95																													✓
BH22-1.4-1.5																													✓
BH25-0.1-0.3																													✓
BH25-0.4-0.7																													✓
BH25-1-1.3																													✓
BH27-0.14-0.23																													✓
BH27-0.3-0.5																													✓
BH27-0.8-0.95	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH27-1.8-1.95																													✓
BH27-2.3-2.5																													✓
BH28-0-0.1																													✓
BH28-0.5-0.95																													✓
BH28-1.5-1.95																													✓
BH28-3-3.2	✓	✓	✓	✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

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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	Misc Inorg - Soil	CEC	Acid Extractable metalsin soil	PFAS in Soils Extended	Asbestos ID - soils NEPM - ASB-001	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PAHs in TCLP (USEPA 1311)	PFAS in TCLP Extended	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	On Hold
BH28-3.2-3.45																													✓
BH28-3.8-4																													✓
BH29-0-0.1																													✓
BH29-0.5-0.95																													✓
BH29-1.5-1.95																													✓
BH29-3-3.45	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH29-4.1-4.5																													✓
BH30-0-0.1																													✓
BH31-0.03-0.1																													✓
BH31-0.4-0.6																													✓
BH31-1-1.2																													✓
BH32-0.03-0.3							✓	✓																					
BH32-0.5-0.7																													✓
BH32-1.3-1.5																													✓
BH34-0.03-0.2							✓	✓																					
BH34-0.2-0.5																													✓
BH34-0.6-0.95																													✓
BH34-1.3-1.5																													✓
SDUP3																													✓
SDUP5																													✓

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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	Misc Inorg - Soil	CEC	Acid Extractable metalsin soil	PFAS in Soils Extended	Asbestos ID - soils NEPM - ASB-001	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PAHs in TCLP (USEPA 1311)	PFAS in TCLP Extended	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	On Hold
TB-S2																													✓
TS-S2																													✓
FR-2-SPT																													✓
BH29-5.4-5.5																													✓
BH8 - [TRIPLICATE]-0.03-0.4																													✓
BH29 - [TRIPLICATE]-0.5-0.95																													✓

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: Craig Ridley <CRidley@jkenvironments.com.au>
Sent: Tuesday, 19 December 2023 5:16 PM
To: Anna Bui; Greta Petzold
Cc: Samplereceipt
Subject: RE: Results for Registration 339695 E36446PR, Macquarie Park NSW

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 Anna, my apologies.
Please change both of these samples, as follows: 13

- BH10 (0.5-0.95) – please analyse BH10 (1.5-1.7) instead
- BH13 (0.58-0.95) – please analyse BH13 (1.5-1.7) instead.

18

ELS REF: 339695-A
TAT: STANDARD
DUE: 3/1/24
AB.

Regards
Craig Ridley
Associate | Environmental Scientist

T: +612 9888 5000
D: 0421 856 992
E: CRidley@jkenvironments.com.au
www.jkenvironments.com.au

PO Box 976
NORTH RYDE BC NSW 1670
115 Wicks Road
MACQUARIE PARK NSW 2113

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.

From: Anna Bui <ABui@envirolab.com.au>
Sent: Tuesday, 19 December 2023 5:11 PM
To: Craig Ridley <CRidley@jkenvironments.com.au>; Greta Petzold <GPetzold@envirolab.com.au>
Cc: Samplereceipt <Samplereceipt@envirolab.com.au>
Subject: RE: Results for Registration 339695 E36446PR, Macquarie Park NSW

This message originated outside the JKG network. If this looks to be from a staff member, it is likely to be malicious (spam/phish attack). Do not click links of open attachments unless you recognise the sender and know the content is safe.

Hi Craig,

We've already done that testing on BH10 (0.5-0.95) – did you want a different sample scheduled instead?
BH13 (0.5-0.95) has also already been analysed for Combo 3, so only missing OC/OP/PCB.

Noted on ASLP.

Kind Regards,

Anna Bui | Customer Service | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E ABui@envirolab.com.au | W www.envirolab.com.au

Follow us on: LinkedIn | Facebook | Twitter

Samples will be analysed per our T&C's.

From: Craig Ridley <CRidley@jkenvironments.com.au>
Sent: Tuesday, December 19, 2023 4:44 PM
To: Greta Petzold <GPetzold@envirolab.com.au>
Cc: Samplereceipt <Samplereceipt@envirolab.com.au>
Subject: RE: Results for Registration 339695 E36446PR, Macquarie Park NSW

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 Greta, can we please arrange for the following additional analysis to be undertaken:

	Sample ID	Test Required
2	BH8 (0.5-0.95)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
6	BH9 (0.4-0.5)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
8	BH9 (1.2-1.3)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
	BH10 (0.5-0.95)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
	BH13 (0.5-0.95)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
22	BH20 (0.5-0.95)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
25	BH22 (0.1-0.15)	pH ($CaCl_2$) and CEC
26	BH22 (0.3-0.5)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
34	BH27 (0.8-0.95)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
40	BH28 (3-3.2)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
46	BH29 (3.3-3.45)	Combination 13aNEPM, PFAS routine level (extended), PFAS TCLP, ASLP PAHs, ASLP 8metals, ASLP PFAS
52	BH32 (0.03-0.3)	pH ($CaCl_2$) and CEC
55	BH34 (0.03-0.2)	pH ($CaCl_2$) and CEC

For the ASLP, please use DI water.
Any issues, please call.

Regards
Craig Ridley
Associate | Environmental Scientist

T: +612 9888 5000
D: 0421 856 992
E: CRidley@jkenvironments.com.au
www.jkenvironments.com.au

PO Box 976
NORTH RYDE BC NSW 1670
115 Wicks Road
MACQUARIE PARK NSW 2113

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 41235

Client Details

Client	JK Environments
Attention	Craig Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E36446PR**
Number of Samples	1 Soil
Date samples received	13/12/2023
Date completed instructions received	13/12/2023

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	19/12/2023
Date of Issue	20/12/2023

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Josh Williams, Organics & LC Supervisor
Suk Lee, Organic Supervisor
Tara White, Metals Team Leader
Tianna Milburn, Senior Chemist

Authorised By
Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		41235-1
Your Reference	UNITS	SDUP4
Date Sampled		04/12/2023
Type of sample		Soil
Date extracted	-	15/12/2023
Date analysed	-	15/12/2023
vTRH C_6 - C_9	mg/kg	<25
vTRH C_6 - C_{10}	mg/kg	<25
TRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total BTEX	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	72

TRH Soil C10-C40 NEPM		
Our Reference	UNITS	41235-1
Your Reference		SDUP4
Date Sampled		04/12/2023
Type of sample		Soil
Date extracted	-	15/12/2023
Date analysed	-	16/12/2023
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	160
Total +ve TRH (C10-C36)	mg/kg	160
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	180
TRH >C_{34} -C_{40}	mg/kg	160
Total +ve TRH (>C10-C40)	mg/kg	340
Surrogate o-Terphenyl	%	93

PAHs in Soil		
Our Reference		41235-1
Your Reference	UNITS	SDUP4
Date Sampled		04/12/2023
Type of sample		Soil
Date extracted	-	15/12/2023
Date analysed	-	16/12/2023
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.9
Anthracene	mg/kg	0.2
Fluoranthene	mg/kg	1.6
Pyrene	mg/kg	2.0
Benzo(a)anthracene	mg/kg	0.8
Chrysene	mg/kg	0.9
Benzo(b,j&k)fluoranthene	mg/kg	1.6
Benzo(a)pyrene	mg/kg	0.99
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5
Dibenzo(a,h)anthracene	mg/kg	0.1
Benzo(g,h,i)perylene	mg/kg	0.6
Total +ve PAH's	mg/kg	10
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	1.4
Benzo(a)pyrene TEQ calc (Half)	mg/kg	1.4
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	1.4
Surrogate p-Terphenyl-d_{14}	%	102

Acid Extractable metals in soil		
Our Reference		41235-1
Your Reference	UNITS	SDUP4
Date Sampled		04/12/2023
Type of sample		Soil
Date digested	-	16/12/2023
Date analysed	-	16/12/2023
Arsenic	mg/kg	6
Cadmium	mg/kg	<0.4
Chromium	mg/kg	15
Copper	mg/kg	25
Lead	mg/kg	32
Mercury	mg/kg	<0.1
Nickel	mg/kg	10
Zinc	mg/kg	43

PFAS in Soil Extended		
Our Reference		41235-1
Your Reference	UNITS	SDUP4
Date Sampled		04/12/2023
Type of sample		Soil
Date prepared	-	16/12/2023
Date analysed	-	16/12/2023
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	0.9
Perfluorodecanesulfonic acid	µg/kg	<0.2
Perfluorobutanoic acid	µg/kg	<0.2
Perfluoropentanoic acid	µg/kg	<0.2
Perfluorohexanoic acid	µg/kg	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.1
Perfluorononanoic acid	µg/kg	<0.1
Perfluorodecanoic acid	µg/kg	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	<0.5
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	0.6
Surrogate $^{13}C_8$ PFOS	%	96
Surrogate $^{13}C_2$ PFOA	%	95
Extracted ISTD $^{13}C_3$ *PFBS*	%	88
Extracted ISTD $^{18}O_2$ *PFHxS*	%	91
Extracted ISTD $^{13}C_4$ *PFOS*	%	101
Extracted ISTD $^{13}C_4$ *PFBA*	%	94

PFAS in Soil Extended		
Our Reference		41235-1
Your Reference	UNITS	SDUP4
Date Sampled		04/12/2023
Type of sample		Soil
Extracted ISTD $^{13}C_3$ *PFPeA*	%	88
Extracted ISTD $^{13}C_2$ *PFHxA*	%	85
Extracted ISTD $^{13}C_4$ *PFHpA*	%	86
Extracted ISTD $^{13}C_4$ *PFOA*	%	95
Extracted ISTD $^{13}C_5$ *PFNA*	%	100
Extracted ISTD $^{13}C_2$ *PFDA*	%	114
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	130
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	127
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	131
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	77
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	103
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	136
Extracted ISTD $^{13}C_8$ *FOSA*	%	112
Extracted ISTD d_3 *N MeFOSA*	%	99
Extracted ISTD d_5 *NEtFOSA*	%	99
Extracted ISTD d_7 *N MeFOSE*	%	113
Extracted ISTD d_9 *N EtFOSE*	%	90
Extracted ISTD d_3 *N MeFOSAA*	%	120
Extracted ISTD d_5 *N EtFOSAA*	%	151
Total Positive PFHxS & PFOS	µg/kg	0.9
Total Positive PFOS & PFOA	µg/kg	1
Total Positive PFAS	µg/kg	1.6

Moisture		
Our Reference		41235-1
Your Reference	UNITS	SDUP4
Date Sampled		04/12/2023
Type of sample		Soil
Date prepared	-	15/12/2023
Date analysed	-	16/12/2023
Moisture	%	8.6

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105°C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	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-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. 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. 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. 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-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 5.4 Table B-15 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	[NT]
Date extracted	-			15/12/2023	[NT]	[NT]	[NT]	[NT]	15/12/2023	[NT]
Date analysed	-			15/12/2023	[NT]	[NT]	[NT]	[NT]	15/12/2023	[NT]
vTRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	83	[NT]
vTRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	83	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	73	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	76	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	88	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	87	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	71	[NT]	[NT]	[NT]	[NT]	70	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			15/12/2023	[NT]	[NT]	[NT]	[NT]	15/12/2023	[NT]
Date analysed	-			16/12/2023	[NT]	[NT]	[NT]	[NT]	16/12/2023	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	83	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	83	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
Surrogate o-Terphenyl	%		Org-020	90	[NT]	[NT]	[NT]	[NT]	84	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			15/12/2023	[NT]	[NT]	[NT]	[NT]	15/12/2023	[NT]
Date analysed	-			16/12/2023	[NT]	[NT]	[NT]	[NT]	16/12/2023	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[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]	104	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	106	[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]	100	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[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]	102	[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]	102	[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-d_{14}	%		Org-022/025	98	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			16/12/2023	[NT]	[NT]	[NT]	[NT]	16/12/2023	[NT]
Date analysed	-			16/12/2023	[NT]	[NT]	[NT]	[NT]	16/12/2023	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	99	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	104	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: PFAS in Soil Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluorohexanesulfonic acid PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	111	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	110	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	115	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	111	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	125	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	121	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	129	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
N-Ethyl perfluorooctanesulfon -amide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
N-Me perfluorooctanesulfonamid -oethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
N-Et perfluorooctanesulfonamid -oethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	116	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	115	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	116	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	105	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_3$ PFBS	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: PFAS in Soil Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	87	[NT]	[NT]	[NT]	[NT]	88	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	90	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	90	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	119	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	86	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	87	[NT]	[NT]	[NT]	[NT]	88	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD d_5 *NEtFOSA*	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: PFAS in Soil Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	96	[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.

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Report Comments

PFAS in Soil Extended - 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).

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Craig Ridley

Sample Login Details

Your reference	E36446PR
Envirolab Reference	41235
Date Sample Received	13/12/2023
Date Instructions Received	13/12/2023
Date Results Expected to be Reported	19/12/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	15.3
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

PFAS jar dated 4/11/2023.
Project ID on jars "E36466PR"

Please direct any queries to:

Pamela Adams	Chris De Luca
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: cdeluca@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	Acid Extractable metalsin soil	PFAS in Soil Extended
SDUP4	✓	✓	✓	✓	✓

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.

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: E36446PR Date Results Required: STANDARD Page: 3 of 3	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Craig Ridley cridley@jkenvironments.com.au

Location: Macquarie Park, NSW

Sampler: LR/HW

Sample Preserved in Esky on Ice

Tests Required

	Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals	ASLP PFAS	BTEX	PFAS (low level, short)
51	4/12/2023		BH31	1-1.2	G, PFAS	0.1	Natural												
52	5/12/2023		BH32	0.03-0.3	G, PFAS, A	1.1	Fill		X				X	X	X	X	X		
53	5/12/2023		BH32	0.5-0.7	G, PFAS, A	0.9	Natural												
54	5/12/2023		BH32	1.3-1.5	G, PFAS, A	0.9	Natural												
55	5/12/2023		BH34	0.03-0.2	G, PFAS, A	0.4	Fill		X				X	X	X	X	X		
56	5/12/2023		BH34	0.2-0.5	G, PFAS, A	0.9	Natural												
57	5/12/2023		BH34	0.6-0.95	G, PFAS	0	Natural*												
58	5/12/2023		BH34	1.3-1.5	G, PFAS	0	Natural												
59	4/12/2023		SDUP3	-	G, PFAS	-	Duplicate					X	X						
60	4/12/2023		SDUP4	-	G,PFAS	-	Duplicate					X	X		SEND TO VIC				
61	5/12/2023		SDUP5	-	G, PFAS	-	Duplicate												
62	4/12/2023		TB-S2	-	G, PFAS	-	Trip Blank					X	X						
63	4/12/2023		TS-S2	-	V	-	Trip Spike											X	
64	4/12/2023		FR-2-SPT	-	#	-	Rinsate					X							X
	BH29			3.4-5.5															

Reling. by: LR ELS 11/12/23 1130

Remarks (comments/detection limits required):

Please test FR2-SPT for total metals

Sample Containers:

G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle

A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By:	Date:	Time:	Received By:	Date:
LR	7/12/23			

ENVIROLAB Envirolab Services
12 Research Drive
Croydon South VIC 3136
Ph. (03) 9763 2500

Job No: 41235

Date Received: 13/12/23

Time Received: 4pm

Received By: AG

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

15.3

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 341181

Client Details

Client	JK Environments
Attention	C Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E36466PR Macquarie Park**
Number of Samples	55 Soil, 2 Material, 2 Water
Date samples received	09/01/2024
Date completed instructions received	09/01/2024

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	17/01/2024
Date of Issue	17/01/2024

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Stuart Chen, Lucy Zhu
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
Liam Timmins, Organics Supervisor
Loren Bardwell, Development Chemist
Lucy Zhu, Asbestos Supervisor
Sean McAlary, Chemist (FAS)
Steven Luong, Senior Chemist
Tim Toll, Senior Chemist

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
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	%	113	69	74	99	95

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		341181-8	341181-9	341181-10	341181-12	341181-13
Your Reference	UNITS	BH2	BH3	BH3	BH4	BH4
Depth		1.7-1.95	0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
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	105	78	90	104

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		341181-15	341181-16	341181-19	341181-20	341181-21
Your Reference	UNITS	BH5	BH5	BH5	BH5	BH6
Depth		0.03-0.2	0.4-0.5	2.5-2.8	3.3-3.45	0.025-0.4
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
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	%	88	88	96	95	91

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		341181-22	341181-25	341181-26	341181-29	341181-30
Your Reference	UNITS	BH6	BH7	BH7	BH11	BH11
Depth		0.5-0.95	0.05-0.1	0.3-0.5	0.03-0.3	0.5-0.7
Date Sampled		03/01/2024	05/01/2024	05/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
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	%	83	97	90	113	114

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		341181-31	341181-33	341181-36	341181-38	341181-39
Your Reference	UNITS	BH11	BH12	BH12	BH19	BH19
Depth		0.7-0.95	0.05-0.23	1.7-1.95	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	04/01/2024	04/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
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	%	81	82	63	82	100

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		341181-42	341181-44	341181-46	341181-47	341181-48
Your Reference	UNITS	BH21	BH21	BH21	BH23	BH23
Depth		0.04-0.15	0.7-0.95	2.1-2.5	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
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	%	91	90	88	90	85

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		341181-50	341181-51	341181-53	341181-58	341181-59
Your Reference	UNITS	BH35	SDUP6	SDUP9	TB-S3	TS-S3
Depth		0-0.15	-	-	-	-
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	[NA]
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	93%
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	94%
Ethylbenzene	mg/kg	<1	<1	<1	<1	94%
m+p-xylene	mg/kg	<2	<2	<2	<2	94%
o-Xylene	mg/kg	<1	<1	<1	<1	94%
Naphthalene	mg/kg	<1	<1	<1	<1	[NA]
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	[NA]
Surrogate aaa-Trifluorotoluene	%	101	95	78	103	95

svTRH (C10-C40) in Soil						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	160	<100	<100	130	<100
Total +ve TRH (C10-C36)	mg/kg	160	<50	<50	130	<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	190	<100	<100	140	<100
TRH >C_{34} -C_{40}	mg/kg	240	<100	<100	210	<100
Total +ve TRH (>C10-C40)	mg/kg	440	<50	<50	350	<50
Surrogate o-Terphenyl	%	71	66	67	78	67

svTRH (C10-C40) in Soil						
Our Reference		341181-8	341181-9	341181-10	341181-12	341181-13
Your Reference	UNITS	BH2	BH3	BH3	BH4	BH4
Depth		1.7-1.95	0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	300	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	300	<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	170	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	510	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	680	<50
Surrogate o-Terphenyl	%	67	69	67	78	67

svTRH (C10-C40) in Soil						
Our Reference		341181-15	341181-16	341181-19	341181-20	341181-21
Your Reference	UNITS	BH5	BH5	BH5	BH5	BH6
Depth		0.03-0.2	0.4-0.5	2.5-2.8	3.3-3.45	0.025-0.4
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	13/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	200
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	200
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	110
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	360
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	480
Surrogate o-Terphenyl	%	62	67	66	66	78

svTRH (C10-C40) in Soil						
Our Reference		341181-22	341181-25	341181-26	341181-29	341181-30
Your Reference	UNITS	BH6	BH7	BH7	BH11	BH11
Depth		0.5-0.95	0.05-0.1	0.3-0.5	0.03-0.3	0.5-0.7
Date Sampled		03/01/2024	05/01/2024	05/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	460	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	460	<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	310	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	790	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	1,100	<50
Surrogate o-Terphenyl	%	66	68	68	76	77

svTRH (C10-C40) in Soil						
Our Reference		341181-31	341181-33	341181-36	341181-38	341181-39
Your Reference	UNITS	BH11	BH12	BH12	BH19	BH19
Depth		0.7-0.95	0.05-0.23	1.7-1.95	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	04/01/2024	04/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	350	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	350	<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	210	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	600	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	800	<50
Surrogate o-Terphenyl	%	79	77	77	77	78

svTRH (C10-C40) in Soil						
Our Reference		341181-42	341181-44	341181-46	341181-47	341181-48
Your Reference	UNITS	BH21	BH21	BH21	BH23	BH23
Depth		0.04-0.15	0.7-0.95	2.1-2.5	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	340
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	160
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	500
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	470
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	470
Surrogate o-Terphenyl	%	77	77	77	77	80

svTRH (C10-C40) in Soil					
Our Reference		341181-50	341181-51	341181-53	341181-58
Your Reference	UNITS	BH35	SDUP6	SDUP9	TB-S3
Depth		0-0.15	-	-	-
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50
Surrogate o-Terphenyl	%	78	75	76	79

PAHs in Soil						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.8	0.1	0.1	0.3	0.2
Pyrene	mg/kg	0.8	<0.1	0.1	0.3	0.2
Benzo(a)anthracene	mg/kg	0.4	<0.1	<0.1	0.1	<0.1
Chrysene	mg/kg	0.3	<0.1	<0.1	0.2	<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	0.08	0.1	0.08
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	0.2	<0.1	<0.1	0.1	<0.1
Total +ve PAH's	mg/kg	3.5	0.1	0.3	1.4	0.50
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	%	112	103	106	108	102

PAHs in Soil						
Our Reference		341181-8	341181-9	341181-10	341181-12	341181-13
Your Reference	UNITS	BH2	BH3	BH3	BH4	BH4
Depth		1.7-1.95	0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	103	105	110	106

PAHs in Soil						
Our Reference		341181-15	341181-16	341181-19	341181-20	341181-21
Your Reference	UNITS	BH5	BH5	BH5	BH5	BH6
Depth		0.03-0.2	0.4-0.5	2.5-2.8	3.3-3.45	0.025-0.4
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	102	102	100	104

PAHs in Soil						
Our Reference		341181-22	341181-25	341181-26	341181-29	341181-30
Your Reference	UNITS	BH6	BH7	BH7	BH11	BH11
Depth		0.5-0.95	0.05-0.1	0.3-0.5	0.03-0.3	0.5-0.7
Date Sampled		03/01/2024	05/01/2024	05/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	%	105	105	109	111	108

PAHs in Soil						
Our Reference		341181-31	341181-33	341181-36	341181-38	341181-39
Your Reference	UNITS	BH11	BH12	BH12	BH19	BH19
Depth		0.7-0.95	0.05-0.23	1.7-1.95	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	04/01/2024	04/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	%	108	100	105	109	103

PAHs in Soil						
Our Reference		341181-42	341181-44	341181-46	341181-47	341181-48
Your Reference	UNITS	BH21	BH21	BH21	BH23	BH23
Depth		0.04-0.15	0.7-0.95	2.1-2.5	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	0.2	<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	0.09	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	0.5	0.66	<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	%	110	110	103	104	114

PAHs in Soil					
Our Reference		341181-50	341181-51	341181-53	341181-58
Your Reference	UNITS	BH35	SDUP6	SDUP9	TB-S3
Depth		0-0.15	-	-	-
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.1	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.4	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	111	102	102	105

Organochlorine Pesticides in soil						
Our Reference		341181-1	341181-2	341181-5	341181-6	341181-9
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		0.03-0.4	0.5-0.7	0.02-0.4	0.5-0.95	0.01-0.1
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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
Surrogate 4-Chloro-3-NBTF	%	101	99	101	97	101

Organochlorine Pesticides in soil						
Our Reference		341181-10	341181-12	341181-15	341181-21	341181-25
Your Reference	UNITS	BH3	BH4	BH5	BH6	BH7
Depth		0.5-0.95	0.02-0.3	0.03-0.2	0.025-0.4	0.05-0.1
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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
Surrogate 4-Chloro-3-NBTF	%	101	103	97	101	101

Organochlorine Pesticides in soil						
Our Reference		341181-26	341181-29	341181-33	341181-38	341181-39
Your Reference	UNITS	BH7	BH11	BH12	BH19	BH19
Depth		0.3-0.5	0.03-0.3	0.05-0.23	0.02-0.4	0.5-0.95
Date Sampled		05/01/2024	03/01/2024	04/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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
Surrogate 4-Chloro-3-NBTF	%	104	104	103	109	102

Organochlorine Pesticides in soil					
Our Reference		341181-42	341181-47	341181-50	341181-51
Your Reference	UNITS	BH21	BH23	BH35	SDUP6
Depth		0.04-0.15	0.02-0.3	0-0.15	-
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	109	106	105	105

Organophosphorus Pesticides in Soil						
Our Reference		341181-1	341181-2	341181-5	341181-6	341181-9
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		0.03-0.4	0.5-0.7	0.02-0.4	0.5-0.95	0.01-0.1
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	%	101	99	101	97	101

Organophosphorus Pesticides in Soil						
Our Reference		341181-10	341181-12	341181-15	341181-21	341181-25
Your Reference	UNITS	BH3	BH4	BH5	BH6	BH7
Depth		0.5-0.95	0.02-0.3	0.03-0.2	0.025-0.4	0.05-0.1
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	%	101	103	97	101	101

Organophosphorus Pesticides in Soil						
Our Reference		341181-26	341181-29	341181-33	341181-38	341181-39
Your Reference	UNITS	BH7	BH11	BH12	BH19	BH19
Depth		0.3-0.5	0.03-0.3	0.05-0.23	0.02-0.4	0.5-0.95
Date Sampled		05/01/2024	03/01/2024	04/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	%	104	104	103	109	102

Organophosphorus Pesticides in Soil					
Our Reference		341181-42	341181-47	341181-50	341181-51
Your Reference	UNITS	BH21	BH23	BH35	SDUP6
Depth		0.04-0.15	0.02-0.3	0-0.15	-
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	109	106	105	105

PCBs in Soil						
Our Reference		341181-1	341181-2	341181-5	341181-6	341181-9
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		0.03-0.4	0.5-0.7	0.02-0.4	0.5-0.95	0.01-0.1
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	%	103	99	101	97	102

PCBs in Soil						
Our Reference		341181-10	341181-12	341181-15	341181-21	341181-25
Your Reference	UNITS	BH3	BH4	BH5	BH6	BH7
Depth		0.5-0.95	0.02-0.3	0.03-0.2	0.025-0.4	0.05-0.1
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	%	102	104	98	102	102

PCBs in Soil						
Our Reference		341181-26	341181-29	341181-33	341181-38	341181-39
Your Reference	UNITS	BH7	BH11	BH12	BH19	BH19
Depth		0.3-0.5	0.03-0.3	0.05-0.23	0.02-0.4	0.5-0.95
Date Sampled		05/01/2024	03/01/2024	04/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	%	105	104	101	104	100

PCBs in Soil					
Our Reference		341181-42	341181-47	341181-50	341181-51
Your Reference	UNITS	BH21	BH23	BH35	SDUP6
Depth		0.04-0.15	0.02-0.3	0-0.15	-
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	106	103	102	100

Acid Extractable metals in soil						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Arsenic	mg/kg	<4	5	7	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	20	21	12	11
Copper	mg/kg	37	8	20	26	19
Lead	mg/kg	15	17	24	23	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	14	13	21	12	6
Zinc	mg/kg	49	22	27	39	23

Acid Extractable metals in soil						
Our Reference		341181-8	341181-9	341181-10	341181-12	341181-13
Your Reference	UNITS	BH2	BH3	BH3	BH4	BH4
Depth		1.7-1.95	0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Arsenic	mg/kg	6	<4	6	<4	12
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	23	13	17	11	25
Copper	mg/kg	2	74	5	63	4
Lead	mg/kg	14	4	18	3	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	1	78	3	59	1
Zinc	mg/kg	2	42	3	38	3

Acid Extractable metals in soil						
Our Reference		341181-15	341181-16	341181-19	341181-20	341181-21
Your Reference	UNITS	BH5	BH5	BH5	BH5	BH6
Depth		0.03-0.2	0.4-0.5	2.5-2.8	3.3-3.45	0.025-0.4
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Arsenic	mg/kg	<4	14	7	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	18	9	4	10
Copper	mg/kg	60	22	5	4	82
Lead	mg/kg	3	17	19	16	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	86	29	<1	<1	82
Zinc	mg/kg	39	16	<1	<1	44

