Parramatta City Council

Contamination Interpretive Report

‘Parramatta Civic Link – Block 3’, Horwood Place, Parramatta, NSW, 2150

10 October 2025

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10 October 2025

Our Ref: 30286862_PCC-Parra-Block3_CIR_R01

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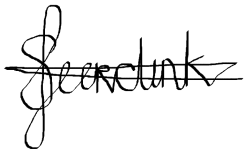

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Version Control

Revision No.	Date Issued	Description	Author	Reviewer	Approver
0	15/8/2025	DRAFT for client review	BD	SS	CR
1	10/10/2025	Final no changes	BD	SS	SG

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Acronyms and Abbreviations

Acronym / Abbreviation	Definition
ABC	Ambient background concentration
ACL	Added contaminant limits
ACM	Asbestos-containing material
AFFF	Aqueous film forming foams
ANZG	Australian and New Zealand Guidelines for Fresh and Marine Water Quality
Arcadis	Arcadis Australia Pacific Pty Ltd
AS	Australian Standard
ASS	Acid sulfate soils
B(a)P	Benzo(a)pyrene
BH	Borehole
BTEXN	Benzene, toluene, ethylbenzene, xylene and naphthalene
CEC	Cation exchange capacity
CLM Act	Contaminated Land Management Act 1997
CoC	Chain of Custody
CoPC	Contaminant of potential concern
CSM	Conceptual Site Model
CRC CARE	Cooperative Research Centre for Contamination Assessment and Remediation of the Environment
CT	Contaminant threshold
CVOC	Chlorinated volatile organic compounds
DGV	Default guideline values
DP	Douglas Partners Pty Ltd
DPIE	Department of Planning, Industry and Environment
DQI	Data quality indicator
DQO	Data quality objective
DSI	Detailed Site Investigation
EIL	Ecological investigation level
EPA	Environment Protection Authority
ESL	Ecological screening level
FD	Field duplicate
FS	Field split

Acronym / Abbreviation	Definition
GSW	General Solid Waste
HIL	Health investigation level
HSL	Health screening level
mbgl	metres below ground level
Metals (8)	Arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), nickel (Ni), lead (Pb), zinc (Zn) and mercury (Hg)
ML	Management limit
mAHD	metres Australian Height Datum
NATA	National Association of Testing Authorities
NEPM	National Environment Protection (Assessment of Site Contamination) Measure
NL	Not limiting
NSW	New South Wales
OCP	Organochlorine pesticides
OPP	Organophosphate pesticides
ACM	Asbestos containing material
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyls
PCC	Parramatta City Council
PSI	Preliminary Site Investigation
PFAS	Per- and poly-fluoroalkyl substances
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonate
PFHxS	Perfluorohexane sulfonic acid
Pty Ltd	Proprietary Limited
SWA	Special Waste Asbestos
TB	Trip blank
TRH	Total recoverable hydrocarbons
TS	Trip spike
VOC	Volatile organic compounds

Executive Summary

Arcadis Australia Pacific Pty Ltd (Arcadis) was engaged by Parramatta City Council (the Client) to prepare a Contamination Interpretive Report (CIR) for the project identified as 'Parramatta Civic Link – Block 3'; located at Horwood Place, Parramatta, NSW, 2150 (the Site). The Site location is shown in the attached *Figure 1*.

This CIR provides an interpretation of the results of the desktop review, site walkover and intrusive soil sampling conducted at the Site between 29 January and 17 February 2025, documented in Douglas Partners Pty Ltd (DP) (2025b) *Report on Detailed Site (Contamination) Investigation, Parramatta Civic Link – Block 3, Horwood Place, Parramatta, NSW,* provided in *Appendix A*. This CIR was prepared to inform the Client on any potential land contamination risks in soil to future receptors, based on a future Open Space land use scenario.

The purpose of the CIR is to provide the Client with a detailed interpretation of the contamination data provided by Douglas Partners to inform on site suitability and potential contamination risks associated with the proposed redevelopment of the Site.

The objectives for completing this CIR are to:

- Review the data documented in the DP (2025) DSI and assess potential exposure risks to human health or the environment posed by the potential contamination (if any),
- Provide advice on the suitability of the Site (in the context of land contamination) for the proposed development of the Site into a publicly accessible open space,
- Identify any data gaps and provide recommendations for further assessment, management and/or remediation of the Site (if required).

The scope of work undertaken to address the project objective included a desktop review, presentation of data quality objectives and assessment of data quality indicators based on the sampling undertaken by DP, interpretation of the results from soil samples collected from 13 test locations (TL01-TL13) provided by DP, and preparation of this CIR.

The key findings included:

- The detected concentrations of the relevant chemical contaminants of potential concern in the soil samples analysed for the DSI were less than the adopted human health Site Assessment Criteria.
- Asbestos was not observed in the field nor detected in the insitu samples analysed by DP. However, bonded ACM was detected within a stockpile of spoil generated from onsite test pitting. Further, an asbestos expansion joint was identified by RMA Group during excavation of test pit location TL02 during the archaeological investigation in January / February 2025, prior to DP's investigation. DP reported the asbestos was identified in expansion joints within the concrete slab and appeared to extend into the underlying road base layer. The asbestos joint was excavated by RMA as far as practicable within the test pit, and DP confirmed residual ACM was not identified in the walls of the excavation during DP's investigation.
- The detected concentrations of the relevant contaminants of potential concern in the soil samples analysed for the DSI were less than the adopted terrestrial ecosystems statistical Site Assessment Criteria.
- Based on the laboratory analytical data and field observations, the natural soils assessed were not considered AASS. The results indicate PASS may be present with sulfides detected in samples TL05 at 9-9.2mbgl and TL08 at 2.5 – 2.7mbgl and have the potential to oxidize, if disturbed. However, the net acidity results indicate the soils are below the action criteria, provided less than 1,000T of soils are disturbed.

- The insitu soils are generally consistent with GSW (non-putrescible) as defined in the NSW EPA (2014a) *Waste Classification Guidelines*. However, the potential for residual asbestos contamination in fill should be considered for further waste classification purposes.
- The coal tar samples indicate the asphalt is free of coal tar and consistent with reclaimed asphalt as defined in the NSW EPA (2014b) *The Reclaimed Asphalt Pavement Exemption 2014*.

Based on the information detailed in the DP (2025b) *DSI* report, and in consideration of the objectives, Arcadis has drawn the following conclusions regarding contamination at the Site:

- The Site history and regulatory records review identified potential sources of contamination onsite including historical uncontrolled filling, uncontrolled demolition and leaks and spills from vehicle. Although considered very low risk, there was considered the potential for historical commercial activities in close proximity to the Site which may have impacted site soils (i.e. dry cleaner).
- The analytical results from the intrusive soil sampling indicate:
  - Detected concentrations of chemical COPC in soils were below the adopted assessment criteria and are unlikely to present an unacceptable human health or ecological exposure risk, based on the assumptions in this report.
  - Asbestos (in the form of bonded ACM and AF/FA with fibres) was not detected in laboratory samples of all fill samples on-site. However, bonded ACM was visually identified (and laboratory confirmed) in a stockpile of spoil generated from the <0.3mbgl of fill during test pitting, in the wall of TL02 from an expansion joint containing asbestos. Review of site identified portions of the electrical conduits onsite are constructed of asbestos. Hence, an SPR linkage is considered 'Possible' for human health exposure risk to residual asbestos in fill, with a moderate risk rating.
- The laboratory results indicate sulfides are present within natural soils at TL05 at 9 - 9.2mbgl and TL08 at 2.5 – 2.7mbgl, indicative of PASS. However, the net acidity indicates results are below the action criteria based on the quantity (assumed <1000 tonnes) and depth (<2mbgl) of disturbance, hence, an ASS management plan is currently not required.
- A duty to report contamination under the CLM Act to the NSW EPA is currently not required.
- The Site is considered suitable for the future Open Space/Recreational C land use scenario, provided a provisional remedial action plan (RAP) is prepared to manage any unexpected finds of residual bonded ACM during construction.

In consideration of the conclusions, Arcadis provides the following recommendations:

- Preparation of a Remedial Action Plan to address the known asbestos contamination identified and potential unexpected finds of asbestos in soils or other expansion joints.
- Preparation of a Site Remediation and Validation report demonstrating the Site has been remediated and suitable for the future Open Space/Recreational C land use. If asbestos is not identified and remediation is not required, a letter confirming the status of the Site is considered sufficient.
- An unexpected finds protocol (UFP) be prepared to document procedures to be implemented should unexpected finds of contamination be encountered during the proposed construction works.
- A construction environmental management plan (CEMP) be developed to document procedures and controls to be implemented to mitigate harm to human health and the environment during the proposed construction works.
- If the quantity of soil and depth of disturbance increases, a reassessment of the requirement for an ASS management plan is required.

1 Introduction

Arcadis Australia Pacific Pty Ltd (Arcadis) was engaged by Parramatta City Council (the Client) to prepare a Contamination Interpretive Report (CIR) for the project identified as 'Parramatta Civic Link – Block 3'; located at Horwood Place, Parramatta, NSW, 2150 (the Site). The Site location is shown in the attached *Figure 1*.

This CIR provides an interpretation of the results of the desktop review, site walkover and intrusive soil sampling conducted at the Site between 29 January and 17 February 2025, documented in Douglas Partners Pty Ltd (DP) (2025b) *Report on Detailed Site (Contamination) Investigation, Parramatta Civic Link – Block 3, Horwood Place, Parramatta, NSW,* provided in *Appendix A*. This CIR was prepared to inform the Client on any potential land contamination risks in soil to future receptors, based on a future Open Space land use scenario.

1.1 Project Understanding

The Site is currently a publicly accessible open space area, comprising of Horwood Place and a portion of George Street (south), Phillip Street (north) and Auctioneer Lane at the entry into the Eat-Street carpark, adjacent to Horwood Place in the central west of the Site. The Site is predominantly covered in hardstand with localised exposed soils in garden beds with well-established trees. The Site is a vehicle and pedestrian accessible thoroughfare for the public, with commercial shops and carparks in the immediate surrounds.

Arcadis understands the Site is proposed to be redeveloped into a planned green pedestrian and cycle-friendly corridor designed to connect Parramatta Square and the Parramatta River. The proposed works are to include upgrades to the pavements, services (power, sewer, water, irrigation, communications) (< 1.0mbgl), and tree planting (up to 2mbgl), refer to the plans in *Appendix B*.

The Client requires a contamination assessment to assess any potential land contamination risks associated with the Site, to inform the decision-making process, prior to development.

1.2 Purpose and Objectives

The purpose of the CIR is to provide the Client with a detailed interpretation of the contamination data provided by Douglas Partners to inform on site suitability and potential contamination risks associated with the proposed redevelopment of the Site.

The objectives for completing this CIR are to:

- Review the data documented in the DP (2025) DSI and assess potential exposure risks to human health or the environment posed by the potential contamination (if any),
- Provide advice on the suitability of the Site (in the context of land contamination) for the proposed development of the Site into a publicly accessible open space,
- Identify any data gaps and provide recommendations for further assessment, management and/or remediation of the Site (if required).

1.3 Scope of Work

The scope of work undertaken to address the project objective include:

- A desktop review of the following:
  - Previous DP (2025) DSI report, including site history, site walkover and intrusive soil investigation results.

  - A selection of historical aerial imagery for the Site provided in the LotSearch Pty Ltd (2023), *Lotsearch Aerials, Horwood Place, Parramatta* (the Lotsearch report), provided in *Appendix A.*
  - Site environmental setting,
  - Landfills, gasworks and waste facilities in proximity to the Site,
  - PFAS investigation sites,
  - NSW EPA and Office of Water databases,
  - Previous waste classification reports.
- Presentation of data quality objectives and assessment of data quality indicators based on the sampling undertaken by DP.
- Interpretation of the results provided by DP,
- Preparation of this CIR.

The scope of work was undertaken in accordance with:

- National Environment Protection Council (NEPC) 2013, *National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999*, as amended in May 2013 ('NEPM'; NEPC, 2013).
- NSW Environmental Protection Authority (EPA) (2020), *Contaminated Land Guidelines: Consultants reporting on contaminated land*.
- Heads of the EPA (HEPA) 2025, *PFAS National Environmental Management Plan* (NEMP) 3.0. (NEMP, 3.0)

This report is subject to the limitations provided in Section 16

2 Site Setting

2.1 Site Identification

The Site is situated in the central Parramatta building district, between Parramatta Station, approximately 320m to the south and Parramatta River, approximately 300m to the north.

The Site identification details are summarised in Table 2-1 with the current site layout shown in the attached *Figure 2*.

Table 2-1 Site Identification Summary

Item	Details
Project Name	Parramatta Civic Link – Block 3
Site Address	Horwood Place, Parramatta, NSW, 2150
Title Information	The Site includes a portion of Phillip Street, Horwood Place, Auctioneer Lane and George Street Road Corridors (no registered lot or deposited plan) and Lot 102, in Deposited Plan 241030.
Site Area	~5,000 m^2
Site Coordinates **(Universal Transverse Mercator coordinates – MGA Zone 56)**	The approximate co-ordinates for the centre of the Site are: **Easting:** 315393.12 mE **Northing:** 6256755.92 mS
Local Government Authority	Parramatta City Council
Owner	Parramatta City Council
Zoning	A review of the NSW Planning Portal Spatial Viewer indicates the Site is currently zoned E2 – Commercial Centre under the *Parramatta Local Environmental Plan 2023*
Land Use (Current/Proposed)	The Site is currently an open space publicly accessible land with vehicle accessible roadway which is to be redeveloped into a pedestrian access only open space area. Refer to the plans in *Appendix B.* The Site is consistent with 'Open Space/Recreational C' land use, as defined in the NEPM (NEPC, 2013)
Surrounding Land Use	Based on a review of the most recent aerial image of the Site retrieved from Nearmap (dated 28 May 2025), the following land uses were observed immediately surrounding the Site: • **North** – High rise commercial and Powerhouse Parramatta, then Parramatta River and low density residential beyond. • **South** – Commercial Roxy Hotel and the Metro construction works, then Macquarie Street, high rise commercial and Parramatta Station beyond. • **East** – Commercial, then Smith Street, high density residential/commercial properties and Parramatta Wharf beyond.

Item	Details
	• **West** – Commercial properties and Eat-Street carpark, then Church Street and a mix of commercial and high density residential properties beyond.

2.2 Site Environmental Setting

Arcadis conducted a desktop review of relevant publicly available records and information provided in the DP (2025) DSI to describe the Site environmental Setting, with details presented in Table 2-2 below.

Table 2-2 Site Environmental Setting

Item	Description
Topography and Elevation	The surface of the Site is relatively flat, located at an elevation of approximately 9m Australian Height Datum (AHD), with a general slope to 8m AHD in the north, towards Parramatta River.
Geology and Soils	A review of the Sydney 1:100,000 Geological Map indicates the geology below the Site is likely to be dominated by silt and clay sized alluvial materials underlain by black to dark-grey Ashfield shale and laminite derived from the Wianamatta Group, formed in the middle Triassic Epoch in the Mesozoic Era. A review of the Soil Landscapes of the Penrith 1:100,000 Sheet report indicates the Site lies within the Birrong Fluvial soil landscape. The soils are likely to comprise of deep (>250 cm) yellow Podzolic soils and yellow Solodic soils on older alluvial terraces; deep (>250 cm) Solodic soils and yellow Solonetz soils on current floodplain.
Hydrology and Hydrogeology	DP reported no surface water bodies are located onsite, with the nearest surface water body to the Site being Parramatta River, located approximately 140m north of the Site, which generally flows to the east into Sydney Harbour. Surface water is likely to flow across the paved surfaces into stormwater drains or infiltrate into exposed permeable soils. Based on site surface topography and elevation, the inferred general surface water flow direction on the Site is considered likely to be towards the north. A search of the WaterNSW real-time maps (https://realtimedata.waternsw.com.au/water.stm) for registered groundwater bores within 500m buffer of the Site indicates there are no registered groundwater bores located onsite. The search reported one registered groundwater bore (GW108611) located approximately 400m to the north-west of the Site, on the northern side of the Parramatta River. The groundwater bore report indicates the following: • The bore is located within the Roman Catholic Church property located at 1 Marist Place, Parramatta, NSW. • The bore was extended to approximately 60m below ground level (mbgl) and completed in April 2005. The geology was described as FILL up to 1mbgl overlying natural comprising of clay, shale then Sandstone • The bore is authorised for 'Domestic Use' with standing water level reported at 6.2mbgl, 5L/s yield and salinity concentrations ranging

Item	Description
	between 4,650 – 5300 mg/L indicating brackish water, not suitable for drinking but may be suitable for irrigation. Given the location of the bore, north of the Parramatta River, Arcadis generally agrees with DP's assessment that the groundwater bore is unlikely to be a potential receptor of groundwater beneath the Site. Based on the location of the identified nearest surface water course, Parramatta River which flows east, and site topography, the inferred groundwater flow direction at the Site is considered likely to be towards the north/northeast. In consideration of approximate elevations at the surface of the Site when compared to the Parramatta River, it is considered unlikely regional groundwater is likely to be encountered up to 5mbgl.
Acid Sulfate Soils	A review of the Acid Sulfate Soil (ASS) Risk Map available on the NSW Government's Department of Planning Industry and Environment (DPIE) eSpade spatial map indicates the Site lies within an area classed as X4: Disturbed terrain, elevation >4 m AHD. A further search of the ASS Risk Maps detailed in the *Parramatta Local Environmental Plan 2023* indicates the Site is in an area classified as 'Class 4' ASS risk. For Class 4 land, works exceeding 2 meters below the natural ground surface, or those lowering the watertable more than 2 meters, require development consent. Given the following: • Ground disturbance is expected to be predominantly shallow (<0.3m) and localised deeper disturbance including upgrades to drainage lines (< 1mbgl) and tree planting (<2mbgl). • The Site is located at an elevation of greater than 5mAHD. • Geology beneath the Site is not identified as sediments from Holocene Geological age. The potential for ASS to be encountered during the proposed ground disturbance works is considered unlikely. However, if potential indicators of ASS is encountered during intrusive investigation works further investigation may be considered warranted.

2.3 Local Meteorology

The Bureau of Meteorology website (http://www.bom.gov.au/climate/data/index.shtml?bookmark=200) was accessed and a search conducted for mean annual rainfall and temperature for 2024, measured by the nearest bureau station to the Site. A summary of data available and obtained from that search is presented in Table 2-3:

Table 2-3 Local Meteorology Information for 2024

Weather Station Location and Number	Mean Annual Maximum Temperature (°C)	Highest Monthly Mean Temperature	Total Annual Rainfall (mm)	Highest Monthly Total of Rainfall
Parramatta North (Masons Drive) 066124	16.7	December (30.1 °C)	975.6	January (206.4mm)

A copy of the search record is presented in *Appendix C*.

3 Site History

3.1 Previous Assessment Reports

The following previous assessment reports were available for review:

- DP (2025a). *Stockpile Waste Classification Parramatta Civil Link - Block 3 George Khattar Lane, Parramatta NSW,* dated 10 February 2025 (the *Stockpile Waste Classification 1*).
- DP (2025b). *DSI*, dated 10 March 2025.
- EHO Consulting Pty Ltd (EHOC) (2025a). *Waste Classification Certificate (Ref: JN05778-WCC-RN18685),* dated 24 January 2025 (the *Stockpile Waste Classification 2*).
- EHOC (2025b). *Waste Classification Certificate (Ref: JN05778-WCC-RN18702),* dated 29 January 2025 (the *Stockpile Waste Classification 3*).

The waste classification reports are provided in *Appendix D*.

A summary of the review, with key points relevant to this CIR is detailed below. Detailed interpretation of the results presented in DP (2025b) *DSI* is provided in the following sections of this report.

3.1.1 Stockpile Waste Classification 1 (DP, 2025a)

The objective of the DP (2025a) *Stockpile Waste Classification 1* report was to classify a stockpile of fill stored at George Khattar Lane, generated from the excavation of archaeological test pits, from a maximum depth of 0.3 m bgl, from locations across Horwood Place within the Site. The waste classification was conducted with reference to the NSW EPA (2014a) *Waste Classification Guidelines, Part 1: Classifying Waste*.

The scope of work included the following:

- Discussions with site personnel to assess the potential source of the stockpile and potential contamination.
- A desktop review of historical aerial, geological and ASS maps.
- Inspection of the stockpile and collection of three primary soil samples (RB-SP-1 to RB-SP-3) and one asbestos ID sample (RM-ACM-1) on 9 January 2025 and 6 February 2025, in accordance with the NSW EPA (2022) *Sampling Design, Part 1: Application* and NSW EPA (2022) *Sampling Design, Part 2: Interpretation*.
- Forward of the samples to a National Association of Testing Authorities (NATA) accredited laboratory for analysis of contaminants of potential concern (CoPC), including:
  - Metals (8) (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc),
  - Benzene, toluene, ethylbenzene and xylene (BTEX),
  - Total recoverable hydrocarbons (TRH),
  - Polycyclic aromatic hydrocarbons (PAH),
  - Organochlorine pesticides and organophosphorus pesticides (OCP/OPP),
  - Total phenols,
  - Polychlorinated biphenyls (PCB),
  - Per- and poly- fluoroalkyl substances (PFAS),
  - Fibrous asbestos and asbestos fines (FA and AF), and
  - Toxicity characteristic leaching procedure (TCLP) on representative nickel and PFAS analytical samples.
- Preparation of the waste classification report.

The report provided the following key findings:

- The historical aerials indicating the Site was historically used for residential and commercial premises until 1975, then developed into a paved public roadway.
- The Site soils were considered a low probability of ASS occurrence.
- The potential sources of contamination were considered to be fill of unknown origin and potential residual hazardous building materials from historical demolition (such as asbestos)
- The source of the stockpile was from below the public road at Horwood Place. The stockpile was estimated to be approximately 20m^3, observed to comprise of pale grey- dark grey gravelly SAND, fine to coarse, with igneous and SANDSTONE gravels, concrete and asphalt, with trace CLAY.
- No staining or odours were noted, however, 'a few' asbestos containing material (ACM) fragments were identified and described as non-friable. A sample of the ACM was collected and confirmed by the laboratory to be bonded asbestos.
- Most chemical contaminant concentrations were below the CT1 criteria for General Solid Waste (GSW), except for nickel in the three primary samples. The TCLP results indicated the nickel concentrations were below the SCC1 criteria for GSW.

The report concluded that the stockpile was classified Special Waste Asbestos (SWA) – GSW (non-putrescible and should be disposed of at a facility licensed to accept the waste.

3.1.2 Detailed Site (Contamination) Investigation (DP, 2025b)

The objective of the DP (2025b) *DSI* was to assess the suitability of the Site for the proposed open space development, to support the development application. The DSI was conducted in conjunction with the geotechnical investigation across the Site, with results detailed in a separated geotechnical factual report.

The scope of work relevant to the contamination assessment included the following:

- A desktop review of site environmental setting, previous reports, ASS risk maps, historical aerial photographs, publicly available Council records and NSW EPA databases.
- A site walkover,
- Intrusive soil sampling including nine test pits (TL01 – TL06 and TL09 – TL11) and four boreholes (BH07, BH08, BH12 and BH13),[1] referenced as TL07, TL08, TL12, and TL13, respectively. Then deeper natural soil samples were collected from the three extended boreholes at test pit locations TL01, TL05 and TL06 (refer to logs TL01-d, TL05-d and TL06-d, respectively) for geotechnical assessment purposes including ASS.
- Screening of samples for volatiles using a photo-ionisation detector (PID),
- Collection of primary soils samples and quality assurance/quality control (QA/QC) samples.
- Forward of the samples to a NATA accredited laboratory for analysis of CoPC, including:
  - BTEXN, TRH,
  - OCP/OPP,
  - Phenols, PAH, PCBs,
  - PFAS,
  - Metals (8), and Cyanide,
  - Asbestos (including AF/FA),
  - TCLP,
  - pH, cation exchange capacity (CEC) and percentage clay content (for the derivation of site specific ecological criteria).

[1] Douglas Partners Notes *'Test pits TL01, TL05 and TL06 were backfilled following the initial environmental investigation and re-drilled for geotechnical purposed up to a maximum depth of 10 mbgl. These locations were re-labelled as TL01-d, TL05-d and TL06-d and were sampled during the geotechnical investigation.*

  - $pH_{f\text{-}fox}$ and Chromium reducible sulfur (CRS) on selected samples which contained indicators of ASS.
- Preparation of the DSI report.

The key findings of this report is discussed and interpreted in the following sections of this report.

Based on the results of the desktop review, site walkover and intrusive soil investigation, the report provided the following conclusion:

- All reports CoPC for soils samples analysed were below the adopted site assessment criteria. However, asbestos was detected in a representative sample collected of the suspected ACM in the waste stockpile (as detailed in the Stockpile Waste Classification 1 report), generated from the top 0.3m of road base from onsite test pits TL01 to TL06 and TL09 to TL11, although the exact source location is unknown.
- Asbestos expansion joints were identified at test pit TL02 in fill (i.e. within the concrete slab and extending into the road base layer) and was observed to extend beyond the extent of excavation of test pit TL02. DP noted the potential for other ACM expansion joints to be present across the entirety of the existing concrete slab.
- Anthropogenic material comprising of building debris (brick, ceramic, tile, concrete and / or glass) were observed in FILL road base materials in test pits TL01 and TL13.
- The assessment of ASS indicated levels below the Action Criteria threshold triggering management, based on the proposed ground disturbance volume. However, the presence of potential ASS (PASS) within natural soils, should be considered for waste classification purposes.
- The Site can be made suitable for the proposed open space development subject to the following:
  - The implementation of a remediation action plan (RAP), which may include further assessment of fill impacted or potentially impacted by asbestos, which includes visual inspection of the fill underlying the road base layer to confirm the presence/absence of asbestos and validation requirements.
  - Protocols for waste classification of spoil.
  - An unexpected finds protocol (UFP) developed to manage any unexpected finds of contamination, if encountered.
  - An operational site environmental management plan to manage potential contamination risks during construction.

3.1.3 Stockpile Waste Classification 2 (EHOC, 2025a)

The objective of the EHOC (2025a) Stockpile Waste Classification 2 was to classify a stockpile of soils (~10m^3) stored at 40 Smith Street, generated from archaeological test pits TL01 to TL04 and TL11 onsite.

The scope of work included the following:

- A desktop review of ASS maps.
- Inspection of the stockpile and collection of three primary soil samples (SP-01 to SP-03) and one on 22 January 2025, in accordance with the NSW EPA (2022) Sampling Design, Part 1: Application.
- Forward of the samples to a National Association of Testing Authorities (NATA) accredited laboratory for analysis of contaminants of potential concern (CoPC), including:
  - Metals (8),
  - BTEXN, TRH and PAH,
  - OCP/OPP,
  - Phenols,
  - PCBs,
  - Asbestos ID.
- Preparation of the waste classification report.

The report provided the following key findings, related to the Site:

- The potential source of contamination was uncontrolled fill.
- The material was described as FILL comprising of CLAY, reddish to pale brown, low to medium plasticity, soft to firm, moist.
- No staining or odours detected in the samples collected and no fragments of potential ACM were observed.

The report concluded the material was classified as GSW (non-putrescible) and should be disposed of at a licensed waste facility.

3.1.4 Stockpile Waste Classification 3 (EHOC, 2025b)

The objective of the EHOC (2025a) Stockpile Waste Classification 2 was to classify a stockpile of soils (~10m^3) stored along Horwood Place, generated from archaeological test pits TL05 to TL10 onsite.

The scope of work included the following:

- A desktop review of ASS maps.
- Inspection of the stockpile and collection of three primary soil samples (SP-01 to SP-03) and one on 22 January 2025, in accordance with the NSW EPA (2022) Sampling Design, Part 1: Application.
- Forward of the samples to a National Association of Testing Authorities (NATA) accredited laboratory for analysis of contaminants of potential concern (CoPC), including:
  - Metals (8),
  - BTEXN, TRH and PAH,
  - OCP/OPP,
  - Phenols,
  - PCBs,
  - Asbestos ID.
- Preparation of the waste classification report.

The report provided the following key findings, related to the Site:

- The potential source of contamination was uncontrolled fill.
- The material was described as FILL comprising of Gravelly CLAY, reddish to pale grey, low to medium plasticity, soft to firm, with sandstone, shale, bitumen and road base (DGB20) inclusions.
- No staining or odours detected in the samples collected and no fragments of potential ACM were observed.

The report concluded the material was classified as GSW (non-putrescible) and should be disposed of at a licensed waste facility.

3.2 Aerial Photography

DP conducted a review of historical aerial photographs of the Site and surrounding land for the period from 1943 to 2025. These photos were reviewed to assess the historical use of the Site and any potential land contaminating activities on the Site or immediately surrounding the Site, with land use activities summarised in Section 7 of the DP (2025b) *DSI* report. Arcadis has conducted an independent review of the aerial photography, including additional aerial imagery provided by Lotsearch from 1930 to 2023 to verify the findings and provide independent interpretation on the findings. It is noted that conclusions drawn from the aerial photographs must be treated with caution as the interpretation is subjective and is often limited by the quality of the photo. A summary of the review of aerials and potential historical contaminating activities is provided below.