Acid Extractable metals in soil						
Our Reference		341181-22	341181-25	341181-26	341181-29	341181-30
Your Reference	UNITS	BH6	BH7	BH7	BH11	BH11
Depth		0.5-0.95	0.05-0.1	0.3-0.5	0.03-0.3	0.5-0.7
Date Sampled		03/01/2024	05/01/2024	05/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Arsenic	mg/kg	8	<4	8	<4	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	10	21	9	25
Copper	mg/kg	10	73	6	51	14
Lead	mg/kg	17	2	16	3	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	59	6	45	15
Zinc	mg/kg	6	34	6	29	13

Acid Extractable metals in soil						
Our Reference		341181-31	341181-33	341181-36	341181-38	341181-39
Your Reference	UNITS	BH11	BH12	BH12	BH19	BH19
Depth		0.7-0.95	0.05-0.23	1.7-1.95	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	04/01/2024	04/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Arsenic	mg/kg	9	<4	7	<4	11
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	12	27	10	9
Copper	mg/kg	2	51	15	64	15
Lead	mg/kg	18	2	20	3	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	57	25	54	7
Zinc	mg/kg	<1	33	16	35	8

Acid Extractable metals in soil						
Our Reference		341181-42	341181-44	341181-46	341181-47	341181-48
Your Reference	UNITS	BH21	BH21	BH21	BH23	BH23
Depth		0.04-0.15	0.7-0.95	2.1-2.5	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Arsenic	mg/kg	<4	4	8	<4	12
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	12	16	13	7
Copper	mg/kg	49	32	5	69	3
Lead	mg/kg	5	12	20	4	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	48	36	2	69	4
Zinc	mg/kg	30	21	4	43	8

Acid Extractable metals in soil						
Our Reference		341181-50	341181-51	341181-53	341181-58	341181-60
Your Reference	UNITS	BH35	SDUP6	SDUP9	TB-S3	BH1 - [TRIPLICATE]
Depth		0-0.15	-	-	-	0.03-0.4
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Arsenic	mg/kg	5	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	10	15	4	10
Copper	mg/kg	19	74	7	<1	96
Lead	mg/kg	52	3	11	4	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	100	8	<1	10
Zinc	mg/kg	82	43	18	3	46

Moisture						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Moisture	%	8.1	10	14	8.3	12

Moisture						
Our Reference		341181-8	341181-9	341181-10	341181-12	341181-13
Your Reference	UNITS	BH2	BH3	BH3	BH4	BH4
Depth		1.7-1.95	0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Moisture	%	23	5.2	18	1.9	21

Moisture						
Our Reference		341181-15	341181-16	341181-19	341181-20	341181-21
Your Reference	UNITS	BH5	BH5	BH5	BH5	BH6
Depth		0.03-0.2	0.4-0.5	2.5-2.8	3.3-3.45	0.025-0.4
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Moisture	%	7.3	17	13	15	1.7

Moisture						
Our Reference		341181-22	341181-25	341181-26	341181-29	341181-30
Your Reference	UNITS	BH6	BH7	BH7	BH11	BH11
Depth		0.5-0.95	0.05-0.1	0.3-0.5	0.03-0.3	0.5-0.7
Date Sampled		03/01/2024	05/01/2024	05/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Moisture	%	11	1.8	18	1.2	14

Moisture						
Our Reference		341181-31	341181-33	341181-36	341181-38	341181-39
Your Reference	UNITS	BH11	BH12	BH12	BH19	BH19
Depth		0.7-0.95	0.05-0.23	1.7-1.95	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	04/01/2024	04/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Moisture	%	15	5.0	16	2.5	10

Moisture						
Our Reference		341181-42	341181-44	341181-46	341181-47	341181-48
Your Reference	UNITS	BH21	BH21	BH21	BH23	BH23
Depth		0.04-0.15	0.7-0.95	2.1-2.5	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Moisture	%	4.9	11	15	4.1	7.9

Moisture					
Our Reference		341181-50	341181-51	341181-53	341181-58
Your Reference	UNITS	BH35	SDUP6	SDUP9	TB-S3
Depth		0-0.15	-	-	-
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Moisture	%	19	6.3	5.1	0.3

Asbestos ID - soils NEPM - ASB-001						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/01/2024	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Sample mass tested	g	970.35	735.15	668.77	913.27	705.71
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Grey fine-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected 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	0.1818	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	See Above	No visible asbestos detected	No visible asbestos detected	Chrysotile Amosite Crocidolite	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	0.1764	–	–	0.0285	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	0.0182	<0.001	<0.001	0.0031	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/01/2024	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Sample mass tested	g	1,052.51	635.38	931.81	262.68	865.95
Sample Description	-	Black fine-grained soil & rocks	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Orange coarse-grained soil & rocks	Grey fine-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 ID - soils NEPM - ASB-001						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/01/2024	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Sample mass tested	g	785.19	1,292.62	693.15	977.55	338.48
Sample Description	-	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Orange coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Orange 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 ID - soils NEPM - ASB-001						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/01/2024	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Sample mass tested	g	1,105.92	894.5	680.52	768.37	1,146.83
Sample Description	-	Grey fine-grained soil & rocks	Brown coarse-grained soil & rocks	Grey fine-grained soil & rocks	Brown coarse-grained soil & rocks	Grey fine-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 ID - soils NEPM - ASB-001						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/01/2024	16/01/2024	16/01/2024	16/01/2024	16/01/2024
Sample mass tested	g	791.5	895.02	643.72	1,115.32	741.5
Sample Description	-	Brown coarse-grained soil & rocks	Grey fine-grained soil & rocks	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Beige sandy soil
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 ID - soils NEPM - ASB-001		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
Date analysed	-	16/01/2024
Sample mass tested	g	517.57
Sample Description	-	Brown fine-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected
Total Asbestos#1	g/kg	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected
ACM >7mm Estimation*	g	–
FA and AF Estimation*	g	–
ACM >7mm Estimation*	%(w/w)	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001

TCLP Preparation - Acid						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	10.2	8.7	8.3	10.7	8.8
pH of soil TCLP (after HCl)	pH units	2.2	1.7	1.7	2.3	1.7
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	6.9	5.2	5.1	8.6	5.0

TCLP Preparation - Acid						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	8.7	7.6	8.8	7.8	8.6
pH of soil TCLP (after HCl)	pH units	1.7	1.7	1.7	1.7	1.7
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	5.1	5.0	5.0	4.9	5.1

TCLP Preparation - Acid						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	8.1	9.2	7.4	9.2	5.5
pH of soil TCLP (after HCl)	pH units	1.7	1.6	1.6	1.7	1.6
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	5.0	5.0	4.9	5.1	4.9

TCLP Preparation - Acid						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	8.0	6.2	8.9	6.3	9.3
pH of soil TCLP (after HCl)	pH units	1.6	1.6	1.7	1.6	1.8
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	5.1	5.0	5.2	5.2	5.2

TCLP Preparation - Acid						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	6.2	8.3	7.8	9.3	9.2
pH of soil TCLP (after HCl)	pH units	1.6	1.5	1.5	1.6	2.8
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	4.9	4.9	5.0	5.2	6.3

TCLP Preparation - Acid		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
pH of soil for fluid# determ.	pH units	8.6
pH of soil TCLP (after HCl)	pH units	1.5
Extraction fluid used		1
pH of final Leachate	pH units	5.0

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01	<0.01	0.02	<0.01
Copper	mg/L	0.01	<0.01	<0.01	<0.01	0.02
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	0.08
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	<0.02	<0.02	0.02	<0.02	0.03
Zinc	mg/L	<0.02	0.08	0.03	<0.02	0.2

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	0.02	<0.01	0.02	<0.01	0.02
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.24	<0.02	0.1	<0.02	0.30
Zinc	mg/L	0.02	<0.02	<0.02	<0.02	0.03

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	<0.01	0.04	<0.01	0.03	<0.01
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.04	0.1	<0.02	0.1	<0.02
Zinc	mg/L	0.03	<0.02	<0.02	<0.02	<0.02

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.08	0.02	0.1	0.04	0.09
Zinc	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Arsenic	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Cadmium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Chromium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Copper	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Lead	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03
Mercury	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel	mg/L	0.02	0.03	<0.02	0.08	<0.02
Zinc	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02

Metals from Leaching Fluid pH 2.9 or 5		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
Date extracted	-	11/01/2024
Date analysed	-	11/01/2024
Arsenic	mg/L	<0.05
Cadmium	mg/L	<0.01
Chromium	mg/L	<0.01
Copper	mg/L	<0.01
Lead	mg/L	<0.03
Mercury	mg/L	<0.0005
Nickel	mg/L	<0.02
Zinc	mg/L	0.1

PAHs in TCLP (USEPA 1311)						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Naphthalene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	93	101	94	90	87

PAHs in TCLP (USEPA 1311)						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Naphthalene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	80	93	92	93	89

PAHs in TCLP (USEPA 1311)						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Naphthalene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	82	85	86	90	98

PAHs in TCLP (USEPA 1311)						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Naphthalene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	97	96	101	88	89

PAHs in TCLP (USEPA 1311)						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	11/01/2024	11/01/2024	11/01/2024	12/01/2024	12/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	12/01/2024	12/01/2024
Naphthalene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluorene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chrysene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	89	87	91	89	97

PAHs in TCLP (USEPA 1311)		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
Date extracted	-	12/01/2024
Date analysed	-	12/01/2024
Naphthalene in TCLP	mg/L	<0.0001
Acenaphthylene in TCLP	mg/L	<0.0001
Acenaphthene in TCLP	mg/L	<0.0001
Fluorene in TCLP	mg/L	<0.0001
Phenanthrene in TCLP	mg/L	<0.0001
Anthracene in TCLP	mg/L	<0.0001
Fluoranthene in TCLP	mg/L	<0.0001
Pyrene in TCLP	mg/L	<0.0001
Benzo(a)anthracene in TCLP	mg/L	<0.0001
Chrysene in TCLP	mg/L	<0.0001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.0002
Benzo(a)pyrene in TCLP	mg/L	<0.0001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.0001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.0001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.0001
Total +ve PAH's	mg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	90

PFAS in Soils Extended						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	0.5	<0.1	<0.1	0.5	0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	5.1	0.5	0.2	7.8	0.3
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	0.2	<0.1	<0.1	0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.2	<0.1	<0.1	0.3	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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	98	97	102	103
Surrogate $^{13}C_2$ *PFOA*	%	100	102	101	95	102
Extracted ISTD $^{13}C_3$ *PFBS*	%	94	101	93	94	97
Extracted ISTD $^{18}O_2$ *PFHxS*	%	98	98	91	89	96
Extracted ISTD $^{13}C_4$ *PFOS*	%	106	106	98	96	102

PFAS in Soils Extended						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	99	102	93	96	100
Extracted ISTD $^{13}C_3$ *PFPeA*	%	107	110	99	101	109
Extracted ISTD $^{13}C_2$ *PFHxA*	%	102	105	100	97	102
Extracted ISTD $^{13}C_4$ *PFHpA*	%	101	98	92	92	99
Extracted ISTD $^{13}C_4$ *PFOA*	%	107	102	97	101	103
Extracted ISTD $^{13}C_5$ *PFNA*	%	117	110	99	104	105
Extracted ISTD $^{13}C_2$ *PFDA*	%	125	111	103	107	113
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	128	116	112	111	112
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	133	117	115	121	129
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	89	100	89	75	101
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	103	105	98	95	102
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	123	108	100	101	111
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	149	117	109	115	119
Extracted ISTD $^{13}C_8$ *FOSA*	%	98	104	98	94	103
Extracted ISTD d_3 *N MeFOSA*	%	104	104	102	95	100
Extracted ISTD d_5 *N EtFOSA*	%	101	102	97	100	101
Extracted ISTD d_7 *N MeFOSE*	%	99	104	94	97	99
Extracted ISTD d_9 *N EtFOSE*	%	100	105	98	103	107
Extracted ISTD d_3 *N MeFOSAA*	%	112	106	94	80	106
Extracted ISTD d_5 *N EtFOSAA*	%	125	113	113	92	119
Total Positive PFHxS & PFOS	µg/kg	5.6	0.5	0.2	8.3	0.5
Total Positive PFOS & PFOA	µg/kg	5.3	0.5	0.2	8.0	0.3
Total Positive PFAS	µg/kg	6.1	0.5	0.2	8.8	0.5

PFAS in Soils Extended						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	0.5	<0.1	<0.1	<0.1	<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	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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*	%	110	103	103	109	106
Surrogate $^{13}C_2$ *PFOA*	%	106	100	104	96	98
Extracted ISTD $^{13}C_3$ *PFBS*	%	103	93	101	96	98
Extracted ISTD $^{18}O_2$ *PFHxS*	%	98	91	100	93	96
Extracted ISTD $^{13}C_4$ *PFOS*	%	99	99	107	98	103

PFAS in Soils Extended						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	102	96	104	94	102
Extracted ISTD $^{13}C_3$ *PFPeA*	%	110	106	113	103	109
Extracted ISTD $^{13}C_2$ *PFHxA*	%	103	99	107	93	104
Extracted ISTD $^{13}C_4$ *PFHpA*	%	98	95	100	89	97
Extracted ISTD $^{13}C_4$ *PFOA*	%	103	101	109	102	106
Extracted ISTD $^{13}C_5$ *PFNA*	%	106	107	117	100	106
Extracted ISTD $^{13}C_2$ *PFDA*	%	111	105	124	102	111
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	109	113	135	109	106
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	113	115	145	101	119
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	101	87	102	84	101
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	106	102	108	94	104
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	111	102	127	99	112
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	114	117	167	100	111
Extracted ISTD $^{13}C_8$ *FOSA*	%	106	97	107	100	103
Extracted ISTD d_3 *N MeFOSA*	%	107	96	108	102	110
Extracted ISTD d_5 *N EtFOSA*	%	106	96	106	98	104
Extracted ISTD d_7 *N MeFOSE*	%	111	95	107	100	105
Extracted ISTD d_9 *N EtFOSE*	%	109	99	113	103	113
Extracted ISTD d_3 *N MeFOSAA*	%	101	88	136	66	106
Extracted ISTD d_5 *N EtFOSAA*	%	106	90	166	84	107
Total Positive PFHxS & PFOS	µg/kg	0.5	<0.1	<0.1	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	0.5	<0.1	<0.1	<0.1	<0.1
Total Positive PFAS	µg/kg	0.5	<0.1	<0.1	<0.1	<0.1

PFAS in Soils Extended						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	<0.1	<0.1	<0.1	<0.1	<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	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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*	%	95	99	99	98	99
Surrogate $^{13}C_2$ *PFOA*	%	103	99	100	102	97
Extracted ISTD $^{13}C_3$ *PFBS*	%	94	103	98	102	94
Extracted ISTD $^{18}O_2$ *PFHxS*	%	94	100	93	100	92
Extracted ISTD $^{13}C_4$ *PFOS*	%	107	110	103	109	100

PFAS in Soils Extended						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	99	106	99	105	95
Extracted ISTD $^{13}C_3$ *PFPeA*	%	104	112	109	110	113
Extracted ISTD $^{13}C_2$ *PFHxA*	%	99	106	101	102	91
Extracted ISTD $^{13}C_4$ *PFHpA*	%	95	101	97	101	86
Extracted ISTD $^{13}C_4$ *PFOA*	%	99	110	106	106	107
Extracted ISTD $^{13}C_5$ *PFNA*	%	103	113	110	106	95
Extracted ISTD $^{13}C_2$ *PFDA*	%	105	123	115	115	104
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	115	129	124	112	113
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	115	138	129	117	104
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	101	102	96	104	86
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	101	107	115	105	88
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	103	124	126	110	97
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	117	144	144	113	110
Extracted ISTD $^{13}C_8$ *FOSA*	%	99	106	96	108	93
Extracted ISTD d_3 *N MeFOSA*	%	97	111	90	107	72
Extracted ISTD d_5 *N EtFOSA*	%	99	107	99	105	97
Extracted ISTD d_7 *N MeFOSE*	%	102	108	92	107	78
Extracted ISTD d_9 *N EtFOSE*	%	102	113	100	115	101
Extracted ISTD d_3 *N MeFOSAA*	%	96	129	93	102	55
Extracted ISTD d_5 *N EtFOSAA*	%	112	137	110	104	63
Total Positive PFHxS & PFOS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive PFAS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1

PFAS in Soils Extended						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	0.1	<0.1	<0.1	<0.1	<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	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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*	%	95	106	103	106	100
Surrogate $^{13}C_2$ *PFOA*	%	101	102	107	100	102
Extracted ISTD $^{13}C_3$ *PFBS*	%	100	95	103	106	95
Extracted ISTD $^{18}O_2$ *PFHxS*	%	95	86	104	104	103
Extracted ISTD $^{13}C_4$ *PFOS*	%	116	102	102	104	99

PFAS in Soils Extended						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	109	101	105	106	98
Extracted ISTD $^{13}C_3$ *PFPeA*	%	128	118	115	112	106
Extracted ISTD $^{13}C_2$ *PFHxA*	%	100	90	105	106	103
Extracted ISTD $^{13}C_4$ *PFHpA*	%	99	93	103	106	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	121	109	101	114	100
Extracted ISTD $^{13}C_5$ *PFNA*	%	113	105	105	114	100
Extracted ISTD $^{13}C_2$ *PFDA*	%	140	116	109	124	115
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	147	137	112	129	111
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	148	132	114	142	120
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	91	86	105	117	103
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	105	95	104	109	94
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	146	116	103	124	106
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	#	144	108	157	109
Extracted ISTD $^{13}C_8$ *FOSA*	%	101	101	104	103	104
Extracted ISTD d_3 *N MeFOSA*	%	114	108	111	110	103
Extracted ISTD d_5 *N EtFOSA*	%	105	103	105	103	102
Extracted ISTD d_7 *N MeFOSE*	%	103	101	102	103	102
Extracted ISTD d_9 *N EtFOSE*	%	110	114	104	105	101
Extracted ISTD d_3 *N MeFOSAA*	%	156	89	108	147	108
Extracted ISTD d_5 *N EtFOSAA*	%	181	112	102	156	115
Total Positive PFHxS & PFOS	µg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total Positive PFAS	µg/kg	0.1	<0.1	<0.1	<0.1	<0.1

PFAS in Soils Extended						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	10/01/2024	10/01/2024
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	<0.1	<0.1	<0.1	<0.1	1.2
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	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
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*	%	103	101	98	102	103
Surrogate $^{13}C_2$ *PFOA*	%	103	104	103	103	101
Extracted ISTD $^{13}C_3$ *PFBS*	%	98	102	98	102	97
Extracted ISTD $^{18}O_2$ *PFHxS*	%	98	102	102	106	99
Extracted ISTD $^{13}C_4$ *PFOS*	%	100	104	103	109	100

PFAS in Soils Extended						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	98	102	98	104	102
Extracted ISTD $^{13}C_3$ *PFPeA*	%	108	110	106	114	110
Extracted ISTD $^{13}C_2$ *PFHxA*	%	102	101	101	112	103
Extracted ISTD $^{13}C_4$ *PFHpA*	%	102	103	98	109	102
Extracted ISTD $^{13}C_4$ *PFOA*	%	101	108	103	114	106
Extracted ISTD $^{13}C_5$ *PFNA*	%	101	112	103	116	106
Extracted ISTD $^{13}C_2$ *PFDA*	%	105	122	111	129	105
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	118	122	121	127	113
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	120	132	123	145	127
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	109	111	106	116	114
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	102	111	96	106	98
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	110	119	114	126	103
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	116	148	127	164	116
Extracted ISTD $^{13}C_8$ *FOSA*	%	102	108	103	105	100
Extracted ISTD d_3 *N MeFOSA*	%	101	105	102	109	104
Extracted ISTD d_5 *N EtFOSA*	%	101	104	99	101	101
Extracted ISTD d_7 *N MeFOSE*	%	97	104	101	109	102
Extracted ISTD d_9 *N EtFOSE*	%	104	105	100	109	111
Extracted ISTD d_3 *N MeFOSAA*	%	107	128	101	147	113
Extracted ISTD d_5 *N EtFOSAA*	%	108	134	118	161	114
Total Positive PFHxS & PFOS	µg/kg	<0.1	<0.1	<0.1	<0.1	1.2
Total Positive PFOS & PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	1.2
Total Positive PFAS	µg/kg	<0.1	<0.1	<0.1	<0.1	1.2

PFAS in Soils Extended					
Our Reference		341181-50	341181-51	341181-53	341181-58
Your Reference	UNITS	BH35	SDUP6	SDUP9	TB-S3
Depth		0-0.15	-	-	-
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	10/01/2024	10/01/2024	10/01/2024	15/01/2024
Date analysed	-	10/01/2024	10/01/2024	10/01/2024	15/01/2024
Perfluorobutanesulfonic acid	µg/kg	0.2	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	0.2	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	1.4	<0.1	0.4	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	0.4	<0.1	0.2	<0.1
Perfluorononanoic acid	µg/kg	0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	103	100	100	100
Surrogate $^{13}C_2$ *PFOA*	%	105	102	100	98
Extracted ISTD $^{13}C_3$ *PFBS*	%	95	102	99	112
Extracted ISTD $^{18}O_2$ *PFHxS*	%	99	104	100	117
Extracted ISTD $^{13}C_4$ *PFOS*	%	97	107	103	109

PFAS in Soils Extended					
Our Reference		341181-50	341181-51	341181-53	341181-58
Your Reference	UNITS	BH35	SDUP6	SDUP9	TB-S3
Depth		0-0.15	-	-	-
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	98	102	99	111
Extracted ISTD $^{13}C_3$ *PFPeA*	%	105	108	110	115
Extracted ISTD $^{13}C_2$ *PFHxA*	%	105	100	102	115
Extracted ISTD $^{13}C_4$ *PFHpA*	%	99	100	102	125
Extracted ISTD $^{13}C_4$ *PFOA*	%	97	104	101	115
Extracted ISTD $^{13}C_5$ *PFNA*	%	103	108	100	113
Extracted ISTD $^{13}C_2$ *PFDA*	%	115	111	114	120
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	98	109	111	138
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	112	118	125	115
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	98	108	116	124
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	97	107	99	128
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	117	110	108	122
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	135	115	117	134
Extracted ISTD $^{13}C_8$ *FOSA*	%	92	106	100	121
Extracted ISTD d_3 *N MeFOSA*	%	98	102	100	115
Extracted ISTD d_5 *N EtFOSA*	%	91	103	98	122
Extracted ISTD d_7 *N MeFOSE*	%	89	103	97	112
Extracted ISTD d_9 *N EtFOSE*	%	95	104	106	105
Extracted ISTD d_3 *N MeFOSAA*	%	111	110	115	123
Extracted ISTD d_5 *N EtFOSAA*	%	115	102	111	121
Total Positive PFHxS & PFOS	µg/kg	1.4	<0.1	0.5	<0.1
Total Positive PFOS & PFOA	µg/kg	1.9	<0.1	0.5	<0.1
Total Positive PFAS	µg/kg	2.4	<0.1	0.7	<0.1

PFAS in TCLP Extended						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.03	<0.01	<0.01	0.02	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.21	0.02	<0.01	0.40	0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	103	101	106	101	99
Surrogate $^{13}C_2$ *PFOA*	%	102	112	106	99	101
Extracted ISTD $^{13}C_3$ *PFBS*	%	97	96	95	99	95
Extracted ISTD $^{18}O_2$ *PFHxS*	%	97	99	100	102	104
Extracted ISTD $^{13}C_4$ *PFOS*	%	103	109	106	107	108

PFAS in TCLP Extended						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	103	102	102	103	103
Extracted ISTD $^{13}C_3$ *PFPeA*	%	115	113	112	114	116
Extracted ISTD $^{13}C_2$ *PFHxA*	%	105	104	102	109	106
Extracted ISTD $^{13}C_4$ *PFHpA*	%	104	106	101	103	113
Extracted ISTD $^{13}C_4$ *PFOA*	%	112	108	115	118	118
Extracted ISTD $^{13}C_5$ *PFNA*	%	102	105	101	108	109
Extracted ISTD $^{13}C_2$ *PFDA*	%	115	113	112	119	117
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	104	115	108	116	117
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	118	120	118	124	123
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	73	76	72	83	83
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	99	94	90	96	102
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	116	98	98	111	115
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	123	113	116	118	117
Extracted ISTD $^{13}C_8$ *FOSA*	%	97	102	101	103	108
Extracted ISTD d_3 *N MeFOSA*	%	104	105	99	103	108
Extracted ISTD d_5 *N EtFOSA*	%	95	92	91	95	97
Extracted ISTD d_7 *N MeFOSE*	%	93	102	99	104	107
Extracted ISTD d_9 *N EtFOSE*	%	101	108	107	109	113
Extracted ISTD d_3 *N MeFOSAA*	%	116	106	106	108	120
Extracted ISTD d_5 *N EtFOSAA*	%	104	104	103	104	110
Total Positive PFHxS & PFOS	µg/L	0.24	0.02	<0.01	0.42	0.01
Total Positive PFOS & PFOA	µg/L	0.21	0.02	<0.01	0.41	0.01
Total Positive PFAS	µg/L	0.25	0.02	<0.01	0.44	0.01

PFAS in TCLP Extended						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	101	103	100	110	101
Surrogate $^{13}C_2$ *PFOA*	%	99	109	113	107	111
Extracted ISTD $^{13}C_3$ *PFBS*	%	99	97	100	100	97
Extracted ISTD $^{18}O_2$ *PFHxS*	%	107	103	102	103	102
Extracted ISTD $^{13}C_4$ *PFOS*	%	110	106	110	103	110

PFAS in TCLP Extended						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	101	104	105	105	106
Extracted ISTD $^{13}C_3$ *PFPeA*	%	113	112	117	115	116
Extracted ISTD $^{13}C_2$ *PFHxA*	%	104	104	110	111	110
Extracted ISTD $^{13}C_4$ *PFHpA*	%	107	109	106	110	107
Extracted ISTD $^{13}C_4$ *PFOA*	%	115	110	109	113	110
Extracted ISTD $^{13}C_5$ *PFNA*	%	110	107	112	108	108
Extracted ISTD $^{13}C_2$ *PFDA*	%	116	118	124	121	118
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	114	113	119	121	116
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	121	122	128	132	129
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	78	80	83	82	83
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	97	100	103	99	94
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	111	112	117	108	116
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	116	113	128	119	121
Extracted ISTD $^{13}C_8$ *FOSA*	%	109	104	106	107	104
Extracted ISTD d_3 *N MeFOSA*	%	101	107	106	107	107
Extracted ISTD d_5 *N EtFOSA*	%	94	97	99	99	95
Extracted ISTD d_7 *N MeFOSE*	%	107	106	110	101	110
Extracted ISTD d_9 *N EtFOSE*	%	107	110	113	111	109
Extracted ISTD d_3 *N MeFOSAA*	%	119	108	118	115	118
Extracted ISTD d_5 *N EtFOSAA*	%	106	105	113	109	111
Total Positive PFHxS & PFOS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01

PFAS in TCLP Extended						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	100	102	99	103	101
Surrogate $^{13}C_2$ *PFOA*	%	104	105	101	111	107
Extracted ISTD $^{13}C_3$ *PFBS*	%	97	101	102	93	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%	99	105	104	99	104
Extracted ISTD $^{13}C_4$ *PFOS*	%	105	107	110	107	107

PFAS in TCLP Extended						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	102	103	102	102	100
Extracted ISTD $^{13}C_3$ *PFPeA*	%	111	109	113	114	115
Extracted ISTD $^{13}C_2$ *PFHxA*	%	104	103	109	108	109
Extracted ISTD $^{13}C_4$ *PFHpA*	%	102	105	112	106	106
Extracted ISTD $^{13}C_4$ *PFOA*	%	110	109	115	104	104
Extracted ISTD $^{13}C_5$ *PFNA*	%	107	109	108	110	108
Extracted ISTD $^{13}C_2$ *PFDA*	%	108	113	119	116	112
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	107	108	114	117	106
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	114	112	117	118	115
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	66	83	82	79	78
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	93	93	94	98	86
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	113	98	115	106	96
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	116	103	116	116	117
Extracted ISTD $^{13}C_8$ *FOSA*	%	101	105	103	103	103
Extracted ISTD d_3 *N MeFOSA*	%	98	103	103	102	102
Extracted ISTD d_5 *N EtFOSA*	%	88	96	94	90	93
Extracted ISTD d_7 *N MeFOSE*	%	106	109	100	102	104
Extracted ISTD d_9 *N EtFOSE*	%	108	107	108	110	110
Extracted ISTD d_3 *N MeFOSAA*	%	111	105	119	115	105
Extracted ISTD d_5 *N EtFOSAA*	%	103	96	105	112	96
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

PFAS in TCLP Extended						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	101	104	100	111	100
Surrogate $^{13}C_2$ *PFOA*	%	104	109	100	107	103
Extracted ISTD $^{13}C_3$ *PFBS*	%	102	99	98	88	92
Extracted ISTD $^{18}O_2$ *PFHxS*	%	102	104	106	96	97
Extracted ISTD $^{13}C_4$ *PFOS*	%	108	107	107	90	90

PFAS in TCLP Extended						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	103	101	103	94	94
Extracted ISTD $^{13}C_3$ *PFPeA*	%	111	110	111	104	101
Extracted ISTD $^{13}C_2$ *PFHxA*	%	107	104	103	95	92
Extracted ISTD $^{13}C_4$ *PFHpA*	%	107	100	106	96	90
Extracted ISTD $^{13}C_4$ *PFOA*	%	110	106	106	86	85
Extracted ISTD $^{13}C_5$ *PFNA*	%	105	105	102	77	78
Extracted ISTD $^{13}C_2$ *PFDA*	%	116	110	110	85	82
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	114	113	110	83	85
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	124	122	117	82	82
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	75	78	78	54	50
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	98	91	94	73	69
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	108	105	100	48	56
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	124	112	115	51	54
Extracted ISTD $^{13}C_8$ *FOSA*	%	105	108	100	73	75
Extracted ISTD d_3 *N MeFOSA*	%	104	104	103	91	87
Extracted ISTD d_5 *N EtFOSA*	%	92	95	93	86	82
Extracted ISTD d_7 *N MeFOSE*	%	105	104	101	93	95
Extracted ISTD d_9 *N EtFOSE*	%	109	110	107	100	99
Extracted ISTD d_3 *N MeFOSAA*	%	115	112	107	60	60
Extracted ISTD d_5 *N EtFOSAA*	%	105	108	106	62	59
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

PFAS in TCLP Extended						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	0.03
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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 aci	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	99	101	104	95	111
Surrogate $^{13}C_2$ *PFOA*	%	106	101	106	106	109
Extracted ISTD $^{13}C_3$ *PFBS*	%	93	97	98	91	92
Extracted ISTD $^{18}O_2$ *PFHxS*	%	90	91	90	90	92
Extracted ISTD $^{13}C_4$ *PFOS*	%	86	92	92	94	86

PFAS in TCLP Extended						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	93	96	96	94	95
Extracted ISTD $^{13}C_3$ *PFPeA*	%	103	104	104	105	105
Extracted ISTD $^{13}C_2$ *PFHxA*	%	90	95	96	96	96
Extracted ISTD $^{13}C_4$ *PFHpA*	%	94	92	92	87	93
Extracted ISTD $^{13}C_4$ *PFOA*	%	86	89	89	85	85
Extracted ISTD $^{13}C_5$ *PFNA*	%	76	79	81	76	76
Extracted ISTD $^{13}C_2$ *PFDA*	%	84	86	82	86	88
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	82	81	84	86	88
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	82	83	81	81	85
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	53	52	56	54	55
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	73	70	76	68	65
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	53	53	51	53	53
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	49	54	54	50	61
Extracted ISTD $^{13}C_8$ *FOSA*	%	75	74	78	79	77
Extracted ISTD d_3 *N MeFOSA*	%	86	89	88	88	92
Extracted ISTD d_5 *N EtFOSA*	%	84	83	86	85	86
Extracted ISTD d_7 *N MeFOSE*	%	92	95	93	98	97
Extracted ISTD d_9 *N EtFOSE*	%	96	97	100	100	98
Extracted ISTD d_3 *N MeFOSAA*	%	62	58	61	58	60
Extracted ISTD d_5 *N EtFOSAA*	%	66	63	65	62	65
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	0.03
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	0.03
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	0.03

PFAS in TCLP Extended		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
Date prepared	-	11/01/2024
Date analysed	-	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02
Perfluorobutanoic acid	µg/L	<0.02
Perfluoropentanoic acid	µg/L	<0.02
Perfluorohexanoic acid	µg/L	<0.01
Perfluoroheptanoic acid	µg/L	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01
Perfluorononanoic acid	µg/L	<0.01
Perfluorodecanoic acid	µg/L	<0.02
Perfluoroundecanoic acid	µg/L	<0.02
Perfluorododecanoic acid	µg/L	<0.05
Perfluorotridecanoic acid	µg/L	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5
4:2 FTS	µg/L	<0.01
6:2 FTS	µg/L	<0.01
8:2 FTS	µg/L	<0.02
10:2 FTS	µg/L	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5
MePerfluorooctanesulf- amid oacetic aci	µg/L	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	98
Surrogate $^{13}C_2$ *PFOA*	%	105
Extracted ISTD $^{13}C_3$ *PFBS*	%	88
Extracted ISTD $^{18}O_2$ *PFHxS*	%	88
Extracted ISTD $^{13}C_4$ *PFOS*	%	93

PFAS in TCLP Extended		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	91
Extracted ISTD $^{13}C_3$ *PFPeA*	%	103
Extracted ISTD $^{13}C_2$ *PFHxA*	%	92
Extracted ISTD $^{13}C_4$ *PFHpA*	%	92
Extracted ISTD $^{13}C_4$ *PFOA*	%	86
Extracted ISTD $^{13}C_5$ *PFNA*	%	75
Extracted ISTD $^{13}C_2$ *PFDA*	%	89
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	85
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	86
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	53
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	70
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	54
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	60
Extracted ISTD $^{13}C_8$ *FOSA*	%	72
Extracted ISTD d_3 *N MeFOSA*	%	87
Extracted ISTD d_5 *N EtFOSA*	%	81
Extracted ISTD d_7 *N MeFOSE*	%	87
Extracted ISTD d_9 *N EtFOSE*	%	92
Extracted ISTD d_3 *N MeFOSAA*	%	63
Extracted ISTD d_5 *N EtFOSAA*	%	65
Total Positive PFHxS & PFOS	µg/L	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01
Total Positive PFAS	µg/L	<0.01

ASLP Preparation - Neutral						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	11.0	9.5	7.4	11.1	9.0

ASLP Preparation - Neutral						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	8.3	7.8	7.6	6.4	8.2

ASLP Preparation - Neutral						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	7.8	9.0	7.6	7.9	5.8

ASLP Preparation - Neutral						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	8.0	6.1	8.7	6.6	9.2

ASLP Preparation - Neutral						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of final Leachate	pH units	7.9	7.8	6.1	6.6	8.1

ASLP Preparation - Neutral		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
pH of final Leachate	pH units	6.6

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Arsenic	µg/L	<1	6	3	<1	9
Cadmium	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	µg/L	3	<1	5	5	2
Copper	µg/L	2	3	4	<1	4
Lead	µg/L	<1	1	5	<1	7
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	<1	<1	2	<1	2
Zinc	µg/L	3	4	5	3	9

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Arsenic	µg/L	<1	<1	<1	1	<1
Cadmium	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	µg/L	<1	5	3	5	<1
Copper	µg/L	2	2	4	1	2
Lead	µg/L	<1	4	2	3	<1
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	3	<1	4	<1	4
Zinc	µg/L	5	5	4	5	5

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Arsenic	µg/L	3	<1	<1	<1	<1
Cadmium	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	µg/L	6	<1	4	<1	<1
Copper	µg/L	4	3	<1	<1	<1
Lead	µg/L	7	<1	5	<1	<1
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	3	4	1	<1	<1
Zinc	µg/L	5	4	4	3	4

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Arsenic	µg/L	<1	<1	<1	<1	<1
Cadmium	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	µg/L	<1	<1	<1	3	<1
Copper	µg/L	1	<1	<1	1	<1
Lead	µg/L	<1	<1	<1	4	<1
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	<1	<1	1	<1	<1
Zinc	µg/L	4	2	4	3	3

Metals from Neutral Leaching Fluid ICPMS						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Arsenic	µg/L	<1	<1	<1	<1	2
Cadmium	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	µg/L	3	4	<1	<1	1
Copper	µg/L	<1	2	<1	<1	<1
Lead	µg/L	2	4	1	<1	<1
Mercury	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel	µg/L	<1	1	<1	<1	1
Zinc	µg/L	5	4	3	4	5

Metals from Neutral Leaching Fluid ICPMS		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
Date extracted	-	12/01/2024
Date analysed	-	12/01/2024
Arsenic	µg/L	1
Cadmium	µg/L	<0.1
Chromium	µg/L	2
Copper	µg/L	5
Lead	µg/L	2
Mercury	µg/L	<0.05
Nickel	µg/L	1
Zinc	µg/L	13

PAHs in Water Leach						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Naphthalene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthylene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Fluorene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Phenanthrene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)anthracene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)pyrene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(g,h,i)perylene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Surrogate p-Terphenyl-d_{14}	%	89	89	88	83	68

PAHs in Water Leach						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Naphthalene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthylene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Fluorene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Phenanthrene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)anthracene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)pyrene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(g,h,i)perylene in ASLP	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Surrogate p-Terphenyl-d_{14}	%	78	69	74	81	79

PAHs in Water Leach						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Naphthalene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	98	92	94	110	100

PAHs in Water Leach						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Naphthalene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	102	94	99	93	100

PAHs in Water Leach						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024	12/01/2024	12/01/2024	12/01/2024
Naphthalene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	90	103	99	99	98

PAHs in Water Leach		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
Date extracted	-	12/01/2024
Date analysed	-	12/01/2024
Naphthalene in ASLP	µg/L	<0.1
Acenaphthylene in ASLP	µg/L	<0.1
Acenaphthene in ASLP	µg/L	<0.1
Fluorene in ASLP	µg/L	<0.1
Phenanthrene in ASLP	µg/L	<0.1
Anthracene in ASLP	µg/L	<0.1
Fluoranthene in ASLP	µg/L	<0.1
Pyrene in ASLP	µg/L	<0.1
Benzo(a)anthracene in ASLP	µg/L	<0.1
Chrysene in ASLP	µg/L	<0.1
Benzo(bjk)fluoranthene in ASLP	µg/L	<0.2
Benzo(a)pyrene in ASLP	µg/L	<0.1
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	<0.1
Dibenzo(a,h)anthracene in ASLP	µg/L	<0.1
Benzo(g,h,i)perylene in ASLP	µg/L	<0.1
Surrogate p-Terphenyl-d_{14}	%	94

PFAS in ASLP Extended						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.02	<0.01	<0.01	0.02	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.21	0.02	<0.01	0.33	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	100	99	95	104	101
Surrogate $^{13}C_2$ PFOA	%	109	107	112	108	103
Extracted ISTD $^{13}C_3$ *PFBS*	%	97	95	99	103	98
Extracted ISTD $^{18}O_2$ *PFHxS*	%	94	92	98	90	99
Extracted ISTD $^{13}C_4$ *PFOS*	%	95	95	95	98	97

PFAS in ASLP Extended						
Our Reference		341181-1	341181-2	341181-3	341181-5	341181-6
Your Reference	UNITS	BH1	BH1	BH1	BH2	BH2
Depth		0.03-0.4	0.5-0.7	1.5-1.7	0.02-0.4	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	99	102	105	102	105
Extracted ISTD $^{13}C_3$ *PFPeA*	%	112	110	121	114	116
Extracted ISTD $^{13}C_2$ *PFHxA*	%	101	104	102	100	101
Extracted ISTD $^{13}C_4$ *PFHpA*	%	100	103	105	101	104
Extracted ISTD $^{13}C_4$ *PFOA*	%	93	94	95	97	99
Extracted ISTD $^{13}C_5$ *PFNA*	%	92	87	94	89	91
Extracted ISTD $^{13}C_2$ *PFDA*	%	96	94	100	100	95
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	98	95	96	98	95
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	93	94	95	95	93
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	60	63	63	64	61
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	99	85	92	88	85
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	70	66	73	76	78
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	72	68	70	71	71
Extracted ISTD $^{13}C_8$ *FOSA*	%	83	84	81	83	82
Extracted ISTD d_3 *N MeFOSA*	%	93	93	93	92	92
Extracted ISTD d_5 *N EtFOSA*	%	90	90	89	93	90
Extracted ISTD d_7 *N MeFOSE*	%	95	97	102	95	100
Extracted ISTD d_9 *N EtFOSE*	%	104	101	104	105	103
Extracted ISTD d_3 *N MeFOSAA*	%	74	78	77	78	79
Extracted ISTD d_5 *N EtFOSAA*	%	75	74	80	78	78
Total Positive PFHxS & PFOS	µg/L	0.23	0.02	<0.01	0.35	<0.01
Total Positive PFOS & PFOA	µg/L	0.21	0.02	<0.01	0.33	<0.01
Total Positive PFAS	µg/L	0.24	0.02	<0.01	0.35	<0.01

PFAS in ASLP Extended						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	92	96	97	99	98
Surrogate $^{13}C_2$ PFOA	%	101	105	107	110	109
Extracted ISTD $^{13}C_3$ *PFBS*	%	98	103	99	102	95
Extracted ISTD $^{18}O_2$ *PFHxS*	%	95	90	104	95	98
Extracted ISTD $^{13}C_4$ *PFOS*	%	105	96	99	97	92

PFAS in ASLP Extended						
Our Reference		341181-9	341181-10	341181-12	341181-13	341181-15
Your Reference	UNITS	BH3	BH3	BH4	BH4	BH5
Depth		0.01-0.1	0.5-0.95	0.02-0.3	0.5-0.95	0.03-0.2
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	107	104	106	102	104
Extracted ISTD $^{13}C_3$ *PFPeA*	%	121	119	119	119	113
Extracted ISTD $^{13}C_2$ *PFHxA*	%	107	103	109	105	103
Extracted ISTD $^{13}C_4$ *PFHpA*	%	107	103	103	101	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	99	96	100	98	95
Extracted ISTD $^{13}C_5$ *PFNA*	%	92	87	94	92	91
Extracted ISTD $^{13}C_2$ *PFDA*	%	95	97	101	98	96
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	97	94	97	98	92
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	97	97	95	92	94
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	63	67	64	61	62
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	91	92	92	92	91
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	73	72	78	66	69
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	69	64	75	77	73
Extracted ISTD $^{13}C_8$ *FOSA*	%	87	83	85	87	83
Extracted ISTD d_3 *N MeFOSA*	%	98	95	98	91	93
Extracted ISTD d_5 *N EtFOSA*	%	91	93	91	89	90
Extracted ISTD d_7 *N MeFOSE*	%	100	102	98	99	95
Extracted ISTD d_9 *N EtFOSE*	%	104	99	104	99	97
Extracted ISTD d_3 *N MeFOSAA*	%	77	76	81	81	79
Extracted ISTD d_5 *N EtFOSAA*	%	82	80	84	78	79
Total Positive PFHxS & PFOS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01

PFAS in ASLP Extended						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	106	92	102	99	99
Surrogate $^{13}C_2$ PFOA	%	105	104	107	107	111
Extracted ISTD $^{13}C_3$ *PFBS*	%	98	99	93	101	100
Extracted ISTD $^{18}O_2$ *PFHxS*	%	96	94	94	103	107
Extracted ISTD $^{13}C_4$ *PFOS*	%	90	96	95	111	110

PFAS in ASLP Extended						
Our Reference		341181-16	341181-21	341181-22	341181-25	341181-26
Your Reference	UNITS	BH5	BH6	BH6	BH7	BH7
Depth		0.4-0.5	0.025-0.4	0.5-0.95	0.05-0.1	0.3-0.5
Date Sampled		03/01/2024	03/01/2024	03/01/2024	05/01/2024	05/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	103	103	100	107	109
Extracted ISTD $^{13}C_3$ *PFPeA*	%	117	110	116	116	118
Extracted ISTD $^{13}C_2$ *PFHxA*	%	102	105	107	110	110
Extracted ISTD $^{13}C_4$ *PFHpA*	%	107	112	107	106	111
Extracted ISTD $^{13}C_4$ *PFOA*	%	100	97	98	111	112
Extracted ISTD $^{13}C_5$ *PFNA*	%	90	89	90	110	108
Extracted ISTD $^{13}C_2$ *PFDA*	%	96	90	89	116	120
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	92	95	91	104	113
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	91	89	92	123	122
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	58	60	64	77	80
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	106	92	86	105	103
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	70	76	72	121	127
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	75	77	73	124	129
Extracted ISTD $^{13}C_8$ *FOSA*	%	82	83	85	103	107
Extracted ISTD d_3 *N MeFOSA*	%	92	92	94	105	106
Extracted ISTD d_5 *N EtFOSA*	%	87	91	92	95	95
Extracted ISTD d_7 *N MeFOSE*	%	93	91	89	110	114
Extracted ISTD d_9 *N EtFOSE*	%	92	94	95	108	111
Extracted ISTD d_3 *N MeFOSAA*	%	83	81	77	124	126
Extracted ISTD d_5 *N EtFOSAA*	%	78	77	77	118	120
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

PFAS in ASLP Extended						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	99	102	96	104	98
Surrogate $^{13}C_2$ PFOA	%	102	104	103	108	106
Extracted ISTD $^{13}C_3$ *PFBS*	%	99	102	104	103	105
Extracted ISTD $^{18}O_2$ *PFHxS*	%	110	97	108	103	100
Extracted ISTD $^{13}C_4$ *PFOS*	%	111	109	115	107	111

PFAS in ASLP Extended						
Our Reference		341181-29	341181-30	341181-33	341181-36	341181-38
Your Reference	UNITS	BH11	BH11	BH12	BH12	BH19
Depth		0.03-0.3	0.5-0.7	0.05-0.23	1.7-1.95	0.02-0.4
Date Sampled		03/01/2024	03/01/2024	04/01/2024	04/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	108	109	109	104	109
Extracted ISTD $^{13}C_3$ *PFPeA*	%	115	118	118	114	119
Extracted ISTD $^{13}C_2$ *PFHxA*	%	109	110	110	108	110
Extracted ISTD $^{13}C_4$ *PFHpA*	%	109	103	113	109	107
Extracted ISTD $^{13}C_4$ *PFOA*	%	114	115	117	116	114
Extracted ISTD $^{13}C_5$ *PFNA*	%	109	112	113	105	111
Extracted ISTD $^{13}C_2$ *PFDA*	%	118	118	116	122	116
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	109	112	108	107	111
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	118	125	121	122	117
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	74	81	81	71	77
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	100	98	105	102	97
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	118	121	121	118	121
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	121	123	123	136	124
Extracted ISTD $^{13}C_8$ *FOSA*	%	108	103	103	102	106
Extracted ISTD d_3 *N MeFOSA*	%	103	106	109	106	105
Extracted ISTD d_5 *N EtFOSA*	%	97	101	95	94	98
Extracted ISTD d_7 *N MeFOSE*	%	107	111	107	104	108
Extracted ISTD d_9 *N EtFOSE*	%	112	113	111	114	111
Extracted ISTD d_3 *N MeFOSAA*	%	117	120	122	132	122
Extracted ISTD d_5 *N EtFOSAA*	%	110	111	114	119	113
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

PFAS in ASLP Extended						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Date analysed	-	11/01/2024	11/01/2024	11/01/2024	11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	0.03
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
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	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ PFOS	%	99	102	101	108	107
Surrogate $^{13}C_2$ PFOA	%	110	103	103	103	108
Extracted ISTD $^{13}C_3$ *PFBS*	%	100	101	99	101	106
Extracted ISTD $^{18}O_2$ *PFHxS*	%	105	107	102	100	105
Extracted ISTD $^{13}C_4$ *PFOS*	%	111	103	103	103	104

PFAS in ASLP Extended						
Our Reference		341181-39	341181-42	341181-44	341181-47	341181-48
Your Reference	UNITS	BH19	BH21	BH21	BH23	BH23
Depth		0.5-0.95	0.04-0.15	0.7-0.95	0.02-0.3	0.5-0.95
Date Sampled		03/01/2024	03/01/2024	03/01/2024	03/01/2024	03/01/2024
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	108	106	103	106	106
Extracted ISTD $^{13}C_3$ *PFPeA*	%	118	116	115	114	120
Extracted ISTD $^{13}C_2$ *PFHxA*	%	109	103	107	109	106
Extracted ISTD $^{13}C_4$ *PFHpA*	%	111	109	117	106	115
Extracted ISTD $^{13}C_4$ *PFOA*	%	110	116	113	111	113
Extracted ISTD $^{13}C_5$ *PFNA*	%	106	109	108	104	111
Extracted ISTD $^{13}C_2$ *PFDA*	%	112	116	114	107	114
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	100	103	112	106	109
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	120	116	115	113	116
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	78	78	73	76	72
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	102	97	100	102	105
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	123	117	116	115	121
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	127	123	128	117	127
Extracted ISTD $^{13}C_8$ *FOSA*	%	105	107	101	106	103
Extracted ISTD d_3 *N MeFOSA*	%	103	104	105	103	104
Extracted ISTD d_5 *N EtFOSA*	%	98	99	92	95	94
Extracted ISTD d_7 *N MeFOSE*	%	104	108	101	102	100
Extracted ISTD d_9 *N EtFOSE*	%	108	102	100	101	100
Extracted ISTD d_3 *N MeFOSAA*	%	121	131	123	126	125
Extracted ISTD d_5 *N EtFOSAA*	%	111	108	117	109	115
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01	<0.01	0.03
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01	<0.01	0.03
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01	<0.01	0.03

PFAS in ASLP Extended		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
Date prepared	-	11/01/2024
Date analysed	-	11/01/2024
Perfluorobutanesulfonic acid	µg/L	0.02
Perfluoropentanesulfonic acid	µg/L	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02
Perfluorobutanoic acid	µg/L	<0.02
Perfluoropentanoic acid	µg/L	<0.02
Perfluorohexanoic acid	µg/L	<0.01
Perfluoroheptanoic acid	µg/L	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01
Perfluorononanoic acid	µg/L	<0.01
Perfluorodecanoic acid	µg/L	<0.02
Perfluoroundecanoic acid	µg/L	<0.02
Perfluorododecanoic acid	µg/L	<0.05
Perfluorotridecanoic acid	µg/L	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5
4:2 FTS	µg/L	<0.01
6:2 FTS	µg/L	<0.01
8:2 FTS	µg/L	<0.02
10:2 FTS	µg/L	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.02
EtPerfluorooctanesulf-amid oacetic acid	µg/L	<0.02
Surrogate $^{13}C_8$ PFOS	%	98
Surrogate $^{13}C_2$ PFOA	%	101
Extracted ISTD $^{13}C_3$ *PFBS*	%	101
Extracted ISTD $^{18}O_2$ *PFHxS*	%	100
Extracted ISTD $^{13}C_4$ *PFOS*	%	103

PFAS in ASLP Extended		
Our Reference		341181-50
Your Reference	UNITS	BH35
Depth		0-0.15
Date Sampled		03/01/2024
Type of sample		Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	102
Extracted ISTD $^{13}C_3$ *PFPeA*	%	116
Extracted ISTD $^{13}C_2$ *PFHxA*	%	107
Extracted ISTD $^{13}C_4$ *PFHpA*	%	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	110
Extracted ISTD $^{13}C_5$ *PFNA*	%	112
Extracted ISTD $^{13}C_2$ *PFDA*	%	107
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	104
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	113
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	71
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	99
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	120
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	123
Extracted ISTD $^{13}C_8$ *FOSA*	%	98
Extracted ISTD d_3 *N MeFOSA*	%	104
Extracted ISTD d_5 *N EtFOSA*	%	93
Extracted ISTD d_7 *N MeFOSE*	%	99
Extracted ISTD d_9 *N EtFOSE*	%	94
Extracted ISTD d_3 *N MeFOSAA*	%	122
Extracted ISTD d_5 *N EtFOSAA*	%	115
Total Positive PFHxS & PFOS	µg/L	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01
Total Positive PFAS	µg/L	0.02

Asbestos ID - materials			
Our Reference		341181-54	341181-55
Your Reference	UNITS	FCF1-BH2	FCF1-SURFACE
Depth		0.5-1.5	-
Date Sampled		03/01/2024	03/01/2024
Type of sample		Material	Material
Date analysed	-	15/01/2024	15/01/2024
Mass / Dimension of Sample	-	17.03g	54.58g
Sample Description	-	Brown fibre cement material	Grey fibre cement material
Asbestos ID in materials	-	No asbestos detected Organic fibres detected	Chrysotile asbestos detected
Trace Analysis	-	No asbestos detected	[NT]

vTRH(C6-C10)/BTEXN in Water			
Our Reference	UNITS	341181-56	341181-57
Your Reference		FR-SP-SPT	FR-S4-SA
Depth		-	-
Date Sampled		03/01/2024	03/01/2024
Type of sample		Water	Water
Date extracted	-	10/01/2024	10/01/2024
Date analysed	-	11/01/2024	11/01/2024
TRH C_6 - C_9	µg/L	56	46
TRH C_6 - C_{10}	µg/L	57	58
TRH C_6 - C_{10} less BTEX (F1)	µg/L	57	58
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	%	102	102
Surrogate Toluene-d8	%	95	101
Surrogate 4-Bromofluorobenzene	%	96	119

svTRH (C10-C40) in Water			
Our Reference		341181-56	341181-57
Your Reference	UNITS	FR-SP-SPT	FR-S4-SA
Depth		-	-
Date Sampled		03/01/2024	03/01/2024
Type of sample		Water	Water
Date extracted	-	16/01/2024	16/01/2024
Date analysed	-	16/01/2024	16/01/2024
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	%	72	69

PAHs in Water			
Our Reference		341181-56	341181-57
Your Reference	UNITS	FR-SP-SPT	FR-S4-SA
Depth		-	-
Date Sampled		03/01/2024	03/01/2024
Type of sample		Water	Water
Date extracted	-	16/01/2024	16/01/2024
Date analysed	-	16/01/2024	16/01/2024
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	%	94	88

Metals in Waters - Acid extractable			
Our Reference		341181-56	341181-57
Your Reference	UNITS	FR-SP-SPT	FR-S4-SA
Depth		-	-
Date Sampled		03/01/2024	03/01/2024
Type of sample		Water	Water
Date prepared	-	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024
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	0.1	0.08
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	<0.02	<0.02

PFAS in Water LOW LEVEL Short			
Our Reference		341181-56	341181-57
Your Reference	UNITS	FR-SP-SPT	FR-S4-SA
Depth		-	-
Date Sampled		03/01/2024	03/01/2024
Type of sample		Water	Water
Date prepared	-	10/01/2024	10/01/2024
Date analysed	-	10/01/2024	10/01/2024
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	<0.001	<0.001
Perfluorooctanoic acid PFOA	µg/L	<0.001	<0.001
6:2 FTS	µg/L	<0.001	<0.001
8:2 FTS	µg/L	<0.002	<0.002
Surrogate $^{13}C_8$ *PFOS*	%	104	104
Surrogate $^{13}C_2$ *PFOA*	%	102	104
Extracted ISTD $^{18}O_2$ *PFHxS*	%	79	81
Extracted ISTD $^{13}C_4$ *PFOS*	%	84	87
Extracted ISTD $^{13}C_4$ *PFOA*	%	102	101
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	151	136
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	#	#
Total Positive PFHxS & PFOS	µg/L	<0.001	<0.001
Total Positive PFOA & PFOS	µg/L	<0.001	<0.001
Total Positive PFAS	µg/L	<0.001	<0.001

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) **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-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
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.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-021	Determination of Mercury by Cold Vapour AAS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Metals-022	Determination of various metals by ICP-MS following leaching using ultra high purity water, i.e. reagent water = CLASS 1, 2 & 4 from AS 4439.3.
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	Leachates are extracted 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. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.