In the aerial imagery from 1930 to 1943 the Site appears to residential buildings occupying the southern portion of the Site and commercial buildings to the north with open space areas with low lying vegetation and a tree in the middle of the site. Phillip Street and George Street are visible, and surfaces appear covered in hardstand. The surrounding land is occupied by a mix of residential and commercial buildings and Parramatta River is visible to the north. There is no evidence of heavy industrial activity on immediately surrounding land.

A review of aerial imagery from 1943 to 1965 indicates the site layout remains mostly unchanged with visible signs of anthropogenic material and possible stockpiles/surface mounding in the central open space portion of the Site.

From 1970 to 1978 the buildings onsite were demolished and a roadway constructed with hardstand surface and the site appears generally in its present-day layout. Buildings immediately to the east of the centre of the site have been removed and a carpark is visible. General high rise commercial/residential development is observed in the immediate surrounds.

No significant changes were observed thereafter from 1978 to present, with the exception of landscaping developments including tree planting and slight upgrades to pedestrian access ways.

The review of historical aerial photography indicated a potential for minor land contaminating activities to have been undertaken on the site, specifically:

- Uncontrolled filling/stockpiling.
- Uncontrolled demolition of structures.
- Vehicle thoroughfare (spills and leaks).

Further assessment of these identified potential land contaminating activities is considered warranted. A copy of the Lotsearch aerials is presented in *Appendix E.*

3.3 Chemical Control Orders

Chemical control orders are created under Part 3, Division 5 of the *Environmentally Hazardous Chemicals Act 1985*, and are used to selectively and specifically control particular chemicals or chemical wastes to limit their potential or actual impact on the environment. Arcadis has used the decision matrix presented in Table 5-4 (based on the NSW EPA chemical control orders[2] available at the time of this DSI), to facilitate an assessment of the potential for those control chemicals to be present on the Site.

Table 3-1 Chemical Control Orders Decision Matrix

Preliminary Screening Question	Decision
Were aluminium smelter wastes used or stored on the Site?	No
Were dioxin contaminated wastes generated or stored on Site?	No
Were organotin wastes generated or stored on Site?	No
Were polychlorinated biphenyls (PCB) used or stored on Site?	No
Were scheduled chemicals used, or wastes stored, on Site?	No
Were aluminium smelter wastes used or stored on Site?	No

[2] SPCC 1986, *Chemical Control Order in Relation to Aluminium Smelter Wastes Containing Fluoride and/or Cyanide*
NSW EPA 1986, *Chemical Control Order in Relation to Dioxin-Contaminated Waste Materials*
NSW EPA 1989, *Chemical Control Order in Relation to Organotin Wastes*
NSW EPA 1997, *Polychlorinated Biphenyl Chemical Control Order*
NSW EPA 2004, *Chemical Control Order in Relation to Scheduled Chemical Wastes*

Based on the desktop review and observations made during the site walkover, potential sources of chemical control orders related chemicals on the Site is considered unlikely.

4 Regulatory Records

The DP (2025b) *DSI* included a search of Council and NSW EPA public registers. The following subsections provides a summary of the findings of the searches, verification of the results and interpretation of the findings to assess potential contamination risks from the regulatory records.

4.1 NSW EPA Records

A summary of the results of the search of NSW EPA public registers conducted by DP and additional searches conducted by Arcadis, is provided in Table 4-1:

The verified searches of NSW EPA Records of Notices and List of Notified Sites is provided in *Appendix F.*

The summary of verified searches of NSW EPA Public Register (under section 308 of the *Protection of the Environment Operations Act 1997* (the POEO Act) is provided in *Appendix G*.

Table 4-1 Summary of NSW EPA Record Search Results

Item	Description
Gasworks Sites	A search of the NSW EPA database did not identify any former gas works sites onsite or immediately surrounding the Site.
Records of Notices	A search of the NSW EPA online contaminated land record of notices indicated that the site (and land located immediately adjacent to the site) was not the subject of: • Orders made under Part 3 of the *Contaminated Land Management Act 1997* (the CLM Act). • Notices available to the public under section 58 of the CLM Act. • An approved voluntary management proposal under the CLM Act that has not been fully carried out and where NSW EPA approval has not been revoked. • Site audit statements provided to the NSW EPA under section 53B of the CLM Act that relate to significantly contaminated land. • Where practicable, copies of anything formerly required to be part of the public record. or • Actions taken by NSW EPA (or the previous State Pollution Control Commission) under section 35 or 36 of the *Environmentally Hazardous Chemicals Act 1985*.
List of Notified Sites	A search of the NSW EPA online list of NSW contaminated sites notified to NSW EPA indicated that the Site (and land located immediately adjacent to the site) was not on the list. The search identified four properties within Parramatta including the following: • Bp Service Station located at 435 Church Street, approximately 800m north of the Site. • Coleman Oval Embankment located at Corner of Pitt Street and Macquarie Street, approximately 660m west of the Site. • 7-Eleven (former Mobile) Service Station, located at 81 Victoria Road, approximately 860m northeast of the Site.

Item	Description
	• Parramatta Park Toilet Block Demolition, located at the Cresent Toilet Block Parramatta Park, approximately 1.2km east northeast of the Site. The above properties contamination activity types were listed as 'Regulation under the CLM Act not required.' Given the distance to these properties and considering the NSW EPA has determined the properties do not require regulation, they are considered unlikely to pose a contamination risk to the Site.
PFAS Investigation	A search of the NSW EPA current PFAS Investigation Programs and Defence management and investigation programs did not identify any investigations onsite or immediately surrounding the Site. Further, there are no fire stations, aviation facilities or bushfire prone land onsite or immediately surrounding the Site, indicating the historical use of PFAS containing firefighting foam activities are unlikely.
Public Register (under section 308 of the POEO Act)	A search of the NSW EPA online POEO public register indicated that the site (and land located immediately adjacent to the site) was not the subject of a licence, application, notice, audit, pollution study or reduction program. However, the search identified six records within 250m of the Site, which included four former or currently POEO licensed activities, which generally were associated with railway infrastructure construction and extractive activities. There were also two notable s.91 Clean Up Notice and Penalty Notices issued which included: • Clean up notice (Notice No: 1513867) issued on 3 May 2013 to R.P Huang & G.T Hu as "The Dry Clearers on George", located at Shop 11b, Mayfield Plaza, 26 George Street, Parramatta, located approximately 130m west of the Site, inferred hydraulically cross gradient of the Site. The notice was attributed to an excessive quantity of perchloroethylene (PERC) contaminated dry cleaning waste (8 x 20L) stored within the shop, stacked on top of each other in a 'disorderly and inappropriate manner' and ordered to be removed and disposed of at a licensed facility. • Penalty notice (Notice No: 3173541030) issued on 16 February 2024 to JAVA Golden Arc Australia Pty Ltd, located at 312 Church Steet, Parramatta, approximately 150m north-west of the Site, inferred hydraulically down-gradient of the Site. The Notice was for '*supply of beverage etc in container without supply arrangement - corporation'* (no report was available). Arcadis conducted a search of the POEO public register on 23 June 2025 and also identified the below sites issued with a notice: • Clean up notice (Notice No: 1563521) issued on 11 April 2018 to EQ Constructions Pty Ltd, located at 331A-339 Church Street, Parramatta, approximately 210m northwest of the Site, inferred hydraulically cross gradient to down gradient of the Site. The notice was for sandstone fines pollution of the Parramatta River.

Item	Description
	• Penalty notice (Notice No: 3173541737) issued on 18 March 2025 to Fuhua Jiang, located at 12 Darcy Street, Parramatta, approximately 300m south of the Site, inferred hydraulically upgradient. The notice was for '*the supply of false/misleading information relating to waste*' (no report was available). • Penalty notice (Notice No: 3173540839) issued on 1 May 2024 to Super Demolition Pty Ltd, located at 10 Darcy Street, Parramatta, approximately 300m south of the Site, inferred hydraulically upgradient. The notice was for 'Transporter asbestos waste does not give prescribed info to EPA – Corporation' (no report was available). Based on the above records there is no indication of the potential for contamination at these premises migrating and potentially posing a risk to the Site. The details of the additional notice records identified and available (Notice No: 1563521) is provided in *Appendix G*.

A further review of publicly available aerial maps of the Site and immediate surrounds did not identify any of the following activities onsite or within 500m of the Site:

- Defence Sites
- Waste management facilities
- Liquid fuel facilities
- Air services
- Motor garages/service stations
- Naturally Occurring Asbestos Potential

The nearest dry cleaners is 'Dry Cleaners on George' located approximately 130m west of the Site.

Based on the review of the NSW EPA public records, potential land contaminating activities were not identified on the Site, and it is considered unlikely the aforementioned commercial activities surrounding the Site would pose an unacceptable contamination risk to the Site. Arcadis notes, DP considers the Dry Cleaners on George potential contamination risk impacting the Site to be low. However, they consider there is the potential for unknown historical commercial activities involving dry cleaners in close proximity to the Site. Arcadis generally agrees additional verification samples of chlorinated volatile organic compounds (CVOC) associated with dry cleaning activities may be warranted, however the risk is low.

4.2 Planning Certificates

A search of the Paramatta City Council's Planning Certificates prepared under Section 10.7(2) and Section 10.7(5) of the Department of Planning, Industry and Environment (DPIE) (1979). *Environmental Planning and Assessment Act 1979* for Lot 102, in Deposited Plan 241030 within the Site reported no records pertaining to the Site.

4.3 Schedule 11 Hazardous Chemicals

A search of the SafeWork NSW Schedule 11 hazardous chemicals (dangerous goods) on the Site was not conducted as the Site History did not indicate the potential for underground storage tanks to be registered onsite.

5 Site Walkover

5.1 Observations

A site walkover was undertaken by an environmental consultant from DP, on 5th February 2025. A summary of these observations is provided in Table 6-1.

A photographic log of the images collected during the Site walkover is provided in *Appendix A*.

The site layout at the time of the site walkover is shown in *Figure 2*.

Table 5-1 Site Walkover Observations

Item	Description
Current Site layout and Land Use	The Site was predominantly covered in hardstand, including asphaltic concrete on roads and concrete/paved pedestrian footpath, with minor cracks. Well established trees were observed in square insitu planters along the sidewalk.
Site Boundaries	No details on the site boundary were given, however, given the site was publicly accessible, it is assumed no fencing at the boundaries.
Drainage	No surface water bodies, or drainage lines were observed onsite.
Staining and Odours	None reported.
Chemical Handling and Storage	None reported.
Aboveground and Underground Storage Tanks	None reported.
Onsite Septic	None reported.
Wastes	None reported.
Hazardous Materials	No hazardous material (Including potential ACM) reported.
Fill Material	No obvious signs of filling reported, as the Site was described as generally flat, consistent with the surrounds.
Phytotoxicity	Well established trees were observed with no reported signs of distress or die back.
Activities on Adjacent Land	The Site was surrounded by mixture of low-rise and high-rise commercial buildings, a carpark, and a construction site for the Metro line was observed to the south.

In consideration of the observations reported by DP at the time of the site walk, there appears to be no significant indicators of potential contamination.

5.2 Aesthetics

Arcadis has used the guidance outlined in Section 3.6.2 - 3.6.3 of the NEPM (NEPC, 2013) to facilitate an assessment of field observations in the context of aesthetic risk. An assessment of site aesthetics is presented in Table 5-2.

Table 5-2 Aesthetic Risk Screening

Aesthetic Risk Screening Questions	Decision
Are highly malodorous soils present onsite?	No
Are hydrocarbon sheens present on surface waters onsite?	No
Are discoloured chemical deposits or soil staining with chemical waste (other than of a very minor nature) present in soils onsite?	No
Are large monolithic deposits of otherwise low risk material (e.g. gypsum as a powder or plasterboard or cement kiln dust) present in soils onsite?	No
Are materials including putrescible refuse (that may generate hazardous levels of methane, such as a deep fill profile of green waste or large quantities of timber waste) present in soils onsite?	No
Are soils containing residue from animal burials (e.g. former abattoir sites) present onsite?	No
Are large quantities of non-hazardous inert material (e.g. foreign material) likely to be present in soils onsite?	No
Are high odour residue materials present in soils onsite?	No
Are large quantities of various fill types and demolition rubble likely to be present in soils onsite?	No

The Site history review and visual observations during the site walkover did not identify potential aesthetic risks. Section 3.6.3 of the NEPM (NEPC, 2013) advises that:

- Small quantities of non-hazardous inert material should not be a cause of concern or limit the use of the site in most circumstances.
- Sites with large quantities of well-covered known inert materials that present no health hazard such as brick fragments and concrete waste (for example, broken cement blocks) are usually of low concern for both non-sensitive and sensitive land uses.

As the Site is proposed to be covered predominantly in hardstand with minimal soil access and in consideration of the dot points above, further assessment of aesthetics is considered not required. If intrusive sampling works identifies the contrary, further assessment will be required.

6 Preliminary Conceptual Site Model

A conceptual site model (CSM) assesses potential sources, pathways and receptors at a site and the connections between these. In order for a potential risk to exist to human health and/or ecological receptor there must be a clear or suspected source -pathway-receptor (SPR) linkage between the known or potential source(s) and receptor(s) in relation to the Site. The following sections provide a summary of the identified (or potential) sources, pathways and receptors at the Site, based on the available site information at the time of writing.

6.1 Adopted Land Use Scenario and Assumptions

Based on the information provided, Arcadis understands the Site will be redeveloped into a planned green pedestrian and cycle-friendly corridor, removing the vehicle access thoroughfare from George Street to Phillip Street and the carpark. The proposed works are to include upgrades to the pavements (more than 80% hardstand), upgrades to the utilities and drainage line running north-south along the western boundary of Horwood Place, and tree planting and only minimal soil access in garden beds. Based on the construction concept plans, the ground disturbance works are primarily to include shallow disturbance (<0.3mbgl) across the Site for pavement upgrades, and linear upgrades to utilities, sewer and stormwater (<1.0mbgl) and localised disturbance for planting of well-established trees, (< 2mbgl), with no deep excavations required. At completion, opportunities for direct access to soil by the public are likely to be minimal, but there may be potential for people to inhale, ingest or come into direct dermal contact with dust particulates from exposed areas of soil on the Site.

Given the Site is located in an urban area it is assumed the drinking water at the Site will be a council supplied reticulated water supply, consistent with surrounding properties.

Therefore, the proposed land use for the Site is consistent with 'Open Space/Recreational C', as defined in NEPM (NEPC, 2013).

In consideration of the commercial shops/offices in the immediate surrounds and highly urbanised and hardstand surrounds, the land use immediately surrounding the Site is consistent with Commercial/industrial, with adult employees the primary receptors offsite.

6.2 Sources of Contamination

Based on the site history review, regulatory records and site walkover observations provided by DP, a number of potential land contaminating activities have been identified for the Site, which include the following onsite sources:

- Uncontrolled filling/fill of unknown origin,
- Uncontrolled demolition of former buildings/structures and residual hazardous building materials in soils,
- Spills and leaks associated with vehicle parking and thoroughfare.

DP also identified a potential for an offsite source of contamination from historical dry cleaners due to commercial premises in close proximity to the Site. However, Arcadis considers this risk to be low, as no evidence for dry cleaning activities have been identified immediately surrounding the Site.

These potential sources of contamination, associated potential affected media and contaminants of potential concern (CoPC) are listed in Table 7-1:

Table 6-1 Sources of Contamination and CoPC

Source	Matrix	CoPC
Uncontrolled filling	Soils (Fill)	TRH, BTEXN, PAH, OCP/OPP, PCB, metals (8), PFAS, phenols and Asbestos.
Uncontrolled demolition	Soils (Fill)	Lead, PCBs, asbestos.
Vehicle thoroughfare, spills and leaks	Soils (Near surface soils)	TRH, BTEXN, PAH, Metals (8)
Commercial activities in immediate surrounds (potential dry cleaners)	Soils	CVOCs, PFAS.

Metals (8) = Arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), nickel (Ni), lead (Pb), zinc (Zn) and mercury (Hg)
OCP / OPP = Organochlorine pesticides / Organophosphate pesticides
PAH = polycyclic aromatic hydrocarbons
TRH = Total Recoverable Hydrocarbons
BTEXN = benzene, toluene, ethylbenzene, xylene and naphthalene
PCB = Polychlorinated biphenyl
CVOC = Chlorinated volatile organic compounds
PFAS = Per- and poly- fluoroalkyl substances

6.3 Potential Source, Pathway and Receptor Linkages

The desktop review and site walkover observations were assessed in the context of the project objectives, in order to develop a preliminary conceptual site model (CSM) for the Site.

The potential sources of contamination and associated media affected potential exposure pathways to future receptors under a commercial/industrial land use is provided in Table 6-2.

Table 6-2 Source Pathway Receptor Linkages Summary

Source/Media	Potential Exposure Pathway	Site End Users (On-Site)	Intrusive Maintenance Workers (On-Site)	Groundwater users (On-Site)	Groundwater Users (Off-Site)	Recreational Surface water Users (Off-site)	Ecological Receptors -Terrestrial (On-site)	Ecological Receptors -Aquatic (Off-site)	Buildings and Infrastructure	Justification
Soil: • Uncontrolled Fill • Uncontrolled demolition • Vehicle spills and leaks • Commercial activities in immediate surrounds (potential dry cleaners)	• Direct Contact, Ingestion/ Dermal Contact/Dust Inhalation	✓	✓	N/A	N/A	N/A	N/A	N/A	✘	• The Site history review indicated a potential for uncontrolled filling and leaks/spills from vehicles with associated contaminants which may present a dermal contact, ingestion or dermal contact exposure risk to human health for future site users and a direct contact risk to intrusive maintenance workers. Further assessment of dermal contact / dust inhalation / ingestion exposure risk and direct contact exposure risk is considered warranted. • Site history information and walkover observations did not indicate a potential for significant quantities of petroleum hydrocarbon contamination to be present on site. However, further assessment of risks from hydrocarbons in soils associated with the uncontrolled filling, is subject to the results of the sampling works to adequately characterise the Site soils. Hence, screening of contaminant concentrations in soils against the management limits is considered warranted to inform the future development.
	• Inhalation of Asbestos fibres	✓	N/A	N/A	N/A	N/A	N/A	N/A	N/A	• The Site History review indicated a potential for uncontrolled filling at the Site which may include bonded ACM and/or AF/FA to be present in fill across the Site. Therefore, further assessment of asbestos exposure risk to future site users (incl. construction workers) is considered warranted.
	• Vapour Intrusion	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A	• The Site History review, Regulatory Records review and site walkover observations did not indicate a potential for primary or secondary vapour sources to be present within site. However, a review of site aerials indicated a potential for historical uncontrolled filling which may be a source of volatiles. The proposed earthworks are likely to include considerable disturbance of soils, which will often result in evaporation of volatiles and concentrations required to present an intrusion / inhalation risk, vapour intrusion / inhalation exposure risks are considered unlikely. However, further assessment of vapour intrusion / inhalation risks associated with the uncontrolled filling, is subject to the results of the sampling works to adequately characterise the Site soils.
	• Direct Uptake (Ecological)	N/A	N/A	N/A	N/A	N/A	✓	N/A	N/A	• The proposed development is likely to be predominantly hardstand with extensive areas covered with concrete or asphalt, with minimal soil access, hence, may have limited environmental values requiring consideration while in operational use. If landscaped areas are proposed, there are often practical considerations that enable soil properties to be improved by addition of ameliorants with a persistent modifying effect or by the common practice of backfilling or top dressing with clean soil (NEPC, 2013). On that basis, Arcadis considers the potential for terrestrial ecological exposure risks, based on the future land use to be low. However, preliminary screening of contaminant concentrations in soils against the ecological investigation and screening levels is considered warranted to inform the future development.
	• Aesthetic	✘	N/A	N/A	N/A	N/A	N/A	N/A	N/A	• The Site history review and site walkover observations did not identify a potential for unacceptable aesthetics risks to be present on the site. Further assessment of aesthetic risks on site, is considered not required.
Groundwater: • Historical commercial activities	• Direct Contact, ingestion • Vapour Intrusion	✘	✘	✘	✘	✘	N/A	✘	N/A	• Given there is no receiving surface waters onsite, the potential for a direct contact exposure risk to any contaminated groundwater for future site users is considered unlikely under the future land use scenario. Further, the proposed development is likely to include a reticulated potable water supply, therefore the risk of potential ingestion exposure risk of contaminated drinking water is considered unlikely. • Site history information and walkover observations did not indicate a potential for significant quantities of petroleum hydrocarbon contamination to be present on site nor surrounding the Site. Therefore, the potential for a vapour intrusion risk from hydrocarbons in groundwater is considered unlikely. • Section 3 of this report did not identify any registered groundwater bores hydraulically downgradient of the site, authorised for industrial, agricultural or domestic use purposes. Arcadis considers that further assessment of industrial water, agricultural use as a groundwater value, is not warranted. • Given the groundwater is likely encountered greater than 5mAHD (approximately 4m below surface levels) at the Site and the proposed ground disturbance works is assumed to be limited to the top 2m, with no dewatering required, the potential for a direct contact exposure risk to intrusive maintenance workers, is unlikely. • The nearest surface water body is Parramatta River (~140m north of the Site) and is well known to have historical and continued ongoing contaminant loading on it from surrounding stormwater runoff and commercial activities. Based on the Site history review there appears to be no significant quantities of liquid contaminants onsite which would have the potential to infiltrate groundwater and migrate towards the Parramatta River causing unacceptable environmental harm. Therefore, the potential for an offsite aquatic or recreational exposure risk from onsite contamination sources is unlikely.

In consideration of the above and the proposed development, there is no evidence to suggest unacceptable contamination in groundwater which may pose a risk to the proposed Open Space/Recreational C land use, hence further assessment of groundwater is currently considered not warranted.

7 Data Quality Objectives

The Data Quality Objectives (DQO) process is a systematic planning tool based on the scientific method for establishing criteria for data quality and for developing data collection designs. The DQO define the experimental process required to test a hypothesis. The DQO process has been developed to ensure that efforts relating to data collection are cost effective by eliminating unnecessary, duplicative, or overly precise data whilst at the same time ensuring the data collected is of sufficient quality and quantity to support defensible decision making.

It is recognised that the most efficient way to accomplish these goals is to establish criteria for defensible decision making before data collection begins and develop a data collection design based on these criteria.

7.1 Seven Step Process

The DQO process consists of seven steps, which are designed to clarify the study objectives, define the appropriate type of data and specify tolerable levels of potential decision errors. The seven-step DQO process can be summarised as:

- **Step 1: State the Problem** – concisely describe the problem to be studied. Review prior studies and existing information to gain a sufficient understanding to define the problem.
- **Step 2: Identify the Decision** – identifying the decisions that need to be made about the contamination problem and the new environmental data required to make them.
- **Step 3: Identify the Inputs to the Decision** – identify the information that needs to be obtained and the measurements that need to be taken to resolve the decision statement.
- **Step 4: Define the Study Boundaries** – specify the time periods and spatial area to which decisions will apply. Determine when and where data should be collected.
- **Step 5: Develop the Analytical Approach (or Decision Rule)** – define the statistical parameter of interest, specify the action level, and integrate the previous DQO outputs into a single statement that describes the logical basis for choosing among alternative actions.
- **Step 6: Specify Tolerable Limits on Decision Errors** – define the decision maker's tolerable decision error rates based on a consideration of the consequences of making an incorrect decision.
- **Step 7: Optimise the Design** –evaluate information from the previous steps and generate alternative data collection designs. Choose the most resource-effective design that meets all DQOs.

The DQOs which will be used as a basis for evaluation of the suitability of the data collected during the DSI conducted by DP were derived in accordance with Standards Australia, (2005), *Australian Standard (AS) 4482.1 – Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds (*4482.1-2005), provided in Table 7 1 below.

Table 7-1 Data Quality Objectives

Step	Details
1. State the Problem	The reason or purpose of the investigation being undertaken is set out in Section 1.2 of this report. The objective of this investigation is set out in Section 1.2 of this report. The project team and technical support experts identified for the project will generally include project director to provide technical oversight, a project manager to plan and manage the works, field staff and subcontractors to execute the fieldworks. Arcadis considers the design and undertaking of the investigation will be constrained by weather conditions, and DP's financial and time budgets. The regulatory authorities associated with this project include NSW Environment Protection Authority (EPA), the local planning authority (the Client), and SafeWork NSW.
2. Identify the Decision / Goal of the study	The decisions that need to be made during this DSI, to address the project objectives, include the following: • What is the nature and extent of the impact (If any)? • Is the data collected for the DSI suitable for assessing land contamination exposure risks? • Do the concentrations of CoPC occur at concentrations that have the potential to pose an unacceptable risk to human health or the environment, based on the proposed land use scenario? • If so, what is the order of priority to minimise the risk and what additional measures are required to mitigate or manage the risk? • Is the Site suitable, in the context of land contamination, for the proposed land use scenario?
3. Identify the Inputs to the Decision	Key data inputs required to make decisions on the project detailed in Step 2 includes: • Data obtained during the previous contamination assessments, desktop review, site walkover and intrusive investigation. • Identification of sample media that needs to be assessed and associated CoPC, • The basis for decisions to be made from field screening, and selection of samples for analysis. • Laboratory data collected and concentrations of CoPC in the media assessed. • The analytical methods required for each identified COPC, so that assessment can be made relative to adopted site assessment criteria.

Step	Details
	• The adopted site assessment criteria based on the proposed land use, which is set out in Section 8.2.
4. Define the Study Boundary	The scale of the decisions required will be based on the Site, as defined by its boundaries. The geographical and spatial extent of the project is limited to: • The boundary of the Site as detailed in Section 2 and shown in in *Figure 2*. • Any physical constraints or existing infrastructure on site that prevents safe and reasonable access by the project team and subcontractors. • The vertical extent of the study boundary being the vertical extent of fill and maximum depth of proposed disturbance (<2mbgl) or 0.5m into inferred natural, whichever occurs first, at each soil sampling locations. The time and budget constraints of the project will be as per those set out in the contract (and subsequent variations) between DP and the client. Temporal boundaries of the investigation were limited to the dates that field works were completed.
5. Develop the Analytical Approach (or Decision Rule)	The field QA/QC and Laboratory QA/QC procedures to be conducted during the DSI is provided in Section 7.2 and 7.3, respectively. Data quality indicators (DQI) were adopted to facilitate an assessment of the completeness, comparability, representativeness, precision and accuracy (bias) of the field and laboratory data collected. These DQI are set out and assessed in *Appendix I.* The following if/then statements will be used to assess the suitability of the Site based on the proposed Open Space/Recreational C land use, in the context of land contamination: 1. If field and laboratory analytical dataset is within the DQI assessment parameters, then the data may be considered to be adequately complete, comparable, representative, precise and accurate, for decision making within the objectives of the DSI. 2. If field and laboratory analytical dataset is outside the DQI assessment parameters, then additional data may be collected to address identified data gaps. The statistical assessment for soil chemical contamination is determined by the following decision rules: • The 95 % Upper Confidence Limit (UCL) of the arithmetic mean for each contaminant of concern is below the Site Assessment Criteria,

Step	Details
	• The individual contaminant concentration should not exceed the adopted Site Assessment Criteria by more than 250%, and • The standard deviation of individual contaminants should not exceed 50% of the adopted Site Assessment Criteria. Therefore, 3. If field and laboratory analytical results for soils are below the Site Assessment Criteria, then the Site may be considered suitable for the proposed land use scenario. 4. If field and laboratory soil chemical analytical results exceed the Site Assessment Criteria, and further statistical assessment indicates results exceeds the Site Assessment Criteria, then the Site may be considered unsuitable for the proposed land use scenario and further site assessment, remediation and/or management may be required. 5. If asbestos is identified in surface soils (<0.1m bgl) the Site may be considered unsuitable for the proposed land use scenario and further assessment, remediation and/or management may be required. 6. If asbestos is identified at depth, at concentrations which exceeds the Site Assessment Criteria the Site may be considered unsuitable for the proposed land use scenario and further assessment, remediation and/or management may be required.
6. Specify Tolerable Limits on Decision Errors	There are two types of decision error, which includes the following: • Sampling errors occur when the sampling program does not adequately detect the variability of a contaminant from point to point across the Site. That is, the samples collected are not representative of site conditions (e.g. an appropriate number of representative samples have not been collected from each stratum to account for estimated variability); and • Measurement errors occur during sample collection, handling, preparation, analysis and data reduction. In the assessment of land contamination, these errors can result in either: • a Type I error, where contamination exposure risks are considered to be acceptable, when they are not, OR • a Type II error, where contamination exposure risks are considered to be not acceptable, when they are. In order for decision rules to be sound, they should be designed to minimise decision errors. The risk of decision error will be mitigated by the following:

Step	Details
	• Fieldwork tasks will be undertaken by suitably experienced field staff and sub-contractors, with reference to the DQO presented in this report. • Laboratory analyses will be undertaken by NATA accredited laboratories. • Interpretation of data will be undertaken by suitably experienced environmental consultants. Precision is measured using the relative percent difference (RPD). Acceptable replicate data for field duplicates are defined as follows: • Where one or more of the results are below the laboratory limit of reporting (LoR) or when the primary laboratory result is less than five times the laboratory LoR and the difference between concentrations is less than 5% of the relevant criterion concentration an RPD is not calculated, • If concentrations are <10 × LoR, then RPD criteria of 0-100% is acceptable, • If concentrations are between 10 - 30 × LoR, then RPD criteria of 0–50% is acceptable, • If concentrations are > 30 × LoR, then RPD of 0 – 30 % (inorganics) and 0 - 50% (Organics) is acceptable. The acceptable limits for soil, and water field QA/QC results will require to be as follows: • Trip Blank and Rinsate Blanks results < LoR; and • Trip Spike results >70% of original Where acceptable limits for field duplicates were not met, a discussion on low biased error will be provided. Laboratory recovery of matrix spikes and surrogate spikes, method blanks and control sample acceptance limits will be as per the laboratory's Quality Assurance targets accepted under their NATA accreditation. Where acceptable limits for laboratory duplicates are not met, a discussion on potential sources of error will be provided with feedback from the laboratory.
7. Optimise the Design	Soil sampling locations should be selected based on a combination of the following: • Systematic sampling over a grid to provide representative coverage and to characterise the Site in accordance with the minimum sampling density requirements detailed in the NSW EPA (2022), *Sampling design part 1 – application, and* • Judgemental sampling to target areas of historical filling and the proposed deeper disturbance based on the proposed development plans.