Method ID	Methodology Summary
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-022/025 ASLP	ASLP Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.
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.
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 5.4 Table B-15 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.

Method ID	Methodology Summary
Org-029A	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 5.4Table B-15 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. TOPA analyses use a pre-spiked, labelled internal standard PFAS precursor to assess the oxidation efficiency. The efficiency of removal by oxidation is recorded in the report. Additionally, dilutions applied (if required) to ensure sufficient precursor oxidation are also recorded and are available on request. 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	341181-2
Date extracted	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			11/01/2024	1	11/01/2024	11/01/2024		11/01/2024	11/01/2024
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	94	90
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	94	90
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	89	85
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	93	87
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	94	91
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	97	94
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	100	96
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	92	1	113	96	16	94	86

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	341181-38
Date extracted	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			[NT]	15	11/01/2024	11/01/2024		12/01/2024	11/01/2024
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	15	<25	<25	0	99	84
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	15	<25	<25	0	99	84
Benzene	mg/kg	0.2	Org-023	[NT]	15	<0.2	<0.2	0	93	78
Toluene	mg/kg	0.5	Org-023	[NT]	15	<0.5	<0.5	0	96	79
Ethylbenzene	mg/kg	1	Org-023	[NT]	15	<1	<1	0	100	85
m+p-xylene	mg/kg	2	Org-023	[NT]	15	<2	<2	0	103	88
o-Xylene	mg/kg	1	Org-023	[NT]	15	<1	<1	0	106	91
Naphthalene	mg/kg	1	Org-023	[NT]	15	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	15	88	90	2	116	85

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]	33	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	11/01/2024	11/01/2024		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	33	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	33	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	33	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	33	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	33	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	33	82	90	9	[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]	51	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	51	11/01/2024	11/01/2024		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	51	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	51	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	51	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	51	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	51	95	84	12	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	341181-2
Date extracted	-			11/01/2024	1	10/01/2024	10/01/2024		11/01/2024	10/01/2024
Date analysed	-			13/01/2024	1	10/01/2024	10/01/2024		13/01/2024	10/01/2024
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	138	82
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	131	84
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	160	150	6	114	92
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	138	82
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	190	160	17	131	84
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	240	240	0	114	92
Surrogate o-Terphenyl	%		Org-020	87	1	71	70	1	76	66

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	341181-38
Date extracted	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			[NT]	15	13/01/2024	10/01/2024		10/01/2024	10/01/2024
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	15	<50	<50	0	96	92
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	15	<100	<100	0	88	97
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	15	<100	<100	0	86	#
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	15	<50	<50	0	96	92
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	15	<100	<100	0	88	97
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	15	<100	<100	0	86	#
Surrogate o-Terphenyl	%		Org-020	[NT]	15	62	67	8	119	91

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	33	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	33	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	33	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	33	77	78	1	[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]	51	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	51	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	51	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	51	75	75	0	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	341181-2
Date extracted	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	123	116
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	109
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	121	112
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.1	67	125	108
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	0.8	0.5	46	122	114
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.8	0.5	46	119	113
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.4	0.2	67	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	0.3	0.2	40	116	109
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	0.5	0.4	22	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	0.3	0.06	133	110	116
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.2	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	105	1	112	110	2	100	104

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	341181-38
Date extracted	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	127	120
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	122	114
Fluorene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	123	118
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	132	121
Anthracene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	129	116
Pyrene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	126	120
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	121	111
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	15	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	15	<0.05	<0.05	0	112	124
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	15	106	100	6	104	102

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	33	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	33	100	104	4	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	51	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	51	102	102	0	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	341181-2
Date extracted	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	119	114
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	135	128
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	121	117
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	92
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	116	114
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	106
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	114
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	104
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	113	109
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	104
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	99	1	101	102	1	97	99

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	341181-38
Date extracted	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	124	117
HCB	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	140	133
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	128	103
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	109	104
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	125	125
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	118	116
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	130	122
Endrin	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	120	122
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	120	120
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	110	98
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	15	97	97	0	101	102

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	33	103	106	3	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	51	105	102	3	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	341181-2
Date extracted	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	123	112
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	127	118
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	113	121
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	126	124
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	126	120
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	109	115
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	100
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	99	1	101	102	1	97	99

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	341181-38
Date extracted	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	116	127
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	134	129
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	127	135
Malathion	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	112	132
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	133	133
Fenthion	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	123	125
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	106	130
Phosalone	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	15	97	97	0	101	102

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	33	103	106	3	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	51	105	102	3	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	341181-2
Date extracted	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	117	102
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	100	1	103	103	0	98	98

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	341181-38
Date extracted	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	15	<0.1	<0.1	0	121	102
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	15	98	99	1	101	98

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	33	101	102	1	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	51	100	100	0	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	341181-2
Date prepared	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	106	104
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	96	88
Chromium	mg/kg	1	Metals-020	<1	1	15	11	31	101	95
Copper	mg/kg	1	Metals-020	<1	1	37	38	3	102	109
Lead	mg/kg	1	Metals-020	<1	1	15	12	22	108	91
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	120	126
Nickel	mg/kg	1	Metals-020	<1	1	14	9	43	99	91
Zinc	mg/kg	1	Metals-020	<1	1	49	38	25	113	86

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	341181-38
Date prepared	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Arsenic	mg/kg	4	Metals-020	[NT]	15	<4	<4	0	107	97
Cadmium	mg/kg	0.4	Metals-020	[NT]	15	<0.4	<0.4	0	99	79
Chromium	mg/kg	1	Metals-020	[NT]	15	10	11	10	102	89
Copper	mg/kg	1	Metals-020	[NT]	15	60	71	17	105	121
Lead	mg/kg	1	Metals-020	[NT]	15	3	3	0	104	84
Mercury	mg/kg	0.1	Metals-021	[NT]	15	<0.1	<0.1	0	125	113
Nickel	mg/kg	1	Metals-020	[NT]	15	86	100	15	101	90
Zinc	mg/kg	1	Metals-020	[NT]	15	39	46	16	101	77

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	33	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	33	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	33	12	12	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	33	51	73	35	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	33	2	3	40	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	33	57	67	16	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	33	33	39	17	[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]	51	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	51	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	51	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	51	10	10	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	51	74	69	7	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	51	3	3	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	51	100	93	7	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	51	43	43	0	[NT]	[NT]

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	341181-2
Date extracted	-			11/01/2024	1	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Date analysed	-			11/01/2024	1	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Arsenic	mg/L	0.05	Metals-020	<0.05	1	<0.05	<0.05	0	113	106
Cadmium	mg/L	0.01	Metals-020	<0.01	1	<0.01	<0.01	0	103	92
Chromium	mg/L	0.01	Metals-020	<0.01	1	<0.01	<0.01	0	100	94
Copper	mg/L	0.01	Metals-020	<0.01	1	0.01	0.01	0	108	105
Lead	mg/L	0.03	Metals-020	<0.03	1	<0.03	<0.03	0	101	96
Mercury	mg/L	0.0005	Metals-021	<0.0005	1	<0.0005	<0.0005	0	100	75
Nickel	mg/L	0.02	Metals-020	<0.02	1	<0.02	<0.02	0	99	91
Zinc	mg/L	0.02	Metals-020	<0.02	1	<0.02	0.03	40	103	92

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-38
Date extracted	-			[NT]	15	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Date analysed	-			[NT]	15	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Arsenic	mg/L	0.05	Metals-020	[NT]	15	<0.05	<0.05	0	109	110
Cadmium	mg/L	0.01	Metals-020	[NT]	15	<0.01	<0.01	0	97	94
Chromium	mg/L	0.01	Metals-020	[NT]	15	<0.01	<0.01	0	96	97
Copper	mg/L	0.01	Metals-020	[NT]	15	0.02	0.02	0	107	111
Lead	mg/L	0.03	Metals-020	[NT]	15	<0.03	<0.03	0	95	97
Mercury	mg/L	0.0005	Metals-021	[NT]	15	<0.0005	<0.0005	0	80	79
Nickel	mg/L	0.02	Metals-020	[NT]	15	0.30	0.30	0	94	93
Zinc	mg/L	0.02	Metals-020	[NT]	15	0.03	0.03	0	96	94

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	33	11/01/2024	11/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	11/01/2024	11/01/2024		[NT]	[NT]
Arsenic	mg/L	0.05	Metals-020	[NT]	33	<0.05	<0.05	0	[NT]	[NT]
Cadmium	mg/L	0.01	Metals-020	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Chromium	mg/L	0.01	Metals-020	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Copper	mg/L	0.01	Metals-020	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Lead	mg/L	0.03	Metals-020	[NT]	33	<0.03	<0.03	0	[NT]	[NT]
Mercury	mg/L	0.0005	Metals-021	[NT]	33	<0.0005	<0.0005	0	[NT]	[NT]
Nickel	mg/L	0.02	Metals-020	[NT]	33	0.1	0.1	0	[NT]	[NT]
Zinc	mg/L	0.02	Metals-020	[NT]	33	<0.02	<0.02	0	[NT]	[NT]

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	341181-2
Date extracted	-			15/01/2024	1	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Date analysed	-			16/01/2024	1	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	96	75
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	88	77
Fluorene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	89	78
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	93	80
Anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	87	76
Pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	80	70
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	79	69
Benzo(bjk)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	<0.0002	1	<0.0002	<0.0002	0	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	85	85
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	<0.0001	1	<0.0001	<0.0001	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	79	1	93	98	5	87	72

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-38
Date extracted	-			[NT]	15	11/01/2024	11/01/2024		15/01/2024	11/01/2024
Date analysed	-			[NT]	15	11/01/2024	11/01/2024		16/01/2024	11/01/2024
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	105	87
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	95	86
Fluorene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	103	91
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	94	92
Anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	93	88
Pyrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	95	81
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	87	79
Benzo(bjk)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	[NT]	15	<0.0002	<0.0002	0	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	135	89
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	[NT]	15	<0.0001	<0.0001	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	15	89	82	8	94	87

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	33	11/01/2024	11/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	11/01/2024	11/01/2024		[NT]	[NT]
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Fluorene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Pyrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	[NT]	33	<0.0002	<0.0002	0	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	[NT]	33	<0.0001	<0.0001	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	33	101	93	8	[NT]	[NT]

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	48	12/01/2024	12/01/2024		[NT]	[NT]
Date analysed	-			[NT]	48	12/01/2024	12/01/2024		[NT]	[NT]
Naphthalene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Acenaphthylene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Fluorene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Phenanthrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Pyrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Chrysene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.0002	Org-022/025	[NT]	48	<0.0002	<0.0002	0	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.0001	Org-022/025	[NT]	48	<0.0001	<0.0001	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	48	97	93	4	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	341181-2
Date prepared	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			10/01/2024	1	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	107	100
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	0.1	0.1	0	128	114
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	0.5	0.5	0	114	105
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	123	109
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	5.1	4.8	6	110	106
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	89	90
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	112	111
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	105	103
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	1	0.2	0.2	0	106	109
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	107	113
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	0.2	0.2	0	108	106
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	106	106
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	102	99
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	102	105
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	101	107
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	111	121
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	1	<5	<5	0	107	106
4:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	106	106
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	106	106
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	98	101
10:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	94	115
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	110	110
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	114	112
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	1	<1	<1	0	107	111
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	1	<1	<1	0	104	103
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	1	<5	<5	0	103	102
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	107	109
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	112	110
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	100	1	98	98	0	105	103
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	101	1	100	101	1	98	96

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	341181-2
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	101	1	94	101	7	100	98
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	95	1	98	95	3	91	94
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	105	1	106	104	2	103	98
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	104	1	99	101	2	103	100
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	112	1	107	104	3	107	107
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	108	1	102	102	0	108	98
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	105	1	101	102	1	101	93
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	107	1	107	110	3	105	100
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	110	1	117	115	2	106	101
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	107	1	125	123	2	110	105
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	111	1	128	123	4	111	104
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	111	1	133	130	2	112	105
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	108	1	89	91	2	108	99
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	100	1	103	100	3	106	95
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	108	1	123	128	4	103	98
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	114	1	149	159	6	120	107
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	102	1	98	99	1	101	98
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	104	1	104	102	2	105	100
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	108	1	101	104	3	104	98
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	102	1	99	99	0	104	96

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	341181-2
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	111	1	100	101	1	107	99
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	109	1	112	118	5	108	104
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	109	1	125	138	10	106	103

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	341181-38
Date prepared	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Date analysed	-			[NT]	15	10/01/2024	10/01/2024		10/01/2024	10/01/2024
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	104	111
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	112	112
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	111	118
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	114	112
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	102	105
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	[NT]	15	<0.2	<0.2	0	107	101
Perfluorobutanoic acid	µg/kg	0.2	Org-029	[NT]	15	<0.2	<0.2	0	115	110
Perfluoropentanoic acid	µg/kg	0.2	Org-029	[NT]	15	<0.2	<0.2	0	106	110
Perfluorohexanoic acid	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	110	105
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	102	100
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	110	111
Perfluorononanoic acid	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	113	110
Perfluorodecanoic acid	µg/kg	0.5	Org-029	[NT]	15	<0.5	<0.5	0	100	98
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	[NT]	15	<0.5	<0.5	0	118	105
Perfluorododecanoic acid	µg/kg	0.5	Org-029	[NT]	15	<0.5	<0.5	0	102	98
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	[NT]	15	<0.5	<0.5	0	104	102
Perfluorotetradecanoic acid	µg/kg	5	Org-029	[NT]	15	<5	<5	0	111	109
4:2 FTS	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	101	98
6:2 FTS	µg/kg	0.1	Org-029	[NT]	15	<0.1	<0.1	0	102	98
8:2 FTS	µg/kg	0.2	Org-029	[NT]	15	<0.2	<0.2	0	102	102
10:2 FTS	µg/kg	0.2	Org-029	[NT]	15	<0.2	<0.2	0	96	138
Perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	15	<1	<1	0	110	119
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	15	<1	<1	0	120	112
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	[NT]	15	<1	<1	0	112	113
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	[NT]	15	<1	<1	0	109	99
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	[NT]	15	<5	<5	0	110	103
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	[NT]	15	<0.2	<0.2	0	113	112
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	[NT]	15	<0.2	<0.2	0	98	104
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	15	106	101	5	100	103
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	15	98	101	3	100	103

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	341181-38
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	[NT]	15	98	98	0	101	97
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	[NT]	15	96	98	2	105	100
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	[NT]	15	103	102	1	106	106
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	[NT]	15	102	100	2	105	102
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	[NT]	15	109	108	1	114	109
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	[NT]	15	104	104	0	107	107
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	[NT]	15	97	97	0	110	107
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	[NT]	15	106	105	1	109	107
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	[NT]	15	106	104	2	111	110
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	[NT]	15	111	109	2	121	122
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	[NT]	15	106	103	3	101	128
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	[NT]	15	119	110	8	125	137
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	[NT]	15	101	104	3	111	117
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	[NT]	15	104	99	5	112	107
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	[NT]	15	112	116	4	114	122
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	[NT]	15	111	115	4	136	151
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	[NT]	15	103	105	2	100	99
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	[NT]	15	110	102	8	103	106
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	[NT]	15	104	104	0	101	103
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	[NT]	15	105	104	1	100	103

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	341181-38
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	15	113	111	2	102	106
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	15	106	103	3	130	134
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	15	107	104	3	122	155

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	10/01/2024	10/01/2024		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	[NT]	33	<0.5	<0.5	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	[NT]	33	<0.5	<0.5	0	[NT]	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	[NT]	33	<0.5	<0.5	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	[NT]	33	<0.5	<0.5	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	[NT]	33	<5	<5	0	[NT]	[NT]
4:2 FTS	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
6:2 FTS	µg/kg	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
8:2 FTS	µg/kg	0.2	Org-029	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
10:2 FTS	µg/kg	0.2	Org-029	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	33	<1	<1	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	33	<1	<1	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	[NT]	33	<1	<1	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	[NT]	33	<1	<1	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	[NT]	33	<5	<5	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	33	103	99	4	[NT]	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	33	107	104	3	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	[NT]	33	103	100	3	[NT]	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	[NT]	33	104	109	5	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	[NT]	33	102	103	1	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	[NT]	33	105	106	1	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	[NT]	33	115	115	0	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	[NT]	33	105	105	0	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	[NT]	33	103	101	2	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	[NT]	33	101	105	4	[NT]	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	[NT]	33	105	110	5	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	[NT]	33	109	110	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	[NT]	33	112	113	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	[NT]	33	114	117	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	[NT]	33	105	107	2	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	[NT]	33	104	105	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	[NT]	33	103	108	5	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	[NT]	33	108	112	4	[NT]	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	[NT]	33	104	105	1	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	[NT]	33	111	106	5	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	[NT]	33	105	105	0	[NT]	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	[NT]	33	102	111	8	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	33	104	104	0	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	33	108	113	5	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	33	102	105	3	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
Date analysed	-			[NT]	51	10/01/2024	10/01/2024		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	[NT]	51	<0.5	<0.5	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	[NT]	51	<0.5	<0.5	0	[NT]	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	[NT]	51	<0.5	<0.5	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	[NT]	51	<0.5	<0.5	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	[NT]	51	<5	<5	0	[NT]	[NT]
4:2 FTS	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
6:2 FTS	µg/kg	0.1	Org-029	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
8:2 FTS	µg/kg	0.2	Org-029	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
10:2 FTS	µg/kg	0.2	Org-029	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	51	<1	<1	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	51	<1	<1	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	[NT]	51	<1	<1	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	[NT]	51	<1	<1	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	[NT]	51	<5	<5	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	51	100	98	2	[NT]	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	51	102	104	2	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	[NT]	51	102	107	5	[NT]	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	[NT]	51	104	110	6	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	[NT]	51	107	116	8	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	[NT]	51	102	111	8	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	[NT]	51	108	117	8	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	[NT]	51	100	117	16	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	[NT]	51	100	111	10	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	[NT]	51	104	111	7	[NT]	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	[NT]	51	108	119	10	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	[NT]	51	111	124	11	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	[NT]	51	109	113	4	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	[NT]	51	118	129	9	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	[NT]	51	108	117	8	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	[NT]	51	107	113	5	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	[NT]	51	110	127	14	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	[NT]	51	115	127	10	[NT]	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	[NT]	51	106	117	10	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	[NT]	51	102	111	8	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	[NT]	51	103	113	9	[NT]	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	[NT]	51	103	114	10	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	51	104	115	10	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	51	110	129	16	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	51	102	115	12	[NT]	[NT]

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	341181-2
Date prepared	-			11/01/2024	1	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Date analysed	-			11/01/2024	1	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	115	107
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	119	117
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	1	0.03	0.02	40	94	108
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	107	119
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	1	0.21	0.20	5	84	108
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	112	91
Perfluorobutanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	119	118
Perfluoropentanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	114	107
Perfluorohexanoic acid	µg/L	0.01	Org-029	<0.01	1	0.01	<0.01	0	99	111
Perfluoroheptanoic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	115	104
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	106	98
Perfluorononanoic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	117	111
Perfluorodecanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	94	105
Perfluoroundecanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	110	103
Perfluorododecanoic acid	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	98	98
Perfluorotridecanoic acid	µg/L	0.1	Org-029	<0.1	1	<0.1	<0.1	0	104	96
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	<0.5	1	<0.5	<0.5	0	115	113
4:2 FTS	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	100	104
6:2 FTS	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	99	98
8:2 FTS	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	108	104
10:2 FTS	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	118	119
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	<0.1	1	<0.1	<0.1	0	117	122
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	115	111
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	<0.1	1	<0.1	<0.1	0	114	121
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	100	89
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	1	<0.5	<0.5	0	106	105
MePerfluorooctanesulf- amid oacetic aci	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	117	128
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	112	110
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	102	1	103	101	2	94	108
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	106	1	102	106	4	103	104

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	341181-2
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	97	1	97	98	1	90	100
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	98	1	97	100	3	95	101
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	99	1	103	106	3	92	107
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	99	1	103	104	1	90	99
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	106	1	115	118	3	98	109
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	104	1	105	106	1	95	106
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	106	1	104	110	6	94	110
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	105	1	112	114	2	87	109
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	104	1	102	105	3	75	106
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	104	1	115	121	5	87	114
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	106	1	104	123	17	81	116
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	108	1	118	131	10	82	120
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	72	1	73	72	1	53	87
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	89	1	99	104	5	70	96
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	94	1	116	124	7	51	102
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	102	1	123	133	8	48	119
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	102	1	97	96	1	73	102
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	101	1	104	109	5	86	101
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	90	1	95	96	1	83	94
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	91	1	93	102	9	92	108

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	341181-2
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	97	1	101	109	8	94	106
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	103	1	116	132	13	61	112
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	98	1	104	121	15	60	107

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-38
Date prepared	-			[NT]	15	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Date analysed	-			[NT]	15	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	110	94
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	124	133
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	111	100
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	123	122
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	112	87
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	[NT]	15	<0.02	<0.02	0	97	108
Perfluorobutanoic acid	µg/L	0.02	Org-029	[NT]	15	<0.02	<0.02	0	119	116
Perfluoropentanoic acid	µg/L	0.02	Org-029	[NT]	15	<0.02	<0.02	0	106	106
Perfluorohexanoic acid	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	111	100
Perfluoroheptanoic acid	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	108	104
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	100	105
Perfluorononanoic acid	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	115	109
Perfluorodecanoic acid	µg/L	0.02	Org-029	[NT]	15	<0.02	<0.02	0	102	99
Perfluoroundecanoic acid	µg/L	0.02	Org-029	[NT]	15	<0.02	<0.02	0	109	110
Perfluorododecanoic acid	µg/L	0.05	Org-029	[NT]	15	<0.05	<0.05	0	97	99
Perfluorotridecanoic acid	µg/L	0.1	Org-029	[NT]	15	<0.1	<0.1	0	98	100
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	[NT]	15	<0.5	<0.5	0	115	112
4:2 FTS	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	109	109
6:2 FTS	µg/L	0.01	Org-029	[NT]	15	<0.01	<0.01	0	95	100
8:2 FTS	µg/L	0.02	Org-029	[NT]	15	<0.02	<0.02	0	110	98
10:2 FTS	µg/L	0.02	Org-029	[NT]	15	<0.02	<0.02	0	117	106
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	[NT]	15	<0.1	<0.1	0	122	123
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	[NT]	15	<0.05	<0.05	0	116	116
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	[NT]	15	<0.1	<0.1	0	118	114
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	[NT]	15	<0.05	<0.05	0	100	95
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	[NT]	15	<0.5	<0.5	0	105	98
MePerfluorooctanesulf- amid oacetic aci	µg/L	0.02	Org-029	[NT]	15	<0.02	<0.02	0	125	126
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	[NT]	15	<0.02	<0.02	0	117	110
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	15	101	104	3	103	99
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	15	111	109	2	104	103

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-38
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	[NT]	15	97	97	0	95	101
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	[NT]	15	102	105	3	95	89
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	[NT]	15	110	104	6	100	93
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	[NT]	15	106	102	4	98	94
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	[NT]	15	116	112	4	104	105
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	[NT]	15	110	106	4	102	95
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	[NT]	15	107	104	3	101	97
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	[NT]	15	110	109	1	105	88
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	[NT]	15	108	112	4	97	78
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	[NT]	15	118	113	4	110	86
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	[NT]	15	116	118	2	103	85
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	[NT]	15	129	122	6	110	85
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	[NT]	15	83	73	13	70	55
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	[NT]	15	94	100	6	92	69
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	[NT]	15	116	105	10	96	59
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	[NT]	15	121	122	1	105	56
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	[NT]	15	104	108	4	97	75
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	[NT]	15	107	106	1	97	88
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	[NT]	15	95	94	1	92	85
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	[NT]	15	110	103	7	97	93

QUALITY CONTROL: PFAS in TCLP Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-38
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	15	109	111	2	102	100
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	15	118	122	3	100	60
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	15	111	106	5	96	63

QUALITY CONTROL: PFAS in TCLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	33	11/01/2024	11/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	11/01/2024	11/01/2024		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029	[NT]	33	<0.05	<0.05	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	[NT]	33	<0.5	<0.5	0	[NT]	[NT]
4:2 FTS	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
6:2 FTS	µg/L	0.01	Org-029	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
8:2 FTS	µg/L	0.02	Org-029	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
10:2 FTS	µg/L	0.02	Org-029	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	[NT]	33	<0.05	<0.05	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	[NT]	33	<0.05	<0.05	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	[NT]	33	<0.5	<0.5	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic aci	µg/L	0.02	Org-029	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	33	100	102	2	[NT]	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	33	100	103	3	[NT]	[NT]

QUALITY CONTROL: PFAS in TCLP Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	[NT]	33	98	98	0	[NT]	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	[NT]	33	106	102	4	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	[NT]	33	107	106	1	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	[NT]	33	103	104	1	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	[NT]	33	111	113	2	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	[NT]	33	103	106	3	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	[NT]	33	106	104	2	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	[NT]	33	106	111	5	[NT]	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	[NT]	33	102	105	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	[NT]	33	110	119	8	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	[NT]	33	110	104	6	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	[NT]	33	117	124	6	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	[NT]	33	78	81	4	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	[NT]	33	94	88	7	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	[NT]	33	100	101	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	[NT]	33	115	111	4	[NT]	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	[NT]	33	100	103	3	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	[NT]	33	103	105	2	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	[NT]	33	93	94	1	[NT]	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	[NT]	33	101	103	2	[NT]	[NT]

QUALITY CONTROL: PFAS in TCLP Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	33	107	105	2	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	33	107	107	0	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	33	106	104	2	[NT]	[NT]

QUALITY CONTROL: Metals from Neutral Leaching Fluid ICPMS						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	341181-2
Date extracted	-			12/01/2024	1	12/01/2024	12/01/2024		12/01/2024	12/01/2024
Date analysed	-			12/01/2024	1	12/01/2024	12/01/2024		12/01/2024	12/01/2024
Arsenic	µg/L	1	Metals-022	<1	1	<1	<1	0	97	117
Cadmium	µg/L	0.1	Metals-022	<0.1	1	<0.1	<0.1	0	97	117
Chromium	µg/L	1	Metals-022	<1	1	3	3	0	98	118
Copper	µg/L	1	Metals-022	<1	1	2	2	0	97	113
Lead	µg/L	1	Metals-022	<1	1	<1	<1	0	99	114
Mercury	µg/L	0.05	Metals-021	<0.05	1	<0.05	<0.05	0	88	88
Nickel	µg/L	1	Metals-022	<1	1	<1	<1	0	98	116
Zinc	µg/L	1	Metals-022	<1	1	3	3	0	113	125

QUALITY CONTROL: Metals from Neutral Leaching Fluid ICPMS						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-38
Date extracted	-			[NT]	15	12/01/2024	12/01/2024		12/01/2024	12/01/2024
Date analysed	-			[NT]	15	12/01/2024	12/01/2024		12/01/2024	12/01/2024
Arsenic	µg/L	1	Metals-022	[NT]	15	<1	<1	0	97	97
Cadmium	µg/L	0.1	Metals-022	[NT]	15	<0.1	<0.1	0	99	101
Chromium	µg/L	1	Metals-022	[NT]	15	<1	<1	0	101	100
Copper	µg/L	1	Metals-022	[NT]	15	2	2	0	99	98
Lead	µg/L	1	Metals-022	[NT]	15	<1	<1	0	98	100
Mercury	µg/L	0.05	Metals-021	[NT]	15	<0.05	<0.05	0	96	103
Nickel	µg/L	1	Metals-022	[NT]	15	4	4	0	100	101
Zinc	µg/L	1	Metals-022	[NT]	15	5	4	22	104	112