Step	Details
	Based on Section 5.3 of the NEMP 3.0(HEPA, 2025) site specific sampling for Per- and Poly-fluoroalkyl Substances (PFAS) has considered the following: • The site topography and features of the surrounding land, • Some environmental media acts as temporary or permanent PFAS sinks (e.g. PFAS concentrations in drainage lines) are important to consider when assessing transport via surface water runoff pathways; and • Other known or potential sources of PFAS contamination onsite or immediately surrounding the Site. Based on the analytical results, additional delineation works for soil will be recommended, if required.

7.2 Field Quality Assurance and Quality Control

7.2.1 Field Screening

Soil samples should be screened for ionisable volatile organic compounds using a photo-ionisation detector (PID). This involves a sub sample from each sampling point to be collected and placed in a zip lock bag, sealed, and shaken. The zip lock bag will then be pierced with the tip of a PID, and the results recorded on the relevant sampling point log.

7.2.2 Decontamination

Non-disposable sampling equipment should be decontaminated between sampling points to mitigate potential for cross contamination of samples. The summarised industry standard of decontamination method generally includes the following:

- The non-disposable sampling equipment washed with a solution of potable water and phosphate free detergent (Liquinox),
- The washed equipment should then be rinsed with de-ionised water,
- Then the rinsed equipment dried with dedicated disposable PFAS free wipes.

7.2.3 Sample Identification, Preservation, Handling and Transport

Soil samples will be identified using project specific number, sampling point identification number and sampling depth interval (e.g. TP01/0.1-1.2 or SP02/0.0-0.1), and date the sample was collected.

Samples will be placed in laboratory prepared containers (containing preservatives as appropriate), and zip lock bags and stored in insulated containers with ice (excluding asbestos).

Samples will then be transported to the NATA accredited analytical laboratory by DP field staff or a third-party courier, using the analytical laboratory's chain of custody (CoC) documentation.

7.2.4 Duplicates and Triplicates

Soil field duplicates and triplicates will be collected at a rate of one set per 20 samples collected (an equivalent of 5%), and one set per 10 samples collected (an equivalent of 10%) where PFAS is a contaminant

of concern. Soil sample collection included splitting of one bulk sample across three separate sample containers, minimising aeration (i.e. not homogenised), to prevent potential volatilisation.

Analysis of the duplicate and triplicates will be based on at least one of the analytes that the parent sample is being analysed for, excluding asbestos. Due to asbestos generally being a discrete contaminant with heterogeneous occurrence in soils (WA DOH, 2009) duplicates are not statistically reliable. Therefore, the omittance of the duplicates for asbestos analysis is considered to not affect the accuracy of the sampling assessment.

The RPD of the detected concentrations in the parent and duplicate, and the parent and triplicate, will be calculated.

7.2.5 Trip Blanks and Trip Spikes

One trip blank and trip spike should be used for each day of sampling or batch of samples transported and scheduled for a minimum of BTEX analysis to determine if sample handling, preservation and storage procedures were acceptable.

7.2.6 Rinsate Blanks and Field Blank (PFAS)

One representative rinsate blank and PFAS field blank as a minimum is required, if sample handling, preservation and storage procedures are consistent on each day of sampling. Analysis of the rinsate blank will be based on at least one of the analytes that the parent sample is being analysed for and the field blank for PFAS analysis, as per the NEMP 3.0 (HEPA, 2025) requirements.

7.3 Laboratory Quality Assurance and Quality Control

Analytical laboratories used for the DSI should be NATA accredited for the analytical methods used.

The QA/QC program of the primary analytical laboratory will typically include analysis of method blanks, matrix spikes, surrogate spikes, laboratory control samples and laboratory duplicates. The laboratories will report on whether the QA/QC analysis has met the laboratory's adopted performance acceptance criteria and provide justification for any exceedances.

7.4 Adopted Site Assessment Criteria

7.4.1 Tier 1 Human Health and Ecological criteria

Based on the proposed land use scenario (Open Space/Recreational C) and assumptions provided in Section 6.1, the soil samples collected from the Site during the DSI were screened, using the following applicable Tier 1 human health and ecological criteria for an Open Space/Recreational land use:

Table 7-2 Adopted Site Assessment Criteria for Soil and Groundwater

Exposure pathway	Adopted Site Assessment Criteria Reference
Human health - Ingestion, dermal contact and dust inhalation	Table 1A (1) in Schedule B1 of the NEPM (NEPC, 2013) Table 2 in the NEMP 3.0 (HEPA, 2025)
Human health - Direct contact	Table B4 in Friebel, E & Nadebaum P (2011)
Human health – Vapour inhalation/intrusion	Table 1A (3) in Schedule B1 of the NEPM (NEPC, 2013)

Exposure pathway	Adopted Site Assessment Criteria Reference
	Table 1A (4) in Schedule B1 of the NEPM (NEPC, 2013)
Human health – Fibre Inhalation (asbestos)	Table 7 in Schedule B1 of the NEPM (NEPC, 2013)
Direct uptake – Terrestrial Ecology	Table 1B (1 - 6) in Schedule B1 of the NEPM (NEPC, 2013) and relevant errata.
Direct and Indirect Exposure (PFAS)	Table 3 in NEMP 3.0 (HEPA, 2025)
Direct Contact with Buildings and Infrastructure (petroleum hydrocarbons)	Table 1B (7) in Schedule B1 of the NEPM (NEPC, 2013)

Arcadis has adopted the relevant Sand (or Coarse) criteria, for soil as a conservative preliminary screening approach.

7.4.2 Site Specific Screening Criteria

For contaminants with no Ecological Investigation Levels (EILs) prescribed in the NEPM (NEPC, 2013), Arcadis calculated a site-specific EIL by adding the ambient background concentration (ABC) of contaminants in residual soils onsite and Added Contaminant Limits (ACL). For the purposes of EIL derivation, it is reasonable to assume aged metals impacted contamination (> 2 years old) based on the site history and no recent significant contamination sources identified. The ACL was derived by DP using the detected concentrations reported by the laboratory for pH, cation exchange capacity (CEC) and percentage of clay content (Refer to results in data summary table, attached Table 1) to calculate the Added Contaminant Levels (ACL). Arcadis notes, DP has derived two EILs, based on site specific ABC and pH, CEC and percentage of clay content parameters, one for fill and the other for natural.

The site specific EILs derived by DP, are presented below.

Table 7-3 Site Specific EILs

Analyte	Adopted EIL[3] - Aged (mg/kg) (FILL)	Adopted EIL - Aged (mg/kg) (Natural)
Zinc	**420**	**430**
Copper	**160**	**180**
Chromium (III)	**410**	**410**
Nickel	**75**	**140**
Lead	**1100**	**1100**

The NEMP (HEPA, 2020) indicates the indirect exposure value for PFOS and PFOA (0.003 mg/kg) may be over-protective if the area of exposed soil is too small to have any material impact on food chain transfer to secondary consumers such as invertivores and carnivores. In this situation, considering site-specific characteristics may justify the use of a higher value (up to 0.14 mg/kg) as the trigger for a detailed site-specific investigation of risk. Relevant site considerations include:

[3] Rounded to two significant figures for consistency and avoidance of false accuracy.

- The site is intensively developed with greater than 80% covered by hard surfaces.
- Secondary consumers are effectively absent from the site.
- The site is situated in an extensively built-up urban setting.
- The site is not in close proximity to waterways, drainage networks or groundwater.

Given the Site is proposed to be predominantly covered in hardstand, located within the urban area of the Parramatta building district, the higher criterion of 0.14 mg/kg for PFOS and PFOA has been adopted, in accordance with the NEMP 3.0 (HEPA, 2025).

7.4.3 Acid Sulfate Soil Criteria

Table 4.4 of ASSMAC 1998 provides the action criteria which would trigger the need for an ASS Management Plan based on soil texture and volume of disturbed material. The soil will be assessed on the site-specific soil, type (a light to medium texture (sands to heavy clays) assuming less than 1,000 Tonnes of soil disturbance, based on the proposed development plans. This texture-based action criteria for the management of ASS disturbance are summarised in below.

Table 7-4 Net Acidity Action Criteria for AASS (ASSMAC 1998 and Sullivan et al. 2018a).

Soil Type	1-1000 t material disturbed	
Texture	**% S-equivalent**	**mol H+/t**
Coarse Texture – Sands to loamy sands	≥ 0.03	≥ 18
Medium Texture – Sandy loams to Light Clays	≥ 0.06	≥ 36
Medium Texture – Medium to heavy clays and silty clays	≥ 0.10	≥ 62

The net acidity result for each sample is compared against the criteria within Table 4-1. However, the acidity hazard of soil materials that are strongly acidic due to processes other than RIS oxidation, are not considered an ASS acidity hazard (Sullivan et al., 2018b). Determination of RIS is performed using the suspension peroxide oxidation combined acidity and sulfur (sPOCAS) or chromium reducible sulfur (S_{CR}) suite of analytical methods. The S_{CR} method is preferred, as sPOCAS can produce false positives due to organic sulfur interferences, overestimating the acidity hazard. Where soils containing detections of RIS and net acidity concentrations at or above the action criteria are proposed to be disturbed, an ASS management plan is required.

7.4.3.1 Preliminary Field Screening Criteria

A pH_F result equal to or < 4 pH units is considered an actual acid sulfate soil, however this is not necessarily a hazard as high organic loads can naturally produce acidic soils < 3.5 pH units. Laboratory analysis (S_{CR} suite) to determine RIS is required to identify a risk profile.

Rapid oxidation to assess pH_{FOX} can be useful in determining the presence of potential acid sulfate soils. The pH_{FOX} when compared to the pH_F result can give an indication of the presence of RIS in the sample. Key indicators that the sample contains RIS include:

- High reactivity and effervescence – the sample can produce substantial heat.
- Release of sulfur odours – sulfur dioxide or hydrogen sulfide.
- Lowering of soil pH by at least one pH unit.

Where pH testing is inconclusive or indicates the potential presence of ASS, the sample should be submitted to a laboratory analysis for chromium reducible sulfur (S_{CR}) analysis. This analysis will provide a liming rate for confirmed ASS.

8 Soil Sampling Methodology

8.1 Soil Sampling Procedure Summary

Intrusive soil sampling works were conducted by DP on 29th January, 5th February and 13th February 2025. The field works was a combined geotechnical and contamination investigation and generally included the following:

- Insitu soil sampling across the Site from archaeological test pits via excavator at nine locations (TL01 – TL06 and TL09 – TL11) and manual drilling via hand auger at four boreholes BH07, BH08. BH12 and BH13, referenced as TL07, TL08, TL12, and TL13, respectively, in the logs, sample IDs and sampling plan figure. Then deeper natural soil samples were collected from the three extended boreholes at test pit locations TL01, TL05 and TL06 (refer to logs TL01-d, TL05-d and TL06-d, respectively) for geotechnical assessment purposes including ASS.
- Drilled for geotechnical purpose at every 1 m interval to a maximum depth of 5 m
- Stockpile soil sampling (RB-SP-1 to RB-SP-3) using a trowel to assess the waste classification of stockpiled soils at George Khattar Lane.

Soil samples were collected as follows:

- From test pits, samples were collected at near surface (~0.15mbgl, immediately below the hardstand) at 0.3m, 0.5m and then every 0.5m thereafter. Additional representative asphalt samples were collected from stockpiled asphaltic material for assessment of coal tar.
- From boreholes, samples were generally collected at 0.15m (immediately below the hardstand including engineered gravels) 0.5m, 1.0m, and every 1.0m thereafter.

Additional samples were collected where visual or olfactory evidence of potential contamination was observed. Samples were collected directly from the auger head, to avoid cross contamination and loss of volatiles, as grab samples, using a fresh pair of nitrile gloves.

Samples were placed in suitable laboratory prepared containers and labelled. At each soil sampling depth, a soil sample included a 250ml laboratory supplied jar with Teflon lined lid for chemical analysis, non-Teflon lined plastic containers for PFAS analysis and a minimum 500ml was collected in a laboratory-supplied zip-lock plastic bag, for analysis of asbestos fines / fibrous asbestos (AF/FA) in soils.

The soil profiles encountered were logged in accordance with the descriptions defined in the Australian Standard (AS) 1726:2017, with details of discolouration, staining, odours or other indicators of potential contamination noted.

Duplicate samples were collected by splitting the primary sample across three sample containers (without homogenising, to avoid loss of volatiles). No triplicate samples appear to have been collected.

No rinsate samples appear to have been collected.

On completion of sampling at soil samples were securely delivered to the primary laboratory Envirolab, a NATA accredited laboratory, for analysis in accordance with Chain of Custody (CoC) documentation.

Sampling point locations were confirmed on a site plan and presented in *Figure 3*.

8.1.1 Soil Analysis

Soil samples were collected from all 13 test pit locations advanced across the Site and an additional three stockpile samples of the waste stockpile. Representative soil samples from each sampling location were submitted to the laboratory for analysis for a suite of CoPC.

A summary of the primary and QA/QC samples analysed from the intrusive works is provided in the table below. Arcadis notes, DP has also analysed some samples for additional monocyclic aromatic hydrocarbons (MAH) and cyanide, however, evidence has not been provided which would indicate a potential source of these contaminants at the Site or from surrounding land.

Table 8-1 Soil Sample Analysis

Location	Required Sample Rate	Total No. of Analyses	Analysis
Primary Samples			
TL01 – TL13	Near surface then every 0.5m interval of fill (or change in soil profile), then every 1.0m thereafter.	56	Representative samples were analysed for: • TRH, BTEXN, PAH, and MAH, • OCP/OPP, PCB, • CVOC, • Cyanide, • Phenols, • Metals (8), • PFAS (short suite), • Asbestos (500ml %w/w), • pHf-fox and Chromium Reducible Sulfur, • pH, CEC and % Clay Content.
RB-SP1 – SP3 and RB-ACM-1	A minimum 300mm below the surface	3	• TRH, BTEXN, PAH, • OCP/OPP, PCB, • Metals (8), • PFAS (short), • TCLP, • Asbestos ID.
QA/QC Samples			
Field Duplicates (Chemical/ PFAS)	1/20 primary Samples / 1/10 primary Samples	4	PAH, Metals (8)
Field Triplicates (Chemical/ PFAS)	1/20 primary samples / 1/10 primary Samples	0	-
Field Blank (PFAS)	1 representative day	0	-
Rinsate Blanks	1 representative day	0	-
Trip Spike/Blank	1/batch	3	BTEXN + TRH (F1)

8.2 Methodology Assessment

The NSW EPA (2022a). *Contaminated Land Guidelines: Sampling design part 1 – application* includes guidance on minimum sampling point densities required for characterising a site, based on detecting circular hot spots by using a systematic sampling pattern. Application of this guidance is recommended when:

- There is little knowledge about the probable locations of the contamination,

- The distribution of the contamination is expected to be random, or
- The distribution of the contamination is expected to be fairly homogenous.

Section 3.1 of NSW EPA (1995) states that judgemental or stratified sampling methods can be used if there is sufficient information about the probable distribution of the contamination. Additionally, Section 6.2.1 in Schedule B2 of the NEPM (NEPC, 2013) states that judgemental sampling, the selection of samples (number, location, timing, etc.) is based on knowledge of the site and professional judgement. Sampling would be expected to be localised to known or potentially contaminated areas identified from knowledge of the site either from the site history or an earlier phase of site assessment. Judgemental sampling can be used to investigate sub-surface contamination issues in site assessment.

The scope of this project has included collection of data that provides an understanding of site history, the locations of potentially contaminated areas and the locations of the proposed ground disturbance activities. On that basis, Arcadis considered reasonable to adopt a combined systematic and judgemental sampling pattern which provides adequate coverage and representation of fill but also captures the locations of potential contamination and locations of ground disturbance proposed for the future construction works. Based on the Site covering an area of approximately 5,000m^2, and in consideration of the potential sources of contamination identified and locations of the proposed ground disturbance activities, the 13 sample locations conducted by DP are considered suitable for characterising the Site, in accordance with NSW EPA (2020).

The sample locations conducted by DP are presented in *Figure 2*.

9 Results

9.1 Field Observations

9.1.1 Generalised Soil Profile

Observations made of soils encountered during intrusive investigation works were recorded on logs, which are presented in *Appendix A*.

Fill appears to be the deepest at TL01 (south Horwood Place, near George Street) and TL08 (north Phillip St), however natural soil was not encountered at TL7, TL12 and TL13, which were discontinued due to a potential service (TL7) and refusal.

A summary of generalised subsurface conditions is presented in the table below:

Table 9-1 Generalised Soil Profile

Approximate Depth Range (mbgl)	Fill/Natural	Soil Description
Surface to 0.25	FILL: Asphalt/concrete	Asphalt and concrete/pavers
0.25 – 0.45	FILL: road base	Grey with gravel and foreign material inclusions
0.6 – 1.0 (and extending to ~2.0 (TL01 and TL08)	FILL: Soils	Generally comprising clayey gravelly SAND (pale brown-dark brown; fine to coarse), sandy CLAY (dark brown; low plasticity, fine to medium sand) and silty CLAY to CLAY (orange-brown, low to medium plasticity), trace siltstone and ironstone gravel. Sandy SILT, with clay, dark brown identified at TL01 and TL08.
1.0 (2.0) – 10.0	Natural	CLAY, sandy CLAY, and SAND (up to approximately 10mbgl in all test locations, excluding TL01, TL07, TL12 and TL13).

9.1.1.1 Odours, Staining and Foreign Material

No olfactory evidence of odours was observed in the soil samples collected, except for sample TL08/2.5-2.8 and sample LT05_D/9.8-10 m which a sulfidic odour was observed and was considered indicative of ASS.

There was no visual evidence of staining observed in the soil samples collected.

Refusal was encountered at TL07 at 0.3 mbgl due to the possible underground service and at TL12 / TL13 on inferred road base at 0.45 mbgl / stiff CLAY at 1.0mbgl.

No potential ACM was observed in insitu samples. However, the stockpile of waste contained suspected visible bonded ACM material which was confirmed by the laboratory in representative sample RB-ACM-01.

Foreign materials including fragments of concrete or glass were observed in test pits TL03, TL04, TL05, TL06 and TL13. Building debris was also observed in the road base in various test pits (concrete, glass), and in FILL in test pits TL01 (brick, ceramic, tile and glass) and TL13 (glass).

Groundwater ingress was observed at TL05_d at approximately 6.0 mbgl and TL08 at 2.3 mbgl, during intrusive works. Based on the geology there is the potential for a perched layer of groundwater within the SAND layer between 2.3-2.5mbgl at TL08, with true groundwater at TL05 within sandy CLAY and SAND layer between approximately 6 – 9mbgl.

9.1.1.2 Volatile Screening

The results of the PID screening indicated the potential for ionisable volatile organic compounds to be present in the samples screened was generally low and consistent with background ambient levels.

The results of the PID screening are presented on the logs in *Appendix A.*

9.2 Laboratory Analytical Results

Four asphaltic samples, 56 primary soil insitu samples, three stockpile soil samples and one solid fragment of suspected ACM from the stockpile were transported to the analytical laboratory for analysis using chain of custody protocols. A selection of the samples was scheduled for laboratory analysis, in consideration of field screening and observations.

A copy of the sample receipts, certificates of analysis, laboratory QA/QC results is presented in the DP (2025b) DSI, provided in *Appendix A*.

The soil laboratory analytical results were tabulated using Esdat and screened against the adopted Site Assessment Criteria, Acid Sulfate Criteria and Waste Screening criteria, presented in the attached Table 1a, Table 1b and Table 2, respectively.

A summary of the results screened against the adopted Site Assessment Criteria is detailed below. A discussion and interpretation of the results and assessment of potential exposure risks is provided in Section 11.

9.2.1 BTEXN, TRH, MAH, PAH, Phenols and VOCs

There were no detections of BTEXN, TRH, MAH, PAH, Phenols and VOCs above the laboratory LoR, except for samples:

- TL07 (0.25 – 0.3) which reported detections of TRH (F3 and F4 fraction), B(a)P and Total PAH,
- TL08 (0.3 – 0.5) which reported detections of B(a)P and Total PAH,
- TL08 (0.3 – 0.5) which reported detections of B(a)P and Total PAH.

All detections were only marginally above the laboratory LoR and below the adopted Site Assessment Criteria.

9.2.2 Cyanide, Solvents and Chlorinated VOCs

There were no detections of cyanide solvents and CVOCs above the laboratory LoR.

9.2.3 PFAS

There were no detections of regulated PFAS compounds above the laboratory LoR, except for samples:

- TL01 (0.5 – 0.6) which reported a detection of PFOA at 0.0001mg/kg, at the laboratory limit of reporting,

- Samples TL02 (0.3 – 0.5), TL04 (0.1 – 0.2), TL07 (0.25 – 0.3), TL08 (1.3 – 1.5), TL12 (0.8 – 1.0) and TL13 (0.3 - 0.4) which reported detections of PFOS between 0.0002 – 0.0031 mg/kg.

Most detections were only marginally above the laboratory LoR, except for TL08 (1.3 – 1.5), which reported a concentration of PFOS at 0.0031 mg/kg, however below the adopted Site Assessment Criteria.

9.2.4 Metals

Most detections of metals were indicative of background levels except for nickel in fill samples TL03/0.1-0.2 m (including duplicate sample BD2/20250205), TL04/0.1-0.2 m, TL05/0.3-0.4 m, and stockpile samples RB-SP-1 to RB-SP-3, ranging from 100 mg/kg to 150 mg/kg, which marginally exceeds the relevant site specific EIL.

9.2.5 Asbestos

Based on the 500ml asbestos samples collected there were no detections of AF/FA.

The laboratory reported no detections of ACM in the insitu samples analysed. A positive ID for bonded ACM was identified in sample RB-ACM-01 collected in the waste stockpile at George Khattar Lane.

9.2.6 Coal Tar

Coal tar was not detected in the asphalt samples analysed.

9.2.7 $pH_{f\text{-}fox}$ and Reaction Rate

All the reported pHF analytical results were above the preliminary 'actual acid sulfate soils (AASS)' field screening criterion of pHF<4, indicating that AASS are unlikely to be present in the soils assessed.

All the reported pHFox analytical results were above the preliminary potential acid sulfate soils (PASS) screening criterion of pH<3.5 indicating that PASS are unlikely to be present in the soils assessed. However, most reported change in pH (pHF - pHFox) analytical results exceeded the preliminary screening criterion of 1 pH unit with the exception of four samples TL01/3.0-3.2, TL06/1.5-2.0, TL06/4.8-5.0, and TL08/1.8-2.0, indicating the potential for PASS to be present.

Most samples analysed exhibited low reactivity rating, except for TL08/1.8-2.0 which exhibited a high reaction indicating the potential for PASS to be present.

9.2.8 Chromium Reducible Sulfur

Soil samples which exhibited the greatest change in pH after oxidisation and with greatest reaction rating within the proposed depth of excavation were selected for further chromium reducible sulfur (CRS) analysis.

The laboratory analytical results were compared against the action criteria that would trigger the need for an acid sulfate soils management plan (Table 4.4, ASSMAC, 1998). For the purpose of selecting the appropriate action criteria, Arcadis has considered the dominant soil type criteria for fill as 'coarse texture' (sands to loamy sands)' and dominant soil type criteria for natural soils as 'medium texture' (light clays)'. Arcadis has also assumed that less than 1,000 tonnes of soil are proposed for disturbance as part of the development work.

The analytical results for the three samples analysed for CRS indicates net acidity levels are less than the relevant action criteria, assuming less than 1,000 Tonnes of soil disturbed.

10 Quality Assurance / Quality Control Assessment

Arcadis adopted specific data quality indicators to evaluate whether the data quality objectives required by the project have been achieved.

The adopted procedures monitor key elements that indicate whether the data provided by DP is useable (in terms of accuracy and reliability), and that the data are adequate for the formation of conclusions on current environmental conditions for the purposes of this report.

Discussion on the data validity and relevant QA/QC analytical results, including laboratory QA/QC, is provided in *Appendix H*, with verification of calculated RPDs, trip blank and trip spike results are presented in the attached Table 3 to Table 5.

Based on the assessment DP appears to have omitted key QA/QC measures required by the statutory guidelines, which are required to increase confidence in the likelihood that cross contamination or reproducibility of the results has been adequately demonstrated. However, in consideration of the overall data quality provided by the laboratory, with no indications of significant outliers or anomalies, Arcadis considers that overall, the data obtained from analysis of the samples collected at the Site, is representative of site soils and the results are both accurate and reliable for the purposes of characterising the Site.

11 Discussion

11.1 Human Health

The detected concentrations of the relevant chemical CoPC in the soil samples analysed for the DSI were less than the adopted human health Site Assessment Criteria. Hence, the potential for CoPC in site soils at levels which may pose an unacceptable direct contact (Ingestion, dermal contact, dust inhalation) or vapour intrusion exposure risk to future human receptors, under an Open Space/Recreational C land use is considered unlikely. Further, there were no primary sources of hydrocarbons identified, therefore a risk to buildings and infrastructures from any onsite sources of hydrocarbons is considered negligible.

Asbestos was not observed in the field nor detected in the insitu samples analysed by DP. However, bonded ACM was detected within a stockpile of spoil generated from onsite test pitting. Further, an asbestos expansion joint was identified by RMA Group (RMA) during excavation of TL02 during the archaeological investigation in January / February 2025, prior to DP's investigation. DP reported the asbestos was identified in expansion joints within the concrete slab and appeared to extend into the underlying road base layer. The asbestos joint was excavated by RMA as far as practicable within the test pit, and DP confirmed residual ACM was not identified in the walls of the excavation during DP's investigation. However, further assessment is required at this location to chase out any remaining visual ACM within the walls or verify no ACM remains. Arcadis agrees there is the potential for additional expansion joints containing asbestos within the concrete which should be assessed during hardstand removal and upgrade works.

Since the DSI, Arcadis has been informed that asbestos containing electrical ducts are present within the Site, extending from light posts within shallow fill. As part of the development the lighting is to be upgraded, and Arcadis assumes the redundant asbestos containing ducts/conduits are to be removed during the construction works, refer to the utility survey and plan showing locations of electrical asbestos ducts in *Appendix I*. Further, given asbestos is a discrete contaminant often with heterogeneous occurrence, the potential for residual bonded asbestos fragments within site fill cannot be dismissed. Hence, there is the potential for unexpected finds of bonded asbestos fragments within fill during the proposed construction works.

Therefore, a remediation action plan (RAP) should be developed to manage the removal of residual asbestos containing conduits, validate the removal of asbestos containing expansion joint at TL02 and manage any unexpected finds of asbestos if encountered.

The logs also indicate a perched layer of groundwater within the SAND layer, approximately between 2.3-2.5mbgl, with true groundwater at within sandy CLAY and SAND layer between approximately 6 – 9mbgl, which is consistent with the levels of the nearby Parramatta River. No sheen or other visual or olfactory evidence of contamination was observed by DP. Given the proposed development works which is predominantly limited to shallow disturbance (<0.3mbgl) with localised linear disturbance for service upgrades (<1.0mbgl) localised deeper disturbance for tree planting (<2.0mbgl) a potential risk of encountering true groundwater which is considered unlikely.

11.2 Ecological - Terrestrial

The detected concentrations of the relevant CoPC in the soil samples analysed for the DSI were less than the adopted terrestrial ecosystems Site Assessment Criteria, with the exception of concentrations of nickel which were reported marginally above the site-specific derived EIL assessment criterion (75mg/kg for FILL) in the following samples:

- TL03/0.1-0.2 (and its duplicate sample BD2/20250205), at a concentration of 110 mg/kg,

- TL04/0.1-0.2, at a concentration of 110 mg/kg,
- TL05/0.3-0.4, at a concentration of 150 mg/kg.
- Stockpile samples RB-SP-1 to RB-SP-3.at concentrations ranging between 110 – 160mg/kg

The samples were collected from the road base materials with the exception of TL05/0.3-0.4, collected from SAND: dark grey; fine to coarse; trace igneous and sandstone gravel. DP conducted a statistical analysis of the detected nickel concentrations in the samples collected using ProUCL. Arcadis notes, in order for the statistical analysis to be valid, the maximum value in any one analyte dataset cannot be greater than 250% of the relevant adopted screening criterion value, and the standard deviation of any one analyte dataset cannot be greater than 50% of the relevant adopted screening criterion value (NEPC, 2013).

The outputs of the ProUCL statistical analysis by DP are presented in *Appendix A.* The results of the statistical analysis for insitu soils indicated the following:

- The maximum detected nickel concentration value in the insitu data set was 150 mg/kg, which is less than 250% of the adopted criterion value,
- The standard deviation of the detected nickel concentrations in the insitu data set was 31 mg/kg, which is less than 50% of the adopted criterion value,
- There is a 95% probability that the arithmetic average concentration of nickel will not exceed 28.07 mg/kg, which is less than the adopted criterion.

Based on the statistical assessment, nickel does not represent a risk to terrestrial ecological receptors.

Further, Section 3.4.2 of NEPM (NEPC, 2013) indicates that:

- A pragmatic risk-based approach should be taken when assessing ecological risk in residential and hardstand settings,
- There are often practical considerations that enable soil properties to be improved by the addition of ameliorants with a persistent modifying effect or by the common practice of backfilling or top dressing with clean soil,
- In other cases, all of the site soils will be removed during site development works or relocated for the formation of new landforms,
- Sites may also be backfilled with 'clean' soil/fill and the fate of any excavated contaminated soil should be considered in process, and
- Commercial sites may have large building structures and extensive areas covered with concrete, other pavement or hardstand materials and may have limited environmental values requiring consideration while in operational use.

The proposed land use scenario is assumed to include predominantly sealed hardstand surfaces, with minimal landscaped areas, where an ecological exposure pathway risk is considered to be low. The proposed development should consider the importation of suitable nutrient-rich soils for any garden beds proposed.

11.3 Acid Sulfate Soils

Based on the laboratory analytical data and field observations, the natural SAND and sandy CLAY soil, assessed across the Site, were not considered AASS. The results indicate PASS may be present with sulfides detected in samples TL05 at 9-9.2mbgl and TL08 at 2.5 – 2.7mbgl and have the potential to oxidize, if disturbed. However, the net acidity results indicate the soils are below the action criteria, provided less than 1,000T of soils are disturbed. Further, in consideration of the shallow depth of disturbance proposed (predominantly shallow <0.3mbgl and localised linear disturbance <2.0mbgl), disturbance and oxidization of the PASS is unlikely. Therefore, an ASS management plan is considered not warranted, in accordance with Table 4.4 of ASSMAC, 1998. If a deeper or greater volume of disturbance is proposed, further assessment may be required.

11.4 Indicative Waste Classification of Insitu Soils

Based on the samples collected and COPC analysed, the insitu soils are generally consistent with GSW (non-putrescible) as defined in the NSW EPA (2014a) *Waste Classification Guidelines*, refer to the attached Table 2. However, the potential for residual asbestos contamination in fill should be considered for further waste classification purposes. The coal tar samples indicate the asphalt is free of coal tar and consistent with reclaimed asphalt as defined in the NSW EPA (2014b) *The reclaimed asphalt pavement exemption 2014*.

Further, sampling and analysis should be undertaken to meet the minimum sampling density for characterisation of the waste, in accordance with the NSW EPA (2022) *Sampling Design Part 1 -Application* or the relevant NSW EPA resource recovery order/exemption.

12 Revised Conceptual Site Model

Based on Arcadis' assessment of desktop review information, fieldwork observations and laboratory analytical data, in the context of the proposed land use scenario, a revised conceptual site model for the Site is presented in Table 12-1.

The linkages consider whether there may be risks to the receptor, either now or in the future. Arcadis adopted the following quantitative or semi-qualitative rationale for assessing whether a complete SPR linkage was present:

- **Complete**: a complete linkage was able to be demonstrated through empirical data indicating concentrations exceeding the Site Assessment Criteria or site observations indicating an unacceptable exposure risk to future receptors.
- **Possible:** a complete linkage is considered possible based on the current understanding of site conditions and empirical data indicating concentrations above the Site Assessment Criteria, however, in consideration of the assumptions of the proposed land use scenario the risk can be managed appropriately.
- **Unlikely:** a complete linkage is considered unlikely based on the current understanding of site conditions, however there are insufficient data or site observations, and further assessment may be required to confirm this.
- **Incomplete:** empirical data or site observations demonstrate that the SPR linkage is incomplete.

Table 12-1 Summary of Potentially Complete SPR Linkages

Source / Media	CoPC	Exposure Pathway	Receptor	SPR Linkage Outcome	Risk
Soil: • Uncontrolled Fill • Uncontrolled demolition. • Vehicle spills and leaks. • Commercial activities in immediate surrounds (potential dry cleaners).	TRH, BTEXN, PAH, OCP/OPP, PCB, Asbestos, PFAS, CVOCs, phenols, Metals (8).	• Direct Contact, • Ingestion/ Dermal Contact/Dust Inhalation	• Site End Users (Onsite) – Recreational C • Intrusive Maintenance Workers	**Incomplete:** Field observations and analytical results for CoPC (including PFAS) in soil were below the Tier 1 screening criteria. Hence, a source of contamination which may pose a direct contact exposure risk to human health under the proposed land use has not been identified.	**Negligible**
		• Inhalation of Asbestos fibres	• Site End Users (Onsite) – Recreational C • Intrusive Maintenance Workers	**Possible:** Analytical results for asbestos in soil reported no detections insitu. However, asbestos was visually identified in shallow fill within the walls of TL02 and in the survey documentation of electrical conduits Further, in consideration of bonded ACM identified in a ~20m^3 spoil stockpile generated from onsite fill, there is the potential for unexpected finds of bonded ACM to reside in fill, which should be managed during construction.	**Moderate**
		• Vapour Intrusion	• Site End Users (Onsite) – Recreational C • Intrusive Maintenance Workers	**Incomplete:** Field observations and analytical results for volatile CoPC in soil were below the Tier 1 screening criteria. Hence, a source of contamination which may pose a vapour intrusion exposure risk to human health under the proposed land use has not been identified.	**Negligible**
		• Direct Uptake	• Terrestrial-Ecological	**Unlikely:** Field observations and analytical results for nickel in soil were above the initial EIL screening levels for ecological terrestrial exposure risk. However, further statistical assessment indicates the soils are below the Site Assessment Criteria.	**Low**

13 Duty to Report

Section 1.3 of NSW EPA (2020) *Contaminated Land Guidelines: Consultants reporting on contaminated land* advises that contaminated land consultants should take reasonable steps to draw the client's attention to their potential duty to report contamination under the section 60 of the *Contaminated Land Management Act 1997*.

Section 2 in NSW EPA (2015) *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997* provides guidance on addressing obligations under section 60 of the Contaminated Land Management Act 1997, regarding who is required to notify EPA as soon as practical after they become aware of contamination, which includes:

- Anyone whose activities have contaminated land; or
- An owner of land that has been contaminated.

For the purposes of section 60(3)(b) of the CLM Act, notification of asbestos contamination is required where:

- friable asbestos is present in or on soil on the land.

AND

- the level of asbestos (% weight for weight) in an individual soil sample is equal to or above the health screening level of friable asbestos in soil (0.001%) specified in Section 4.8, Schedule B1 of the NEPM (NEPC 2013)

AND

- a person has been, or foreseeably will be, exposed to elevated levels of asbestos fibres by breathing them into their lungs.

Based on the insitu results, Arcadis considers that there is currently no duty to report asbestos in soils contamination at the Site. If during the proposed construction works unexpected finds of contamination are identified, a further duty to report assessment may be undertaken.

14 Conclusions and Recommendations

Arcadis completed this CIR based on the DSI completed by DP at the Site to provide the Client with sufficient information to inform on site suitability (in the context of land contamination) and potential contamination risks associated with the proposed development of the Site into a public open space.

Based on the information detailed in the DP (2025b) *DSI* report, and in consideration of the objectives, Arcadis has drawn the following conclusions regarding contamination at the Site:

- The Site history and regulatory records review identified potential sources of contamination onsite including historical uncontrolled filling, uncontrolled demolition and leaks and spills from vehicle. Although considered very low risk, there was considered the potential for historical commercial activities in close proximity to the Site which may have impacted site soils (i.e. dry cleaner).
- The analytical results from the intrusive soil sampling indicate:
  - Detected concentrations of chemical COPC in soils were below the adopted assessment criteria and are unlikely to present an unacceptable human health or ecological exposure risk, based on the assumptions in this report.
  - Asbestos (in the form of bonded ACM and AF/FA with fibres) was not detected in laboratory samples of all fill samples on-site. However, bonded ACM was visually identified (and laboratory confirmed) in a stockpile of spoil generated from the <0.3mbgl of fill during test pitting, in the wall of TL02 from an expansion joint containing asbestos. Review of site identified portions of the electrical conduits onsite are constructed of asbestos. Hence, an SPR linkage is considered 'Possible' for human health exposure risk to residual asbestos in fill, with a moderate risk rating.
- The laboratory results indicate sulfides are present within natural soils at TL05 at 9 - 9.2mbgl and TL08 at 2.5 – 2.7mbgl, indicative of PASS. However, the net acidity indicates results are below the action criteria based on the quantity (assumed <1000 tonnes) and depth (<2mbgl) of disturbance, hence, an ASS management plan is currently not required.
- A duty to report contamination under the CLM Act to the NSW EPA is currently not required.
- The Site is considered suitable for the future Open Space/Recreational C land use scenario, provided a provisional remedial action plan (RAP) is prepared to manage any unexpected finds of residual bonded ACM during construction.

In consideration of the conclusions, Arcadis provides the following recommendations:

- Preparation of a Remedial Action Plan to address the known asbestos contamination identified and potential unexpected finds of asbestos in soils or other expansion joints.
- Preparation of a Site Remediation and Validation report demonstrating the Site has been remediated and suitable for the future Open Space/Recreational C land use. If asbestos is not identified and remediation is not required, a letter confirming the status of the Site is considered sufficient.
- An unexpected finds protocol (UFP) be prepared to document procedures to be implemented should unexpected finds of contamination be encountered during the proposed construction works.
- A construction environmental management plan (CEMP) be developed to document procedures and controls to be implemented to mitigate harm to human health and the environment during the proposed construction works.
- If the quantity of soil and depth of disturbance increases, a reassessment of the requirement for an ASS management plan is required.

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16 Limitations

The findings of this report are based on the Scope of Work described in this report. Arcadis performed the services in a manner consistent with the level of care and expertise exercised by members of the environmental profession. That standard of care may change, and new methods and practices of exploration, testing and analysis may develop in the future, which might produce different results.

No warranties, express or implied, are made. Subject to the Scope of Work, Arcadis' assessment is limited strictly to identifying typical environmental conditions associated with the subject property.

While normal assessments of data reliability have been made, Arcadis assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of Arcadis, or developments resulting from situations outside the scope of this project.

Arcadis prepared this report for the sole and exclusive benefit and use of the client. Notwithstanding delivery of this report by Arcadis or the client to any third party, any copy of this report provided to a third party is provided for informational purposes only, without the right to rely. Arcadis cannot accept any responsibility for any use of or reliance on the contents of prepared reports by any third party except where expressly agreed via an agreed and properly executed reliance letter. Subject to the terms of the reliance letter, Arcadis would disclaim all and any liability to any third person in respect of anything or in consequence of anything done or omitted to be done by that person in reliance, whether whole or partial.

Information from samples collected by Arcadis or historical data reviewed relating to soil, groundwater, waste, air or other matrix conditions in this document is considered to be accurate at the date of issue. Surface, subsurface and atmospheric conditions can vary across a particular site or region, which cannot be wholly defined by investigation. As a result, it is unlikely that the results and estimations presented in this report will represent the extremes of conditions within the site that may exist. Subsurface conditions including contaminant concentrations can change in a limited period of time and typically have a high level of spatial heterogeneity.

From a technical perspective, there is a high degree of uncertainty associated with the assessment of subsurface, aquatic and atmospheric environments. They are prone to be heterogeneous, complex environments, in which small subsurface features or changes in geologic conditions or other environmental anomalies can have substantial impact on water, air and chemical movement.

Arcadis' professional opinions are based upon its professional judgment, experience, and training. These opinions are also based upon data derived from the limited testing and analysis described in this report. It is possible that additional testing and analysis might produce different results and/or different opinions. Arcadis has limited its investigation(s) to the scope agreed upon with its client.

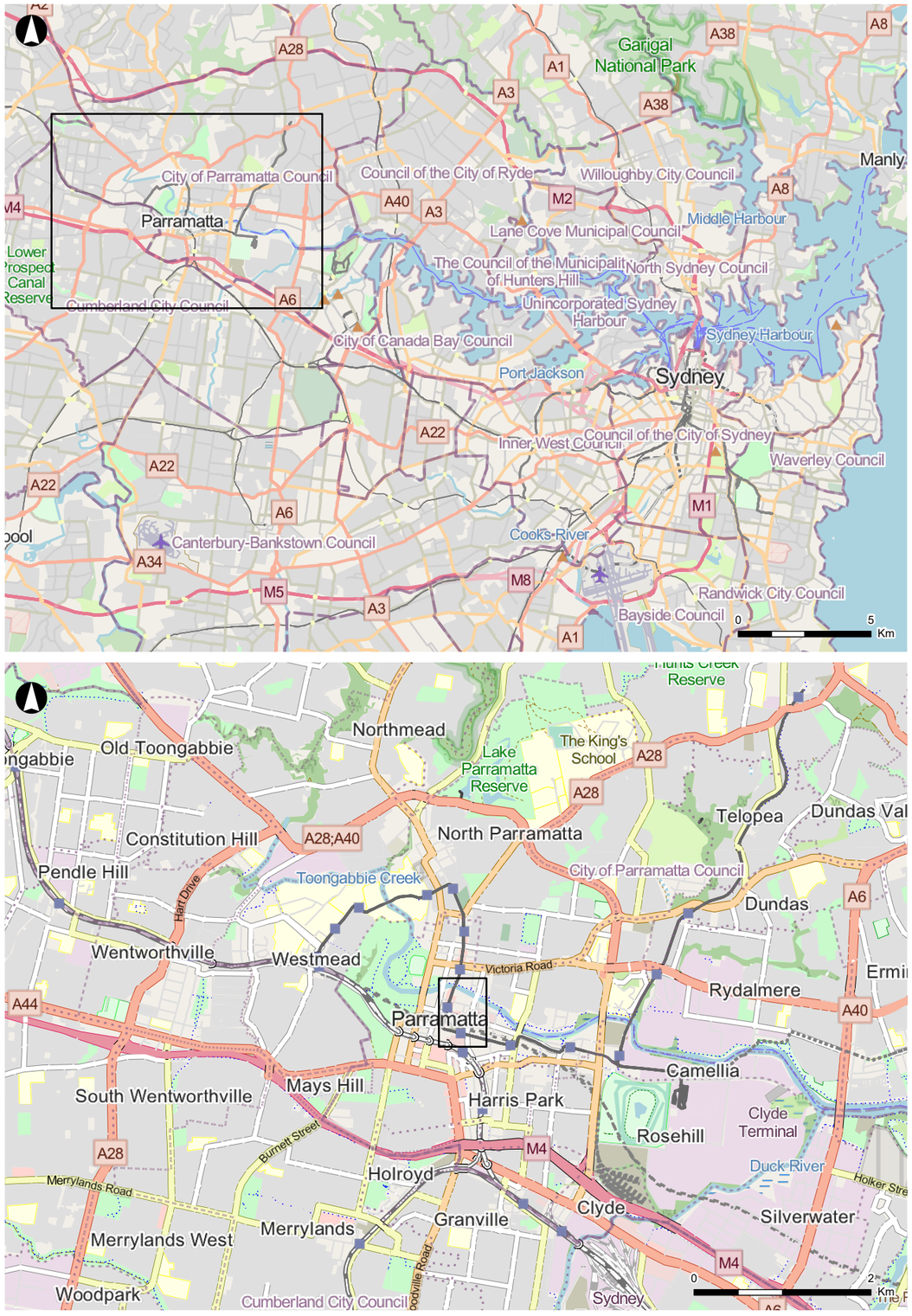
Figures

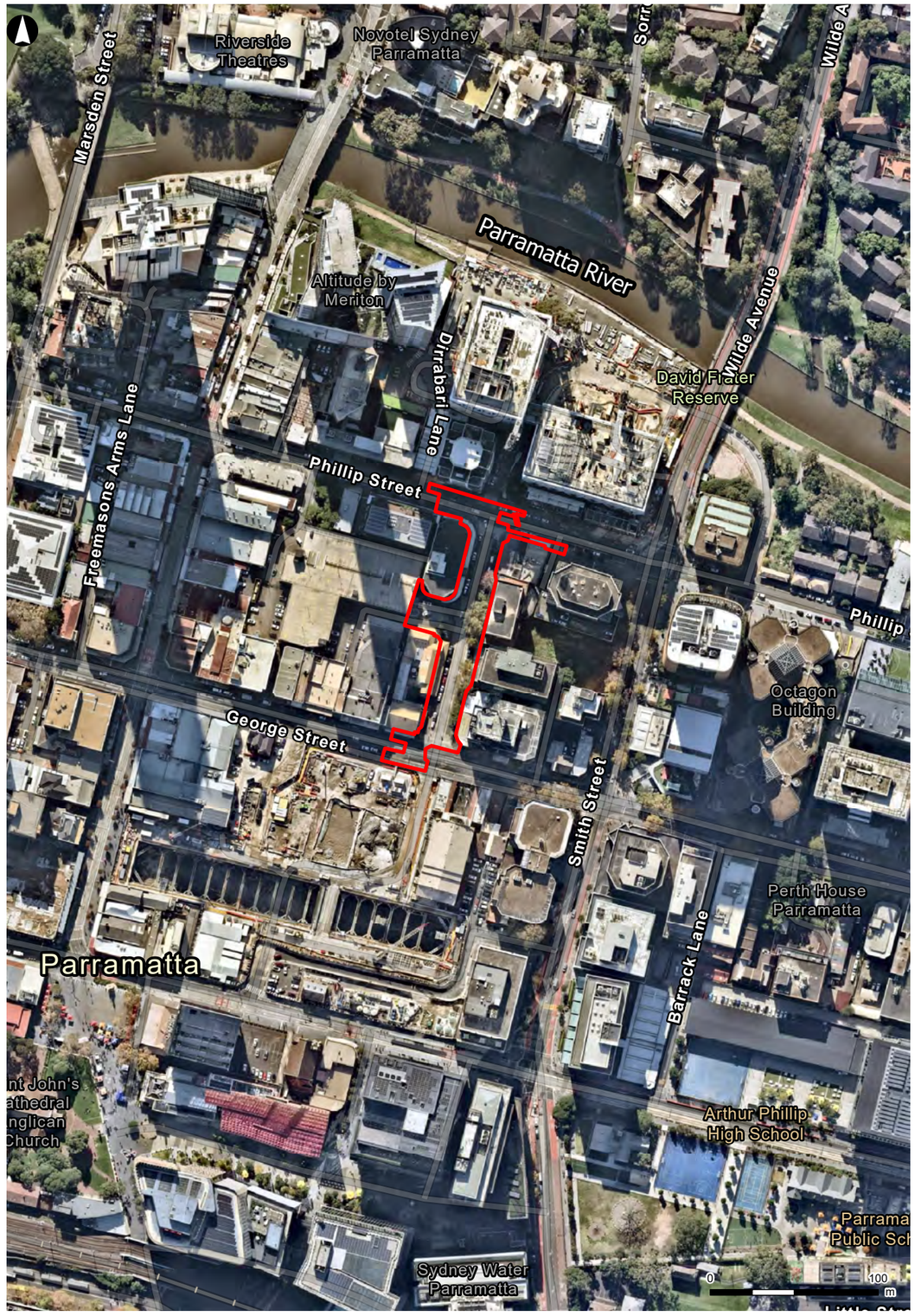
Figure 1 – Site Location

Figure 2 – Site Layout

Figure 3 – Sample Locations and Asbestos Detected (DP, 2025b)

103072296 - Parramatta Civic Link - Block 3, Horwood Place





LEGEND

Approximate Site Boundary

CITY OF PARRAMATTA

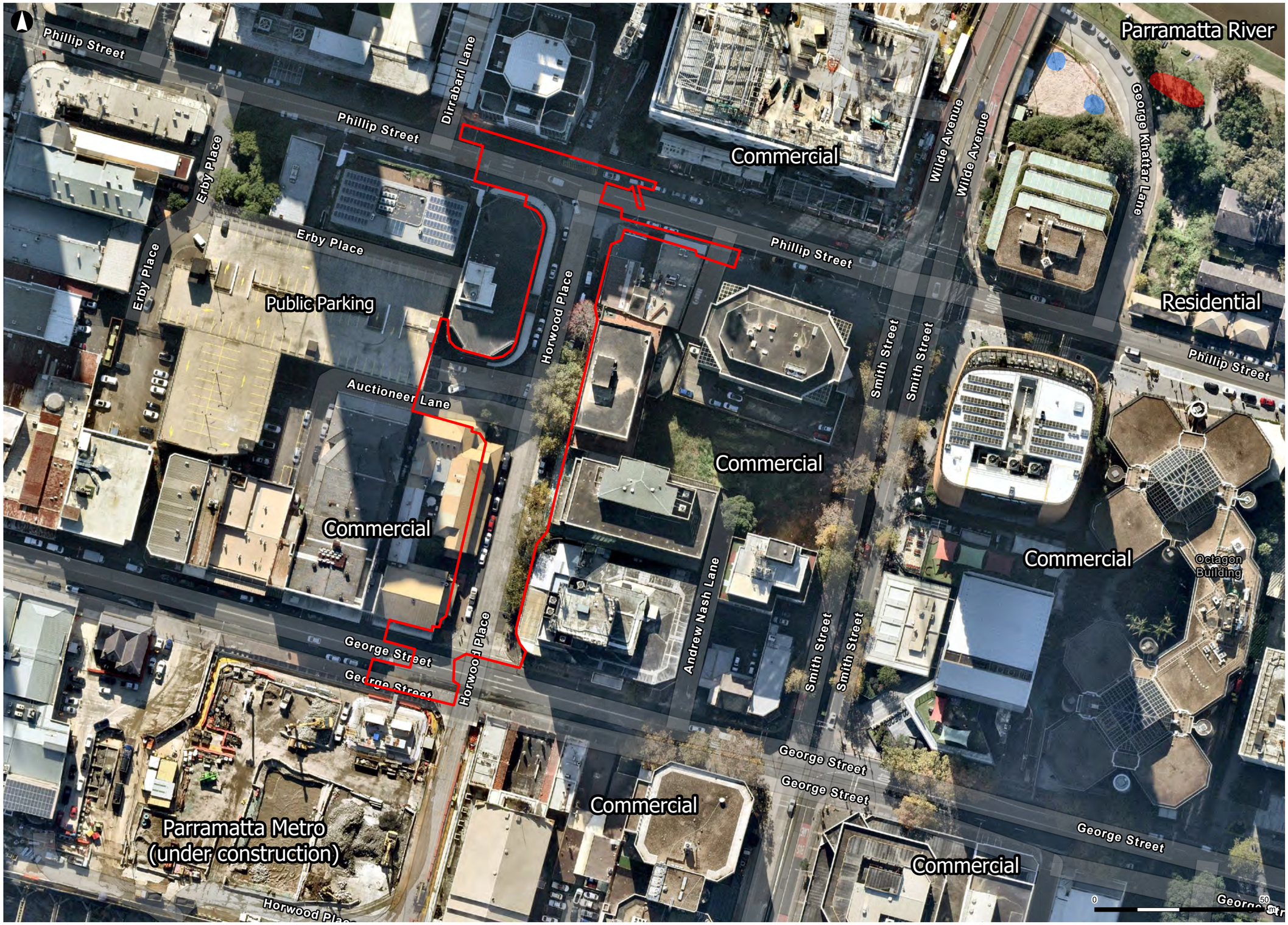
ARCADIS

ARCADIS AUSTRALIA PACIFIC PTY LTD
ABN 76 104 485 289
Level 16, 580 George St | Sydney NSW 2000
P: +61 (0) 2 8907 9000 | F: +61 (0) 2 8907 9001

Coordinate System: GDA2020 MGA Zone 56
Date issued: June 26, 2025
Topographic Service Layer Credits: OpenStreetMap
Imagery: Nearmap, captured on 28/05/2025

Figure 1 - Site Location

103072296 - Parramatta Civic Link - Block 3, Horwood Place



LEGEND

- Approximate Site Boundary
- Waste Stockpiles, EHOC (2025a and 2025b) - General Solid Waste
- Waste Stockpile, DP (2025a) - Special Waste Asbestos

1:1,100 at A3

CITY OF PARRAMATTA

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Coordinate System: GDA2020 MGA Zone 56
Date issued: June 26, 2025
Topographic Service Layer Credits: OpenStreetMap
Imagery: Nearmap, captured on 28/05/2025

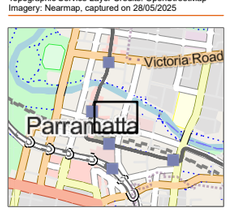
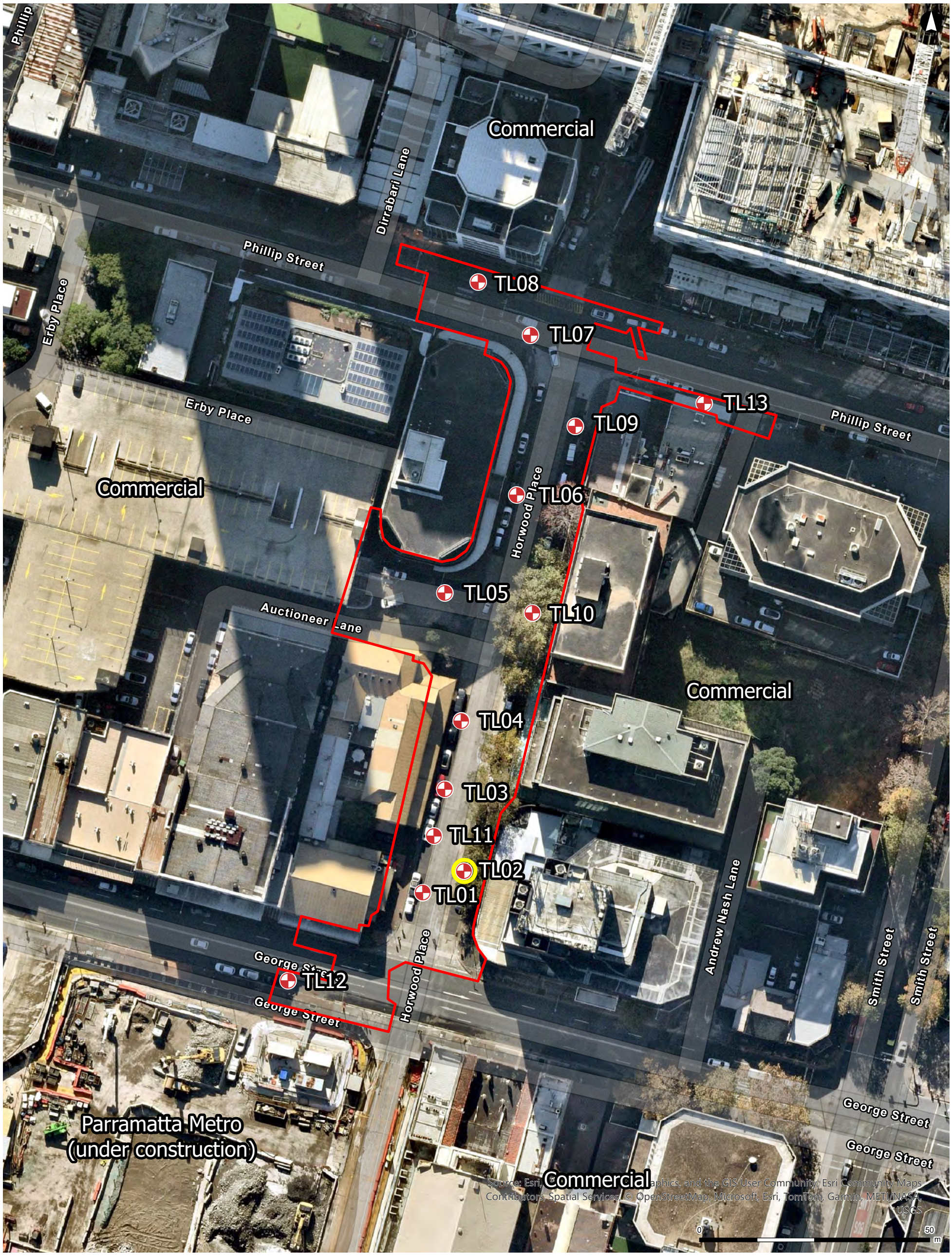


Figure 2 - Site Layout



LEGEND

- Approximate Site Boundary
- Douglas Partners (2025b) Sample Locations
- Asbestos Visually Detected