QUALITY CONTROL: Metals from Neutral Leaching Fluid ICPMS						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	33	12/01/2024	12/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	12/01/2024	12/01/2024		[NT]	[NT]
Arsenic	µg/L	1	Metals-022	[NT]	33	<1	<1	0	[NT]	[NT]
Cadmium	µg/L	0.1	Metals-022	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chromium	µg/L	1	Metals-022	[NT]	33	<1	<1	0	[NT]	[NT]
Copper	µg/L	1	Metals-022	[NT]	33	<1	1	0	[NT]	[NT]
Lead	µg/L	1	Metals-022	[NT]	33	<1	<1	0	[NT]	[NT]
Mercury	µg/L	0.05	Metals-021	[NT]	33	<0.05	<0.05	0	[NT]	[NT]
Nickel	µg/L	1	Metals-022	[NT]	33	1	1	0	[NT]	[NT]
Zinc	µg/L	1	Metals-022	[NT]	33	4	3	29	[NT]	[NT]

QUALITY CONTROL: PAHs in Water Leach						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-2
Date extracted	-			12/01/2024	1	12/01/2024	12/01/2024		12/01/2024	12/01/2024
Date analysed	-			12/01/2024	1	12/01/2024	12/01/2024		12/01/2024	12/01/2024
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	102	97
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	92	91
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	95	96
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	94	96
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	90	90
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	91	83
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	85	88
Benzo(bjk)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	<0.2	1	<0.20	<0.20	0	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	132	107
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	<0.1	1	<0.10	<0.10	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022/025 ASLP	84	1	89	92	3	87	84

QUALITY CONTROL: PAHs in Water Leach						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	341181-38
Date extracted	-			[NT]	5	12/01/2024	12/01/2024		12/01/2024	12/01/2024
Date analysed	-			[NT]	5	12/01/2024	12/01/2024		12/01/2024	12/01/2024
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	99	89
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	88	85
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	104	85
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	90	89
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	86	82
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	89	79
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	83	70
Benzo(bjk)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	[NT]	5	<0.20	<0.20	0	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	125	81
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	5	<0.10	<0.10	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022/025 ASLP	[NT]	5	83	77	8	85	86

QUALITY CONTROL: PAHs in Water Leach					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	33	12/01/2024	12/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	12/01/2024	12/01/2024		[NT]	[NT]
Naphthalene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Fluorene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Chrysene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Benzo(bjk)fluoranthene in ASLP	µg/L	0.2	Org-022/025 ASLP	[NT]	33	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene - ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene in ASLP	µg/L	0.1	Org-022/025 ASLP	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022/025 ASLP	[NT]	33	99	100	1	[NT]	[NT]

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	341181-2
Date prepared	-			11/01/2024	1	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Date analysed	-			11/01/2024	1	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	110	111
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	121	123
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029A	<0.01	1	0.02	0.02	0	92	95
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	108	106
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029A	<0.01	1	0.21	0.17	21	91	116
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	108	96
Perfluorobutanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	120	117
Perfluoropentanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	115	110
Perfluorohexanoic acid	µg/L	0.01	Org-029A	<0.01	1	0.01	<0.01	0	110	102
Perfluoroheptanoic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	115	116
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	110	109
Perfluorononanoic acid	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	114	115
Perfluorodecanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	105	107
Perfluoroundecanoic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	107	105
Perfluorododecanoic acid	µg/L	0.05	Org-029A	<0.05	1	<0.05	<0.05	0	106	100
Perfluorotridecanoic acid	µg/L	0.1	Org-029A	<0.1	1	<0.1	<0.1	0	100	94
Perfluorotetradecanoic acid	µg/L	0.5	Org-029A	<0.5	1	<0.5	<0.5	0	114	105
4:2 FTS	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	112	102
6:2 FTS	µg/L	0.01	Org-029A	<0.01	1	<0.01	<0.01	0	112	97
8:2 FTS	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	103	103
10:2 FTS	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	113	112
Perfluorooctane sulfonamide	µg/L	0.1	Org-029A	<0.1	1	<0.1	<0.1	0	119	117
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029A	<0.05	1	<0.05	<0.05	0	116	115
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029A	<0.1	1	<0.1	<0.1	0	118	113
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029A	<0.05	1	<0.05	<0.05	0	104	93
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029A	<0.5	1	<0.5	<0.5	0	104	100
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	122	125
EtPerfluorooctanesulf-amid oacetic acid	µg/L	0.02	Org-029A	<0.02	1	<0.02	<0.02	0	110	108
Surrogate $^{13}C_8$ PFOS	%		Org-029A	98	1	100	95	5	107	104
Surrogate $^{13}C_2$ PFOA	%		Org-029A	107	1	109	107	2	103	112

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	341181-2
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029A	94	1	97	97	0	95	95
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029A	95	1	94	95	1	96	99
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029A	98	1	95	101	6	85	95
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029A	100	1	99	99	0	97	102
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029A	112	1	112	108	4	108	114
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029A	103	1	101	102	1	100	103
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029A	100	1	100	97	3	102	99
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029A	91	1	93	97	4	92	92
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029A	83	1	92	89	3	84	86
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029A	91	1	96	96	0	92	91
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029A	89	1	98	96	2	89	91
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029A	90	1	93	95	2	85	95
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029A	57	1	60	64	6	57	66
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029A	80	1	99	95	4	79	85
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029A	54	1	70	78	11	58	72
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029A	58	1	72	76	5	64	68
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029A	79	1	83	82	1	78	81
Extracted ISTD d_3 *N MeFOSA*	%		Org-029A	93	1	93	95	2	90	93
Extracted ISTD d_5 *N EtFOSA*	%		Org-029A	90	1	90	92	2	86	90
Extracted ISTD d_7 *N MeFOSE*	%		Org-029A	101	1	95	98	3	90	97

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	341181-2
Extracted ISTD d_9 *N EtFOSE*	%		Org-029A	103	1	104	103	1	99	103
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029A	68	1	74	73	1	69	72
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029A	68	1	75	75	0	72	75

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-38
Date prepared	-			[NT]	15	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Date analysed	-			[NT]	15	11/01/2024	11/01/2024		11/01/2024	11/01/2024
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	107	113
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	112	112
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	105	99
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	116	115
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	106	107
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029A	[NT]	15	<0.02	<0.02	0	92	99
Perfluorobutanoic acid	µg/L	0.02	Org-029A	[NT]	15	<0.02	<0.02	0	119	118
Perfluoropentanoic acid	µg/L	0.02	Org-029A	[NT]	15	<0.02	<0.02	0	108	111
Perfluorohexanoic acid	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	110	106
Perfluoroheptanoic acid	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	111	111
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	109	107
Perfluorononanoic acid	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	109	112
Perfluorodecanoic acid	µg/L	0.02	Org-029A	[NT]	15	<0.02	<0.02	0	103	105
Perfluoroundecanoic acid	µg/L	0.02	Org-029A	[NT]	15	<0.02	<0.02	0	103	108
Perfluorododecanoic acid	µg/L	0.05	Org-029A	[NT]	15	<0.05	<0.05	0	100	96
Perfluorotridecanoic acid	µg/L	0.1	Org-029A	[NT]	15	<0.1	<0.1	0	87	88
Perfluorotetradecanoic acid	µg/L	0.5	Org-029A	[NT]	15	<0.5	<0.5	0	111	106
4:2 FTS	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	102	105
6:2 FTS	µg/L	0.01	Org-029A	[NT]	15	<0.01	<0.01	0	91	91
8:2 FTS	µg/L	0.02	Org-029A	[NT]	15	<0.02	<0.02	0	107	109
10:2 FTS	µg/L	0.02	Org-029A	[NT]	15	<0.02	<0.02	0	120	118
Perfluorooctane sulfonamide	µg/L	0.1	Org-029A	[NT]	15	<0.1	<0.1	0	113	124
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029A	[NT]	15	<0.05	<0.05	0	115	108
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029A	[NT]	15	<0.1	<0.1	0	114	115
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029A	[NT]	15	<0.05	<0.05	0	85	84
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029A	[NT]	15	<0.5	<0.5	0	102	101
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029A	[NT]	15	<0.02	<0.02	0	126	122
EtPerfluorooctanesulf-amid oacetic acid	µg/L	0.02	Org-029A	[NT]	15	<0.02	<0.02	0	110	118
Surrogate $^{13}C_8$ PFOS	%		Org-029A	[NT]	15	98	102	4	98	101
Surrogate $^{13}C_2$ PFOA	%		Org-029A	[NT]	15	109	103	6	106	101

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-38
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029A	[NT]	15	95	87	9	97	94
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029A	[NT]	15	98	94	4	103	104
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029A	[NT]	15	92	90	2	112	110
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029A	[NT]	15	104	104	0	105	105
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029A	[NT]	15	113	114	1	112	109
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029A	[NT]	15	103	100	3	106	110
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029A	[NT]	15	105	104	1	109	105
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029A	[NT]	15	95	100	5	109	113
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029A	[NT]	15	91	84	8	106	109
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029A	[NT]	15	96	98	2	120	114
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029A	[NT]	15	92	95	3	112	108
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029A	[NT]	15	94	89	5	119	124
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029A	[NT]	15	62	62	0	77	85
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029A	[NT]	15	91	96	5	101	100
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029A	[NT]	15	69	69	0	116	119
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029A	[NT]	15	73	72	1	125	118
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029A	[NT]	15	83	83	0	102	99
Extracted ISTD d_3 *N MeFOSA*	%		Org-029A	[NT]	15	93	94	1	102	106
Extracted ISTD d_5 *N EtFOSA*	%		Org-029A	[NT]	15	90	90	0	95	95
Extracted ISTD d_7 *N MeFOSE*	%		Org-029A	[NT]	15	95	93	2	109	108

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-38
Extracted ISTD d_9 *N EtFOSE*	%		Org-029A	[NT]	15	97	93	4	108	109
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029A	[NT]	15	79	80	1	112	112
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029A	[NT]	15	79	78	1	114	108

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	33	11/01/2024	11/01/2024		[NT]	[NT]
Date analysed	-			[NT]	33	11/01/2024	11/01/2024		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029A	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029A	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029A	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029A	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029A	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029A	[NT]	33	<0.05	<0.05	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029A	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029A	[NT]	33	<0.5	<0.5	0	[NT]	[NT]
4:2 FTS	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
6:2 FTS	µg/L	0.01	Org-029A	[NT]	33	<0.01	<0.01	0	[NT]	[NT]
8:2 FTS	µg/L	0.02	Org-029A	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
10:2 FTS	µg/L	0.02	Org-029A	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029A	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029A	[NT]	33	<0.05	<0.05	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029A	[NT]	33	<0.1	<0.1	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029A	[NT]	33	<0.05	<0.05	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029A	[NT]	33	<0.5	<0.5	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029A	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
EtPerfluorooctanesulf-amid oacetic acid	µg/L	0.02	Org-029A	[NT]	33	<0.02	<0.02	0	[NT]	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029A	[NT]	33	96	101	5	[NT]	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029A	[NT]	33	103	113	9	[NT]	[NT]

QUALITY CONTROL: PFAS in ASLP Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029A	[NT]	33	104	100	4	[NT]	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029A	[NT]	33	108	106	2	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029A	[NT]	33	115	112	3	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029A	[NT]	33	109	109	0	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029A	[NT]	33	118	114	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029A	[NT]	33	110	110	0	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029A	[NT]	33	113	110	3	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029A	[NT]	33	117	113	3	[NT]	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029A	[NT]	33	113	116	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029A	[NT]	33	116	123	6	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029A	[NT]	33	108	109	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029A	[NT]	33	121	121	0	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029A	[NT]	33	81	80	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029A	[NT]	33	105	110	5	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029A	[NT]	33	121	120	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029A	[NT]	33	123	119	3	[NT]	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029A	[NT]	33	103	109	6	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029A	[NT]	33	109	108	1	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029A	[NT]	33	95	98	3	[NT]	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029A	[NT]	33	107	106	1	[NT]	[NT]

QUALITY CONTROL: PFAS in ASLP Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029A	[NT]	33	111	109	2	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029A	[NT]	33	122	130	6	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029A	[NT]	33	114	113	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	-			10/01/2024	[NT]	[NT]	[NT]	[NT]	10/01/2024	[NT]
Date analysed	-			11/01/2024	[NT]	[NT]	[NT]	[NT]	11/01/2024	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	108	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	108	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	110	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	103	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate Toluene-d8	%		Org-023	96	[NT]	[NT]	[NT]	[NT]	96	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	111	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			16/01/2024	[NT]	[NT]	[NT]	[NT]	16/01/2024	[NT]
Date analysed	-			16/01/2024	[NT]	[NT]	[NT]	[NT]	16/01/2024	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	107	[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]	107	[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	78	[NT]	[NT]	[NT]	[NT]	80	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			16/01/2024	[NT]	[NT]	[NT]	[NT]	16/01/2024	[NT]
Date analysed	-			16/01/2024	[NT]	[NT]	[NT]	[NT]	16/01/2024	[NT]
Naphthalene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	105	[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]	95	[NT]
Fluorene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94	[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]	93	[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]	87	[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]	135	[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	79	[NT]	[NT]	[NT]	[NT]	94	[NT]

QUALITY CONTROL: Metals in Waters - Acid extractable					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	341181-57
Date prepared	-			10/01/2024	[NT]	[NT]	[NT]	[NT]	10/01/2024	10/01/2024
Date analysed	-			10/01/2024	[NT]	[NT]	[NT]	[NT]	10/01/2024	10/01/2024
Arsenic - Total	mg/L	0.05	Metals-020	<0.05	[NT]	[NT]	[NT]	[NT]	96	[NT]
Cadmium - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	101	[NT]
Chromium - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	94	[NT]
Copper - Total	mg/L	0.01	Metals-020	<0.01	[NT]	[NT]	[NT]	[NT]	85	[NT]
Lead - Total	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	102	[NT]
Mercury - Total	mg/L	0.0005	Metals-021	<0.0005	[NT]	[NT]	[NT]	[NT]	100	81
Nickel - Total	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	97	[NT]
Zinc - Total	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			10/01/2024	[NT]	[NT]	[NT]	[NT]	10/01/2024	[NT]
Date analysed	-			10/01/2024	[NT]	[NT]	[NT]	[NT]	10/01/2024	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	115	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	100	[NT]
6:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	96	[NT]
8:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	84	[NT]	[NT]	[NT]	[NT]	84	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	80	[NT]	[NT]	[NT]	[NT]	81	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	136	[NT]	[NT]	[NT]	[NT]	127	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	195	[NT]	[NT]	[NT]	[NT]	174	[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.

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Report Comments

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 Soil C10-C40 NEPM - # Percent recovery for the surrogate/matrix spike is not possible to report as the high concentration of analytes in sample/s 341181-38ms have caused interference.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 341181-1 for Ni. Therefore a triplicate result has been issued as laboratory sample number 341181-60.

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.

Factual description of asbestos identified in the soil samples: NEPM
Sample 341181-1; Chrysotile, Amosite & Crocidolite asbestos identified in 0.2205g of fibrous matted material
Sample 341181-5; Chrysotile, Amosite & Crocidolite asbestos identified in 0.0356g of fibrous matted material

Note: All samples analysed as received. However, samples 341181-13 & 26 are below the minimum recommended 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

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	C Ridley

Sample Login Details

Your reference	E36466PR Macquarie Park
Envirolab Reference	341181
Date Sample Received	09/01/2024
Date Instructions Received	09/01/2024
Date Results Expected to be Reported	16/01/2024

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	55 Soil, 2 Material, 2 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
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:

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ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
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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 metalsin soil	Asbestos ID - soils NEPM - ASB-001	TCLP Preparation - Acid	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PAHs in TCLP (USEPA 1311)	PFAS in Soils Extended	PFAS in TCLP Extended	ASLP Preparation - Neutral	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	Asbestos ID - materials	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters -Acid extractable	PFAS in Water LOW LEVEL Short	On Hold
BH1-0.03-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH1-0.5-0.7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH1-1.5-1.7	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH1-1.7-1.95																															✓
BH2-0.02-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH2-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH2-1.5-1.7																															✓
BH2-1.7-1.95	✓	✓	✓				✓																								
BH3-0.01-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH3-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH3-1.5-1.95																															✓
BH4-0.02-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH4-0.5-0.95	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH4-1.6-1.95																															✓
BH5-0.03-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH5-0.4-0.5	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH5-0.7-0.95																															✓
BH5-1.8-1.95																															✓
BH5-2.5-2.8	✓	✓	✓				✓																								
BH5-3.3-3.45	✓	✓	✓				✓																								

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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 metalsin soil	Asbestos ID - soils NEPM - ASB-001	TCLP Preparation - Acid	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PAHs in TCLP (USEPA 1311)	PFAS in Soils Extended	PFAS in TCLP Extended	ASLP Preparation - Neutral	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	Asbestos ID - materials	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters -Acid extractable	PFAS in Water LOW LEVEL Short	On Hold
BH6-0.025-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH6-0.5-0.95	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH6-1.5-1.7																															✓
BH6-1.8-2																															✓
BH7-0.05-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH7-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH7-0.7-0.95																															✓
BH7-1.7-1.9																															✓
BH11-0.03-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH11-0.5-0.7	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH11-0.7-0.95	✓	✓	✓				✓	✓																							
BH11-1.5-1.7																															✓
BH12-0.05-0.23	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH12-0.3-0.5																															✓
BH12-0.7-0.95																															✓
BH12-1.7-1.95	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH12-2.7-2.9																															✓
BH19-0.02-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH19-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH19-1.6-1.95																															✓

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
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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 metalsin soil	Asbestos ID - soils NEPM - ASB-001	TCLP Preparation - Acid	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	PAHs in TCLP (USEPA 1311)	PFAS in Soils Extended	PFAS in TCLP Extended	ASLP Preparation - Neutral	Metals from Neutral Leaching Fluid ICPMS	PAHs in Water Leach	PFAS in ASLP Extended	Asbestos ID - materials	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	Metals in Waters -Acid extractable	PFAS in Water LOW LEVEL Short	On Hold
BH19-3-3.2																														✓
BH21-0.04-0.15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH21-0.3-0.5																														✓
BH21-0.7-0.95	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH21-1.5-1.7																														✓
BH21-2.1-2.5	✓	✓	✓				✓																							
BH23-0.02-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH23-0.5-0.95	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
BH23-1.3-1.4																														✓
BH35-0-0.15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
SDUP6	✓	✓	✓	✓	✓	✓	✓												✓												
SDUP7																														✓
SDUP9	✓	✓	✓				✓												✓												
FCF1-BH2-0.5-1.5																										✓					
FCF1-SURFACE																										✓					
FR-SP-SPT																											✓	✓	✓	✓	✓
FR-S4-SA																											✓	✓	✓	✓	✓
TB-S3	✓	✓	✓				✓													✓											
TS-S3	✓																														

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

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customerservice@envirolab.com.au
www.envirolab.com.au

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:
ENVIROLAB SERVICES PTY LTD
12 ASHLEY STREET
CHATSWOOD NSW 2067
P: (02) 99106200
F: (02) 99106201

Attention: Aileen

JKE Job Number: E36466PR

Date Results Required: STANDARD

Page: 1 of 3

FROM:
JKEnvironments
REAR OF 115 WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 5000 F: 02-9888 5001
Attention: Craig Ridley
cridley@jkenvironments.com.au

Location: Macquarie Park, NSW
Sampler: LR/HW

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals & PFAS	Asbestos (Detection)	BTEX	PFAS (low level, short)
03.01.2024	1	BH1	0.03-0.4	G, A, PFAS	0.2	F: Silty Gravelly Sand			X			X		X	X			
03.01.2024	2	BH1	0.5-0.7	G, A, PFAS	0.4	F: Silty Sand			X			X		X	X			
03.01.2024	3	BH1	1.5-1.7	G, A, PFAS	0.9	F: Silty Clay		X				X	X	X	X			
03.01.2024	4	BH1	1.7-1.95	G, PFAS	0.2	Silty Clay												
03.01.2024	5	BH2	0.02-0.4	G, A, PFAS	1	F: Silty Gravelly Sand			X			X		X	X			
03.01.2024	6	BH2	0.5-0.95	G, A, PFAS	1	F: Silty Sandy Clay			X			X		X	X			
03.01.2024	7	BH2	1.5-1.7	G, A, PFAS	0.2	F: Silty Sandy Clay												
03.01.2024	8	BH2	1.7-1.95	G, A, PFAS	0.5	Silty Clay					X							
03.01.2024	9	BH3	0.01-0.1	G, A, PFAS	0.3	F: Silty Gravelly Sand			X			X		X	X			
03.01.2024	10	BH3	0.5-0.95	G, A, PFAS	1.5	F: Silty Clay			X			X		X	X			
03.01.2024	11	BH3	1.5-1.95	G, A, PFAS	1	F: Silty Clay												
03.01.2024	12	BH4	0.02-0.3	G, A, PFAS	0.3	F: Silty Gravelly Sand			X			X		X	X			
03.01.2024	13	BH4	0.5-0.95	G, A, PFAS	0.2	F: Silty Clay		X				X	X	X	X			
03.01.2024	14	BH4	1.6-1.95	G, A, PFAS	0.4	Silty Clay												
03.01.2024	15	BH5	0.03-0.2	G, A, PFAS	0.5	F: Gravelly Sand			X			X		X	X			
03.01.2024	16	BH5	0.4-0.5	G, A, PFAS	2.1	F: Silty Clay		X				X	X	X	X			
03.01.2024	17	BH5	0.7-0.95	G, A, PFAS	2.2	F: Silty Clay												
03.01.2024	18	BH5	1.8-1.95	G, A, PFAS	2.5	F: Silty Clay												
03.01.2024	19	BH5	2.5-2.8	G, A, PFAS	2.7	Silty Clay					X							
03.01.2024	20	BH5	3.3-3.45	G, PFAS	0.1	Siltstone					X							
03.01.2024	21	BH6	0.025-0.4	G, A, PFAS	0.2	F: Silty Gravelly Sand			X			X		X	X			
03.01.2024	22	BH6	0.5-0.95	G, A, PFAS	0.2	F: Silty Clay		X				X	X	X	X			
03.01.2024	23	BH6	1.5-1.7	G, PFAS	0.1	Silty Clay												
03.01.2024	24	BH6	1.8-2	G, PFAS	0.1	Siltstone												
05.01.2024	25	BH7	0.05-0.1	G, A, PFAS	0.5	F: Gravelly Sand			X			X		X	X			

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle
A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By: ~~Kate~~ Date:

Time: Received By: CH Date: 4/1/24

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

Job No: 341181
Date Received: 4/1/24
Time Received: 1210
Received By: CH
Temp: Cool/Ambient 10°C
Cooling: Ice/Icepack
Security: Intact/Broken/None

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	JKE Job Number: E36466PR	JKEnvironments
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067		MACQUARIE PARK, NSW 2113
P: (02) 99106200	Date Results Required: STANDARD	P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201		Attention: Craig Ridley
Attention: Aileen	Page: 2 of 3	cridley@jkenvironments.com.au

Location:	Macquarie Park, NSW	Sample Preserved in Esky on Ice
Sampler:	LR/HW	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals & PFAS	Asbestos (Detection)	BTEX	PFAS (low level, short)
05.01.2024	26	BH7	0.3-0.5	G, A, PFAS	3.1	F: Silty Clay			X			X		X	X			
05.01.2024	27	BH7	0.7-0.95	G, A, PFAS	2.1	F: Silty Clay												
05.01.2024	28	BH7	1.7-1.9	G, A, PFAS	1.7	Siltstone												
03.01.2024	29	BH11	0.03-0.3	G, A, PFAS	0.2	F: Silty Gravelly Sand			X			X		X	X			
03.01.2024	30	BH11	0.5-0.7	G, A, PFAS	0.2	F: Silty Clay		X				X	X	X	X			
03.01.2024	31	BH11	0.7-0.95	G, PFAS	0.1	Silty Clay					X							
03.01.2024	32	BH11	1.5-1.7	G, PFAS	0.1	Siltstone												
04.01.2024	33	BH12	0.05-0.23	G, A, PFAS	1.1	F: Gravelly Sand			X			X		X	X			
04.01.2024	34	BH12	0.3-0.5	G, A, PFAS	0.7	F: Gravelly Sand												
04.01.2024	35	BH12	0.7-0.95	G, A, PFAS	0.8	F: Gravelly Sand												
04.01.2024	36	BH12	1.7-1.95	G, A, PFAS	0.9	F: Silty Clay		X				X	X	X	X			
04.01.2024	37	BH12	2.7-2.9	G, PFAS	0.2	Siltstone												
03.01.2024	38	BH19	0.02-0.4	G, A, PFAS	0.1	F: Silty Gravelly Sand			X			X		X	X			
03.01.2024	39	BH19	0.5-0.95	G, A, PFAS	0.1	F: Silty Clay			X			X		X	X			
03.01.2024	40	BH19	1.6-1.95	G, A, PFAS	0.2	F: Silty Clay												
03.01.2024	41	BH19	3-3.2	G, A, PFAS	0.2	Siltstone												
03.01.2024	42	BH21	0.04-0.15	G, A, PFAS	1.1	F: Silty Clay			X			X		X	X			
03.01.2024	43	BH21	0.3-0.5	G, A, PFAS	3.6	F: Silty Clay												
03.01.2024	44	BH21	0.7-0.95	G, A, PFAS	4.5	F: Silty Clay		X				X	X	X	X			
03.01.2024	45	BH21	1.5-1.7	G, A, PFAS	1.8	F: Silty Clay												
03.01.2024	46	BH21	2.1-2.5	G, PFAS	0	Silty Clay					X							
03.01.2024	47	BH23	0.02-0.3	G, A, PFAS	0.2	F: Silty Gravelly Sand			X			X		X	X			
03.01.2024	48	BH23	0.5-0.95	G, A, PFAS	0.2	F: Sand		X				X	X	X	X			
03.01.2024	49	BH23	1.3-1.4	G, A, PFAS	0.1	F: Sand												
05.01.2024	50	BH35	0-0.15	G, A, PFAS	2.7	F: Silty Clay			X			X		X	X			

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle
A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By:	Date:	Time:	Received By:	Date:
			CH	4/1/24

#341181

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: E36466PR Date Results Required: STANDARD Page: 3 of 3	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Craig Ridley cridley@jkenvironments.com.au

Location:	Macquarie Park, NSW						Sample Preserved in Esky on Ice												
Sampler:	LR/HW						Tests Required												
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals & PFAS	Asbestos (Detection)	BTEX	PFAS (low level, short)
03.01.2024	S1	SDUP6	-	G, PFAS	-	-				X		X						
03.01.2024	S2	SDUP7	-	G, PFAS	-	-												
03.01.2024	S/O	SDUP8	-	G, PFAS	-	-				X		X		SEND TO VIC				
03.01.2024	S3	SDUP9	-	G, PFAS	-	-					X	X						
04.01.2024	S/O	SDUP10	-	G, PFAS	-	-					X	X		SEND TO VIC				
03.01.2024	S4	FCF1-BH2	0.5-1.5	A	-	-										X		
03.01.2024	S5	FCF1-SURFACE	-	A	-	-										X		
03.01.2024	S6	FR-S3-SPT	-	#	-	-					X							X
03.01.2024	S7	FR-S4-SA	-	#	-	-					X							X
03.01.2024	S8	TB-S3	-	PFAS, V	-	-					X	X						
03.01.2024	S9	TS-S3	-	V	-	-											X	

Remarks (comments/detection limits required):	Sample Containers:
Please test FR-S3 and FR-S4 for total metals	G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By:	Date:	Time:	Received By:	Date:
			CH	9/1/24

#341181

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 41490

Client Details

Client	JK Environments
Attention	Craig Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E36466PR**
Number of Samples	2 Soil
Date samples received	11/01/2024
Date completed instructions received	11/01/2024

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.