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Coordinate System: GDA 1994 MGA Zone 56
Date issued: August 6, 2025
Topographic Service Layer Credits: OpenStreetMap
Imagery: Nearmap, captured on 28/05/2025

1:800 at A3

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Figure 3 - Sample Locations and Asbestos Detected

Tables

Table 1a – Soil Analytical Results

Table 1b – Acid Sulfate Soil Analytical Results

Table 2 – Waste Classification Preliminary Screening

Table 3 – Relative Percentage Differences

Table 4 – Trip Blank Results

Table 5 – Trip Spike Results

Table 1A: Soil Analytical Results
Douglas Partners (2025) DSI

| | | |

Table 1A: Soil Analytical Results
Douglas Partners (2025) DSI

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	OPP (Regulated)	OCP (Regulated)								PCBs	Phenols	Halogenated Benzenes / VOCs									Regulated PFAS					Key Chlorinated Hydrocarbons						Metals								Inorganics	Other		
	Chlorpyrifos	DDT	DDT+DDE+DDD	Total Endosulfan	Endrin	Heptachlor	Methoxychlor	Hexachlorobenzene (HCB)	Mirex	PCBs (Sum of total)	Phenolics Total	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Perfluorooctanoic acid (PFOA)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctanesulfonic acid (PFOS)	1,1-dichloroethene	cis-1,2-dichloroethene	Tetrachloroethene	Trichloroethene	trans-1,2-dichloroethene	Vinyl chloride	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Cyanide Total	pH 1:5 soil:water 1:5 soil:water	CEC	Clay Content
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	pH Units	meq/100g	%
LOL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5	1	1	1	1	1	1	1	1	1	0.1	0.1	0.1	0.1	0.1	1	1	1	1	1	1	4	0.4	1	1	1	0.1	1	1	0.5		1	
CRCCare (2011) Direct Contact HSL-CRecreafional / Open Space																																										
CRCCare (2011) HSL Direct Contact Intrusive Maintenance Worker																																										
NEPM 2013 Table 1A(1) HILs Rec C Soil	250		400	340	20	10	400	10	20	1																					300	90		17,000	600	80	1,200	30,000				
NEPM 2013 Table 1A(3) Comm/Ind Soil HSL-D for Vapour Intrusion, Sand																																										
NEPM 2013 Table 1A(3) Open Space/Recreational C Soil HSL-C for Vapour Intrusion, Sand																																										
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space		180																													100											
NEPM 2013 Site specific derived EILs - Urban Res & Pub																																	410	160 180	1100		75 140	420 430				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																																										
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil																																										
PFAS NEMP 2025 HIL C Public open space																					10,000	1,000																					
PFAS NEMP 2025 Ecological direct exposure – all land uses																					10,000				1,000																	
PFAS NEMP 2025 Interim ecological indirect exposure – all land uses																					140				140																	
Field ID	**Depth**	**Matrix & Type**	**Date**																																								
Stockpile Samples																																										
RB-ACM-1		Solid fragment in stockpile	06 Feb 2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB-SP-1		Stockpile soil	29 Jan 2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	<0.1	0.2	-	-	-	-	-	-	-	17	59	9	<0.1	110	44	-	-	-	-
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.4	-	-	-	-	-	-	-	-	-	-
RB-SP-2		Stockpile soil	29 Jan 2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21	66	14	<0.1	120	50	-	-	-	-
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.4	-	-	-	-	-	-	-	-	-	-
RB-SP-3		Stockpile soil	29 Jan 2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25	71	7	<0.1	160	55	-	-	-	-
				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.4	-	-	-	-	-	-	-	-	-	-
Initu Samples																																										
ASP1		Asphalt	05 Feb 2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP2		Asphalt	05 Feb 2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP3		Asphalt	05 Feb 2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP4		Asphalt	05 Feb 2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL01	**0.3 - 0.4**	**FILL - clayey gravelly SAND**	**05 Feb 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4	<0.4	9	5	14	<0.1	8	36	-	-	-	-
	0.5 - 0.6	**FILL - sandy CLAY**	**05 Feb 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.1	0.1	0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	5	<0.4	14	28	160	4.0	8	170	<0.1	-	-	-
	1.5 - 1.7	**FILL - sandy SILT**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.2	-	-
	1.7 - 1.9	**FILL - sandy CLAY**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	45	94	3.5	5	23	-	-	-	-
	1.9 - 2.1	**FILL - CLAY**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	17	18	28	0.5	6	23	-	-	-	-
	3 - 3.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	15	14	21	0.3	8	25	-	-	-	-
	4 - 4.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.8 - 5	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	12	9	15	0.1	6	19	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.0	-	-	-
TL02	**0.3 - 0.5**	**FILL - CLAY**	**29 Jan 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.2	0.2	<0.1	0.2	<1	<1	<1	<1	<1	<1	6	<0.4	18	11	15	<0.1	6	21	<0.1	-	-	-
	0.8 - 1	**Natural**	**29 Jan 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.4	17	12	19	<0.1	6	22	-	-	-	-
	1.3 - 1.5	**Natural**	**29 Jan 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.4	18	12	22	<0.1	6	24	-	7.7	8.3	26
TL03	**0.1 - 0.2**	**FILL - Gravelly SAND**	**05 Feb 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<0.4	17	53	5	<0.1	110	43	<0.1	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.3 - 0.4	**FILL - Clayey SAND**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	11	14	160	<0.1	25	41	-	9.6	7.4	9
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.4 - 0.6	**FILL - Sandy CLAY**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	19	9	26	<0.1	6	20	-	-	-	-
	1 - 1.2	**Natural**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	17	13	27	<0.1	8	25	-	6.0	8.3	35
TL04	**0.1 - 0.2**	**FILL - Gravelly SAND**	**05 Feb 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.2	0.2	<0.1	0.2	<1	<1	<1	<1	<1	<1	4	<0.4	16	59	6	<0.1	110	44	<0.1	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.3 - 0.4	**FILL - Clayey SAND**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	10	10	12	<0.1	22	35	-	-	-	-
	0.4 - 0.6	**FILL - Sandy CLAY**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	13	6	18	<0.1	5	14	-	-	-	-
	1.3 - 1.5	**Natural**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	18	9	12	<0.1	5	19	-	-	-	-
TL05	**0.3 - 0.4**	**FILL - Sand**	**05 Feb 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<1	<1	<1	<1	<1	<1	<1	-	<0.4	22	58	4	<0.1	160	48	<0.1	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.5 - 0.7	**FILL - Sandy CLAY**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	18	11	19	<0.1	14	14	-	-	-	-
	1 - 1.2	**Natural**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	23	10	14	<0.1	7	14	-	-	-	-
	2 - 2.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	15	9	13	<0.1	7	18	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3 - 3.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5 - 5.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5 - 5.5	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	11	10	12	<0.1	8	28	-	-	-	-
	6 - 6	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8 - 8.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	9 - 9.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL06	**0.3 - 0.5**	**FILL - Sandy CLAY**	**29 Jan 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<1	<1	<1	<1	<1	<1	<1	6	<0.4	10	7	19	<0.1	12	60	<0.1	8.3	3.9	10
	0.8 - 1.0	**FILL - Sandy CLAY**	**29 Jan 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	5	<0.4	16	6	14	<0.1	5	10	-	-	-	-
	1.5 - 2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2 - 2.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3 - 3.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	7	9	<0.1	4	13	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.8 - 5	**Natural**	**13 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	8	8	7	<0.1	5	20	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL07	**0.25 - 0.3**	**FILL - Sandy GRAVEL**	**17 Feb 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.4	0.4	<0.1	0.4	<1	<1	<1	<1	<1	<1	6	<0.4	10	53	16	-	7	33	<0.1	-	-	-
TL08	**0.3 - 0.5**	**FILL - Clayey gravelly SAND**	**17 Feb 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	<5	<0.4	8	16	39	0.3	9	15	-	-	-	-
	0.8 - 1	**FILL - Sandy SILT**	**17 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.3 - 1.5	**FILL - Sandy CLAY**	**17 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.1	3.1	<0.1	3.1	-	-	-	-	-	-	<5	<0.4	5	5	13	<0.1	3	8	-	-	-	-
	1.8 - 2	**Natural**	**17 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<0.4	8	6	10	<0.1	4	12	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.1 - 2.3	**Natural**	**17 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<0.4	7	6	9	<0.1	3	9	-	-	-	-
	2.5 - 2.7	**Natural**	**17 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL09	**0.3 - 0.5**	**FILL - Sandy CLAY**	**29 Jan 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	<5	0.5	11	14	55	0.3	12	94	<0.1	-	-	-
	0.8 - 1	**Natural**	**29 Jan 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<0.4	12	11	13	<0.1	6	7	-	-	-	-
	1.3 - 1.5	**Natural**	**29 Jan 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	<5	<0.4	7	6	6	<0.1	3	11	-	-	-	-
TL10	**0.3 - 0.5**	**FILL - CLAY**	**29 Jan 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	5	<0.4	15	8	19	<0.1	6	17	<0.1	-	-	-
	0.8 - 1	**Natural**	**29 Jan 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	15	8	14	<0.1	5	13	-	-	-	-
	1.3 - 1.5	**Natural**	**29 Jan 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL11	**0.3 - 0.4**	**FILL - Clayey SAND**	**05 Feb 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	5	<0.4	15	9	17	<0.1	10	22	<0.1	-	-	-
	0.4 - 0.6	**FILL - Sandy CLAY**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	18	9	13	<0.1	6	19	-	-	-	-
	0.8 - 1	**Natural**	**05 Feb 2025**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	17	12	14	<0.1	6	22	-	-	-	-
TL12	**0.3 - 0.5**	**FILL - Silty Sandy CLAY**	**17 Feb 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	4	<0.4	26	8	12	<0.1	6	7	-	-	-	-
	0.8 - 1	**FILL - Silty CLAY**	**17 Feb 2025**	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.7	0.7	<0.1	0.7	<1	<1	<1	<1	<1	<1	5	-	20	11	19	-	9	17	-	-	-	-
TL13	**0.3 - 0.4**	**FILL - Sandy GRAVEL**	**17 Feb 2025**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.6	0.6	<0.1	0.6	<1	<1	<1	<1	<1	<1	4	0.7	12	30	32	0.2	34	100	<0.1	-	-	-

Minimum Concentration	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.1	<0.1	0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	4	<0.4	5	5	4	0.1	3	7	<0.5	6	3.9	9
Maximum Concentration	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.1	3.1	3.1	<0.1	3.1	<1	<1	<1	<1	<1	<1	6	0.7	26	71	160	4	160	170	<0.5	9.6	8.3	35
Average Concentration *	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	2.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.054	0.44	0.44	0.05	0.44	0.5	0.5	0.5	0.5	0.5	0.5	3.8	0.22	15	19	24	0.25	24	31	0.25	7.9	7	20
Standard Deviation *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.014	0.83	0.83	0	0.83	0	0	0	0	0	0	1.5	0.086	5	19	33	0.77	31	29	0	1.1	2.1	13

* A Non Detect Multiplier of 0.5 has been applied.
ND = non-detect

Environmental Standards
HEPA, March 2025, PFAS NEMP 2025 Ecological direct exposure – all land uses
HEPA, March 2025, PFAS NEMP 2025 HIL C Public open space
HEPA, March 2025, PFAS NEMP 2025 Interim ecological indirect exposure – all land uses

30286862 - Parramatta City Council
Parramatta Civic Link, Block 3

Table 1B: ASS Analytical Results
Douglas Partners (2025) DSI

					ASS Reaction	Field Screen			Acid Base Accounting										
					Reaction Rate	pH (F)	pH Fox	pH Change	pH kcl	sulfidic - Titratable Actual Acidity	Titratable Actual Acidity	Chromium Reducible Sulfur	Chromium Reducible Sulphur	a-Net Acidity without ANCE	Liming Rate	Liming rate without ANCE	Net Acidity (acidity units)	Net Acidity (sulfur units)	Net Acidity excluding ANC (sulfur units)
					Units	pH_Units	pH_Units	pH_Units	pH units	%S	mole H+/t	%w/w	mole H+/t	moles H+/t	kg CaCO3/t	kg CaCO3/t	moles H+/t	%S	%S
EQL										0.01	5	0.005	3	5	0.75	0.75	5	0.005	0.005
ASSMAC 1998 - ASS Action Criteria, 1-1000 T material disturbed (SANDS|Light CLAYS|heavy silty CLAYs)					High	<4	<3.5	1				Detect					≥18|36|62	≥0.03|0.06|0.1	
Field ID	**Depth**	**Matrix & Type**	**Date**	**Lab Report Number**															
Initu Samples																			
TL01	0.3 - 0.4	FILL - clayey gravelly SAND	05 Feb 2025	372294	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.5 - 0.6	FILL - sandy CLAY	05 Feb 2025	372294	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.5 - 1.7	FILL - sandy SILT	13 Feb 2025	373359	Low	8.1	6.2	1.9	-	-	-	-	-	-	-	-	-	-	-
				373359-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.7 - 1.9	FILL - sandy CLAY	05 Feb 2025	372294	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.9 - 2.1	FILL - CLAY	05 Feb 2025	372294	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3 - 3.2	Natural	13 Feb 2025	373216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				373359	Low	6.6	6.0	0.6	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	Natural	13 Feb 2025	373359	Low	8.3	6.2	2.1	-	-	-	-	-	-	-	-	-	-	-
	4.8 - 5	Natural	13 Feb 2025	373216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				373359	Low	7.5	5.9	1.6	-	-	-	-	-	-	-	-	-	-	-
				373359-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL05	2 - 2.2		13 Feb 2025	373359	Low	7.4	6.0	1.4	-	-	-	-	-	-	-	-	-	-	-
	3 - 3.2	Natural	13 Feb 2025	373359	Low	7.2	6.1	1.1	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	Natural	13 Feb 2025	373359	Low	7.6	6.2	1.4	-	-	-	-	-	-	-	-	-	-	-
	5 - 5.2	Natural	13 Feb 2025	373359	Low	7.0	5.9	1.1	-	-	-	-	-	-	-	-	-	-	-
	5 - 5.5	Natural	13 Feb 2025	373216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6 - 6	Natural	13 Feb 2025	373359	Low	6.8	5.8	1	-	-	-	-	-	-	-	-	-	-	-
	8 - 8.2	Natural - SAND	13 Feb 2025	373359	Low	6.9	5.2	1.7	-	-	-	-	-	-	-	-	-	-	-
				373359-A	-	-	-	-	5.4	<0.01	<5	<0.005	<3	<5	<0.75	<0.75	<5	0.0080	0.0080
	9 - 9.2	Natural - SAND	13 Feb 2025	373359	Low	6.6	5.4	1.2	-	-	-	-	-	-	-	-	-	-	-
				373359-A	-	-	-	-	5.6	<0.01	<5	**0.006**	4	6.0	<0.75	<0.75	6.0	0.010	0.010
TL06	0.3 - 0.5	FILL - Sandy CLAY	29 Jan 2025	371670	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.8 - 1.0	FILL - Sandy CLAY	29 Jan 2025	371670	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.5 - 2	Natural	13 Feb 2025	373359	Low	6.3	5.7	0.6	-	-	-	-	-	-	-	-	-	-	-
	2 - 2.2	Natural	13 Feb 2025	373359	Low	7.0	5.8	1.2	-	-	-	-	-	-	-	-	-	-	-
	3 - 3.2	Natural	13 Feb 2025	373216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				373359	Low	7.5	5.8	1.7	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	Natural	13 Feb 2025	373359	Low	7.4	5.8	1.6	-	-	-	-	-	-	-	-	-	-	-
	4.8 - 5	Natural	13 Feb 2025	373216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				373359	Low	6.5	5.8	0.7	-	-	-	-	-	-	-	-	-	-	-
TL08	0.3 - 0.5	FILL - Clayey gravelly SAND	17 Feb 2025	373216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.8 - 1	FILL - Sandy SILT	17 Feb 2025	373359	Low	8.6	6.5	2.1	-	-	-	-	-	-	-	-	-	-	-
	1.3 - 1.5	FILL - Sandy CLAY	17 Feb 2025	373216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.8 - 2	Natural	17 Feb 2025	373216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				373359	High	7.4	6.8	0.6	-	-	-	-	-	-	-	-	-	-	-
	2.1 - 2.3	Natural	17 Feb 2025	373216	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.5 - 2.7	Natural -sandy CLAY	17 Feb 2025	373359	Low	6.9	4.3	2.6	-	-	-	-	-	-	-	-	-	-	-
				373359-A	-	-	-	-	5.8	<0.01	<5	**0.02**	10	10	0.8	0.75	10	0.016	0.016
Statistics																			
Minimum Concentration					**Low**	**6.3**	**4.3**	**4.3**	**5.4**	**<0.01**	**<5**	**<0.005**	**<3**	**<5**	**<0.75**	**0.75**	**<5**	**0.008**	**0.008**
Maximum Concentration					**High**	**8.6**	**6.8**	**6.8**	**5.8**	**<0.01**	**<5**	**0.02**	**10**	**10**	**0.8**	**0.75**	**10**	**0.016**	**0.016**

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

Ahern C R, Stone, Y, and Blunden B 1998. Acid Sulfate Soils Manual. Published by the Acid Sulfate Soil Management Advisory Committee, Wollongbar, NSW, Australia.
Sullivan, L, Ward, N, Toppler, N and Lancaster, G 2018, National Acid Sulfate Soils Guidance: National acid sulfate soils sampling and identification methods manual, ref: CC BY 4.0

Table 2: Preliminary Waste Classification Screening
Douglas Partners (2025) DSI

ARCADIS

					Asbestos		BTEX					MAH	TPH		PAH		OPP	OCP	Moderate Pesticides	Scheduled Pesticides	PCBs	Halogenated Benzenes			Key Chlorinated Hydrocarbons				Chlorinated Hydrocarbons						
				Coal Tar	Asbestos Detected	Asbestos Detected	Benzene	Toluene	Ethylbenzene	Xylene Total	Styrene	Cat-Cb	C10-C36 (Sum of total)	Benzo(a) pyrene	PAHs (Sum of positives)	Chlorpyrifos	Endosulfan Total	Moderately Harmful Pesticides (Total)	Scheduled Chemicals (Total)	PCBs (Sum of total)	1,2-dichlorobenzene	1,4-dichlorobenzene	Chlorobenzene	1,1-dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	1,1,1,2-tetrachloroethane	1,1,1,2-tetrachloroethane	1,1,2-trichloroethane	1,1,1-trichloroethane	1,2-dichloroethane	Carbon tetrachloride	Chloroform
				-	(+/-)	g/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							0.2	0.5	1	1	1	25	50	0.05	0.05	0.1	0.1	0.1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NSW 2014 General Solid Waste CT1 (No Leaching)					Detect		10	288	600	1,000	60	650	10,000	0.8	200	4	60	250	<50	<50	86	150	2,000	14	14	10	4	26	200	24	600	10	10	120	
NSW 2014 General Solid Waste SCC1 (with leached)					Detect		18	518	1,080	1,800	108	6,500	10,000	10	200	7.5	108	250	<50	<50	4.3	7.5	3,600	0.7	25.2	18	7.2	46.8	360	43.2	1,080	0.5	18	126	
NSW 2014 General Solid Waste TCLP1 (leached)																																			
Field ID	**Depth**	**Date**	**Lab Report Number**																																
ASP1		**05 Feb 2025**	**372294**	Absent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP2		**05 Feb 2025**	**372294**	Absent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP3		**05 Feb 2025**	**372294**	Absent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP4		**05 Feb 2025**	**372294**	Absent	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB-ACM-1		**06 Feb 2025**	**372287**	-	Detect	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB-SP-1		**29 Jan 2025**	**371670**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			371670-A	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB-SP-2		**29 Jan 2025**	**371670**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			371670-A	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB-SP-3		**29 Jan 2025**	**371670**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			371670-A	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL01	**0.3 - 0.4**	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.5 - 0.6	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
			372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.5 - 1.7	**13 Feb 2025**	**373359**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.7 - 1.9	**05 Feb 2025**	**372294**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.9 - 2.1	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3 - 3.2	**13 Feb 2025**	**373216**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	**13 Feb 2025**	**373359**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.8 - 5	**13 Feb 2025**	**373216**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL02	**0.3 - 0.5**	**29 Jan 2025**	**371670**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	0.8 - 1	**29 Jan 2025**	**371670**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.3 - 1.5	**29 Jan 2025**	**371670**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL03	**0.1 - 0.2**	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
			372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.3 - 0.4	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.4 - 0.6	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1 - 1.2	**05 Feb 2025**	**372294**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL04	**0.1 - 0.2**	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.3 - 0.4	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	<0.05	<0.05	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	0.4 - 0.6	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.3 - 1.5	**05 Feb 2025**	**372294**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL05	**0.3 - 0.4**	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
			372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.5 - 0.7	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1 - 1.2	**05 Feb 2025**	**372294**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2 - 2.2	**13 Feb 2025**	**373216**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3 - 3.2	**13 Feb 2025**	**373359**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	**13 Feb 2025**	**373359**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.8 - 5	**13 Feb 2025**	**373216**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL06	**0.3 - 0.5**	**29 Jan 2025**	**371670**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	0.8 - 0.1	**29 Jan 2025**	**371670**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.5 - 2	**13 Feb 2025**	**373359**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2 - 2.2	**13 Feb 2025**	**373359**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3 - 3.2	**13 Feb 2025**	**373216**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	**13 Feb 2025**	**373359**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.8 - 5	**13 Feb 2025**	**373216**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL07	**0.25 - 0.3**	**17 Feb 2025**	**373216**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	190	0.2	2.7	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
TL08	**0.3 - 0.5**	**17 Feb 2025**	**373216**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	0.2	3.8	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	0.8 - 1	**17 Feb 2025**	**373359**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.3 - 1.5	**17 Feb 2025**	**373216**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.8 - 2	**17 Feb 2025**	**373216**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.1 - 2.3	**17 Feb 2025**	**373216**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.5 - 2.7	**17 Feb 2025**	**373359**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL09	**0.3 - 0.5**	**29 Jan 2025**	**371670**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	0.09	0.61	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	0.8 - 1	**29 Jan 2025**	**371670**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.3 - 1.5	**29 Jan 2025**	**371670**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL10	**0.3 - 0.5**	**29 Jan 2025**	**371670**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	0.8 - 1	**29 Jan 2025**	**371670**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.3 - 1.5	**29 Jan 2025**	**371670**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL11	**0.3 - 0.4**	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
	0.4 - 0.6	**05 Feb 2025**	**372294**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.8 - 1	**05 Feb 2025**	**372294**	-	-	-	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL12	**0.3 - 0.5**	**17 Feb 2025**	**373216**	-	ND	<0.1	<0.2	<0.5	<1	<1	-	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.8 - 1	**17 Feb 2025**	**373216**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	<0.05	<0.05	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
TL13	**0.3 - 0.4**	**17 Feb 2025**	**373216**	-	ND	<0.1	<0.2	<0.5	<1	<1	<1	<25	<50	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Statistics

Number of Results				**4**	**30**	**29**	**45**	**45**	**45**	**45**	**13**	**45**	**45**	**45**	**45**	**17**	**17**	**17**	**17**	**17**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**	**13**
Number of Detects				**4**	**30**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**3**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Minimum Concentration				**0**	**0**	**<0.1**	**<0.2**	**<0.5**	**<1**	**<1**	**<1**	**<25**	**<50**	**<0.05**	**<0.05**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**
Maximum Concentration				**0**	**1**	**<0.1**	**<0.2**	**<0.5**	**<1**	**<1**	**<1**	**<25**	**190**	**0.2**	**3.8**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**
Average Concentration *				**0**	**0.033**	**0.05**	**0.1**	**0.25**	**0.5**	**0.5**	**0.5**	**12**	**29**	**0.034**	**0.18**	**0.05**	**0.05**	**0.05**	**0.05**	**0.05**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
Standard Deviation *				**0**	**0.18**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**0.037**	**0.69**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

* A Non Detect Multiplier of 0.5 has been applied.
ND = Non-detect

Table 2: Preliminary Waste Classification Screening
Douglas Partners (2025) DSI

ARCADIS

				Phenols	Regulated PFAS			ASS - Field			CRS		ASS - Acid Base Accounting								Metals										Inorganics
				Phenol(s) Total	Perfluorooctanoic acid (PFOA)	Sum of PFHxS and PFOS		pH (F)	Ph Fox	Reaction Rate	Chromium Reducible Sulfur	Chromium Reducible Sulphur	Sulfidic - Titratable Actual Acidity	Titratable Actual Acidity	a Net Acidity without ANCE	Net Acidity excluding ANC (sulfur units)	liming Rate	liming rate without ANCE	Net Acidity (acidity units)	Net Acidity (sulfur units)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Lead (filtered)	Mercury	Nickel	Nickel (filtered)	Zinc	Cyanide Total
				mg/kg	µg/L	µg/kg	µg/L	µg/kg	pH_Units	pH_Units	Units	%w/w	mole H+/t	%S	mole H+/t	moles H+/t	%S	kg CaCO3/t	kg CaCO3/t	moles H+/t	%S	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L	mg/kg	mg/kg	µg/L	mg/kg	mg/kg
EQL				5	0.01	0.1	0.01	0.1				0.005	3	0.01	5	5	0.005	0.75	0.75	5	0.005	4	0.4	1	1	1	30	0.1	1	20	1	0.5
NSW 2014 General Solid Waste CT1 (No Leaching)				288																		100	20			100		4	40			320
NSW 2014 General Solid Waste SCC1 (with leached)				518		18,000		1,800														500	100			1,500		50	1,050			16
NSW 2014 General Solid Waste TCLP1 (leached)					500		50																				5,000			2,000		
Field ID	**Depth**	**Date**	**Lab Report Number**																													
ASP1		**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP2		**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP3		**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP4		**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB-ACM-1		**06 Feb 2025**	**372287**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RB-SP-1		**29 Jan 2025**	**371670**	-	<0.01	<0.1	<0.01	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	17	59	9	-	<0.1	110	-	44	-
			371670-A	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-
RB-SP-2		**29 Jan 2025**	**371670**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	21	66	14	-	<0.1	120	-	50	-
			371670-A	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-
RB-SP-3		**29 Jan 2025**	**371670**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	25	71	7	-	<0.1	160	-	55	-
			371670-A	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260	-	-
TL01	**0.3 - 0.4**	**05 Feb 2025**	**372294**	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	9	5	14	-	<0.1	8	-	36	-
	0.5 - 0.6	**05 Feb 2025**	**372294**	<5	<0.01	0.1	<0.01	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	14	28	160	-	4.0	8	-	170	<0.5
			372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<30	-	-	-	-	-
	1.5 - 1.7	**13 Feb 2025**	**373359**	-	-	-	-	-	8.1	6.2	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.7 - 1.9	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	13	45	94	-	3.5	5	-	23	-
	1.9 - 2.1	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	17	18	28	-	0.5	6	-	23	-
	3 - 3.2	**13 Feb 2025**	**373216**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	15	14	21	-	0.3	8	-	25	-
			373359	-	-	-	-	-	6.6	6.0	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	**13 Feb 2025**	**373359**	-	-	-	-	-	8.3	6.2	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.8 - 5	**13 Feb 2025**	**373216**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	12	9	15	-	0.1	6	-	19	-
			373359	-	-	-	-	-	7.5	5.9	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL02	**0.3 - 0.5**	**29 Jan 2025**	**371670**	<5	<0.01	<0.1	<0.01	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.4	18	11	15	-	<0.1	6	-	21	<0.5
	0.8 - 1	**29 Jan 2025**	**371670**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.4	17	12	19	-	<0.1	6	-	22	-
	1.3 - 1.5	**29 Jan 2025**	**371670**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.4	18	12	22	-	<0.1	6	-	24	-
TL03	**0.1 - 0.2**	**05 Feb 2025**	**372294**	<5	-	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	17	53	5	-	<0.1	110	-	43	<0.5
			372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-
	0.3 - 0.4	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	11	14	160	-	<0.1	25	-	41	-
			372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<30	-	-	-	-	-
	0.4 - 0.6	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	19	9	26	-	<0.1	6	-	20	-
	1 - 1.2	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	17	13	27	-	<0.1	8	-	25	-
TL04	**0.1 - 0.2**	**05 Feb 2025**	**372294**	<5	<0.01	<0.1	<0.01	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	16	59	6	-	<0.1	110	-	44	<0.5
			372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-
	0.3 - 0.4	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	10	10	12	-	<0.1	22	-	35	-
	0.4 - 0.6	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	13	6	18	-	<0.1	5	-	14	-
	1.3 - 1.5	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	18	9	12	-	<0.1	5	-	19	-
TL05	**0.3 - 0.4**	**05 Feb 2025**	**372294**	<5	-	<0.1	48	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	22	58	4	-	<0.1	150	-	48	<0.5
			372294-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	460	-	-
	0.5 - 0.7	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	18	11	19	-	<0.1	14	-	14	-
	1 - 1.2	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	23	10	14	-	<0.1	7	-	14	-
	2 - 2.2	**13 Feb 2025**	**373216**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	15	9	13	-	<0.1	7	-	18	-
			373359	-	-	-	-	-	7.4	6.0	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3 - 3.2	**13 Feb 2025**	**373359**	-	-	-	-	-	7.2	6.1	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	**13 Feb 2025**	**373359**	-	-	-	-	-	7.6	6.2	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5 - 5.2	**13 Feb 2025**	**373359**	-	-	-	-	-	7.0	5.9	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5 - 5.5	**13 Feb 2025**	**373216**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	11	10	12	-	<0.1	8	-	28	-
	6 - 6	**13 Feb 2025**	**373359**	-	-	-	-	-	6.8	5.8	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8 - 8.2	**13 Feb 2025**	**373359**	-	-	-	-	-	6.9	5.2	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359-A	-	-	-	-	-	-	-	-	<0.005	<3	<0.01	<5	<5	0.0080	<0.75	<0.75	<5	0.0080	-	-	-	-	-	-	-	-	-	-	-
	9 - 9.2	**13 Feb 2025**	**373359**	-	-	-	-	-	6.6	5.4	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359-A	-	-	-	-	-	-	-	-	0.006	4	<0.01	<5	6.0	0.010	<0.75	<0.75	6.0	0.010	-	-	-	-	-	-	-	-	-	-	-
TL06	**0.3 - 0.5**	**29 Jan 2025**	**371670**	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	<0.4	10	7	19	-	<0.1	12	-	60	<0.5
	0.8 - 0.1	**29 Jan 2025**	**371670**	-	-	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	16	6	14	-	<0.1	5	-	10	-
	1.5 - 2	**13 Feb 2025**	**373359**	-	-	-	-	-	6.3	5.7	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2 - 2.2	**13 Feb 2025**	**373359**	-	-	-	-	-	7.0	5.8	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3 - 3.2	**13 Feb 2025**	**373216**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	9	7	9	-	<0.1	4	-	13	-
			373359	-	-	-	-	-	7.5	5.8	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4 - 4.2	**13 Feb 2025**	**373359**	-	-	-	-	-	7.4	5.8	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.8 - 5	**13 Feb 2025**	**373216**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	8	8	7	-	<0.1	5	-	20	-
			373359	-	-	-	-	-	6.5	5.8	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL07	**0.25 - 0.3**	**17 Feb 2025**	**373216**	<5	<0.01	<0.1	0.01	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	10	53	16	-	<0.1	7	-	33	<0.5
TL08	**0.3 - 0.5**	**17 Feb 2025**	**373216**	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	8	16	39	-	0.3	9	-	15	-
	0.8 - 1	**17 Feb 2025**	**373359**	-	-	-	-	-	8.6	6.5	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.3 - 1.5	**17 Feb 2025**	**373216**	-	<0.01	<0.1	0.1	3.1	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	5	5	13	-	<0.1	3	-	8	-
	1.8 - 2	**17 Feb 2025**	**373216**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	8	6	10	-	<0.1	4	-	12	-
			373359	-	-	-	-	-	7.4	6.8	High	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.1 - 2.3	**17 Feb 2025**	**373216**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	7	6	9	-	<0.1	3	-	9	-
	2.5 - 2.7	**17 Feb 2025**	**373359**	-	-	-	-	-	6.9	4.3	Low	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			373359-A	-	-	-	-	-	-	-	-	0.02	10	<0.01	<5	10	0.016	0.8	0.75	10	0.016	-	-	-	-	-	-	-	-	-	-	-
TL09	**0.3 - 0.5**	**29 Jan 2025**	**371670**	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	0.5	11	14	55	-	0.3	12	-	94	<0.5
	0.8 - 1	**29 Jan 2025**	**371670**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	12	11	13	-	<0.1	6	-	7	-
	1.3 - 1.5	**29 Jan 2025**	**371670**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<4	<0.4	7	6	6	-	<0.1	3	-	11	-
TL10	**0.3 - 0.5**	**29 Jan 2025**	**371670**	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	15	8	19	-	<0.1	6	-	17	<0.5
	0.8 - 1	**29 Jan 2025**	**371670**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	15	8	14	-	<0.1	5	-	13	-
	1.3 - 1.5	**29 Jan 2025**	**371670**	-	-	<0.1	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL11	**0.3 - 0.4**	**05 Feb 2025**	**372294**	<5	<0.01	<0.1	<0.01	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	15	9	17	-	<0.1	10	-	22	<0.5
	0.4 - 0.6	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	18	9	13	-	<0.1	6	-	19	-
	0.8 - 1	**05 Feb 2025**	**372294**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	17	12	14	-	<0.1	6	-	22	-
TL12	**0.3 - 0.5**	**17 Feb 2025**	**373216**	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	<0.4	26	8	12	-	<0.1	6	-	7	-
	0.8 - 1	**17 Feb 2025**	**373216**	-	<0.01	<0.1	0.02	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	5	<0.4	20	11	19	-	<0.1	9	-	17	-
TL13	**0.3 - 0.4**	**17 Feb 2025**	**373216**	<5	<0.01	<0.1	0.02	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0.7	12	30	32	-	0.2	34	-	100	<0.5

Statistics

Number of Results	**17**	**9**	**13**	**9**	**13**	**19**	**19**	**19**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**45**	**45**	**45**	**45**	**45**	**2**	**45**	**45**	**6**	**45**	**11**
Number of Detects	**0**	**0**	**1**	**4**	**7**	**19**	**19**	**19**	**2**	**2**	**0**	**0**	**2**	**3**	**1**	**1**	**2**	**3**	**29**	**2**	**45**	**45**	**45**	**0**	**8**	**45**	**6**	**45**	**0**
Minimum Concentration	**<5**	**<0.01**	**0.1**	**0.01**	**<0.1**	**6.3**	**4.3**	**0**	**<0.005**	**<3**	**<0.01**	**<5**	**<5**	**0.008**	**<0.75**	**0.75**	**<5**	**0.008**	**4**	**<0.4**	**5**	**5**	**4**	**<30**	**0.1**	**3**	**100**	**7**	**<0.5**
Maximum Concentration	**<5**	**<0.01**	**0.1**	**0.1**	**3.1**	**8.6**	**6.8**	**3**	**0.02**	**10**	**<0.01**	**<5**	**10**	**0.016**	**0.8**	**0.75**	**10**	**0.016**	**6**	**0.7**	**26**	**71**	**160**	**<30**	**4**	**160**	**460**	**170**	**<0.5**
Average Concentration *	**2.5**	**0.005**	**0.054**	**0.019**	**0.44**	**7.2**	**5.9**	**0.16**	**0.0095**	**5.2**	**0.005**	**2.5**	**6.2**	**0.011**	**0.52**	**0.5**	**6.2**	**0.011**	**3.8**	**0.22**	**15**	**19**	**24**	**15**	**0.25**	**24**	**187**	**31**	**0.25**
Standard Deviation *	**0**	**0**	**0.014**	**0.031**	**0.83**	**0.62**	**0.52**	**0.69**	**0.0093**	**4.4**	**0**	**0**	**3.8**	**0.0042**	**0.25**	**0.22**	**3.8**	**0.0042**	**1.5**	**0.086**	**5**	**19**	**33**	**0**	**0.77**	**42**	**148**	**29**	**0**

* A Non Detect Multiplier of 0.5 has been applied.
ND = Non-detect

Table 3: Relative Percentage Differences
Douglas Partners (2025) DSI

ARCADIS

		Field ID	TL06	BD1/20250129		TL03	BD2/20250205	
		Depth	0.8 - 0.1	0.8 - 1		0.1 - 0.2	0.1 - 0.2	
		Lab Report Number	371670	371670		372294	372294	
		Matrix Type	Soil	Soil		Soil	Soil	
		Date	29 Jan 2025	29 Jan 2025	RPD	05 Feb 2025	05 Feb 2025	RPD
	Unit	EQL						
Metals								
Arsenic	mg/kg	4	5	5	0	<4	<4	0
Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<0.4	0
Chromium (III+VI)	mg/kg	1	16	15	6	17	16	6
Copper	mg/kg	1	6	6	0	53	50	6
Lead	mg/kg	1	14	13	7	5	6	18
Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Nickel	mg/kg	1	5	5	0	110	100	10
Zinc	mg/kg	1	10	10	0	43	38	12
TRH								
C6-C10	mg/kg	25	<25	<25	0	<25	<25	0
>C6-C10 less BTEX (F1)	mg/kg	25	<25	<25	0	<25	<25	0
C10-C16	mg/kg	50	<50	<50	0	<50	<50	0
>C10-C16 less Naphthalene (F2)	mg/kg	50	<50	<50	0	<50	<50	0
C16-C34	mg/kg	100	<100	<100	0	<100	<100	0
C34-C40	mg/kg	100	<100	<100	0	<100	<100	0
>C10 - C40 (Sum of total)	mg/kg	50	<50	<50	0	<50	<50	0
TPH								
C6-C9	mg/kg	25	<25	<25	0	<25	<25	0
C10-C14	mg/kg	50	<50	<50	0	<50	<50	0
C15-C28	mg/kg	100	<100	<100	0	<100	<100	0
C29-C36	mg/kg	100	<100	<100	0	<100	<100	0
C10-C36 (Sum of total)	mg/kg	50	<50	<50	0	<50	<50	0
BTEX								
Benzene	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.2	0
Toluene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Ethylbenzene	mg/kg	1	<1	<1	0	<1	<1	0
Xylene (m & p)	mg/kg	2	<2	<2	0	<2	<2	0
Xylene (o)	mg/kg	1	<1	<1	0	<1	<1	0
Xylene Total	mg/kg	1	<1	<1	0	<1	<1	0
Naphthalene (VOC)	mg/kg	1	<1	<1	0	<1	<1	0
PAH								
Acenaphthene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Benz(a)anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Benzo(a) pyrene	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Benzo(b+j+k)fluoranthene	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.2	0
Chrysene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Dibenz(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Fluoranthene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Fluorene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Naphthalene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Phenanthrene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Pyrene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
PAHs (Sum of positives)	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0
Inorganics								
Moisture Content	%	0.1	17	16	6	4.7	4.8	2

***RPDs have only been considered where a concentration is greater than 1 times the EQL.**
****Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 100 (0 - 10 x EQL); 50 (10 - 30 x EQL); 30 (> 30 x EQL))**
*****Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory**

Table 3: Relative Percentage Differences
Douglas Partners (2025) DSI

ARCADIS

			Field ID	TL04	BD1/20250205		TL08	BD01/20250217	
			Depth	0.4 - 0.6	0.4 - 0.6		0.3 - 0.5	0.3 - 0.5	
			Lab Report Number	372294	372294		373216	373216	
			Matrix Type	Soil	Soil		Soil	Soil	
			Date	05 Feb 2025	05 Feb 2025	RPD	17 Feb 2025	17 Feb 2025	RPD
	Unit	EQL							
Metals									
Arsenic	mg/kg	4		4	<4	0	<4	4	0
Cadmium	mg/kg	0.4		<0.4	<0.4	0	<0.4	<0.4	0
Chromium (III+VI)	mg/kg	1		13	14	7	8	9	12
Copper	mg/kg	1		6	6	0	16	9	56
Lead	mg/kg	1		18	15	18	39	47	19
Mercury	mg/kg	0.1		<0.1	<0.1	0	0.3	0.3	0
Nickel	mg/kg	1		5	5	0	9	5	57
Zinc	mg/kg	1		14	12	15	15	14	7
TRH									
C6-C10	mg/kg	25		<25	<25	0	<25	<25	0
>C6-C10 less BTEX (F1)	mg/kg	25		<25	<25	0	<25	<25	0
C10-C16	mg/kg	50		<50	<50	0	<50	<50	0
>C10-C16 less Naphthalene (F2)	mg/kg	50		<50	<50	0	<50	<50	0
C16-C34	mg/kg	100		<100	<100	0	<100	<100	0
C34-C40	mg/kg	100		<100	<100	0	<100	<100	0
>C10 - C40 (Sum of total)	mg/kg	50		<50	<50	0	<50	<50	0
TPH									
C6-C9	mg/kg	25		<25	<25	0	<25	<25	0
C10-C14	mg/kg	50		<50	<50	0	<50	<50	0
C15-C28	mg/kg	100		<100	<100	0	<100	<100	0
C29-C36	mg/kg	100		<100	<100	0	<100	<100	0
C10-C36 (Sum of total)	mg/kg	50		<50	<50	0	<50	<50	0
BTEX									
Benzene	mg/kg	0.2		<0.2	<0.2	0	<0.2	<0.2	0
Toluene	mg/kg	0.5		<0.5	<0.5	0	<0.5	<0.5	0
Ethylbenzene	mg/kg	1		<1	<1	0	<1	<1	0
Xylene (m & p)	mg/kg	2		<2	<2	0	<2	<2	0
Xylene (o)	mg/kg	1		<1	<1	0	<1	<1	0
Xylene Total	mg/kg	1		<1	<1	0	<1	<1	0
Naphthalene (VOC)	mg/kg	1		<1	<1	0	<1	<1	0
PAH									
Acenaphthene	mg/kg	0.1		<0.1	<0.1	0	<0.1	<0.1	0
Acenaphthylene	mg/kg	0.1		<0.1	<0.1	0	<0.1	<0.1	0
Anthracene	mg/kg	0.1		<0.1	<0.1	0	0.1	<0.1	0
Benz(a)anthracene	mg/kg	0.1		<0.1	<0.1	0	0.2	<0.1	67
Benzo(a) pyrene	mg/kg	0.05		<0.05	<0.05	0	0.2	<0.05	120
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5		<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5		<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5		<0.5	<0.5	0	<0.5	<0.5	0
Benzo(g,h,i)perylene	mg/kg	0.1		<0.1	<0.1	0	0.2	<0.1	67
Benzo(b+j+k)fluoranthene	mg/kg	0.2		<0.2	<0.2	0	0.4	<0.2	67
Chrysene	mg/kg	0.1		<0.1	<0.1	0	0.3	<0.1	100
Dibenz(a,h)anthracene	mg/kg	0.1		<0.1	<0.1	0	<0.1	<0.1	0
Fluoranthene	mg/kg	0.1		<0.1	<0.1	0	0.8	<0.1	156
Fluorene	mg/kg	0.1		<0.1	<0.1	0	<0.1	<0.1	0
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1		<0.1	<0.1	0	0.1	<0.1	0
Naphthalene	mg/kg	0.1		<0.1	<0.1	0	<0.1	<0.1	0
Phenanthrene	mg/kg	0.1		<0.1	<0.1	0	0.7	<0.1	150
Pyrene	mg/kg	0.1		<0.1	<0.1	0	0.7	<0.1	150
PAHs (Sum of positives)	mg/kg	0.05		<0.05	<0.05	0	3.8	<0.05	195
Inorganics									
Moisture Content	%	0.1		12	11	9	13	13	0

*RPDs have only been considered where a concentration is greater than 1 times t
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs fc
***Interlab Duplicates are matched on a per compound basis as methods vary be

Table 4: Trip Blanks
Douglas Partners (2025) DSI

			Field ID	TB1	TB2	TB3
			Lab Report Number	371670	372294	373216
			Matrix Type	Soil	Soil	Soil
			Date	29 Jan 2025	05 Feb 2025	17 Feb 2025
	Unit	EQL				
TRH						
C6-C10	mg/kg	25		<25	<25	<25
>C6-C10 less BTEX (F1)	mg/kg	25		<25	<25	<25
TPH						
C6-C9	mg/kg	25		<25	<25	<25
BTEX						
Benzene	mg/kg	0.2		<0.2	<0.2	<0.2
Toluene	mg/kg	0.5		<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	1		<1	<1	<1
Xylene (m & p)	mg/kg	2		<2	<2	<2
Xylene (o)	mg/kg	1		<1	<1	<1
Xylene Total	mg/kg	1		<1	<1	<1
Naphthalene (VOC)	mg/kg	1		<1	<1	<1

Table 5: Trip Spike Recoveries
Douglas Partners (2025) DSI

Field ID	Sampled Date/Time	Matrix Type	Lab Report Number	Analyte	Spike Recovery %
TS1	29/01/2025	Soil	371670	Ethylbenzene	103
TS1	29/01/2025	Soil	371670	Xylene (m & p)	103
TS1	29/01/2025	Soil	371670	Toluene	104
TS1	29/01/2025	Soil	371670	Benzene	103
TS1	29/01/2025	Soil	371670	Xylene (o)	103
TS2	5/02/2025	Soil	372294	Ethylbenzene	98
TS2	5/02/2025	Soil	372294	Xylene (m & p)	98
TS2	5/02/2025	Soil	372294	Toluene	97
TS2	5/02/2025	Soil	372294	Benzene	98
TS2	5/02/2025	Soil	372294	Xylene (o)	98
TS3	17/02/2025	Soil	373216	Ethylbenzene	101
TS3	17/02/2025	Soil	373216	Xylene (m & p)	103
TS3	17/02/2025	Soil	373216	Toluene	102
TS3	17/02/2025	Soil	373216	Benzene	102
TS3	17/02/2025	Soil	373216	Xylene (o)	105

Trip Spike Recoveries. Where no lab LCL and UCL is available, user defined limits between 30% and 150% have been adopted for non-compliance.

Appendix A

Appendix A – DP (2025b) Detailed Site Investigation Report

Douglas PARTNERS

GROUNDED EXPERTISE

Report on Detailed Site (Contamination) Investigation

Parramatta Civil Link - Block 3

Horwood place, Parramatta NSW

Prepared for RMA Group

Project 231981.00

21 July 2025

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Document History

Details

Project No.	231981.00
Document Title	Report on Detailed Site (Contamination) Investigation
Site Address	Horwood place, Parramatta NSW
Report Prepared For	RMA Group
Filename	231981.00.R.001.Rev2

Status and Review

Status	Prepared by	Reviewed by	Date issued
Revision 0	Jiaqi Zhou	Nerilee Edwards	10 March 2025
Revision 1	Jiaqi Zhou	Nerilee Edwards	17 March 2025
Revision 2	Jiaqi Zhou	Nerilee Edwards	21 July 2025

Distribution of Copies

Status	Issued to
Revision 0	RMA Group
Revision 1	RMA Group
Revision 2	RMA Group

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

Signature		Date
Author		21 July 2025
Reviewer		21 July 2025

Douglas Partners acknowledges Australia's First Peoples as the Traditional Owners of the Land and Sea on which we operate. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islander peoples across the many communities in which we live, visit and work. We recognise and respect their ongoing cultural and spiritual connection to Country.

Douglas PARTNERS | GROUNDED EXPERTISE

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Report on Detailed Site (Contamination) Investigation
Parramatta Civil Link - Block 3
Horwood place, Parramatta NSW

1. Introduction

Douglas Partners Pty Ltd (Douglas) has been engaged by RMA Group to conduct this Detailed Site (Contamination) Investigation (DSI) for the Parramatta Civil Link - Block 3 project at Horwood Place, Parramatta NSW (the site). The site is show on Drawing 1, Appendix A.

The investigation was undertaken in accordance with Douglas' proposal 231981.00.P.001.Rev1 dated 27 September 2024.

The objective of the DSI is to assess the suitability of the site for the proposed recreational development and whether further investigation and/or management is required. It is understood that the report will be used to support a Development Application for the proposed development.

This report must be read in conjunction with all appendices including the notes provided in Appendix B.

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

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

This DSI was conducted in conjunction with a geotechnical investigation which is reported separately (Douglas reference 231981.01.R.001, dated March 2025).

2. Proposed development

City of Parramatta Council is intending to create a green pedestrianised zone within Parramatta CBD at Horwood Place between Phillip Street and George Street, linking the Metro West Station and new Powerhouse Museum (both currently under construction). Horwood Place will provide an accessible and vibrant link from business, transport and social hub of Parramatta Square to Parramatta River through the CBD. The proposed development will include removal of roadways, with design elements including a central green spine of planting pods, seating, informally arranged lighting masts, and an awning coverage to building frontages.

3. Scope of work

The scope of work for this investigation included the following:

Site History Desktop Component

Review of the following site / historical information records:

- Existing reports and/or other information made available from the client;
- Regional geological, soil and hydrogeological mapping;
- Acid sulfate soil risk maps;
- Registered groundwater bores for the site and surrounding properties;
- Historical aerial photographs;
- Council records search of online information; and
- NSW EPA databases held under the Contaminated Land Management Act (CLM) and Protection of the Environment Operations Act (POEO) Acts for the site and adjoining properties.

Intrusive Investigation Component

- A site walkover to identify potential sources of contamination.
- Collection of soil samples at regular depth intervals, changes in strata, or upon signs of contamination (e.g. staining, odours) from a total of thirteen (13) test locations:
    - Environmental test pits and boreholes:
        - Nine test pits (TL01 to TL06 and TL09 to TL11) as part of the project archaeological investigation to a maximum depth of 2.1 bgl; and
        - Four boreholes (BH07, BH08, BH12 and BH13) by hand tools to a maximum depth of 2.7 below ground level (bgl).
    - Geotechnical boreholes:
        - Test pits TL01, TL05 and TL06 were backfilled following the initial environmental investigation and re-drilled for geotechnical purposed up to a maximum depth of 10 m bgl. These locations were re-labelled as TL01-d, TL05-d and TL06-d and were sampled during the geotechnical investigation.
- Screening of soil samples for volatile organic compounds (VOC) using a calibrated photo-ionisation detection (PID) instrument.
- Selected soil samples, plus quality assurance and quality control (QA / QC) samples, were submitted to a National Association of Testing Authorities (NATA) accredited laboratory for analysis of various combinations of the identified contaminants of concern and parameters including the following:
    - Heavy metals;
    - Total recoverable hydrocarbons (TRH);
    - Benzene, toluene, ethylbenzene and xylenes (BTEX);
    - Polycyclic aromatic hydrocarbons (PAH);

- Organochlorine pesticides (OCP);
- Organophosphorus pesticides (OPP);
- Polychlorinated biphenyls (PCB);
- Phenols;
- Per- and poly-fluoroalkyl substances (PFAS);
- Cyanide;
- Asbestos fines / fibrous asbestos (AF / FA);
- Toxicity characteristic leaching procedure (TCLP);
- Coal tar (present / absent);
- pH and cation;
- Exchange capacity (CEC); and
- Clay content.

Reporting Component

- Preparation of this site contamination report.

4. Site information

Site address	Horwood place, Parramatta NSW
Legal description	Part of the site described as Lot 102 Deposited Plan (DP) 241030. The rest has no lot number.
Approximate Area	5,000 m^2
Zoning	Zone E2 Commercial Centre
	Zone MU1 Mixed Use
Local Council Area	City of Parramatta Council
Current use	Public Road
Surrounding uses	North – Commercial, Powerhouse Parramatta, and Parramatta River further north East – Commercial South – A construction site, and commercial further south West – Commercial

The site boundary is shown on Figure 1.

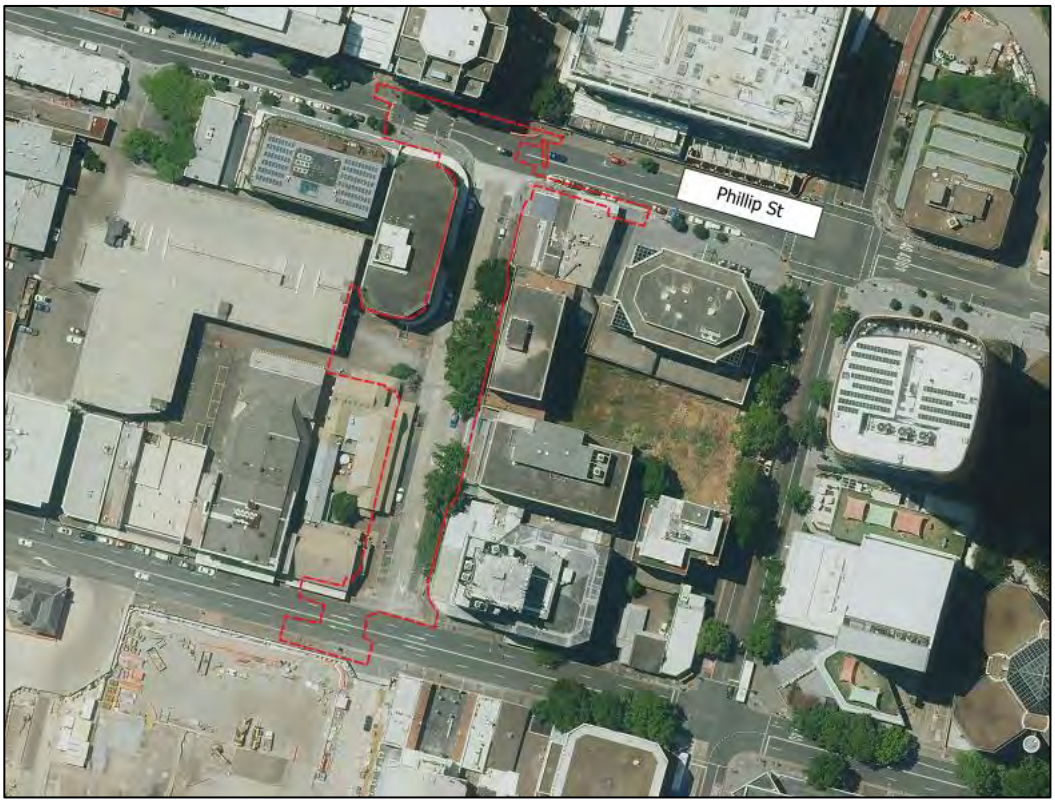

Figure 1: Site location

5. Environmental setting

Regional topography	Reference to NSW 2 m Elevation Contours indicates that the regional topography around the site is on a localised relatively higher area within an area which slopes gently generally from the south downwards to the north towards Parramatta River.
Site topography	Reference to NSW 2 m Elevation Contours indicates that the site is relatively flat, at approximate reduced level (RL) 9 m Australia Height Datum (AHD), with the northern portion of the site at approximately 8 m AHD.
Soil landscape	Reference to the Sydney 1:100,000 Soils Landscape Sheet indicates that the site is underlain by alluvial floodplain draining the Wianamatta Group Shale. The soils comprised deep yellow podzolic soil and yellow solodic soils on older alluvial (terraces) and deep solodic soils and yellow solonetzic soil on current floodplain.
Geology	Reference to published mapping indicates that the site is underlain by sedimentary siliciclastic of Wianamatta Group which typically comprises sandstone, siltstone and shale. The published landscaping map indicated that the site is dominated

	by silt and clay sized alluvial materials derived from the Wianamatta Group.
Acid sulfate soils	Reference to the NSW Acid Sulphate Soils (ASS) risk map indicates that the site is located within an area of x4 Disturbed Terrain, which soil investigation is required to assess for ASS. Parramatta Local Environmental Plan 2023 indicates that the site is located within an area of "Class 4" ASS risk. Development consent is required for works more than 2 m below the natural ground surface or works by which the water table is likely to be lowered more than 2 m below natural ground surface. ASS assessment has been conducted as part of the geotechnical investigation and the results are summarised in Table H3 in Appendix H and discussed in Section 13.2.
Surface water	No surface water bodies are present on the site. Rainfall at the site is anticipated to infiltrate into the unpaved ground or runoff into the local stormwater system. Based on the topography, drainage is likely to be towards Parramatta River (approximately 150 m north of the site).
Groundwater	Based on the regional topography, the anticipated flow direction of groundwater beneath the site is to the north, towards Parramatta River, the likely surface water receiving body for the groundwater flow path. A search of the publicly available registered groundwater bore database indicated that there is one registered groundwater bore 500 m north of the site (i.e. on the other side of the Parramatta River). The standing water level of this domestic groundwater bore recorded is 6.2 m bgl (refer to Attachment C for the record). Given its location relative to the site, it is not considered to be a potential receptor of groundwater from the site. Given the local geology (i.e. Wianamatta Group Shale), the groundwater in the fractured shallow Ashfield Shale beneath the site is anticipated to be saline and very low yield, and not to be suitable for significant potential beneficial uses of the groundwater. The groundwater in the overlying sediments or underlying Hawkesbury Sandstone may be suitable for beneficial use, although significant use of groundwater from the sediments is considered unlikely given its location within the Parramatta CBD.

6. Summary of previous reports

6.1 Reviewed reports

- Douglas (2025). *Stockpile Waste Classification, Parramatta Civil Link - Block 3, George Khattar Lane, Parramatta NSW*. Ref: 231981.00.R.002.Rev0, dated 10 February 2025.

- EHO (2025a). *Waste Classification Certificate*, RMA Contracting Pty Ltd. Ref: JN05778-WCC-RN18702, dated 29 January 2025.
- EHO (2025b). *Waste Classification Certificate*, RMA Contracting Pty Ltd. Ref: JN05778-WCC-RN18685, dated 24 January 2025.

The extracted summary result tables are attached in Appendix H.

6.2 **Douglas (2025)**

Douglas (2025) reported on a waste classification of a stockpile of fill located between George Khattar Lane and Riverside Walk. The stockpile originated from the excavation of the surface fill layer (road base layer) of the archaeological test pits (TL01 to TL06 and TL09 to LT11) to a maximum depth of 0.3 m bgl which are the same test pits sampled for the current investigation. The volume of the stockpile was approximately 20 m^3 and the fill material was described as pale grey to dark grey gravelly sand, fine to coarse, with igneous and sandstone gravel, concrete and asphalt, and trace clay. A few potential asbestos-containing material (PACM) fragments were observed on the surface and within the stockpile. One PACM fragment (labelled as RB-ACM-1) was sampled, and asbestos was detected by laboratory testing. However, given that the stockpile was sourced from multiple test pits, the source location of the asbestos-containing material (ACM) fragments is unknown. Based on the analytical results, the fill within the stockpile was classified as *General Solid Waste (non-putrescible) - Special Waste (Asbestos)*.