Report Details

Date results requested by	17/01/2024
Date of Issue	15/01/2024

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Azrin Akram, Senior Chemist
Suk Lee, Organic Supervisor
Tara White, Metals Team Leader
Tianna Milburn, Senior Chemist

Authorised By
Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		41490-1	41490-2
Your Reference	UNITS	SDUP8	SDUP10
Date Sampled		03/01/2024	04/01/2024
Type of sample		Soil	Soil
Date extracted	-	12/01/2024	12/01/2024
Date analysed	-	13/01/2024	13/01/2024
vTRH C_6 - C_9	mg/kg	<25	<25
vTRH C_6 - C_{10}	mg/kg	<25	<25
TRH 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 BTEX	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	102	100

TRH Soil C10-C40 NEPM			
Our Reference	UNITS	41490-1	41490-2
Your Reference		SDUP8	SDUP10
Date Sampled		03/01/2024	04/01/2024
Type of sample		Soil	Soil
Date extracted	-	12/01/2024	12/01/2024
Date analysed	-	13/01/2024	13/01/2024
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	160	<100
Total +ve TRH (>C10-C40)	mg/kg	160	<50
Surrogate o-Terphenyl	%	82	87

PAHs in Soil			
Our Reference		41490-1	41490-2
Your Reference	UNITS	SDUP8	SDUP10
Date Sampled		03/01/2024	04/01/2024
Type of sample		Soil	Soil
Date extracted	-	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024
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-d_{14}	%	130	138

OCP in Soil		
Our Reference		41490-1
Your Reference	UNITS	SDUP8
Date Sampled		03/01/2024
Type of sample		Soil
Date extracted	-	12/01/2024
Date analysed	-	12/01/2024
alpha-BHC	mg/kg	<0.1
Hexachlorobenzene	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
Total +ve reported Aldrin + Dieldrin	mg/kg	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	84

OP in Soil		
Our Reference		41490-1
Your Reference	UNITS	SDUP8
Date Sampled		03/01/2024
Type of sample		Soil
Date extracted	-	12/01/2024
Date analysed	-	12/01/2024
Azinphos-methyl	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Dichlorovos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Ethion	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Coumaphos	mg/kg	<0.1
Disulfoton	mg/kg	<0.1
Fenamiphos	mg/kg	<0.1
Fenthion	mg/kg	<0.1
Methidathion	mg/kg	<0.1
Mevinphos	mg/kg	<0.1
Methyl Parathion	mg/kg	<0.1
Phorate	mg/kg	<0.1
Phosalone	mg/kg	<0.1
Surrogate 2-chlorophenol-d4	%	84

PCBs in Soil		
Our Reference		41490-1
Your Reference	UNITS	SDUP8
Date Sampled		03/01/2024
Type of sample		Soil
Date extracted	-	12/01/2024
Date analysed	-	12/01/2024
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	%	110

Acid Extractable metals in soil			
Our Reference		41490-1	41490-2
Your Reference	UNITS	SDUP8	SDUP10
Date Sampled		03/01/2024	04/01/2024
Type of sample		Soil	Soil
Date digested	-	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	9	10
Copper	mg/kg	56	59
Lead	mg/kg	<1	2
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	79	69
Zinc	mg/kg	38	39

Moisture			
Our Reference		41490-1	41490-2
Your Reference	UNITS	SDUP8	SDUP10
Date Sampled		03/01/2024	04/01/2024
Type of sample		Soil	Soil
Date prepared	-	12/01/2024	12/01/2024
Date analysed	-	13/01/2024	13/01/2024
Moisture	%	1.9	5.6

PFAS in Soil Extended			
Our Reference		41490-1	41490-2
Your Reference	UNITS	SDUP8	SDUP10
Date Sampled		03/01/2024	04/01/2024
Type of sample		Soil	Soil
Date prepared	-	12/01/2024	12/01/2024
Date analysed	-	12/01/2024	12/01/2024
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorohexanesulfonic acid PFHxS	µg/kg	<0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1
N-Ethyl perfluorooctanesulfon -amide	µg/kg	<1	<1
N-Me perfluorooctanesulfonamid -oethanol	µg/kg	<1	<1
N-Et perfluorooctanesulfonamid -oethanol	µg/kg	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2
EtPerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2
Surrogate $^{13}C_8$ PFOS	%	126	113
Surrogate $^{13}C_2$ PFOA	%	118	121
Extracted ISTD $^{13}C_3$ *PFBS*	%	81	83
Extracted ISTD $^{18}O_2$ *PFHxS*	%	69	67
Extracted ISTD $^{13}C_4$ *PFOS*	%	70	76
Extracted ISTD $^{13}C_4$ *PFBA*	%	100	99

PFAS in Soil Extended			
Our Reference		41490-1	41490-2
Your Reference	UNITS	SDUP8	SDUP10
Date Sampled		03/01/2024	04/01/2024
Type of sample		Soil	Soil
Extracted ISTD $^{13}C_3$ *PFPeA*	%	89	86
Extracted ISTD $^{13}C_2$ *PFHxA*	%	82	80
Extracted ISTD $^{13}C_4$ *PFHpA*	%	80	77
Extracted ISTD $^{13}C_4$ *PFOA*	%	70	66
Extracted ISTD $^{13}C_5$ *PFNA*	%	81	75
Extracted ISTD $^{13}C_2$ *PFDA*	%	71	65
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	70	71
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	75	67
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	72	59
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	91	86
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	76	73
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	95	73
Extracted ISTD $^{13}C_8$ *FOSA*	%	76	74
Extracted ISTD d_3 *N MeFOSA*	%	71	70
Extracted ISTD d_5 *NEtFOSA*	%	84	84
Extracted ISTD d_7 *N MeFOSE*	%	78	81
Extracted ISTD d_9 *N EtFOSE*	%	80	82
Extracted ISTD d_3 *N MeFOSAA*	%	79	73
Extracted ISTD d_5 *N EtFOSAA*	%	98	85
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

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105°C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	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	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or analysed by 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	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Note, For OCs 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.

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. 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. 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. 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-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 5.4 Table B-15 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	[NT]
Date extracted	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
Date analysed	-			13/01/2024	[NT]	[NT]	[NT]	[NT]	13/01/2024	[NT]
vTRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	106	[NT]
vTRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	106	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	104	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	112	[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]	105	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	107	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
Date analysed	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	90	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	80	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	90	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	80	[NT]
Surrogate o-Terphenyl	%		Org-020	78	[NT]	[NT]	[NT]	[NT]	79	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	41490-2
Date extracted	-			12/01/2024	1	12/01/2024	12/01/2024		12/01/2024	12/01/2024
Date analysed	-			12/01/2024	1	12/01/2024	12/01/2024		12/01/2024	12/01/2024
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	115
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	117
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	117
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	111
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	132	133
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	136	138
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	123
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	126	125
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022/025	138	1	130	122	6	134	132

QUALITY CONTROL: OCP in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
Date analysed	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	120	[NT]
Hexachlorobenzene	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]	140	[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]	120	[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]	136	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	124	[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]	134	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	124	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[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]	129	[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]	136	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022/025	82	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: OP in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
Date analysed	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
Azinphos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	120	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	116	[NT]
Diazinon	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	134	[NT]
Dichlorovos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	139	[NT]
Fenitrothion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	118	[NT]
Malathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methyl Parathion	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022/025	82	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
Date analysed	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
Aroclor 1016	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	119	[NT]
Aroclor 1260	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-fluorobiphenyl	%		Org-022/025	114	[NT]	[NT]	[NT]	[NT]	114	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
Date analysed	-			12/01/2024	[NT]	[NT]	[NT]	[NT]	12/01/2024	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	114	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	119	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	118	[NT]

QUALITY CONTROL: PFAS in Soil Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	120	[NT]
Perfluorohexanesulfonic acid PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	113	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	115	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	118	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	113	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	138	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	92	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	88	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
N-Ethyl perfluorooctanesulfon -amide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
N-Me perfluorooctanesulfonamid -oethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	82	[NT]
N-Et perfluorooctanesulfonamid -oethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	125	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	91	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	80	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	118	[NT]
Extracted ISTD $^{13}C_3$ PFBS	%		Org-029	80	[NT]	[NT]	[NT]	[NT]	80	[NT]

QUALITY CONTROL: PFAS in Soil Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	67	[NT]	[NT]	[NT]	[NT]	67	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	71	[NT]	[NT]	[NT]	[NT]	74	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	89	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	81	[NT]	[NT]	[NT]	[NT]	80	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	77	[NT]	[NT]	[NT]	[NT]	78	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	69	[NT]	[NT]	[NT]	[NT]	68	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	80	[NT]	[NT]	[NT]	[NT]	77	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	70	[NT]	[NT]	[NT]	[NT]	65	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	68	[NT]	[NT]	[NT]	[NT]	70	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	65	[NT]	[NT]	[NT]	[NT]	66	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	57	[NT]	[NT]	[NT]	[NT]	57	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	89	[NT]	[NT]	[NT]	[NT]	84	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	77	[NT]	[NT]	[NT]	[NT]	75	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	83	[NT]	[NT]	[NT]	[NT]	84	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	72	[NT]	[NT]	[NT]	[NT]	68	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	72	[NT]	[NT]	[NT]	[NT]	73	[NT]
Extracted ISTD d_5 *NEtFOSA*	%		Org-029	81	[NT]	[NT]	[NT]	[NT]	85	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	86	[NT]	[NT]	[NT]	[NT]	90	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	74	[NT]	[NT]	[NT]	[NT]	73	[NT]

QUALITY CONTROL: PFAS in Soil Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	78	[NT]	[NT]	[NT]	[NT]	77	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	82	[NT]	[NT]	[NT]	[NT]	90	[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.

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Craig Ridley

Sample Login Details

Your reference	E36466PR
Envirolab Reference	41490
Date Sample Received	11/01/2024
Date Instructions Received	11/01/2024
Date Results Expected to be Reported	17/01/2024

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	2 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	20.2
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams	Chris De Luca
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: cdeluca@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	OCP in Soil	OP in Soil	PCBsin Soil	Acid Extractable metalsin soil	PFAS in Soil Extended
SDUP8	✓	✓	✓	✓	✓	✓	✓	✓
SDUP10	✓	✓	✓				✓	✓

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.

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: E36466PR Date Results Required: STANDARD Page: 3 of 3	JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Craig Ridley cridley@jkenvironments.com.au

Location: Macquarie Park, NSW

Sampler: LR/HW

Sample Preserved in Esky on Ice

Tests Required

	Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6aNEPM	Combo 3aNEPM	Combo 13 aNEPM	Combo 6	Combo 3	PFAS (Routine, Extended)	TCLP PAHs & metals	TCLP PFAS	ASLP PAHs & Metals & PFAS	Asbestos (Detection)	BTEX	PFAS (low level, short)
	03.01.2024	S1	SDUP6	-	G, PFAS	-	-				X		X						
	03.01.2024	S2	SDUP7	-	G, PFAS	-	-												
1	03.01.2024	S/O	SDUP8	-	G, PFAS	-	-				X		X		SEND TO VIC				
	03.01.2024	S3	SDUP9	-	G, PFAS	-	-					X	X						
2	04.01.2024	S/O	SDUP10	-	G, PFAS	-	-					X	X		SEND TO VIC				
	03.01.2024	S4	FCF1-BH2	0.5-1.5	A	-	-										X		
	03.01.2024	S5	FCF1-SURFACE	-	A	-	-										X		
	03.01.2024	S6	FR-S3-SPT	-	#	-	-					X							X
	03.01.2024	S7	FR-S4-SA	-	#	-	-					X							X
	03.01.2024	S8	TB-S3	-	PFAS, V	-	-					X	X						
	03.01.2024	S9	TS-S3	-	V	-	-											X	

ENVIROLAB

Envirolab Services
~~21 Research Drive~~
Croydon South VIC 3136
~~Ph: (03) 9763 2500~~

Job No: 41490

Date Received: 11/1/24
Time Received: 12:35pm
Received By: AG
Temp: Cool/Ambient 20.2°C
Cooling: Ice/Icepack
Security: Intact/Broken/None

Remarks (comments/detection limits required):
Please test FR-S3 and FR-S4 for total metals

Sample Containers:
G - 250mg Glass Jar # - 1 x HNO3 Wash PVC, 2 x BTEX Vials, 2 x Amber Glass Bottles, 1 x PFAS Bottle
A - Ziplock Asbestos Bag PFAS - PFAS Jar, V - Vial

Relinquished By:	Date:	Time:	Received By:	Date:
Christine Ho (ECS SYD)	10/1/24		CH	9/1/24

#341181

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 340105

Client Details

Client	JK Environments
Attention	C Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E36466PR, Macquarie Park**
Number of Samples	6 Water
Date samples received	13/12/2023
Date completed instructions received	13/12/2023

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	20/12/2023
Date of Issue	20/12/2023

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Results Approved By
Amanda Chui, LC/Air Toxics Supervisor
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Liam Timmins, Organics Supervisor
Loren Bardwell, Development Chemist
Nancy Zhang, Laboratory Manager, Sydney

Authorised By
Nancy Zhang, Laboratory Manager

VOCs in water						
Our Reference		340105-1	340105-2	340105-3	340105-4	340105-5
Your Reference	UNITS	MW18	MW26	MW29	WDUP1	TB-W1
Date Sampled		12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Type of sample		Water	Water	Water	Water	Water
Date Extracted	-	15/12/2023	15/12/2023	15/12/2023	15/12/2023	15/12/2023
Date Analysed	-	18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023
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	5	10	5	<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	<1	<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		340105-1	340105-2	340105-3	340105-4	340105-5
Your Reference	UNITS	MW18	MW26	MW29	WDUP1	TB-W1
Date Sampled		12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
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	%	104	102	103	104	103
Surrogate Toluene-d8	%	100	100	100	101	100
Surrogate 4-Bromofluorobenzene	%	101	100	105	101	101

vTRH(C6-C10)/BTEXN in Water						
Our Reference		340105-1	340105-2	340105-3	340105-4	340105-5
Your Reference	UNITS	MW18	MW26	MW29	WDUP1	TB-W1
Date Sampled		12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	15/12/2023	15/12/2023	15/12/2023	15/12/2023	15/12/2023
Date analysed	-	18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023
TRH C_6 - C_9	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<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	<1	<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	%	104	102	103	104	103
Surrogate Toluene-d8	%	100	100	100	101	100
Surrogate 4-Bromofluorobenzene	%	101	100	105	101	101

vTRH(C6-C10)/BTEXN in Water		
Our Reference		340105-6
Your Reference	UNITS	TS-W1
Date Sampled		12/12/2023
Type of sample		Water
Date extracted	-	15/12/2023
Date analysed	-	18/12/2023
Benzene	µg/L	94%
Toluene	µg/L	97%
Ethylbenzene	µg/L	107%
m+p-xylene	µg/L	106%
o-xylene	µg/L	102%
Surrogate Dibromofluoromethane	%	103
Surrogate Toluene-d8	%	101
Surrogate 4-Bromofluorobenzene	%	98

svTRH (C10-C40) in Water						
Our Reference		340105-1	340105-2	340105-3	340105-4	340105-5
Your Reference	UNITS	MW18	MW26	MW29	WDUP1	TB-W1
Date Sampled		12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023
Date analysed	-	18/12/2023	18/12/2023	18/12/2023	19/12/2023	19/12/2023
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	%	70	82	76	72	87

PAHs in Water						
Our Reference		340105-1	340105-2	340105-3	340105-4	340105-5
Your Reference	UNITS	MW18	MW26	MW29	WDUP1	TB-W1
Date Sampled		12/12/2023	12/12/2023	12/12/2023	12/12/2023	12/12/2023
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	18/12/2023	18/12/2023	18/12/2023	18/12/2023	18/12/2023
Date analysed	-	19/12/2023	19/12/2023	19/12/2023	19/12/2023	19/12/2023
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	%	78	95	84	82	90

HM in water - dissolved					
Our Reference	UNITS	340105-1	340105-2	340105-3	340105-4
Your Reference		MW18	MW26	MW29	WDUP1
Date Sampled		12/12/2023	12/12/2023	12/12/2023	12/12/2023
Type of sample		Water	Water	Water	Water
Date prepared	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Arsenic-Dissolved	µg/L	<1	<1	<1	<1
Cadmium-Dissolved	µg/L	<0.1	0.7	<0.1	0.8
Chromium-Dissolved	µg/L	<1	1	<1	1
Copper-Dissolved	µg/L	4	190	<1	190
Lead-Dissolved	µg/L	<1	7	<1	8
Mercury-Dissolved	µg/L	<0.05	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	100	250	92	250
Zinc-Dissolved	µg/L	400	1,100	59	1,100

HM in water - total		
Our Reference		340105-5
Your Reference	UNITS	TB-W1
Date Sampled		12/12/2023
Type of sample		Water
Date prepared	-	15/12/2023
Date analysed	-	15/12/2023
Arsenic-Total	µg/L	<1
Cadmium-Total	µg/L	<0.1
Chromium-Total	µg/L	<1
Copper-Total	µg/L	<1
Lead-Total	µg/L	<1
Mercury-Total	µg/L	<0.05
Nickel-Total	µg/L	<1
Zinc-Total	µg/L	<1

Miscellaneous Inorganics				
Our Reference	UNITS	340105-1	340105-2	340105-3
Your Reference		MW18	MW26	MW29
Date Sampled		12/12/2023	12/12/2023	12/12/2023
Type of sample		Water	Water	Water
Date prepared	-	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023
pH	pH Units	5.8	5.0	6.3
Electrical Conductivity	µS/cm	4,000	2,600	1,200

PFAS in Waters Trace Extended					
Our Reference		340105-1	340105-2	340105-3	340105-4
Your Reference	UNITS	MW18	MW26	MW29	WDUP1
Date Sampled		12/12/2023	12/12/2023	12/12/2023	12/12/2023
Type of sample		Water	Water	Water	Water
Date prepared	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Date analysed	-	14/12/2023	14/12/2023	14/12/2023	14/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.0004	0.0005	<0.0004	0.0005
Perfluoropentanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.0002	<0.0002	0.0002	<0.0002
Perfluoroheptanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanesulfonic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorobutanoic acid	µg/L	<0.004	<0.004	<0.02	<0.004
Perfluoropentanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid	µg/L	0.002	0.0009	0.0006	0.0009
Perfluoroheptanoic acid	µg/L	<0.0004	<0.0004	<0.0004	<0.0004
Perfluorooctanoic acid PFOA	µg/L	<0.0002	0.0003	0.0002	0.0003
Perfluorononanoic acid	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid	µg/L	<0.005	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05
4:2 FTS	µg/L	<0.001	<0.001	<0.001	<0.001
6:2 FTS	µg/L	0.0066	0.002	0.0006	0.001
8:2 FTS	µg/L	<0.0004	<0.0004	<0.0004	<0.0004
10:2 FTS	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	µg/L	<0.01	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Surrogate $^{13}C_8$ *PFOS*	%	95	89	95	93
Surrogate $^{13}C_2$ *PFOA*	%	95	102	96	96
Extracted ISTD $^{13}C_3$ *PFBS*	%	75	82	81	70
Extracted ISTD $^{18}O_2$ *PFHxS*	%	84	91	84	78
Extracted ISTD $^{13}C_4$ *PFOS*	%	83	93	78	81
Extracted ISTD $^{13}C_4$ *PFBA*	%	30	43	#	41

PFAS in Waters Trace Extended					
Our Reference		340105-1	340105-2	340105-3	340105-4
Your Reference	UNITS	MW18	MW26	MW29	WDUP1
Date Sampled		12/12/2023	12/12/2023	12/12/2023	12/12/2023
Type of sample		Water	Water	Water	Water
Extracted ISTD $^{13}C_3$ *PFPeA*	%	99	114	88	102
Extracted ISTD $^{13}C_2$ *PFHxA*	%	83	92	72	80
Extracted ISTD $^{13}C_4$ *PFHpA*	%	86	91	89	78
Extracted ISTD $^{13}C_4$ *PFOA*	%	129	136	171	121
Extracted ISTD $^{13}C_5$ *PFNA*	%	89	95	73	83
Extracted ISTD $^{13}C_2$ *PFDA*	%	108	113	127	105
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	114	127	131	110
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	114	141	113	97
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	73	108	92	42
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	98	111	#	93
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	193	174	#	173
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	137	146	#	144
Extracted ISTD $^{13}C_8$ *FOSA*	%	71	74	73	68
Extracted ISTD d_3 *N MeFOSA*	%	108	102	109	107
Extracted ISTD d_5 *N EtFOSA*	%	99	102	103	103
Extracted ISTD d_7 *N MeFOSE*	%	101	108	109	107
Extracted ISTD d_9 *N EtFOSE*	%	97	108	112	110
Extracted ISTD d_3 *N MeFOSAA*	%	95	101	111	90
Extracted ISTD d_5 *N EtFOSAA*	%	101	117	117	95
Total Positive PFHxS & PFOS	µg/L	<0.0002	<0.0002	0.0002	<0.0002
Total Positive PFOS & PFOA	µg/L	<0.0002	0.0003	0.0002	0.0003
Total Positive PFAS	µg/L	0.0086	0.0035	0.002	0.0030

PFAS in Water TRACE Short		
Our Reference		340105-5
Your Reference	UNITS	TB-W1
Date Sampled		12/12/2023
Type of sample		Water
Date prepared	-	14/12/2023
Date analysed	-	14/12/2023
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.0002
Perfluorooctanesulfonic acid PFOS	µg/L	<0.0002
Perfluorooctanoic acid PFOA	µg/L	<0.0002
6:2 FTS	µg/L	<0.0004
8:2 FTS	µg/L	<0.0004
Surrogate $^{13}C_8$ *PFOS*	%	94
Surrogate $^{13}C_2$ *PFOA*	%	105
Extracted ISTD $^{18}O_2$ *PFHxS*	%	83
Extracted ISTD $^{13}C_4$ *PFOS*	%	85
Extracted ISTD $^{13}C_4$ *PFOA*	%	116
Extracted ISTD$^{13}C_2$ *6:2FTS*	%	173
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	148
Total Positive PFHxS & PFOS	µg/L	<0.0002
Total Positive PFOS & PFOA	µg/L	<0.0002
Total Positive PFAS	µg/L	<0.0002

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25°C in accordance with APHA latest edition 2510 and Rayment & Lyons.
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. Salt forms (e.g. FeO, PbO, ZnO) are determinined stoichiometrically from the base metal concentration.
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 5.4 Table B-15 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-W3	[NT]
Date Extracted	-			15/12/2023	2	15/12/2023	18/12/2023		15/12/2023	[NT]
Date Analysed	-			18/12/2023	2	18/12/2023	19/12/2023		18/12/2023	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	2	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	2	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	2	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	2	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	2	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	2	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	2	<1	<1	0	95	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	2	5	5	0	97	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	2	<1	<1	0	96	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	2	<1	<1	0	98	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	2	<1	<1	0	96	[NT]
Dibromomethane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	2	<1	<1	0	98	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	2	1	1	0	95	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	2	<1	<1	0	97	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	2	<1	<1	0	91	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	2	<1	<1	0	100	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	2	<1	<1	0	102	[NT]
Bromoform	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	<2	2	<2	<2	0	104	[NT]
Styrene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
o-xylene	µg/L	1	Org-023	<1	2	<1	<1	0	101	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	2	102	103	1	101	[NT]
Surrogate Toluene-d8	%		Org-023	101	2	100	99	1	102	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	95	2	100	102	2	98	[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	-			15/12/2023	2	15/12/2023	18/12/2023		15/12/2023	[NT]
Date analysed	-			18/12/2023	2	18/12/2023	19/12/2023		18/12/2023	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	2	<10	<10	0	101	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	2	<10	<10	0	101	[NT]
Benzene	µg/L	1	Org-023	<1	2	<1	<1	0	96	[NT]
Toluene	µg/L	1	Org-023	<1	2	<1	<1	0	97	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	2	<1	<1	0	102	[NT]
m+p-xylene	µg/L	2	Org-023	<2	2	<2	<2	0	104	[NT]
o-xylene	µg/L	1	Org-023	<1	2	<1	<1	0	101	[NT]
Naphthalene	µg/L	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	2	102	103	1	101	[NT]
Surrogate Toluene-d8	%		Org-023	101	2	100	99	1	102	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	95	2	100	102	2	98	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			18/12/2023	[NT]	[NT]	[NT]	[NT]	18/12/2023	[NT]
Date analysed	-			18/12/2023	[NT]	[NT]	[NT]	[NT]	18/12/2023	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	108	[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]	86	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	108	[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]	86	[NT]
Surrogate o-Terphenyl	%		Org-020	90	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			18/12/2023	[NT]	[NT]	[NT]	[NT]	18/12/2023	[NT]
Date analysed	-			19/12/2023	[NT]	[NT]	[NT]	[NT]	19/12/2023	[NT]
Naphthalene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	102	[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]	92	[NT]
Fluorene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94	[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]	95	[NT]
Pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	93	[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]	92	[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]	119	[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	81	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			14/12/2023	1	14/12/2023	14/12/2023		14/12/2023	[NT]
Date analysed	-			14/12/2023	1	14/12/2023	14/12/2023		14/12/2023	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	102	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	1	<0.1	<0.1	0	104	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	108	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	1	4	4	0	98	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	100	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	1	<0.05	<0.05	0	84	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	1	100	100	0	105	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	1	400	400	0	103	[NT]

QUALITY CONTROL: HM in water - total						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date prepared	-			15/12/2023	[NT]	[NT]	[NT]	[NT]	15/12/2023	[NT]
Date analysed	-			15/12/2023	[NT]	[NT]	[NT]	[NT]	15/12/2023	[NT]
Arsenic-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Cadmium-Total	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Chromium-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Copper-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Lead-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Mercury-Total	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	89	[NT]
Nickel-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Zinc-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: Miscellaneous Inorganics					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			14/12/2023	[NT]	[NT]	[NT]	[NT]	14/12/2023	[NT]
Date analysed	-			14/12/2023	[NT]	[NT]	[NT]	[NT]	14/12/2023	[NT]
pH	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]
Electrical Conductivity	µS/cm	1	Inorg-002	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PFAS in Waters Trace Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			14/12/2023	[NT]	[NT]	[NT]	[NT]	14/12/2023	[NT]
Date analysed	-			14/12/2023	[NT]	[NT]	[NT]	[NT]	14/12/2023	[NT]
Perfluorobutanesulfonic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluoropentanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	112	[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]	104	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorodecanesulfonic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	90	[NT]
Perfluorobutanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluoropentanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorohexanoic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluoroheptanoic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	94	[NT]
Perfluorononanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	132	[NT]
Perfluorodecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	90	[NT]
Perfluoroundecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorododecanoic acid	µg/L	0.005	Org-029	<0.005	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorotridecanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorotetradecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	116	[NT]
4:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	104	[NT]
6:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	96	[NT]
8:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	96	[NT]
10:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	94	[NT]
Perfluorooctane sulfonamide	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	97	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	82	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	89	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	102	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	91	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	100	[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	74	[NT]	[NT]	[NT]	[NT]	79	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	80	[NT]	[NT]	[NT]	[NT]	86	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	74	[NT]	[NT]	[NT]	[NT]	80	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	86	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	85	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	115	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	89	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	115	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	43	[NT]	[NT]	[NT]	[NT]	57	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	150	[NT]	[NT]	[NT]	[NT]	157	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	146	[NT]	[NT]	[NT]	[NT]	157	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	71	[NT]	[NT]	[NT]	[NT]	74	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	106	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	104	[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	104	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	80	[NT]	[NT]	[NT]	[NT]	83	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	84	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: PFAS in Water TRACE Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			14/12/2023	[NT]	[NT]	[NT]	[NT]	14/12/2023	[NT]
Date analysed	-			14/12/2023	[NT]	[NT]	[NT]	[NT]	14/12/2023	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	94	[NT]
6:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	96	[NT]
8:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	96	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	91	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	80	[NT]	[NT]	[NT]	[NT]	86	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	74	[NT]	[NT]	[NT]	[NT]	80	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	115	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	150	[NT]	[NT]	[NT]	[NT]	157	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	146	[NT]	[NT]	[NT]	[NT]	157	[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.

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Report Comments

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).