6.3 **EHO (2025a)**

Environmental Hazmat Occupational Consulting Pty Ltd (EHO) conducted a waste classification for a stockpile of fill located at 40 Smith Street, Parramatta. The stockpile originated from the excavation of archaeological test pits (TL01 to TL04 and LT11) which were located at the southern portion of the current site. The volume of the stockpile was reported as approximately 10 m^3 and the fill material was described as reddish to pale brown clay, low to medium plasticity, soft to firm. No PACM was observed by EHO on the surface or within the stockpile and no asbestos was reported by the laboratory testing. Based on the analytical results, the subject fill within the stockpile was classified as General Solid Waste (non-putrescible).

6.4 **EHO (2025b)**

EHO (2025b) reported on a waste classification of a stockpile of fill located at 40 Smith Street, Parramatta. The stockpile originated from the excavation of archaeological test pits (TL015 to TL10) which were located at the northern portion of the current site. The volume of the stockpile was reported as approximately 10 m^3 and the fill material was described as reddish to pale grey gravelly clay, low to medium plasticity, soft to firm, with sandstone, shale, bitumen and road base. No PACM was observed by EHO on the surface or within the stockpile and no asbestos was reported by the laboratory testing. Based on the analytical results, the subject fill within the stockpile was classified as General Solid Waste (non-putrescible).

7. Site history

7.1 Historical aerial photography

Several historical aerial photographs were obtained from public databases. Extracts of the aerial photographs are included in Appendix C. A summary of key features observed for the site and surrounding land is presented in Table 1.

Table 1: Summary of historical aerial photographs

Year	Site	Surrounding land use
1943	Roads were present along the alignments of the current George Street and Phillip Street. The southern portion of the site contained commercial style buildings. The central portion of the site contained a residential style building and associated yard and an area which was undeveloped with vegetation. A commercial / light industrial style building was located at the northern portion of the site.	The site was located in a generally commercial / light industrial area with some scattered residential style buildings, including further to the east and north-east of the site.
1951	Garden beds and a possible building structure appear to have been present in the central portion of the site. A new path / driveway was present from the current Phillip Street to the central portion of the site.	A possible commercial or residential-style building had been constructed immediately west of the central portion of the site. A building to the south of the site, adjacent to an outdoor carpark, had been extended.
1961	Ground disturbance was observed in the northern central portion of the site, with the former garden beds or path / driveway not evident in this photograph.	The commercial / residential style building observed immediately adjacent to the west of the site in the 1951 photograph had been demolished. The property to the south of the site had been redeveloped with commercial style buildings.
1970	The buildings in the southern and central portion of the site had been demolished. The ground disturbance at the northern central portion of the site was no longer evident and vegetation appeared to be present in this area.	The area to the west of the site had been developed as an outdoor car park. The buildings to the east of the south of the site had been demolished and replaced by a multi-story building. The commercia buildings to the north and north-west of the site had been demolished and replaced by a commercial / possible light industrial building and an outdoor car park.
1978	All buildings onsite had been demolished and the site and been redeveloped as the current Horwood Place (public road).	A multi-story commercial building had been constructed immediately adjacent to the west of the site. The commercial buildings to the south-west of the site had been demolished and ground disturbance was apparent in the area.

Year	Site	Surrounding land use
		The commercial buildings immediately to the east of the site had been demolished and replaced by an outdoor car park. Commercial buildings to the north-east of the site had been demolished and replaced by a multi-story commercial buildings. The current Barry Wilde Bridge with associated roadways had been constructed to the north-east of the site.
1986	No significant changes were apparent.	Large commercial / light commercial buildings had been constructed immediately west and south-west of the site. Commercial and residential buildings to the south-east and east of the site had been demolished and replace by multi-story commercial buildings.
1994	No significant changes were apparent.	The larger commercial building immediately to the west of the site had been extended. The commercial building immediately north of the site had been demolished and replaced by a multi-story commercial building.
2005	No significant changes were apparent.	A large commercial building had been constructed immediately to the south-west of the site. A multi-story commercial building had been constructed immediately east of the site. A residential / commercial style building further to the north of the site had been demolished and replaced by two commercial style buildings.
2011-2018	No significant changes were apparent.	No significant changes were apparent.
2025	No significant changes were apparent.	The large commercial building immediately south had been demolished, and the area is currently a construction site (for the Metro West Station project).

7.2 Public registers and planning records

EPA Notices available under Section 58 of the Contaminated Land Management Act (CLM Act) Database searched 14/02/2025	There were no records of notices for the site or adjacent sites.

Sites notified to EPA under Section 60 of the CLM Act Database searched 14/02/2025	The site and adjacent sites were not listed as notified contaminated sites.
Licences listed under Section 308 of the Protection of the Environment Operations Act 1997 (POEO Act) Database searched 24/02/2025	There were six records issued to adjacent properties within a 250 m radius: • R.P Huang & G.T HU as "The Dry Clearers on George" - Shop 11b, Mayfield Plaza, 26 George Street, PARRAMATTA [~130m west – cross gradient of the site] – *An excessive quantity of perchloroethylene* (PERC) contaminated dry cleaning waste (20L) to be removed - Clean up notice issued 3 May 2013; • John Holland Pty Ltd - 143 and 169 Macquarie Street, Parramatta [~230 south-east – up-gradient of the site] – land-based extractive activity - licence surrendered on 15 December 2025; • JAVA Golden Arc Australia Pty Ltd - 312 Church Steet, Parramatta – [~ 150m north-west – down-gradient of the site] - Supply etc beverage in container without supply arrangement – penalty notice issued on 16 February 2024; • CPB Contractors Pty Limited – Package 4, Parramatta [~140 m west – cross gradient of the site] – Railway infrastructure construction (>=50,000T & track to be constructed>10km & <30km) - Licence surrendered (pending 12 February2025); • Gamuda Berhad - Sydney Metro West (Western Tunnel and Eastern Creek, Parramatta) – [~140m west – cross gradient of the site] - Railway infrastructure construction (>=50,000T & track to be constructed>10km & <30km); Concrete works - POEO licence issued 4 May 2022; and • Great River City Light Rail Pty Ltd – Package 5, Parramatta [unknown address] – Railway infrastructure construction (<50,000T) - POEP licence issued 14 December 2021. Given the former licenced activities and their location relative to the site, it is considered that the risk to the site from eth above is generally low.
PFAS Investigation Sites listed on the EPA website Database searched 14/02/2025	The site was not listed or adjacent to a site listed under: NSW EPA PFAS Investigation Program; Defence PFAS Investigation Program; Defence PFAS Management Program; and Airservices Australia National PFAS Management Program.
Council Records	A site search for council records on the current site was requested on 12 December 2025. However, the search result had not been received at the time of preparation of this report. The report may need to be amended pending the results of the records provided.

7.3 Site history integrity assessment

The information used to establish the history of the site was sourced from reputable and reliable reference documents, many of which were official records held by Government departments / agencies. The databases maintained by various Government agencies potentially can contain high quality information, but some of these do not contain any data at all.

In particular, aerial photographs can provide high quality information that is generally independent of memory or documentation. They are only available at intervals of several years, so some gaps exist in the information from this source. The observed site features are open to different interpretations and can be affected by the time of day and/or year at which they were taken, as well as specific events, such as flooding. Care has been taken to consider different possible interpretations of aerial photographs and to consider them in conjunction with other lines of evidence.

7.4 Summary of site history

Information from the historical aerial photographs suggest the site was used for residential and commercial / light industrial since at least 1948 until the 1970s, when it was re-developed as the current Horwood Place (a public road). The majority of the region around the site has been used for urban residential and commercial / possible light industrial purposes since at least 1948.

A former dry clearer which was approximately 130 m east (cross gradient of the site) had received EPA clean-up notice for the contaminated dry cleaning waste. Given the location of the former dry clearer, there is a potential risk of it impacting the site is considered to be low. However, given the long history of the site and surrounding area as part of a commercial centre other dry cleaners may have previously operated in close proximity to the site.

8. Site walkover

A site walkover was undertaken by an environmental scientist on 5 February 2025. The general site topography was consistent with that described in Section 5. The site layout appeared to have remained unchanged from the 1978 aerial photograph. The following key site features pertinent to the DSI were observed (refer to photographs in Appendix D):

- The site was occupied by Horwood Place, between Phillip Street and George Street;
- Horwood Place was paved by concrete or asphaltic concrete, with the footpath covered by pavers. Minor cracks were observed at the footpath;
- Trees were observed within squares of exposed soil on the footpath;
- A construction site for the Metro line was observed to the south of the site;
- An indoor public car park was observed to the east of the site; and
- A mixture of low-rise and high-rise commercial buildings were observed surrounding the site.

9. Preliminary conceptual site model

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

Based on the current investigation and previous reports, the following potential sources of contamination and associated contaminants of potential concern (CoPC) have been identified and summarised in Table 2.

Table 2: Summary of potential sources

Potential sources and associated CoPC
On-site sources
S1: Fill: Associated with levelling, demolition of former buildings on the site and potential burying of waste CoPC: metals, PFAS, TRH, BTEX, PAH, PCB, OCP, phenols and asbestos
Off-site sources
S2: Adjacent commercial activities (e.g. potential for former dry cleaner) CoPC: VOC (including drycleaning solvents), metals, TRH, BTEX, PAH, PCB, phenols and PFAS

The following potential human and environmental receptors, along with relevant potential pathways, have been identified and summarised in Table 3.

Table 3: Summary of potential receptors and pathways

Potential human receptors
HR1: Current users [public road / footpath] **HR2:** Construction and maintenance workers **HR3:** End users [recreational] **HR4:** Adjacent site users [residential / commercial]
Potential environmental receptors
ER1: Surface water [Parramatta River] **ER2:** Groundwater **ER3:** Terrestrial ecosystems
Potential pathways to human receptors
HP1: Ingestion and dermal contact **HP2:** Inhalation of dust and / or vapours

Potential pathways to environmental receptors
EP1: Surface water run-off **EP2:** Leaching of contaminants and vertical migration into groundwater **EP3:** Lateral migration of groundwater providing base flow to water bodies **EP4:** Inhalation, ingestion and absorption

Summary of potentially complete exposure pathways

A 'source–pathway–receptor' approach has been used to assess the potential risks of harm being caused to human or environmental receptors from contamination sources on or in the vicinity of the site, via exposure pathways (potential complete pathways). The possible pathways between the above sources (S1 to S2) and receptors are provided in below Table 4.

Table 4: Summary of potentially complete exposure pathways

Source and CoPC	Exposure pathway	Receptor	Risk management action
S1: Fill: metals, PFAS, TRH, BTEX, PAH, PCB, OCP, phenols and asbestos	**HP1:** Ingestion and dermal contact **HP2:** Inhalation of dust and/or vapours	**HR1:** Current users [public road/footpath] **HR2:** Construction and maintenance workers **HR3:** End users [recreational]	Conduct contamination investigation including intrusive sampling and testing. Based on the soil investigation results, conduct groundwater or soil vapour investigation if required. Note: Based on the information provided to Douglas, it is assumed that the proposed development is to be an open area without any in-closed building structure, vapour intrusion is not considered to be a complete pathway, and given no on-site sources of potential volatile
	HP2: Inhalation of dust and/or vapours	**HR4:** Adjacent site users [residential/commercial]	
	EP1: Surface water run-off **EP3:** Lateral migration of groundwater providing base flow to water bodies	**ER1:** Surface water	
	EP2: Leaching of contaminants and vertical migration into groundwater	**ER2:** Groundwater	
	EP4: Inhalation, ingestion and absorption	**ER3:** Terrestrial ecosystems	
S2: Adjacent commercial activities (e.g. former dry cleaner) CoPC: VOC (including drycleaning solvents), metals, TRH, BTEX, PAH, PCB, phenols and PFAS	**HP1:** Ingestion and dermal contact	**HR2:** Construction and maintenance workers	
	HP2: Inhalation of dust and/or vapours	**HR1:** Current users [public road/footpath] **HR2:** Construction and maintenance workers	

Source and CoPC	Exposure pathway	Receptor	Risk management action
		HR3: End users [recreational]	contamination have been identified no groundwater or soil vapour sampling and testing has been conducted. Should any in-closed building structure be proposed then the CSM may change.

10. Sampling and analysis plan

10.1 Data quality objectives

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

10.2 Soil sampling and analysis rationale

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

Table 2 of NSW EPA (2022) recommends a minimum of 13 sampling points for a site of 0.5 ha for site characterisation based on the detection of circular hot spots using a systemic grid sampling pattern. A total of 13 test locations were positioned across accessible areas of the site. The locations were determined by the client and generally following a systematic grid sampling pattern.

For the test pits where archaeological investigation was conducted (TL01 to TL06, and TL09 to TL11), the sampling was conducted following the completion of archaeological testing. The surface layer including pavement / asphaltic concrete and the road base layer underneath had been removed as part of the archaeological process prior to conduct this investigation. As such, no soil samples were collected from the road base layer from some of these test pits (LT01, LT02, LT05, LT06 and TL09 to TL11). The analytical results for the road base material during the Douglas (2025) investigation have therefore been reviewed and included as part of the contamination assessment. Soil samples from these test pits were generally collected at depths of 0.3 m, 0.5 m and every 0.5 m thereafter, and changes in lithology or signs of contamination.

For the hand auger boreholes (BH07, BH08. BH12 and BH13). Soil samples were generally collected at depths of approximately 0.15 m, 0.5 m, 1.0 m and every 0.5 m thereafter, and changes in lithology or signs of contamination.

Deep natural soil samples were collected from the three boreholes (TL01-d, TL05-d and TL06-d) drilled for geotechnical purpose at every 1 m interval to a maximum depth of 5 m as requested by the client.

The general sampling methods are described in the field work methodology in Appendix F.

At least one fill sample from each borehole / test pit was analysed for the CoPC in the CSM, with more samples analysed from borehole / test pits where deeper fill was encountered, or where signs of contamination were observed (such as staining and odours). PFAS was generally analysed from shallow fill and from natural in two test locations to provide a general coverage of the site as an initial screen. In addition, three samples labelled as (ASP1 to ASP3) were collected from the asphaltic material for coal tar testing (present or absent) analysis which was stockpiled onsite prior to this assessment.

11. Site assessment criteria

The site assessment criteria (SAC) applied in the current investigation are informed by the CSM (Section 9) which identified human and environmental receptors to potential contamination on the site. Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013).

The investigation and screening levels applied in the current investigation comprise levels adopted for a generic public open space land use scenario. The derivation of the SAC is in Appendix G, and the adopted SAC are listed on the summary analytical results tables in Appendix H.

12. Results

12.1 Field work results

The environmental and geotechnical borehole and test pit logs for this assessment are provided in Appendix J. The general sub-surface profiles are recorded as follows:

Asphalt Concrete/concrete/pavement:	In all test locations to a maximum depth of 0.28 m bgl.
Fill / Road base:	In all test locations except LT08 and TL12 to a maximum depth of 0.45 bgl. Fragments of concrete or glass were observed in TL03, TL04, TL05, TL06 and TL13. ACM was recorded within a stockpile which originated from the excavation of the upper 0.3 m of road base within the site (Douglas, 2025). However, as the stockpile source was from multiple test pits, the source location of the ACM / PACM fragments is unknown. ACM was also recorded by others in LT02 as discussed below. It is noted that TL07 was refusal at 0.3 m due to the possible underground service and TL13 was refusal on inferred road base at 0.45 m.

Fill:	Generally comprising clayey gravelly sand / sandy clay / clay / sand to depths between 0.6 to 2.1 m bgl. Fragments of brick, ceramic, tile, concrete and glass were observed at TL01. It is noted that TL12 and TL13 refused in fill or possible fill at 1 and 0.45 m respectively.
Clay/sandy clay/sand:	Clay / sandy clay / sand in all test locations except TL01, TL07, TL12 and TL13 to a maximum termination depth of 10.0 m bgl.

Building debris was observed in the road base in various test pits (concrete, glass), and in the general fill in test pits TL01 (brick, ceramic, tile and glass) and TL13 (glass). Building debris is indicative of the potential presence of asbestos. Sulfidic odour was observed in sample LT08/2.5-2.8 m and in sample LT05_d/9.8-10 m and could be indicative of ASS. No other visual or olfactory evidence (e.g. staining, odours, free phase product) was observed during this investigation to suggest the presence of contamination within the soils or groundwater (where encountered) at the site.

Douglas has been advised by the client that asbestos expansion joints were identified at test pit TL02 in fill during the archaeological investigation in January / February 2025 (i.e. prior to Douglas sampling). The client advised that the asbestos was identified in expansion joints within the concrete slab, and based on the photograph provided by the client, Douglas notes that the expansion joints appear to extend into the underlying road base layer. The client advised that the asbestos joint was excavated by the client as far as practical within the test pit, however part of the expansion joint extended beyond the pit, and remained within the wall of the TL02 excavation pit at the completion of the investigation works (photos 12 to 14, Appendix D). The asbestos expansion joints and asbestos impacted soil were removed from the TL02 prior to Douglas inspecting and sampling the pit.

The PID screening recorded values of less than 1 ppm suggesting the absence, or very low concentrations, of VOC in the samples tested.

Free groundwater was observed at approximately 6.0 m and 2.3 m bgl at TP05_d and TL08 during drilling of boreholes or excavation of test pits respectively. No free groundwater was observed in other test locations during this investigation. It should be noted that groundwater levels are affected by climatic conditions and soil permeability and will therefore vary with time.

12.2 **Laboratory analytical results**

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

- Table H1: Summary of results of soil analysis;
- Table H2: Summary of Results - Acid Sulfate Soils; and
- Table H3: Summary of results of preliminary waste classification.

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

12.3 Data quality assurance and quality control

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

13. Discussion

13.1 Soils

All analytical results for metal, PAH, TRH, BTEX, cyanide, VOC, phenols, OCP, OPP, PCB and PFAS in all samples tested during this investigation and the previous investigations outlined in Section 5 were below the SAC with the exception of:

- Nickel in fill samples TL03/0.1-0.2 m and its duplicate sample BD2/20250205, TL04/0.1-0.2 m, TL05/0.3-0.4 m, RB-SP-1 to RB-SP-3 ranging from 100 mg/kg to 150 mg/kg, which exceeds the EIL-C of 75 mg/kg. In assessing the significance of these results the following has been considered:
  - All but one of the samples which recorded exceedances comprised road base materials, which commonly comprise igneous gravel with naturally occurring elevated nickel concentrations. The remaining sample which recorded nickel above the EIL (TL05/0.3-0.4 m) comprised fill with trace igneous gravel;
  - Road base is not considered to be a valuable substrate for terrestrial ecology, and as such the exceedances recorded in the road base are not considered to be significant; and
  - Statistical assessment of nickel was conducted on all tested primary fill samples (or their replicate / triplicate where that subsample recorded a higher concentration) excluding samples collected from the road base layer. The statistical analysis was conducted using the US EPA ProUCL statistical software to assess the significance of the results recorded above the SAC. The calculated 95% confidence limits (UCL) of the arithmetic mean for nickel (28.07 mg/kg) was below the SAC, and the standard deviation was less than 50% of the SAC (refer to inputs and outputs from ProUCL in Appendix H).
- Perfluorooctanesulfonic acid (PFOS) in fill sample TL08/1.3-1.5 m (0.0031 mg/kg) which exceeds the ecological soil guideline values for indirect exposure of 0.003 mg/kg. However, given that the site is located in a heavily urbanised area, foraging animals are only expected to source a small percentage of their food from the site, therefore, the minor exceedance is not considered to present a significant risk.
- Asbestos was detected in a fibre cement fragment within a stockpile that was sourced from the excavation of the upper 0.3 m of road base from pits TL01 to TL06 and TL09 to LT11 (Douglas, 2025). Additional PACM fragments were observed within the stockpile but not tested. It is not known which of the test pit(s) the ACM / PACM was sourced from, or whether it was localised or from multiple test pits; however ACM expansion joints were recorded by others during their excavation of TL02, and could potentially be the (or one of the) source of the ACM.

Douglas did not observe any PACM in the test pits during our sampling, however did record concrete and glass within the road base materials in several test pits, and various building debris (brick, ceramic, tile, concrete and glass) in the fill in test pit TL01. These anthropogenic materials can be indictive of the presence of asbestos.

13.2 Acid sulfate soil

Based on the field test results in Table H2, the following is noted:

- Sulfidic odour was observed in sample LT08/2.5-2.8 m and in sample LT05_D/9.8-10 m;
- All pH_F values were above pH 4 in all samples, which indicates that prior oxidisation was less likely;
- All pH_{FOX} value were higher than the field indicator level of pH 3; and
- Fifteen out of nineteen samples recorded a change in pH greater than 1 between pH_F and pH_{FOX} values, which can be indicative of potential acid sulfate soil (PASS).

Three samples TL05/8-8.2 m, TL05/9-9.2 m and TL08/2.5-2.7 m were tested for ASS using the full Chromium Suite (SCr) analysis. The selected samples were considered to have the highest probability of containing ASS based on field indicators (as summarised above) and being from below the water table.

Based on the SCR test results in Table H2, the following noted:

- Reducible sulfur was detected in samples TL05/9-9.2 m and TL08/2.5-2.7 m which indicates potential presence of PASS in soils onsite below the water table.
- The concentrations of net acidity in these three samples were below the action criteria of 0.03%, therefore, management of ASS is not required.

13.3 Preliminary waste classification

13.3.1 Preliminary comment

It is noted that the information provided in this Section 13.2 does not constitute a waste classification for off-site disposal purposes, but rather makes preliminary comments on current results with respect to waste guidance. Should excavated soils require off-site disposal during development further testing and a final waste classification assessment, which takes into consideration the information in this report, must be undertaken.

13.3.2 Fill

To assist in planning and budgeting for the proposed development, a preliminary waste classification was undertaken with reference to the waste classification guidelines, EPA (2014). All soils and bedrock removed from the site must be disposed legally in accordance with the POEO Act. Waste classifications are required to inform the legal disposal.

The following Table 5 presents the results of the six-step procedure outlined in EPA (2014) for determining the type of waste and the waste classification of soils. This process applies to the fill (including surface soils) at the site, which do not meet the definition of virgin excavated natural material (VENM).

Table 5: Six step classification procedure

Step	Comments	Rationale
1. Is the waste special waste?	Yes (extent not known)	No ACM, clinical or related waste, or waste tyres were observed in the test locations. Asbestos was detected in a fibre cement fragment sample RB-ACM-1 from stockpiled road base by the analytical laboratory (Douglas, 2025). Douglas was advised by the client that asbestos expansion joints were identified at TL02 in fill (i.e. within the concrete slab and extending into the road base layer) and that the expansion joint extended beyond the extent of excavation for TL02.
2. Is the waste liquid waste?	No	The fill comprised a soil matrix.
3. Is the waste "pre-classified"?	No	The fill is not pre-classified with reference to NSW EPA (2014). The natural material, if classified as VENM, is pre-classified as general solid waste (non-putrescible).
4. Does the waste possess hazardous waste characteristics?	No	The waste was not observed to contain or considered at risk to contain explosives, gases, flammable solids, oxidising agents, organic peroxides, toxic substances, corrosive substances, coal tar, batteries, lead paint or dangerous goods containers.
5. Determining a wastes classification using chemical assessment	Conducted	Refer to Table H2, Appendix H.
6. Is the waste putrescible or non-putrescible?	No	The fill does not contain materials considered to be putrescible [a].

Notes:

a Wastes that are generally not classified as putrescible include soils, timber, garden trimmings, agricultural, forestry and crop materials, and natural fibrous organic and vegetative materials (NSW EPA, 2014).

All chemical concentrations for the analysed fill samples during this investigation were within the contaminant threshold 1 (CT1s) for general solid waste (GSW) except for following samples:

- Lead in samples TL01/0.5-0.6 m (160 mg/kg) and TL03/0.3-0.4 m (160 mg/kg) which exceeded the CT1 of 100 mg/kg; and
- Nickel in samples TL03/0.1-0.2 m (110 mg/kg) and its duplicate sample BD2/20250205 (100 mg/kg), TL04/0.1-0.2 m (110 mg/kg) and TL05/0.3-0.4 m (150 mg/kg) which exceeded the CT1 of 40 mg/kg.

TCLP analysis for lead and nickel was undertaken on the above samples except the duplicate sample BD2/20250205 to determine the leachability characteristics of the contamination for this investigation. All total and TCLP concentrations were within specific contaminant concentration (SCC1) and TCLP1 respectively for GSW.

No CT thresholds apply to PFAS. All total and TCLP PFAS concentrations were within specific SCC1 and TCLP1 respectively for GSW.

No asbestos was detected in any test samples during this investigation. However, asbestos was detected by the laboratory in an ACM sample sourced from the excavation of the top 0.3 m road base within the current site boundary (Douglas, 2025), and building debris was recorded in the road base in various test pits and in the underlying fill in two of the test pits.

Based on the results of the current investigation and previous investigations outlined in Section 6, the fill at the site is preliminary classified as follows:

- Road base fill layer beneath the concrete slab: provisionally *GSW (non-putrescible) – Special Waste (Asbestos Waste)* subject to further assessment;
- Road base fill layer beneath the asphaltic concrete: provisionally: *GSW (non-putrescible) – Special Waste (Asbestos Waste)* subject to further assessment. It is recommended that this material is managed and assessed separately to the road base beneath the concrete slabs (and other fill at the site), as the risk of asbestos in these materials may differ; and
- The remaining fill layers: *GSW (non-putrescible) with respect to chemical contaminants. Given the presence of ACM in soils at the site and building debris in the fill further assessment of asbestos is required to assess the waste classification.* Note the potential presence of asbestos in fill at the site should be considered for planning purposes.

13.3.3 Natural soil

The following Table 6 presents the results of the assessment of natural soils and bedrock at the site with reference to the VENM definition in the POEO Act and the EPA[1] website.

Table 6: VENM classification procedure

Item	Comments	Rationale
Is the material natural?	Yes	Natural materials logged in the test pits / boreholes as residual clay / sandy clay / sand. These materials underlie the fill at the site.
Is the material impacted by manufactured chemicals or process residues?	Possible	There were no visual or olfactory indicators of chemical contamination of the materials in the boreholes. Concentrations of contaminants were considered to be typical of background concentrations except mercury in sample TL01/3-3.2 m (0.3 mg/kg) which exceeded the background concentration of 0.1 mg/kg (Table H2, Appendix H).
Are the materials acid sulfate soils?	Possible	Assessment for ASS undertaken (refer to Section 5.3 and field work results in Section 13.2).

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

Item	Comments	Rationale
Are there current or previous land uses that have (or may have) contaminated the materials?	Possible	Former commercial / potential light industrial land uses, fill of unknown origin.

Concentration of the analysed natural soil samples were within the referenced published background levels and the published concentrations in NSW EPA *The Excavated Natural Material Order 2014* except for mercury in sample TL01/3-3.2 m. The source of this mercury is not known, but may have been from cross contamination with the overlying fill at this location due to the drilling methodology.

Based on the mapping of ASS and ASS testing summary in Section 13.2, and subject to further assessment of the mercury as recorded above, natural soil and bedrock within the site may be classifiable as follows:

- Natural clay / sandy clay / sand above the water table: Virgin Excavation Natural Material (VENM); and
- Natural alluvial clay / sandy clay / sand below the water table: GSW unless further assessment of material to be disposed does not identify any RIS (based on EPA guidance at the time of reporting).

14. Conclusions and recommendations

The DSI comprised a desktop study, a site walkover, and intrusive soil investigation to assess the suitability of the site for the proposed Horwood Place upgrade and whether further investigation and/or management of contamination is required.

All recorded contaminant concentrations for tested soil samples collected from the test pits were within the adopted SAC. However, asbestos was detected in a representative fibre cement fragment sample tested from a number of observed fragments in a stockpile that was sourced from the excavation of the upper 0.3 m of road base within the site (Douglas, 2025). As the stockpile source was from multiple test pits, the source location of the ACM fragments is unknown. However, Douglas has been advised that asbestos expansion joints were identified at test pit TL02 in fill (i.e. within the concrete slab and extending into the road base layer) and that the observed expansion joint extended beyond the extent of excavation of pit TL02. The ACM could be present in expansion joints across the entirety of the existing concrete slab.

Building debris (brick, ceramic, tile, concrete and/or glass) were observed in road base materials and in the fill in test pits TL01 and TL13. These anthropogenic materials can be indictive of the presence of asbestos.

Assessment of ASS did not record any ASS requiring management to the depth of investigation. However, low levels of chromium reducible sulfide were recorded which needs to be considered in for the purposes of classification for disposal.