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	C Ridley

Sample Login Details

Your reference	E36466PR, Macquarie Park
Envirolab Reference	340105
Date Sample Received	13/12/2023
Date Instructions Received	13/12/2023
Date Results Expected to be Reported	20/12/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	6 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	8
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:

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	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water	HM in water - dissolved	pH	Electrical Conductivity	PFAS in Waters Trace Extended	PFAS in Water TRACE Short
MW18	✓	✓	✓	✓	✓	✓	✓	✓	
MW26	✓	✓	✓	✓	✓	✓	✓	✓	
MW29	✓	✓	✓	✓	✓	✓	✓	✓	
WDUP1	✓	✓	✓	✓	✓			✓	
TB-W1	✓	✓	✓	✓	✓				✓
TS-W1		✓							

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: E36466PR 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: Craig Ridley Cridley@jkenvironments.com.au

Location: Macquarie Park

Sampler: LR

Sample Preserved in Esky on Ice

Tests Required

	Date Sampled	Lab Ref:	Sample Number	Sample Containers	PID	Sample Description	Combo 3	VOCs	PFAS - Extended (Trace)	pH/EC	BTEX	PFAS - Short (Trace)						
1	12/12/2023		MW18	#	1	Groundwater	x	X	X	X								
2	12/12/2023		MW26	#	1.7	Groundwater	x	X	X	X								
3	12/12/2023		MW29	#	2.9	Groundwater	x	X	X	X								
4	12/12/2023		WDUP1	HNO3, V, G, PFAS	-	Duplicate	X	X	X									
	12/12/2023		WDUP2	HNO3, V, G, PFAS	-	Duplicate	X	X	X		SEND TO VIC							
5	12/12/2023		TB-W1	V, PFAS, HNO3, G	-	Trip Blank	X	X				X						
6	12/12/2023		TS-W1	V	-	Trip Spike					X							

ENVIROLAB

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

Job No: 334105

Date Received: 13/12/23

Time Received: 1415

Received By: P-C.

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

PL

Remarks (comments/detection limits required):

All analysis PQLs to ANZECC (2000) Detection Limits Please

Sample Containers:

- (500mL Amber Glass Bottle, BTEX Vials, HNO3 Wash PVC, Unpreserved PVC, PFAS PVC) HNO3 - HNO3 Wash PVC V- BTEX Vials G- 500ml Amber Glass Bottle PFAS - PFAS PVC

Relinquished By:	Date:	Time:	Received By:	Date:
	13/12/2023	12:20		

13/12/23
1415

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 41275

Client Details

Client	JK Environments
Attention	Craig Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E36466PR**
Number of Samples	1 Water
Date samples received	15/12/2023
Date completed instructions received	15/12/2023

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	21/12/2023
Date of Issue	21/12/2023

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Results Approved By
Pamela Adams, Laboratory Manager, Melbourne
Tara White, Metals Team Leader
Tianna Milburn, Senior Chemist

Authorised By
Pamela Adams, Laboratory Manager

VOCs in water - Routine Level		
Our Reference		41275-1
Your Reference	UNITS	WDUP2
Date Sampled		12/12/2023
Type of sample		Water
Date extracted	-	20/12/2023
Date analysed	-	20/12/2023
Dichlorodifluoromethane	µg/L	<10
Chloromethane	µg/L	<10
Vinyl Chloride	µg/L	<10
Bromomethane	µg/L	<10
Chloroethane	µg/L	<10
Trichlorofluoromethane	µg/L	<10
1,1-Dichloroethene	µg/L	<1
Trans-1,2-dichloroethene	µg/L	<1
1,1-dichloroethane	µg/L	<1
Cis-1,2-dichloroethene	µg/L	<1
Bromochloromethane	µg/L	<1
Chloroform	µg/L	<1
2,2-dichloropropane	µg/L	<1
1,2-dichloroethane	µg/L	<1
1,1,1-trichloroethane	µg/L	<1
1,1-dichloropropene	µg/L	<1
Cyclohexane	µg/L	<1
Carbon tetrachloride	µg/L	<1
Benzene	µg/L	<1
Dibromomethane	µg/L	<1
1,2-dichloropropane	µg/L	<1
Trichloroethene	µg/L	<1
Bromodichloromethane	µg/L	<1
trans-1,3-dichloropropene	µg/L	<1
cis-1,3-dichloropropene	µg/L	<1
1,1,2-trichloroethane	µg/L	<1
Toluene	µg/L	<1
1,3-dichloropropane	µg/L	<1
Dibromochloromethane	µg/L	<1
1,2-dibromoethane	µg/L	<1
Tetrachloroethene	µg/L	<1
1,1,1,2-tetrachloroethane	µg/L	<1
Chlorobenzene	µg/L	<1
Ethylbenzene	µg/L	<1

VOCs in water - Routine Level		
Our Reference		41275-1
Your Reference	UNITS	WDUP2
Date Sampled		12/12/2023
Type of sample		Water
Bromoform	µg/L	<1
m+p-xylene	µg/L	<2
Styrene	µg/L	<1
1,1,2,2-tetrachloroethane	µg/L	<1
o-xylene	µg/L	<1
1,2,3-trichloropropane	µg/L	<1
Isopropylbenzene	µg/L	<1
Bromobenzene	µg/L	<1
n-propyl benzene	µg/L	<1
2-chlorotoluene	µg/L	<1
4-chlorotoluene	µg/L	<1
1,3,5-trimethyl benzene	µg/L	<1
Tert-butyl benzene	µg/L	<1
1,2,4-trimethyl benzene	µg/L	<1
1,3-dichlorobenzene	µg/L	<1
Sec-butyl benzene	µg/L	<1
1,4-dichlorobenzene	µg/L	<1
4-isopropyl toluene	µg/L	<1
1,2-dichlorobenzene	µg/L	<1
n-butyl benzene	µg/L	<1
1,2-dibromo-3-chloropropane	µg/L	<1
1,2,4-trichlorobenzene	µg/L	<1
Hexachlorobutadiene	µg/L	<1
1,2,3-trichlorobenzene	µg/L	<1
Surrogate Dibromofluoromethane	%	104
Surrogate toluene-d8	%	102
Surrogate 4-BFB	%	97

vTRH(C6-C10)/BTEXN in Water		
Our Reference	UNITS	41275-1
Your Reference		WDUP2
Date Sampled		12/12/2023
Type of sample		Water
Date extracted	-	20/12/2023
Date analysed	-	20/12/2023
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
Total +ve Xylenes	µg/L	<1
Total BTEX in water	µg/L	<1
Surrogate Dibromofluoromethane	%	104
Surrogate toluene-d8	%	101
Surrogate 4-BFB	%	97

TRH Water(C10-C40) NEPM		
Our Reference		41275-1
Your Reference	UNITS	WDUP2
Date Sampled		12/12/2023
Type of sample		Water
Date extracted	-	18/12/2023
Date analysed	-	19/12/2023
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	<100
TRH C_{29} - C_{36}	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	<50
TRH >C_{10} - C_{16}	µg/L	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50
TRH >C_{16} - C_{34}	µg/L	<100
TRH >C_{34} - C_{40}	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	<50
Surrogate o-Terphenyl	%	88

PAHs in Water		
Our Reference		41275-1
Your Reference	UNITS	WDUP2
Date Sampled		12/12/2023
Type of sample		Water
Date extracted	-	18/12/2023
Date analysed	-	18/12/2023
Naphthalene	µg/L	<0.1
Acenaphthylene	µg/L	<0.1
Acenaphthene	µg/L	<0.1
Fluorene	µg/L	<0.1
Phenanthrene	µg/L	<0.1
Anthracene	µg/L	<0.1
Fluoranthene	µg/L	<0.1
Pyrene	µg/L	<0.1
Benzo(a)anthracene	µg/L	<0.1
Chrysene	µg/L	<0.1
Benzo(b,j&k)fluoranthene	µg/L	<0.2
Benzo(a)pyrene	µg/L	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1
Total +ve PAH's	µg/L	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5
Surrogate p-Terphenyl-d_{14}	%	85

HM in water - dissolved		
Our Reference		41275-1
Your Reference	UNITS	WDUP2
Date Sampled		12/12/2023
Type of sample		Water
Date prepared	-	19/12/2023
Date analysed	-	19/12/2023
Arsenic-Dissolved	µg/L	<1
Cadmium-Dissolved	µg/L	<0.1
Chromium-Dissolved	µg/L	<1
Copper-Dissolved	µg/L	2
Lead-Dissolved	µg/L	<1
Nickel-Dissolved	µg/L	110
Zinc-Dissolved	µg/L	440
Mercury-Dissolved	µg/L	<0.05

PFAS in water TRACE Extended		
Our Reference		41275-1
Your Reference	UNITS	WDUP2
Date Sampled		12/12/2023
Type of sample		Water
Date prepared	-	19/12/2023
Date analysed	-	19/12/2023
Perfluorobutanesulfonic acid	µg/L	<0.0004
Perfluoropentanesulfonic acid	µg/L	<0.001
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.0002
Perfluoroheptanesulfonic acid	µg/L	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	<0.0002
Perfluorodecanesulfonic acid	µg/L	<0.002
Perfluorobutanoic acid	µg/L	<0.002
Perfluoropentanoic acid	µg/L	<0.002
Perfluorohexanoic acid	µg/L	0.002
Perfluoroheptanoic acid	µg/L	<0.0004
Perfluorooctanoic acid PFOA	µg/L	<0.0002
Perfluorononanoic acid	µg/L	<0.001
Perfluorodecanoic acid	µg/L	<0.002
Perfluoroundecanoic acid	µg/L	<0.002
Perfluorododecanoic acid	µg/L	<0.005
Perfluorotridecanoic acid	µg/L	<0.01
Perfluorotetradecanoic acid	µg/L	<0.05
4:2 FTS	µg/L	<0.001
6:2 FTS	µg/L	0.0064
8:2 FTS	µg/L	<0.0004
10:2 FTS	µg/L	<0.002
Perfluorooctane sulfonamide	µg/L	<0.01
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05
N-Ethyl perfluorooctanesulfon -amide	µg/L	<0.1
N-Me perfluorooctanesulfonamid -oethanol	µg/L	<0.05
N-Et perfluorooctanesulfonamid -oethanol	µg/L	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.002
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.002
Surrogate $^{13}C_8$ PFOS	%	103
Surrogate $^{13}C_2$ PFOA	%	97
Extracted ISTD $^{13}C_3$ *PFBS*	%	81
Extracted ISTD $^{18}O_2$ *PFHxS*	%	80
Extracted ISTD $^{13}C_4$ *PFOS*	%	74
Extracted ISTD $^{13}C_4$ *PFBA*	%	30

PFAS in water TRACE Extended		
Our Reference		41275-1
Your Reference	UNITS	WDUP2
Date Sampled		12/12/2023
Type of sample		Water
Extracted ISTD $^{13}C_3$ *PFPeA*	%	97
Extracted ISTD $^{13}C_2$ *PFHxA*	%	87
Extracted ISTD $^{13}C_4$ *PFHpA*	%	88
Extracted ISTD $^{13}C_4$ *PFOA*	%	128
Extracted ISTD $^{13}C_5$ *PFNA*	%	90
Extracted ISTD $^{13}C_2$ *PFDA*	%	91
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	86
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	82
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	49
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	96
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	#
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	121
Extracted ISTD $^{13}C_8$ *FOSA*	%	69
Extracted ISTD d_3 *N MeFOSA*	%	116
Extracted ISTD d_5 *N EtFOSAA*	%	105
Extracted ISTD d_7 *N MeFOSE*	%	115
Extracted ISTD d_9 *N EtFOSE*	%	123
Extracted ISTD d_3 *N MeFOSAA*	%	89
Extracted ISTD d_5 *N EtFOSAA*	%	105
Total Positive PFHxS & PFOS	µg/L	<0.0002
Total Positive PFOS & PFOA	µg/L	<0.0002
Total Positive PFAS	µg/L	0.0084

Method ID	Methodology Summary
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Metals-022 ICP-MS	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.
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-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. 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. 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-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 5.4 Table B-15 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 - Routine Level					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			20/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Date analysed	-			20/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromomethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromoform	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Styrene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VOCs in water - Routine Level					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate toluene-d8	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate 4-BFB	%		Org-023	97	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			20/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
Date analysed	-			20/12/2023	[NT]	[NT]	[NT]	[NT]	20/12/2023	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	109	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	109	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	110	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	110	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate toluene-d8	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate 4-BFB	%		Org-023	97	[NT]	[NT]	[NT]	[NT]	97	[NT]

QUALITY CONTROL: TRH Water(C10-C40) NEPM					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			19/12/2023	[NT]	[NT]	[NT]	[NT]	19/12/2023	[NT]
Date analysed	-			19/12/2023	[NT]	[NT]	[NT]	[NT]	19/12/2023	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	127	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	133	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	127	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	133	[NT]
Surrogate o-Terphenyl	%		Org-020	84	[NT]	[NT]	[NT]	[NT]	75	[NT]

QUALITY CONTROL: PAHs in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			18/12/2023	[NT]	[NT]	[NT]	[NT]	18/12/2023	[NT]
Date analysed	-			18/12/2023	[NT]	[NT]	[NT]	[NT]	18/12/2023	[NT]
Naphthalene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	73	[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]	81	[NT]
Fluorene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	88	[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]	80	[NT]
Pyrene	µg/L	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	80	[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]	92	[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]	110	[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-d_{14}	%		Org-022/025	98	[NT]	[NT]	[NT]	[NT]	80	[NT]

QUALITY CONTROL: HM in water - dissolved					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			19/12/2023	[NT]	[NT]	[NT]	[NT]	19/12/2023	[NT]
Date analysed	-			19/12/2023	[NT]	[NT]	[NT]	[NT]	19/12/2023	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022 ICP-MS	<0.1	[NT]	[NT]	[NT]	[NT]	109	[NT]
Chromium-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Copper-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Lead-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Nickel-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Zinc-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021 CV-AAS	<0.05	[NT]	[NT]	[NT]	[NT]	108	[NT]

QUALITY CONTROL: PFAS in water TRACE Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Perfluorobutanesulfonic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluoropentanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	92	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorodecanesulfonic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	65	[NT]
Perfluorobutanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluoropentanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorohexanoic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluoroheptanoic acid	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.0002	Org-029	<0.0002	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorononanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	114	[NT]
Perfluorodecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	92	[NT]
Perfluoroundecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorododecanoic acid	µg/L	0.005	Org-029	<0.005	[NT]	[NT]	[NT]	[NT]	93	[NT]
Perfluorotridecanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorotetradecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	106	[NT]
4:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	108	[NT]
6:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	89	[NT]
8:2 FTS	µg/L	0.0004	Org-029	<0.0004	[NT]	[NT]	[NT]	[NT]	107	[NT]
10:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluorooctane sulfonamide	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	102	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	96	[NT]
N-Ethyl perfluorooctanesulfon -amide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
N-Me perfluorooctanesulfonamid -oethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	90	[NT]
N-Et perfluorooctanesulfonamid -oethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	99	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	102	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate $^{13}C_8$ PFOS	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	96	[NT]
Surrogate $^{13}C_2$ PFOA	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_3$ PFBS	%		Org-029	90	[NT]	[NT]	[NT]	[NT]	78	[NT]

QUALITY CONTROL: PFAS in water TRACE Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	77	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	89	[NT]	[NT]	[NT]	[NT]	64	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	80	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	87	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	120	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	76	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	77	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	111	[NT]	[NT]	[NT]	[NT]	78	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	77	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	57	[NT]	[NT]	[NT]	[NT]	39	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	118	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	171	[NT]	[NT]	[NT]	[NT]	126	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	80	[NT]	[NT]	[NT]	[NT]	65	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	116	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: PFAS in water TRACE Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	117	[NT]	[NT]	[NT]	[NT]	81	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	128	[NT]	[NT]	[NT]	[NT]	80	[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.

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Report Comments

PFAS in Waters Trace Extended analysed by Envirolab Sydney, report number 340410.

PFAS: 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).

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Craig Ridley

Sample Login Details

Your reference	E36466PR
Envirolab Reference	41275
Date Sample Received	15/12/2023
Date Instructions Received	15/12/2023
Date Results Expected to be Reported	21/12/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	21.3
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams	Chris De Luca
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: cdeluca@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

Sample ID	VOCs in water - Routine Level	vTRH(C6-C10)/BTEXN in Water	TRH Water(C10-C40) NEPM	PAHs in Water	HM in water - dissolved	PFAS in water TRACE Extended
WDUP2	✓	✓	✓	✓	✓	✓

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.

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: E36466PR 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: Craig Ridley Cridley@jkenvironments.com.au

Location: Macquarie Park

Sampler: LR

Sample Preserved in Esky on Ice

Tests Required

	Date Sampled	Lab Ref:	Sample Number	Sample Containers	PID	Sample Description	Combo 3.	VOCs	PFAS - Extended (Trace)	pH/EC	BTEX	PFAS - Short (Trace)						
1	12/12/2023		MW18	#	1	Groundwater	x	X	X	X								
2	12/12/2023		MW26	#	1.7	Groundwater	x	X	X	X								
3	12/12/2023		MW29	#	2.9	Groundwater	x	X	X	X								
4	12/12/2023		WDUP1	HNO3, V, G, PFAS	-	Duplicate	X	X	X									
	12/12/2023	(1)	WDUP2	HNO3, V, G, PFAS	-	Duplicate	X	X	X		SEND TO VIC							
5	12/12/2023		TB-W1	V, PFAS, HNO3, G	-	Trip Blank	X	X				X						
6	12/12/2023		TS-W1	V	-	Trip Spike					X							

Relinquished by ELS SYD

Carter Zhang

14/12/23 1200

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

Job No: 341075

Date Received: 13/12/23

Time Received: 1415

Received By: P-C

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

Envirolab Services
25 Hasse[illegible] Drive
Croydon South VIC 3136
Ph: (03) 8763 2500

Job No: 41275

Date Received: AP 15/12/23

Time Received: 1430 1:25

Received By: AP 21.3

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

Remarks (comments/detection limits required):

All analysis PQLs to ANZECC (2000) Detection Limits Please

Sample Containers:

- (500mL Amber Glass Bottle, BTEX Vials, HNO3 Wash PVC, Unpreserved PVC, PFAS PVC) HNO3 - HNO3 Wash PVC V- BTEX Vials G- 500ml Amber Glass Bottle PFAS - PFAS PVC

Relinquished By:	Date:	Time:	Received By:	Date:
	13/12/2023	12:20		

13/12/23
1415

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)[23] methods and those described in *Environmental Sampling and Analysis, A Practical Guide,* (1991)[24]. 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;

[23] US EPA, (1994). *SW-846: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.* (US EPA SW-846)

[24] 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 6.1 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 6% of primary samples.
Inter-laboratory duplicate (soil)	4	As above.
Intra-laboratory duplicate (groundwater)	1	Approximately 30% of primary samples.
Inter-laboratory duplicate (groundwater)	1	As above.
Trip spikes Soil Water	 3 1	One per analytical batch to demonstrate adequacy of preservation, storage and transport methods.
Trip blanks Soil Water	 3 1	One per analytical batch to demonstrate adequacy of storage and transport methods.
Rinsates (soil equipment)	4	One per soil analytical batch to demonstrate adequacy of decontamination methods. JKE note that an additional rinsate was collected during the January 2024 fieldworks.

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 generally in accordance with Schedule B(3) of NEPM (2013) and the laboratory NATA accredited methodologies. 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 the temperature on receipt of inter-laboratory soil samples was reported to be up to 22.4°C, and up to 21.3°C on receipt of the inter-laboratory water samples. 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. JKE consider it is possible that the increase in temperature for the inter-laboratory duplicate samples may also be attributed to the length of time in transit to the secondary laboratory which is based in Victoria. However, based on the BTEX and TRH (F1 and F2) concentrations reported for the primary samples, JKE consider this does not adversely impact on the validity of the data set as a whole. We also note that the trip spike results were acceptable, indicating the field/transport preservation was appropriate. The primary samples were received at appropriately chilled temperatures.

The inter-laboratory analysis for PFAS in groundwater was undertaken by the primary laboratory (Envirolab NSW). The secondary laboratory (Envirolab VIC) was not able to perform the trace-level analysis and subsequently returned the sample to the Sydney laboratory for analysis of PFAS in groundwater. This analysis was conducted 'blind' under a separate analytical report (340410, not provided to JKE). The remainder of the inter-laboratory duplicate analysis of groundwater was undertaken by Envirolab VIC. On this basis, JKE consider this non-conformance in field duplicate analysis to be minor and it does not affect the quality of the dataset as a whole or the outcome of the investigation.

The laboratory analysis was generally undertaken within the specified holding times. The following exceedances were identified:

- Report 339235-A: The analysis of pH in soil samples was undertaken approximately four weeks beyond the recommended holding time. JKE note that the pH analysis was undertaken to establish soil-specific EILs. The delay in analysis was associated with the analysis being undertaken following receipt of the initial results and the holiday closure period of the laboratory. As the samples were stored in appropriate conditions (i.e. chilled), and the results indicated the soils to be alkaline, JKE consider it is unlikely that the pH of the soil sample would change dramatically and that the results are sufficiently reliable for the purpose of establishing site-specific EILs;

- Report 339235-A: The analysis of BTEX, TRH, PAH, OCP, OPP, and PCBs in soils was undertaken approximately one week beyond the recommended holding time. The delay in analysis was associated with the analysis being requested following receipt of the initial results. As the samples were stored in appropriate conditions (i.e. chilled), JKE consider it is unlikely that the analytes would change dramatically during the minor holding time exceedance and that the results are sufficiently reliable for the purpose of this investigation; and
- Report 339695-A: The analysis of BTEX, TRH, PAH, OCP, OPP, and PCBs in soils was undertaken approximately one week beyond the recommended holding time. The delay in analysis was associated with the analysis being requested following receipt of the initial results. As the samples were stored in appropriate conditions (i.e. chilled), JKE consider it is unlikely that the analytes would change dramatically during the minor holding time exceedance and that the results are sufficiently reliable for the purpose of this investigation.

Due to a typographical error by JKE, some of the soil analysis reports were assigned the incorrect project reference of E36446PR, rather than the project reference, E36466PR. JKE consider this typographical error to be minor and to have no adverse impact on the quality of the data set.

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 following:
- Anthracene PQL for groundwater analysis was 10 times greater than the ecological SAC;
- Hexachlorobutadiene PQL for groundwater analysis was marginally greater than the HSL-SSA SAC; and
- Vinyl chloride PQL for groundwater analysis was approximately 3 times greater than the human contact SAC and 33 times greater than the HSL-SSA SAC.

In light of the PAH concentrations reported for soil and groundwater, and the VOC concentrations reported for groundwater, JKE are 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 discussed below:
- An elevated RPD was reported for TRH F3 in SDUP1/BH33 (0.04-0.14m);
- Elevated RPDs were reported for TRH F3, TRH F4 and perfluorooctanoic acid (PFOA) in SDUP2/BH24 (0-0.1m);
- Elevated RPDs were reported for TRH F4 and copper in SDUP3/BH22 (0.1-0.15m);

- Elevated RPDs were reported for TRH F3, TRH F4, several PAH compounds, arsenic, copper and one PFAS compound in SDUP4/BH8 (0.03-0.4m);
- Elevated RPDs were reported for TRH F3 and F4, copper and lead in SDUP6/BH6 (0.025-0.4m);
- Elevated RPDs were reported for chromium, copper, PFOA and perfluorohexanesulfonic acid (PFHxS), and a few PAH compounds in SDUP9/BH2 (0.5-0.95m);
- An elevated RPD was reported for 6:2 fluorotelomer sulfonic acid (6:2 FTS) in WDUP1/MW26; and
- An elevated RPD was reported for copper in WDUP2/MW18.

Values outside the acceptable limits for the soil samples have typically been attributed to sample heterogeneity and the difficulties associated with obtaining homogenous duplicate samples of heterogeneous matrices. Some of the values (particularly for organic compounds) may also have been attributed to low analyte concentrations approaching the PQL. However, this was variable across the analytical batches. As the primary and duplicate samples were compared to the SAC, the exceedances are not considered to have had an adverse impact on the data set as a whole.

Values outside the acceptable limits for the water samples have been attributed to low analyte concentrations approaching the PQL (i.e. within 5x the PQL). In these instances, the RPD values are considered acceptable.

Trip Blanks

During the investigation, three soil trip blanks (i.e. one per analytical batch) were placed in the eskies during sampling and transported back to the laboratory. The soil trip blank analysis results were all less than the PQLs with the exception of chromium, lead and zinc with reported concentrations ranging from 2mg/kg to 4mg/kg. 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.

During the investigation, one water trip blank was placed in the esky during sampling and transported back to the laboratory. The results were all less than the PQLs, therefore cross contamination between samples that may have significance for data validity did not occur.

Rinsates

All results were below the PQL with the exception of TRH F1, copper and zinc. TRH F1 were recorded at concentrations up to 110µg/L, whilst copper and zinc were recorded at concentrations of up to 0.5mg/L and 0.04mg/L respectively.

The detectable concentration of light fraction TRH is most likely attributed to THMs. These compounds are breakdown products from the chlorination process and are common in potable water at the concentration reported (the Australian drinking water guideline for total trihalomethanes is 250µg/L). The copper and zinc results are also likely attributable to the use of potable water in the decontamination process and are common at the concentrations reported (the Australian Drinking water guideline for copper and zinc are 2mg/L and 3mg/L respectively).

On this basis, there is considered to be a low potential for cross contamination to have occurred to an extent that may have significance for data validity.

Trip Spikes

The results for the soil trip spikes ranged from 93% to 110% and the results for the water trip spike ranged from 94% to 107%. These results 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:

Envirolab Report 339235:

- Matrix spike recovery for zinc in one soil sample was not possible due to the inhomogeneous nature of the sample. However, an acceptable recovery was obtained for the LCS; and
- For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptable range, the laboratory indicated that the respective target analyte results may be unaffected and in other circumstances the PQL has been raised to accommodate the outlier(s).

Envirolab Report 339235-A:

- For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptable range, the laboratory indicated that the respective target analyte results may be unaffected and in other circumstances the PQL has been raised to accommodate the outlier(s).

Envirolab Report 41047:

- For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptable range, the laboratory indicated that the respective target analyte results may be unaffected and in other circumstances the PQL has been raised to accommodate the outlier(s).

Envirolab Report 339695:

- Matrix spike recoveries for several PAH compounds were not possible in one soil sample due to matrix interference. JKE note that acceptable recoveries were obtained for the LCS;
- RPD exceedances were recorded for PAHs in one soil sample pairing. The laboratory considered the RPDs acceptable due to the heterogeneous nature of the sample;
- RPD exceedances were reported for copper in one soil sample pairing, and several metals in another. The laboratory issued triplicate results;
- For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptable range, the laboratory indicated that the respective target analyte results may be unaffected and in other circumstances the PQL has been raised to accommodate the outlier(s); and
- The soil sample collected from BH27 (0.3-0.5m) was below the minimum recommended 500mL sample volume as per NEPM 2013.

Envirolab Report 339695-A:

- Insufficient sample volume was available for PFAS TCLP preparation for one sample. The laboratory subsequently sub-sampled from the glass jar rather than using the supplied PFAS sample container. JKE note that the PFAS TCLP and ASLP results for the sample were below the PQL, indicating this non-conformance did not adversely impact the quality of dataset;
- RPD exceedances were reported for several metals in one sample pairing. The laboratory issued triplicate results;
- Matrix spike recoveries for several PAH compounds were not possible in one sample due to matrix interference. JKE note that acceptable recoveries were obtained for the LCS;
- A high matrix spike recovery was obtained for exchangeable calcium in one soil sample. The laboratory re-digested and re-spiked the sample, and the high recovery was confirmed. The laboratory attributed the high recovery rate to matrix interference, though noted an acceptable recovery was obtained for the LCS; and
- For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptable range, the laboratory indicated that the respective target analyte results may be unaffected and in other circumstances the PQL has been raised to accommodate the outlier(s).

Envirolab Report 41235:

- For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptable range, the laboratory indicated that the respective target analyte results may be unaffected and in other circumstances the PQL has been raised to accommodate the outlier(s).

Envirolab Report 341181:

- Matrix spike recoveries for some TRH fractions were not possible in one sample due to interference from high analyte concentrations within one soil sample. JKE note that acceptable recoveries were obtained of the LCS;
- An RPD exceedance was reported for nickel in one sample pairing. The laboratory issued triplicate results;
- For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptable range, the laboratory indicated that the respective target analyte results may be unaffected and in other circumstances the PQL has been raised to accommodate the outlier(s); and
- The soil samples collected from BH4 (0.5-0.95m) and BH12 (1.7-1.95m) were below the minimum recommended 500mL sample volume as per NEPM 2013.

Envirolab Report 340105:

- For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptable range, the laboratory indicated that the respective target analyte results may be unaffected and in other circumstances the PQL has been raised to accommodate the outlier(s).

Envirolab Report 41275:

- For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptable range, the laboratory indicated that the respective target analyte results may be unaffected and in other circumstances the PQL has been raised to accommodate the outlier(s); and
- PFAS in waters (trace level) was analysed by Envirolab Sydney (Report number 340410).

The laboratory QA non-conformances were considered to be sporadic and minor in nature and do not adversely affect the quality of the dataset as a whole. JKE consider that the dataset is suitably reliable for the purpose and objectives of the PSI.

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, and in the vicinity of the USTs. Additional investigation is recommended to confirm the conclusions of the investigation.

As identified via the CSM review and data gap assessment process outlined in the discussion section of the report, the PSI data is not representative of all AEC and all CoPC as the intrusive component of the PSI was designed prior to the development of the CSM. Consequently, all potentially affected media and all related CoPC were not considered as this was outside the scope of the PSI. This has been considered in drawing conclusions and making recommendations.

Appendix H: Field Work Documents

JKEnvironments

WATER QUALITY METER CALIBRATION FORM

Client:	TTW		
Project:	Proposed S5 Data Centre		
Location:	34 Waterloo Road, MACQUARIE PARK, NSW		
Job Number:	36466BF		
DISSOLVED OXYGEN			
Make: Professional Plus	Model: YSI5		
Date of calibration: 12/12/23	Name of Calibrator: LR		
Span value: 70% to 130%			
Measured value: 112%			
Measured reading Acceptable (Yes/No):			
pH			
Make: Professional Plus	Model: YSI5		
Date of calibration: 12/12/23	Name of Calibrator: LR		
Buffer 1: Theoretical pH = 7.01± 0.01	Expiry date: 9/10/24	Lot No: CE 230523	
Buffer 2: Theoretical pH = 4.01± 0.01	Expiry date: 11/12/24	Lot No: CB 2665	
Measured reading of Buffer 1: 7.00			
Measured reading of Buffer 2: 3.98			
Slope:	Measured reading Acceptable (Yes/No):		
EC			
Make: Professional Plus	Model: YSI5		
Date: 12/12/23	Name of Calibrator: LR	Temperature: 25.2 °C	
Calibration solution: Rowe's Scientific	Expiry date: 11/24	Lot No: IC19548	
Theoretical conductivity at temperature (see solution container): 1413 µS/cm			
Measured conductivity: 383 µS/cm	Measured reading Acceptable (Yes/No):		
REDOX			
Make: Professional Plus	Model: YSI5		
Date of calibration: 12/12/23	Name of Calibrator: LR		
Calibration solution: ORP Test Solution	Expiry date: 6/12/24	Lot No: 8976	
Theoretical redox value: 240mV			
Measured redox reading: 242.2 mV	Measured reading Acceptable (Yes/No):		

JKEnvironments

PID FIELD CALIBRATION FORM

Client:	TTW
Project:	Proposed S5 Data Centre
Location:	34 Waterloo Road, MACQUARIE PARK, NSW
Job Number:	36466BF

PID

Make: Honeywell	Model: MiniRae 3000+	Unit: 3	Date of last factory calibration: 09.08.23
Date of calibration: 12/12/23		Name of Calibrator: L.R	
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:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading:	± ppm
Measured reading Acceptable (Yes/No):			

PID

Make:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading:	± ppm
Measured reading Acceptable (Yes/No):			

PID

Make:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading:	± ppm
Measured reading Acceptable (Yes/No):			

PID

Make:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading:	± ppm
Measured reading Acceptable (Yes/No):			

JKEnvironments

Client:	TTW	**Job No.:**	36466BF
Project:	Proposed S5 Data Centre	**Well No.:**	MW2
Location:	34 Waterloo Road, MACQUARIE PARK, NSW	**Depth (m):**	Well depth 3.6m

WELL FINISH

X	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:		**SWL – Before:**	Well Dry
Date:	12/12/23	**Time – Before:**	-
Undertaken By:	LR	**Total Vol Removed:**	-
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)
-	-	-	-	-	-	-	-	-
			Well Dry					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

Sampling Containers Used: x glass amber, x BTEX vials, x HNO3 plastic, x H2SO4 plastic, x unpreserved plastic

YSI used:

Tested By: Lewis Robinson	**Remarks:**
Date Tested: 12/12/23	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 8/2/24	

JKEnvironments

Client:	TTW	Job No.:	36466BF
Project:	Proposed S5 Data Centre	Well No.:	MW18
Location:	34 Waterloo Road, MACQUARIE PARK, NSW	Depth (m):	13.1m

WELL FINISH

X	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Peri Pump	SWL – Before:	5.15
Date:	12/12/23	Time – Before:	9:32
Undertaken By:	LR	Total Vol Removed:	7L
Pump Program No:	low	PID (ppm):	1.0

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
10:34 (0)	5.15	0.5		27.0	5.3	5216	5.35	-25.5
10:38 (4)	5.22	1.5		23.2	4.5	4486	5.25	-32.1
10:42 (8)	5.23	2		23.4	4.6	4577	5.25	-37.5
10:46 (12)	5.24	2.5		23.4	4.1	4667	5.24	-43.4
10:50 (16)	5.24	3		23.6	3.9	4792	5.25	-47.8
10:54 (20)	5.24	3.5		24.2	3.5	4998	5.26	-52.0
10:58 (24)	5.23	4		24.3	3.4	5107	5.26	-54.4
11:02 (28)	5.23	4.5		24.8	3.4	4972	5.26	-56.6
11:06 (32)	5.23	5		24.4	3.6	4963	5.27	-59.7
11:10 (36)	5.23	5.5		25.7	3.3	5294	5.25	-58.3
11:14 (40)	5.23	6		26.5	3.3	5585	5.24	-56.2
11:18 (44)	5.22	6.5		26.6	3.4	5717	5.24	-55.8
11:22 (48)	5.22	6.5		26.5	3.5	5737	5.24	-56.7
11:26 (52)	5.22	7		26.4	3.5	5760	5.24	-54.3
			Steady State achieved					
			Starting Sampling					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

MW18P2 - 2x glass amber, 4 btex, 1x HNO_3, 1x PFAS

Sampling Containers Used: 2 x glass amber, 4 x BTEX vials, 1 x HNO3 plastic, 0 x H2SO4 plastic, 1 x unpreserved plastic

2x PFAS

YSI used: YSI 5

Tested By: Lewis Robinson	**Remarks:**
Date Tested: 12/12/23	- Steady state conditions
Checked By: EW	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 21/12/23	

JKEnvironments

Client:	TTW	**Job No.:**	36466BF
Project:	Proposed S5 Data Centre	**Well No.:**	MW26
Location:	34 Waterloo Road, MACQUARIE PARK, NSW	**Depth (m):**	14.2

WELL FINISH

X	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Micropurge	**SWL – Before:**	10.16m
Date:	12/12/23	**Time – Before:**	7:30am
Undertaken By:	LR	**Total Vol Removed:**	4L
Pump Program No:	1CPM	**PID (ppm):**	1.7

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
7:51	10.16	0.5		21.3	11.5	3263	4.22	23.8
8:11 (0)	10.24	0.5		22.8	253.2	3346	4.45	12.7
8:15 (4)	10.29	1		22.1	266.4	3200	4.06	11.3
8:19 (8)	10.34	1.5		21.7	276.6	3099	4.00	9.0
8:23 (12)	10.37	2		21.5	278.4	3067	4.00	5.7
8:27 (16)	10.40	2		21.3	282.4	3015	4.02	3.3
8:31 (20)	10.42	2.5		21.2	284.4	2980	4.04	1.4
8:35 (24)	10.40	2.5		21.3	282.6	2968	4.07	-0.7
8:39 (28)	10.41	3		21.3	282.6	2952	4.10	-1.6
8:43 (32)	10.39	3		21.6	276.5	2995	4.13	-2.2
8:47 (36)	10.39	3.5		21.6	276.5	2993	4.16	-1.8
8:51 (40)	10.39	4		21.6	276.5	3004	4.30	-1.7
			Steady State achieved					
			Sampling Started					
			DO [illegible] UNLIKELY					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

WDUP1 - 1x HNO3, 4x BTEX, 2x glass amber, 1x PFAS

Sampling Containers Used: 2 x glass amber, 4 x BTEX vials, 1 x HNO3 plastic, 0 x H2SO4 plastic, 1 x unpreserved plastic

YSI used: YSI5

2x PFAS

Tested By: Lewis Robinson	**Remarks:**
Date Tested: 12/12/23	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 22/12/23	

JKEnvironments

Client:	TTW	Job No.:	36466BF
Project:	Proposed S5 Data Centre	Well No.:	MW39
Location:	34 Waterloo Road, MACQUARIE PARK, NSW	Depth (m):	19m

WELL FINISH

X	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Micro purge	SWL – Before:	13.26m
Date:	12/12/23	Time – Before:	12:31pm
Undertaken By:	LR	Total Vol Removed:	4.5L
Pump Program No:	1CPM	PID (ppm):	2.9

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
12:54 (0)	13.32	0.5		26.8	119.2	2102	6.66	-26.4
12:58 (4)	13.30	1		26.5	125.0	2087	6.17	-29.0
1:02 (8)	13.33	1.5		26.8	109.9	2131	5.92	-32.6
1:06 (12)	13.38	2		24.6	186.8	2007	5.78	-34.2
1:10 (16)	13.39	2.5		23.4	224.5	1906	5.84	-40.2
1:14 (20)	13.41	3		23.0	246.6	1883	5.81	-47.3
1:18 (24)	13.42	3		22.7	256.5	1867	5.72	-49.7
1:22 (28)	13.42	3.5		22.4	261.6	1881	5.68	-57.9
1:26 (32)	13.39	3.5		22.5	259.7	1916	5.65	-82.9
1:30 (36)	13.37	4		22.6	257.9	1941	5.64	-66.4
1:34 (40)	13.37	4		22.3	263.7	1935	5.67	-69.4
1:38 (44)	13.37	4.5		22.3	263.6	1943	5.69	-71.7
			Steady State achieved					
			Started Sampling					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

WDUP3 - 2 bles

Sampling Containers Used: 2 x glass amber, 4 x BTEX vials, 1 x HNO3 plastic, 0 x H2SO4 plastic, 1 x unpreserved plastic

YSI used: YSI 5

2x PAHs

Tested By: Lewis Robinson	**Remarks:**
Date Tested: 12/12/23	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 22/12/23	

JKEnvironments

PID FIELD CALIBRATION FORM

Client:	TTW
Project:	Proposed S5 Data Centre
Location:	34 Waterloo Road, MACQUARIE PARK, NSW
Job Number:	E36466PR

PID

Make: Honeywell	Model: minirae lite +	Unit: 4	Date of last factory calibration: 13.7.23
Date of calibration: 27/11/23		Name of Calibrator: LR	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 99.7 ppm		Error in measured reading: ± 0.3 ppm	
Measured reading Acceptable (Yes/No):			

PID

Make: Honeywell	Model: minirae lite +	Unit: 4	Date of last factory calibration: 13.7.23
Date of calibration: 28/11/23		Name of Calibrator: LR	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 100.0 ppm		Error in measured reading: ± 0.0 ppm	
Measured reading Acceptable (Yes/No):			

PID

Make: Honeywell	Model: minirae lite +	Unit: 4	Date of last factory calibration: 13.7.23
Date of calibration: 30/11/23		Name of Calibrator: LR	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 98.8 ppm		Error in measured reading: ± 1.2 ppm	
Measured reading Acceptable (Yes/No):			

PID

Make: Honeywell	Model: minirae lite +	Unit: 4	Date of last factory calibration: 13.7.23
Date of calibration: 1/12/23		Name of Calibrator: LR	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 100.3 ppm		Error in measured reading: ± 0.3 ppm	
Measured reading Acceptable (Yes/No):			

PID

Make: Honeywell	Model: minirae lite +	Unit: 4	Date of last factory calibration: 13.7.23
Date of calibration: 4/12/23		Name of Calibrator: LR	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: 100.0 ppm		Error in measured reading: ± 0.0 ppm	
Measured reading Acceptable (Yes/No):			

JKEnvironments

PID FIELD CALIBRATION FORM

Client:	TTW
Project:	Proposed S5 Data Centre
Location:	34 Waterloo Road, MACQUARIE PARK, NSW
Job Number:	E36466PR

PID

Make: Professional 5/51 Series	Model: Mini Rae Lite +	Unit: 4	Date of last factory calibration: 13.7.23
Date of calibration: 5/12/23		Name of Calibrator: LR	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: 99.5 ppm		Error in measured reading: ± 0.5	ppm
Measured reading Acceptable (Yes/No):			

PID

Make: Professional Series	Model: Mini Rae Lite +	Unit: 4	Date of last factory calibration: 13.7.23
Date of calibration: 6/12/23		Name of Calibrator: LR	
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):			

PID

Make:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading: ±	ppm
Measured reading Acceptable (Yes/No):			

PID

Make:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading: ±	ppm
Measured reading Acceptable (Yes/No):			

PID

Make:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading: ±	ppm
Measured reading Acceptable (Yes/No):			

JKEnvironments

WATER QUALITY METER CALIBRATION FORM

Client:	TTW		
Project:	Proposed S5 Data Centre		
Location:	34 Waterloo Road, MACQUARIE PARK, NSW		
Job Number:	E36466PR		
DISSOLVED OXYGEN			
Make: Professional Series		Model: YSI	
Date of calibration: 4/12/23		Name of Calibrator: LR	
Span value: 70% to 130%			
Measured value: 85%			
Measured reading Acceptable (Yes/No):			
pH			
Make: Professional Series		Model: YSI	
Date of calibration: 4/12/23		Name of Calibrator: LR	
Buffer 1: Theoretical pH = 7.01± 0.01		Expiry date: 9/10/24	Lot No: CB53110
Buffer 2: Theoretical pH = 4.01± 0.01		Expiry date: 20/5/24	Lot No: CB52665
Measured reading of Buffer 1: 6.82			
Measured reading of Buffer 2: 3.88			
Slope: –		Measured reading Acceptable (Yes/No):	
EC			
Make: Professional Series		Model: YSI	
Date: 4/12/23	Name of Calibrator: LR		Temperature: 23.4 °C
Calibration solution: Rowes Scientific		Expiry date: 11/24	Lot No: IC 19548
Theoretical conductivity at temperature (see solution container): 1359 µS/cm			
Measured conductivity: 1352 µS/cm		Measured reading Acceptable (Yes/No):	
REDOX			
Make: Professional Series		Model: YSI	
Date of calibration: 4/12/23		Name of Calibrator: LR	
Calibration solution: ORP Test Solution		Expiry date: 8/11/24	Lot No: 8177
Theoretical redox value: 240mV			
Measured redox reading: 236 mV		Measured reading Acceptable (Yes/No):	

JKEnvironments

WATER QUALITY METER CALIBRATION FORM

Client:	TTW		
Project:	Proposed S5 Data Centre		
Location:	34 Waterloo Road, MACQUARIE PARK, NSW		
Job Number:	E36466PR		
DISSOLVED OXYGEN			
Make: YSI 5		Model: Professional Series	
Date of calibration: 5/12/23		Name of Calibrator: LR	
Span value: 70% to 130%			
Measured value:			
Measured reading Acceptable (Yes/No):			
pH			
Make: YSI 5		Model: Professional Series	
Date of calibration: 5/12/23		Name of Calibrator: LR	
Buffer 1: Theoretical pH = 7.01± 0.01		Expiry date: 9/10/24	Lot No: CB3110
Buffer 2: Theoretical pH = 4.01± 0.01		Expiry date: 20/3/25	Lot No: CB2665
Measured reading of Buffer 1: 7.12			
Measured reading of Buffer 2: 4.10			
Slope:		Measured reading Acceptable (Yes/No):	
EC			
Make: YSI 5		Model: Professional Series	
Date: 5/12/23	Name of Calibrator: LR		Temperature: 21 °C
Calibration solution: Ramsey Scientific		Expiry date: 11/24	Lot No: IC 19546
Theoretical conductivity at temperature (see solution container): 1305 µS/cm			
Measured conductivity: 1295 µS/cm		Measured reading Acceptable (Yes/No):	
REDOX			
Make: YSI 5		Model: Professional Series	
Date of calibration: 5/12/23		Name of Calibrator: LR	
Calibration solution: ORP Solution		Expiry date: 8/11/24	Lot No: 8177
Theoretical redox value: 240mV			
Measured redox reading: 240.3 mV		Measured reading Acceptable (Yes/No):	

JKEnvironments

WATER QUALITY METER CALIBRATION FORM

Client:	TTW		
Project:	Proposed S5 Data Centre		
Location:	34 Waterloo Road, MACQUARIE PARK, NSW		
Job Number:	E36466PR		
DISSOLVED OXYGEN			
Make: Professional Series		Model: YSI 5	
Date of calibration: 6/12/23		Name of Calibrator: LR	
Span value: 70% to 130%			
Measured value: 123%			
Measured reading Acceptable (Yes/No):			
pH			
Make: Professional Series		Model: YSI5	
Date of calibration: 6/12/23		Name of Calibrator: LR	
Buffer 1: Theoretical pH = 7.01± 0.01		Expiry date: 9/10/24	Lot No: CB 3110
Buffer 2: Theoretical pH = 4.01± 0.01		Expiry date: 20/3/24	Lot No: CB2665
Measured reading of Buffer 1:	6.95		
Measured reading of Buffer 2:	3.97		
Slope:		Measured reading Acceptable (Yes/No):	
EC			
Make: Professional Series		Model: YSI 5	
Date: 6/12/23	Name of Calibrator: LR		Temperature: 25.3 °C
Calibration solution: Rowe's Scientific		Expiry date: 11/24	Lot No: IC 19548
Theoretical conductivity at temperature (see solution container):		1413	µS/cm
Measured conductivity: 1404 µS/cm		Measured reading Acceptable (Yes/No):	
REDOX			
Make: Professional Series		Model: YSI5	
Date of calibration: 6/12/23		Name of Calibrator: LR	
Calibration solution: ORP Test Solution		Expiry date: 6/12/24	Lot No: 8976
Theoretical redox value:	240mV		
Measured redox reading: 239.2 mV		Measured reading Acceptable (Yes/No):	

JKEnvironments

Client:	TTW	Job No.:	E36466PR
Project:	Proposed S5 Data Centre	Well No.:	MW8
Location:	34 Waterloo Road, MACQUARIE PARK, NSW	Depth (m):	5.6m

WELL FINISH DETAILS

	Gatic Cover ☒	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development	SWL – Before (m):	Well Dry
Date:	6/12/23	Time – Before:	7:39am
Undertaken By:	LR	SWL – After (m):	-
Total Vol. Removed:	-	Time – After:	-
PID Reading (ppm):	0.2		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
	Well	effectively	Dry		
	No	Water	observed		

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: YSI 5 Well effectively Dry

Tested By:	LR
Date Tested:	6/12/23
Checked By:	CR
Date:	22/1/24

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:	TTW	Job No.:	E36466PR
Project:	Proposed S5 Data Centre	Well No.:	MW18
Location:	34 Waterloo Road, MACQUARIE PARK, NSW	Depth (m):	13.1

WELL FINISH DETAILS

	Gatic Cover ☒	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development	SWL – Before (m):	4.56m
Date:	4/12/23	Time – Before:	10:28am
Undertaken By:	LR	SWL – After (m):	—
Total Vol. Removed:	2.2DOL	Time – After:	12:35pm
PID Reading (ppm):	0.3		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
5L	20.5	2.5	2652	5.38	49.5
10L	20.7	2.3	2655	5.38	49.1
15	20.5	2.2	2798	5.51	47.8
20	20.6	2.1	2787	5.53	45.8
25	20.6	2.7	2820	5.61	39.5
30	20.8	1.8	1415	6.57	36.3
35	20.6	1.9	2886	5.60	34.8
40	20.5	1.8	2978	5.56	33.6
45	20.6	2.0	3056	5.55	31.0
50	20.6	2.2	3013	5.58	28.1
55	20.6	1.7	2996	5.60	26.3
60	20.5	1.8	3057	5.55	25.5
65	20.7	1.9	2142	6.25	24.0
70	20.5	1.8	3057	5.60	22.8
75	20.7	2.0	3070	5.58	19.4
80	20.5	1.8	3099	5.55	19.0
85	20.8	78.9	3071	5.61	7.5
90	20.5	37.1	3110	5.58	6.4
95	20.6	16.9	3066	5.60	4.8
100	20.5	17.2	3116	5.57	3.5
105	20.6	369.0	2560	6.00	3.8
110	20.6	361.0	2990	5.59	2.3
115	20.6	360.7	3131	5.56	0.8

10.1L

8.5lm

16.7L

50.1L

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: YSI5 Grey/black silty odour

Tested By:	LR	**Remarks:**
Date Tested:	4.12.23	- 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:	CR	
Date:	8/12/23	

120	20.5	362.8	3130	5.54	0.4
125	20.5	364.6	1916	5.71	-0.5
130	20.9	355.4	3087	5.87	-0.1
135	20.5	363.2	3146	5.54	-2.1
140	20.5	364.1	2594	5.72	-2.8

Pg 2/2

JKEnvironments

Client:	TTW	Job No.:	E36466PR
Project:	Proposed S5 Data Centre	Well No.:	MW 18
Location:	34 Waterloo Road, MACQUARIE PARK, NSW	Depth (m):	~~14.5m~~ 13.8m

WELL FINISH DETAILS

	Gatic Cover ☐	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:		SWL – Before (m):	
Date:		Time – Before:	
Undertaken By:		SWL – After (m):	
Total Vol. Removed:		Time – After:	
PID Reading (ppm):			

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
145	20.8	356.1	2491	5.97	0.9
150	20.6	360.7	2800	5.61	-1.7
155	20.6	360.3	3189	5.55	-3.0
160	20.7	357.6	3077	5.58	-3.7
165	20.8	360.4	2920	5.56	-2.2
170	20.5	362.9	3195	5.54	-2.5
175	20.5	362.8	3177	5.53	-3.4
180	20.6	366.6	3192	5.59	-4.0
185	20.6	360.6	3220	5.55	-4.0
190	20.6	360.7	3195	5.55	-4.9
195	20.6	360.7	3198	5.54	-6.0
200	20.6	360.6	3213	5.53	-6.4
—	—	—	—	—	—
	EFFECTIVELY DRY				

clear

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used:

Tested By:	
Date Tested:	
Checked By:	
Date:	

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:	TTW	Job No.:	E36466PR
Project:	Proposed S5 Data Centre	Well No.:	BH26
Location:	34 Waterloo Road, MACQUARIE PARK, NSW	Depth (m):	14.2

WELL FINISH DETAILS

	Gatic Cover ☒	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development	SWL – Before (m):	9.70m
Date:	5/12/23	Time – Before:	8:27am
Undertaken By:	LR	SWL – After (m):	—
Total Vol. Removed:	115	Time – After:	1.40 pm
PID Reading (ppm):	0.3		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
5	20.1	–	1328	5.49	-23.3
10	20.2	–	1204	5.63	-23.1
15	21.1	–	1111	5.65	-23.6
20	21.9	–	1794	5.46	-0.8
25	21.0	–	1709	5.46	-2.9
30	21.9	–	1226	5.44	-1.1
35	21.0	–	1145	5.58	-1.5
40	21.8	–	3560	5.32	14.4
45	21.5	–	507	5.62	13.3
50	20.9	–	944	5.65	8.1
55	21.2	–	285.8	5.69	13.9
60	21.7	–	254.7	6.07	20.9
65	21.6	–	265.6	6.05	22.4
70	20.9	–	659	5.54	10.2
75	20.9	–	1348	5.50	5.9
80	21.4	–	426.0	5.94	18.2
85	20.9	–	965	5.57	12.4
90	20.9	–	1800	5.44	10.8
95	20.6	–	1085	5.60	10.5
100	20.8	–	1006	5.82	12.0
105	21.4	–	599.8	5.72	14.9
110	20.8	–	596	5.85	12.6
115	20.7	–	577	5.65	10.6

20L of water added

20L of water added

10L of water added

10L of water added

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: YSI5

Clear water

Effectively Dry

Tested By:	[redacted] LR	**Remarks:**
Date Tested:	5/12/23	- 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
Checked By:	CR	- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Date:	8/12/24	

JKEnvironments

Client:	TTW	Job No.:	E36466PR
Project:	Proposed S5 Data Centre	Well No.:	MW29
Location:	34 Waterloo Road, MACQUARIE PARK, NSW	Depth (m):	19.0m

WELL FINISH DETAILS

	Gatic Cover ☒	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development	SWL – Before (m):	6.96m
Date:	6/12/23	Time – Before:	7.56am
Undertaken By:	LR	SWL – After (m):	—
Total Vol. Removed:	175L	Time – After:	1:24pm
PID Reading (ppm):	13.3		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
5	21.4	2.0	577	6.18	9.4
10	21.4	1.8	573	6.09	8.2
15	21.4	1.8	573	6.07	6.4
20	21.6	3.0	333.0	6.14	3.8
25	21.8	0.6	571	6.30	-2.3
30	21.9	0.9	557	6.30	-5.1
35	22.1	325.3	533	6.30	-16.7
40	22.1	326.4	492.0	6.34	-20.5
45	22.1	326.0	495.9	6.13	-23.5
50	22.4	319.3	446.0	6.01	-25.5
55	21.9	330.9	273.5	5.95	-25.9
60	22.8	310.1	279.5	5.91	-28.0
65	21.6	338.1	224.3	6.21	-25.3
70	21.8	335.6	232.9	6.28	-25.3
75	22.0	315.5	264.9	6.12	-24.0
80	22.7	312.7	263.5	6.17	-23.4
85	23.3	299.2	267.1	6.16	-24.1
90	21.9	331.0	425.0	6.21	-30.1
95	22.2	323.8	296.2	6.25	-28.4
100	22.8	310.4	259.4	6.24	-23.5
105	21.5	340.4	466.2	6.22	-21.1
110	21.5	340.4	526	6.31	-20.4
115	22.2	321.9	270.3	5.36	-18.5

20L added

20L added

20L added

20L added

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: YSI 5

Water clear after development

EFFECTIVELY DRY

Tested By:	LR
Date Tested:	6/12/23
Checked By:	CL
Date:	8/12/23

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

Pg 2

JKEnvironments

Client:	TTW	Job No.:	E36466PR
Project:	Proposed S5 Data Centre	Well No.:	MW29
Location:	34 Waterloo Road, MACQUARIE PARK, NSW	Depth (m):	19.0

WELL FINISH DETAILS

	Gatic Cover ☐	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:		SWL – Before (m):	
Date:		Time – Before:	
Undertaken By:		SWL – After (m):	
Total Vol. Removed:		Time – After:	
PID Reading (ppm):			

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
125	22.7	312.5	227.0	6.36	-16.9
130	21.8	333.5	321.6	6.33	-15.0
135	21.7	333.5	425.9	6.31	-15.3
140	22.1	326.1	273.9	6.42	-13.1
145	22.4	319.5	261.7	6.47	-11.2
150	22.6	316.0	258.0	6.51	-11.0
155	22.2	326.8	291.8	6.45	-9.7
160	22.3	321.7	347.9	6.35	-7.3
165	22.0	323.7	308.0	6.46	-13.2
170	22.6	328.8	304.2	6.40	-12.5
	EFFECTIVELY DRY				

2L added

5L added

10L added

Comments:Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used:

Tested By:		**Remarks:**
Date Tested:		- 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
Checked By:		- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Date:		

Appendix I: Guidelines and Reference Documents

Acid Sulfate Soils Management Advisory Committee (ASSMAC), (1998). Acid Sulfate Soils Manual

Australian and New Zealand Environment Conservation Council (ANZECC), (2000). Australian and New Zealand Guidelines for Fresh and Marine Water Quality

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

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