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

- A remediation action plan (RAP) is prepared in accordance with NSW EPA (2020) to address:
  - Further assessment and/or remediation requirements for fill impacted (or potentially impacted) by asbestos;
  - Protocols to conduct additional visual inspection of the fill underlying the road-base layer to confirm the presence / absence of PACM;
  - Protocols for the validation of site remediation;
  - Protocols for waste classification of any materials requiring off-site disposal, and protocols for material import, including check-sampling, where appropriate;
  - Unexpected Finds Protocol outlining the procedures that would be undertaken in the event unexpected contamination is encountered during excavation works; and
  - Other general requirements for RAPs under NSW EPA (2020).
- Validation of the successful implementation of the RAP.
- For remediation involving the management of contamination on-site, an environmental management plan (EMP) must be prepared and administered in a way that is consistent with NSW EPA requirements.

Preliminary comments on waste classification are provided in Section 13.3, noting that further assessment is required to confirm the waste classification of any materials to be disposed of off-site.

15. References

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

Douglas. (2025). *Stockpile Waste Classification, Parramatta Civil Link - Block 3, George Khattar Lane, Parramatta NSW. Ref: 231981.00.R.002.Rev0, dated 10 February 2025*.

EHO. (2025a). *Waste Classification Certificate, RMA Contracting Pty Ltd. Ref: JN05778-WCC-RN18702, dated 29 January 2025*.

EHO. (2025b). *Waste Classification Certificate, RMA Contracting Pty Ltd. Ref: JN05778-WCC-RN18685, dated 24 January 2025*.

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

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

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

16. **Limitations**

Douglas Partners Pty Ltd (Douglas) has prepared this report for this project at Horwood place, Parramatta NSW in line with Douglas' proposal dated 27 September 2024 and acceptance received from Charlie Dutra of RMA Group. The work was carried out under Douglas' Engagement Terms. This report is provided for the exclusive use of RMA Group for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of Douglas, does so entirely at its own risk and without recourse to Douglas for any loss or damage. In preparing this report Douglas has necessarily relied upon information provided by the client and/or their agents.

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

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

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

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

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

Asbestos has been detected by laboratory analysis in fill materials during the previous investigation outline in Section 6. Building demolition materials, such as glass, brick, ceramic, tile and concrete, were observed in fill during this investigation, and these are considered as indicative of the possible presence of hazardous building materials (HBM), including asbestos.

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

Appendix A

Drawings

SITE LOCATION

LEGEND

- Approximate Extent of Propos Development
- Test Pit and Deep Geotechnic Borehole
- Test Pit and Deep Geotechnic Borehole (with monitoring we
- Test Pit and Shallow Borehole
- Hand Augered Borehole

NOTE:

1. Drawing projection in GDA2020 / MGA zone 56, adapted from aerial imagery from Metro Map dated 10.02.2025 and client supplied drawing titled Area of Disturbance Plan dated 26.08.2024
2. Test locations are approximate only and were located using differential GPS typically accurate to ± 0.1 m depending on satellite coverage
3. Previous investigation locations are approximate only

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT: City of Parramatta Council	
OFFICE: Sydney	DRAWN BY: JDB
SCALE: 1:1000 @A3	DATE: 17.03.2025

TITLE: **Test Location Plan**
Parramatta Civil Link - Block 3
Horwood Place, Parramatta, NSW

PROJECT:	231981.00
DRAWING No:	1
REVISION:	0

Appendix B

About This Report

About this Report

November 2023

Introduction

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

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

Copyright

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

Borehole and Test Pit Logs

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

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

Groundwater

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

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

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

Reports

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

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

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

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

continued next page

About this Report

Site Anomalies

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

Information for Contractual Purposes

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

Site Inspection

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

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Appendix C

Historical Aerial Photographs and Public Registers Records

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT: RMA Group		TITLE: **1943 Historical Aerial Imagery**	PROJECT: 231981.00
OFFICE: Sydney	DRAWN BY: JZ	**Parramatta Civil Link - Block 3**	DRAWING No: A
SCALE: 1:1500 @A3	DATE: 03.March.2025	**Horwood place, Parramatta NSW**	REVISION: 0

N

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT: RMA Group		TITLE: **1951 Historical Aerial Imagery**	PROJECT: 231981.00
OFFICE: Sydney	DRAWN BY: JZ	**Parramatta Civil Link - Block 3**	DRAWING No: B
SCALE: 1:1500 @A3	DATE: 03.March.2025	**Horwood place, Parramatta NSW**	REVISION: 0

N

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT: RMA Group		
OFFICE: Sydney	DRAWN BY: JZ	
SCALE: 1:1500 @A3	DATE: 03.March.2025	

TITLE: **1961 Historical Aerial Imagery**
Parramatta Civil Link - Block 3
Horwood place, Parramatta NSW

N

PROJECT:	231981.00
DRAWING No:	C
REVISION:	0

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT:	RMA Group		
OFFICE:	Sydney	DRAWN BY:	JZ
SCALE:	1:1500 @A3	DATE:	03.March.2025

TITLE: **1970 Historical Aerial Imagery**
Parramatta Civil Link - Block 3
Horwood place, Parramatta NSW

N

PROJECT:	231981.00
DRAWING No:	D
REVISION:	0

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT: RMA Group		
OFFICE: Sydney	DRAWN BY: JZ	
SCALE: 1:1500 @A3	DATE: 03.March.2025	

TITLE: **1978 Historical Aerial Imagery**
Parramatta Civil Link - Block 3
Horwood place, Parramatta NSW

N

PROJECT:	231981.00
DRAWING No:	E
REVISION:	0

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS	CLIENT: RMA Group		TITLE: **1986 Historical Aerial Imagery** **Parramatta Civil Link - Block 3** **Horwood place, Parramatta NSW**
	OFFICE: Sydney	DRAWN BY: JZ	
	SCALE: 1:1500 @A3	DATE: 03.March.2025	

N

PROJECT:	231981.00
DRAWING No:	F
REVISION:	0

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT: RMA Group		
OFFICE: Sydney	DRAWN BY: JZ	
SCALE: 1:1500 @A3	DATE: 03.March.2025	

TITLE: **1994 Historical Aerial Imagery**
Parramatta Civil Link - Block 3
Horwood place, Parramatta NSW

N

PROJECT:	231981.00
DRAWING No:	G
REVISION:	0

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT: RMA Group		
OFFICE: Sydney	DRAWN BY: JZ	
SCALE: 1:1500 @A3	DATE: 03.March.2025	

TITLE: **2005 Historical Aerial Imagery**
Parramatta Civil Link - Block 3
Horwood place, Parramatta NSW

N

PROJECT:	231981.00
DRAWING No:	H
REVISION:	0

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS	CLIENT: RMA Group		TITLE: **2011 Historical Aerial Imagery** **Parramatta Civil Link - Block 3** **Horwood place, Parramatta NSW**
	OFFICE: Sydney	DRAWN BY: JZ	
	SCALE: 1:1500 @A3	DATE: 03.March.2025	

N

PROJECT:	231981.00
DRAWING No:	1
REVISION:	0

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT:	RMA Group		
OFFICE:	Sydney	DRAWN BY:	JZ
SCALE:	1:1500 @A3	DATE:	03.March.2025

TITLE: **2018 Historical Aerial Imagery**
Parramatta Civil Link - Block 3
Horwood place, Parramatta NSW

N

PROJECT:	231981.00
DRAWING No:	J
REVISION:	0

NOTE:
1. Drawing projection in GDA94 / MGA zone 56.

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT: RMA Group		TITLE: **2025 Historical Aerial Imagery**	PROJECT: 231981.00
OFFICE: Sydney	DRAWN BY: JZ	**Parramatta Civil Link - Block 3**	DRAWING No: K
SCALE: 1:1500 @A3	DATE: 03.March.2025	**Horwood place, Parramatta NSW**	REVISION: 0

N

WaterNSW
Work Summary

GW108611

Licence: 10WA108668
Licence Status: CURRENT

Authorised Purpose(s): DOMESTIC
Intended Purpose(s): DOMESTIC

Work Type: Bore
Work Status: Supply Obtained
Construct.Method: Down Hole Hamm
Owner Type: Private

Commenced Date:
Completion Date: 20/04/2005
Final Depth: 60.50 m
Drilled Depth: 60.50 m

Contractor Name: INTERTEC DRILLING SERVICES
Driller: William Crump
Assistant Driller:

Property: ROMAN CATHOLIC CHURCH 1
Marist Pl PARRAMATTA 2150 NSW
GWMA: -
GW Zone: -
Standing Water Level (m): 6.200
Salinity Description:
Yield (L/s): 5.500

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	FIELD OF	1//1034092
Licensed:	CUMBERLAND	FIELD OF MARS	Whole Lot 1//1034092

Region: 10 - Sydney South Coast
River Basin: 212 - HAWKESBURY RIVER
Area/District:
CMA Map: 9130-3N
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6257213.000
Easting: 315129.000
Latitude: 33°48'32.9"S
Longitude: 151°00'09.8"E

GS Map: -
MGA Zone: 56
Coordinate Source: GIS - Geogra

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	11.50	206			Down Hole Hammer
1		Hole	Hole	11.50	60.50	165			Down Hole Hammer
1		Annulus	Concrete	-0.10	11.50	206			
1	1	Casing	Pvc Class 9	-0.50	29.50	140			Suspended in Clamps, Screwed and Glued
1	1	Casing	Steel	-0.50	11.50	168	158		Driven into Hole, Welded

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
46.10	46.30	0.20	Unknown			5.00		00:25:00	4650.00
56.50	56.60	0.10	Unknown	6.20		0.20		00:25:00	5300.00

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	1.00	1.00	Fill	Fill	
1.00	3.00	2.00	Clay, brown	Clay	
3.00	5.50	2.50	Shale	Shale	
5.50	7.00	1.50	Sandstone, with Shale bedding	Sandstone	
7.00	22.00	15.00	Sandstone, grey	Sandstone	
22.00	23.30	1.30	Sandstone, soft	Sandstone	
23.30	46.10	22.80	Sandstone, grey	Sandstone	
46.10	46.30	0.20	Sandstone, fractured	Sandstone	
46.30	47.50	1.20	Sandstone, grey	Sandstone	
47.50	47.70	0.20	Sandstone, fractured	Sandstone	
47.70	56.50	8.80	Sandstone, grey	Sandstone	
56.50	56.60	0.10	Sandstone, fractured	Sandstone	
56.60	60.50	3.90	Sandstone, grey	Sandstone	

Remarks

20/04/2005: Form A Remarks:
Airlift tests at 60m = 5.5 Lps, 42m = 4.0 Lps. Water has a strange odour & is discoloured.
04/03/2010: Updated from original form A.

***** End of GW108611 *****

Warning To Clients: This raw data has been supplied to the NSW Office of Water by drillers, licensees and other sources. The NOW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

Suburb	SiteName	Address	ContaminationActivityType	ManagementClass	Latitude	Longitude
PARKES	Former BP Telescope Service Station	339-341 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.13216152	148.1743239
PARKES	BP Reliance East End Service Station Parkes	46 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.14243539	148.1846227
PARKES	Former Parkes Gasworks (including Rail Corridor and offsite land)	129 Woodward Street and land within the Parkes railway CORRIDOR	Gasworks	Contamination currently regulated under CLM Act	-33.14480316	148.1844397
PARKLEA	Caltex Parklea Service Station	Old Windsor (north of Miami Street) ROAD	Service Station	Regulation under CLM Act not required	-33.72427108	150.9388531
PARRAMATTA	BP Service Station	435 Church STREET	Service Station	Regulation under CLM Act not required	-33.80498714	151.0056151
PARRAMATTA	Coleman Oval Embankment	Cnr of Pitt STREET and Maquarie STREET	Unclassified	Regulation under CLM Act not required	-33.80441625	150.9954841
PARRAMATTA	7-Eleven (former Mobil) Service Station	81 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.80919769	151.0142894
PARRAMATTA	Parramatta Park Toilet Block Demolition	The Cresent Toilet Block Parramatta PARK	Unclassified	Regulation under CLM Act not required	-33.81054034	150.9961968
PAUPONG	Former Timber Treatment Plant	Off Paupong ROAD	Other Industry	Regulation under CLM Act not required	-36.57657408	148.6624998
PENDLE HILL	7-Eleven Service Station	217 Wentworth AVENUE	Service Station	Regulation under CLM Act not required	-33.8017814	150.9577994
PENNANT HILLS	Shell Coles Express Pennant Hills West	386 Pennant Hills ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.73928611	151.0679704
PENRITH	Mirvac Industrial Site	2101 Castlereagh ROAD	Other Industry	Regulation under CLM Act not required	-33.73497514	150.6954097
PENRITH	7-Eleven (former Mobil) Service Station	212-222 Andrews ROAD	Service Station	Regulation under CLM Act not required	-33.73059678	150.6952571
PENRITH	Lowes Petroleum (Former Mobil) Depot Penrith	174 Coreen AVENUE	Other Petroleum	Regulation under CLM Act not required	-33.74484268	150.6980504
PENRITH	Caltex Service Station	Castlereagh Rd Cnr Lugard STREET	Service Station	Regulation under CLM Act not required	-33.73426843	150.6933382
PENRITH	BP Express Service Station	Corner Coreen Avenue and Castlereagh ROAD	Service Station	Regulation under CLM Act not required	-33.74385498	150.6925743

Search results

Your search for:Suburb: PARRAMATTA

Search Again
Refine Search

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the planning process.

Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... more search tips

More information about particular sites may be available from:

- The POEO public register
- The appropriate planning authority: for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act.

See What's in the record and What's not in the record.

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.
This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register.POEO public register

14 February 2025

For business and industry

For local government

Contact us

131 555 (tel:131555)

Online (https://www.epa.nsw.gov.au/about-us/contact-us/feedback)

info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

EPA Office Locations (https://www.epa.nsw.gov.au/about-us/contact-us/locations)

Section 91 Protection of the Environment Operations Act 1997

Clean-Up Notice

R.P HUANG & G.T HU

Trading as DRY CLEANERS ON GEORGE

ABN 65 920 194 196

Shop 11B Mayfair Plaza, 26 George Street

PARRAMATTA NSW 2123

Attention: Geoff Hu

Notice Number	1513867
File Number	FIL12/2097
Date	03-May-2013

NOTICE OF CLEAN-UP ACTION

BACKGROUND

The Accountable Party R.P Huang and G.T Hu trading as "The Dry Cleaners on George" conducts dry cleaning operations at Shop 11b, Mayfair Plaza, 26 George Street, PARRAMATTA NSW 2150 ("the premises").

On 30 April 2013, Mr Luke Formosa and Mr Roger De Keyzer conducted a site inspection of the premises. An excessive quantity of Perchloroethylene (PERC) contaminated dry cleaning waste were being stored inside the shop. There were about 8 (20L) containers stored on the premises, these were stacked on top of each other in a disorderly and inappropriate manner (see Addendum attachment).

This is a large stockpile of PERC waste and must be removed for legal disposal at an appropriately licensed waste facility.

DIRECTION TO TAKE CLEAN-UP ACTION

1. The Environment Protection Authority (EPA) directs R.P HUANG & G.T HU to take the following clean-up action:

- To engage the services of a licensed waste removalist company to remove all PERC waste at the premises. All PERC waste must be taken off "the premises" to an appropriately licensed waste facility by no later than **Friday 6 September 2013**.
- The EPA must be notified immediately after PERC waste is removed from "the premises". All PERC waste removed must be tracked using the EPA's online waste tracking system.

Clean-Up Notice

.....

Andrew Hawkins

Manager Chemicals Regulation Unit

Hazardous Materials, Chemicals & Radiation

(by Delegation)

INFORMATION ABOUT THIS CLEAN-UP NOTICE

- This notice is issued under section 91 of the Protection of the Environment Operations Act 1997.
- It is an offence against the Act not to comply with a clean-up notice unless you have a reasonable excuse.

Penalty for not complying with this notice

- The maximum penalty for a corporation is $1,000,000 and a further $120,000 for each day the offence continues. The maximum penalty for an individual is $250,000 and a further $60,000 for each day the offence continues.

Cost recovery from the person who caused the incident

- If you comply with this clean-up notice but you are not the person who caused the pollution incident to which the notice relates, you have a right to go to court to recover your costs of complying with the notice from the person who caused the incident.Other costs
- The Protection of the Environment Operations Act allows the EPA to recover from you reasonable costs and expenses it incurs in monitoring action taken under this notice, ensuring the notice is complied with and associated matters. (If you are going to be required to pay these costs and expenses you will later be sent a separate notice called a “Notice Requiring Payment of Reasonable Costs and Expenses”).

Continuing obligation

- Under section 319A of the Act, your obligation to comply with the requirements of this notice continues until the notice is complied with, even if the due date for compliance has passed.

Variation of this notice

- This notice may only be varied by subsequent notices issued by the EPA.

Notice summary

Search Again Return to Previous Page

Summary of Notice No: 3173541030

Organisation:	JAVA GOLDEN ARC AUSTRALIA PTY LTD
Location:	N\A
LGA:	N\A
Catchment:	N\A
Issue date:	16 Feb 2024
Notice status:	Issued
Complied with date:	
	Penalty Notice
Offence date:	20 Nov 2023
Legislation:	Waste Avoidance and Resource Recovery Act 2001 - 38(1)(a)
Offence short title:	Supply etc beverage in container without supply arrangement - Corporation

For business and industry

For local government

Contact us

131 555 (tel:131555)

Online (https://www.epa.nsw.gov.au/about-us/contact-us/feedback)

info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

EPA Office Locations (https://www.epa.nsw.gov.au/about-us/contact-us/locations)

Licence summary

Search Again | Return to Previous Page

Summary Licence No: 20560

View this licence (PDF document 117 kb)

Licence holder: JOHN HOLLAND PTY LTD
Premises: Macquarie House and adjacent car park
143 and 169 Macquarie Street, PARRAMATTA, NSW, 2150
LGA: CITY OF PARRAMATTA **Catchment:** Sydney Coast & Georges River
Administrative fee: $1,830.00
Licence status: Surrendered
Activity type: Land-based extractive activity (Expired)
Licence review: Due date 15 Apr 2020
Pollution incident management plan: Last tested 25 Aug 2015

Applications

Number	Application type	Current status	Date received
1532020	s.58 Licence Variation	Issued	09 Jul 2015
1536338	s.80 Surrender of a Licence	Issued	20 Nov 2015

Notices

Number	Issue date	Notice type
1532020	31 Jul 2015	s.58 Licence Variation
1536338	15 Dec 2015	s.80 Surrender of a Licence

Annual Returns

Start date	End date	Date received	Non-compliance	LBL data
15-Apr-2015	15-Dec-2015	18-Jan-2016	No	Not available

For business and industry

For local government

Contact us

131 555 (tel:131555)

Online (https://www.epa.nsw.gov.au/about-us/contact-us/feedback)

info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

EPA Office Locations (https://www.epa.nsw.gov.au/about-us/contact-us/locations)

Licence summary

Search Again Return to Previous Page

Summary Licence No: 21347

View this licence (PDF document 185 kb)

Licence holder: CPB CONTRACTORS PTY LIMITED
Premises: Parramatta Light Rail Stage 1 - Westmead to Carlingford
PACKAGE 4, PARRAMATTA, NSW, 2123
LGA: CITY OF PARRAMATTA **Catchment:** Sydney Coast & Georges River
Administrative fee: $20,655.00
Licence status: Issued
Activity type: Railway infrastructure construction (>=50,000T & track to be constructed>10km & <30km)
Licence review: Complete date 20 Dec 2024
Due date 20 Dec 2029
Pollution incident management plan: Last tested 29 Sep 2023
Current Environmental Risk Level: Level 1

Applications

Number	Application type	Current status	Date received
1593282	s.58 Licence Variation	Issued	27 Mar 2020
1594024	s.58 Licence Variation	Issued	27 Mar 2020
1594216	s.58 Licence Variation	Issued	27 Mar 2020
1600705	s.58 Licence Variation	Issued	23 Sep 2020
1603708	s.58 Licence Variation	Issued	04 Dec 2020
1606728	s.58 Licence Variation	Issued	02 Mar 2021
1609050	s.58 Licence Variation	Issued	02 Mar 2021
1610621	s.58 Licence Variation	Issued	09 Jul 2021
1610787	s.58 Licence Variation	Issued	15 Jul 2021
1612565	s.58 Licence Variation	Withdrawn	13 Sep 2021
1614882	s.58 Licence Variation	Issued	01 Dec 2021
1647120	s.80 Surrender of a Licence	Pending	12 Feb 2025

Notices

Number	Issue date	Notice type

1593282	09 Apr 2020	s.58 Licence Variation
1594024	17 Apr 2020	s.58 Licence Variation
1594216	24 Apr 2020	s.58 Licence Variation
1600705	19 Oct 2020	s.58 Licence Variation
1603708	10 Dec 2020	s.58 Licence Variation
1606728	22 Mar 2021	s.58 Licence Variation
1609050	21 May 2021	s.58 Licence Variation
1610621	09 Jul 2021	s.58 Licence Variation
1610787	16 Jul 2021	s.58 Licence Variation
1611803	20 Aug 2021	s.58 Licence Variation
1612235	31 Aug 2021	s.58 Licence Variation
1612511	10 Sep 2021	s.58 Licence Variation
1612774	16 Sep 2021	s.58 Licence Variation
1612785	17 Sep 2021	s.58 Licence Variation
1612822	20 Sep 2021	s.58 Licence Variation
1613065	01 Oct 2021	s.58 Licence Variation
1613465	15 Oct 2021	s.58 Licence Variation
1614882	08 Dec 2021	s.58 Licence Variation
1615455	21 Dec 2021	s.58 Licence Variation
1616023	20 Jan 2022	s.58 Licence Variation
1616228	28 Jan 2022	s.58 Licence Variation

Annual Returns

Start date	End date	Date received	Non-compliance	LBL data	
03-Jan-2024	02-Jan-2025	Not received			Complete annual return via eConnect
03-Jan-2023	02-Jan-2024	01-Mar-2024	No	Not available	
03-Jan-2022	02-Jan-2023	02-Mar-2023	yes	Not available	
03-Jan-2021	02-Jan-2022	23-Feb-2022	yes	Not available	
03-Jan-2020	02-Jan-2021	23-Feb-2021	yes	Not available	

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Licence holder: **GAMUDA BERHAD**
Trading as: Gamuda (Australia) Branch
Premises: SYDNEY METRO WEST - WESTERN TUNNELLING AND EASTERN CREEK, PARRAMATTA, NSW, 2150

Administrative fee: $91,800.00
Licence status: Issued
Activity type: Railway infrastructure construction (>=50,000T & track to be constructed>10km & <30km)
Concrete works
Licence review: Due date 04 May 2027
Pollution incident management plan: Last tested 24 Jan 2024
Current Environmental Risk Level: Level 1

Applications

Number	Application type	Current status	Date received
1621672	s.58 Licence Variation	Issued	12 Apr 2022
1623521	s.58 Licence Variation	Issued	11 Oct 2022
1627271	s.58 Licence Variation	Issued	23 Feb 2023
1628817	s.58 Licence Variation	Issued	05 Apr 2023

1629411	s.58 Licence Variation	Issued	29 May 2023
1632437	s.58 Licence Variation	Issued	25 Aug 2023
1637401	s.58 Licence Variation	Issued	15 Feb 2024
1638968	s.58 Licence Variation	Issued	19 Apr 2024
1639304	s.58 Licence Variation	Issued	19 Apr 2024
1640077	s.58 Licence Variation	Issued	23 May 2024
1641525	s.58 Licence Variation	Issued	21 Jun 2024
1642408	s.58 Licence Variation	Issued	05 Aug 2024
1643868	s.58 Licence Variation	Issued	25 Sep 2024
1645354	s.58 Licence Variation	Issued	21 Jun 2024
1646825	s.58 Licence Variation	Pending	20 Dec 2024

Notices

Number	Issue date	Notice type
1618918	25 May 2022	s.58 Licence Variation
1619891	15 Jul 2022	s.58 Licence Variation
1621672	25 Aug 2022	s.58 Licence Variation
1623521	28 Oct 2022	s.58 Licence Variation
1624484	21 Dec 2022	s.58 Licence Variation
1627271	03 Mar 2023	s.58 Licence Variation
1627859	31 Mar 2023	s.58 Licence Variation
1628817	24 May 2023	s.58 Licence Variation
1629411	13 Jul 2023	s.58 Licence Variation
1632310	24 Aug 2023	s.58 Licence Variation
1632437	06 Sep 2023	s.58 Licence Variation

1634195	10 Nov 2023	s.58 Licence Variation
1635656	22 Dec 2023	s.58 Licence Variation
1637401	01 Mar 2024	s.58 Licence Variation
1638968	01 May 2024	s.58 Licence Variation
1639304	21 May 2024	s.58 Licence Variation
1640077	14 Jun 2024	s.58 Licence Variation
1641525	31 Jul 2024	s.58 Licence Variation
1642408	27 Aug 2024	s.58 Licence Variation
1643868	16 Oct 2024	s.58 Licence Variation
1645354	19 Dec 2024	s.58 Licence Variation

Pollution studies and reduction programs

Title	Program type	Start date	Complete date	
Ammonia and NOx Treatment Study and Report	Water	16 Dec 2022		Conditions

Annual Returns

Start date	End date	Date received	Non-compliance	LBL data
04-May-2023	03-May-2024	01-Jul-2024	No	Not available
04-May-2022	03-May-2023	30-Jun-2023	No	Not available

Licence summary

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Licence holder:	**GREAT RIVER CITY LIGHT RAIL PTY LTD**
Premises:	Parramatta Light Rail Stage 1 - Westmead to Carlingford PACKAGE 5, PARRAMATTA, NSW, 2123 **LGA:** CITY OF PARRAMATTA **Catchment:** Sydney Coast & Georges River
Administrative fee:	$7,650.00
Licence status:	Issued
Activity type:	Railway infrastructure construction (<50,000T)
Licence review:	Due date 14 Dec 2026
Pollution incident management plan:	Last tested 19 Dec 2023
Current Environmental Risk Level:	Level 1

Applications

Number	Application type	Current status	Date received
1635255	s.58 Licence Variation	Issued	03 Dec 2023
1638237	s.58 Licence Variation	Issued	25 Mar 2024

Notices

Number	Issue date	Notice type
1635255	21 Dec 2023	s.58 Licence Variation

1638237	04 Apr 2024	s.58 Licence Variation

Annual Returns

Start date	End date	Date received	Non-compliance	LBL data	
14-Dec-2023	13-Dec-2024	Not received			Complete annual return via eConnect
14-Dec-2022	13-Dec-2023	08-Feb-2024	No	Not available	
14-Dec-2021	13-Dec-2022	09-Feb-2023	No	Not available	

Appendix D

Site Photographs

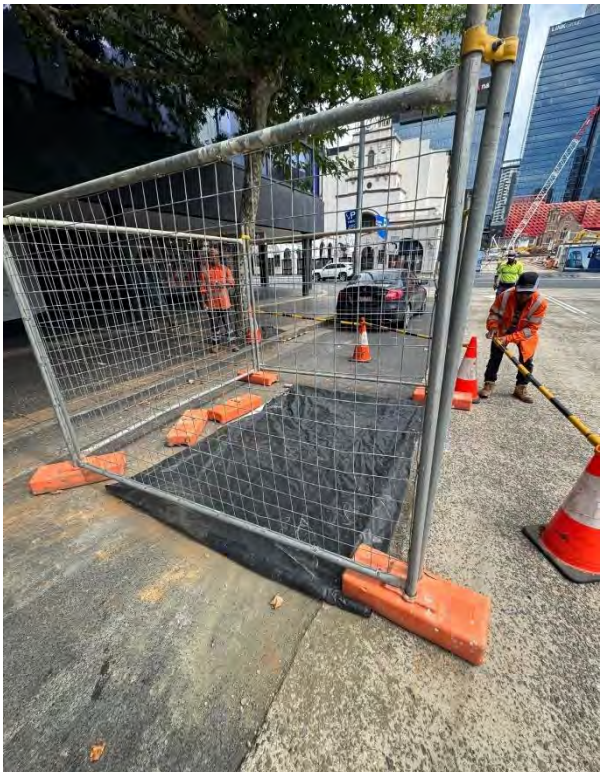

Photo 1: Representative soil profile at test location TL01

Photo 2: Representative soil profile at test location TL02

Douglas PARTNERS	**Site Photographs**	PROJECT:	231981.00
	Parramatta Civil Link - Block 3	PLATE No:	1
	Horwood place, Parramatta NSW	REV:	1
	CLIENT	RMA Group	

Photo 3: Representative soil profile at test location TL05

Photo 4: Representative soil profile at test location TL06

Douglas PARTNERS	**Site Photographs**	PROJECT:	231981.00
	Parramatta Civil Link - Block 3	PLATE No:	2
	Horwood place, Parramatta NSW	REV:	1
	CLIENT	RMA Group	

Photo 5: Representative soil profile at test location TL09

Photo 6: Representative soil profile at test location TL10

Douglas PARTNERS	**Site Photographs**	PROJECT:	231981.00
	Parramatta Civil Link - Block 3	PLATE No:	3
	Horwood place, Parramatta NSW	REV:	1
	CLIENT	RMA Group	

Photo 7: Representative soil profile at test location TL11

Photo 8: Representative photo of the ACM fragment observed (Douglas 2025)

Douglas PARTNERS	**Site Photographs**	PROJECT:	231981.00
	Parramatta Civil Link - Block 3	PLATE No:	4
	Horwood place, Parramatta NSW	REV:	1
	CLIENT	RMA Group	

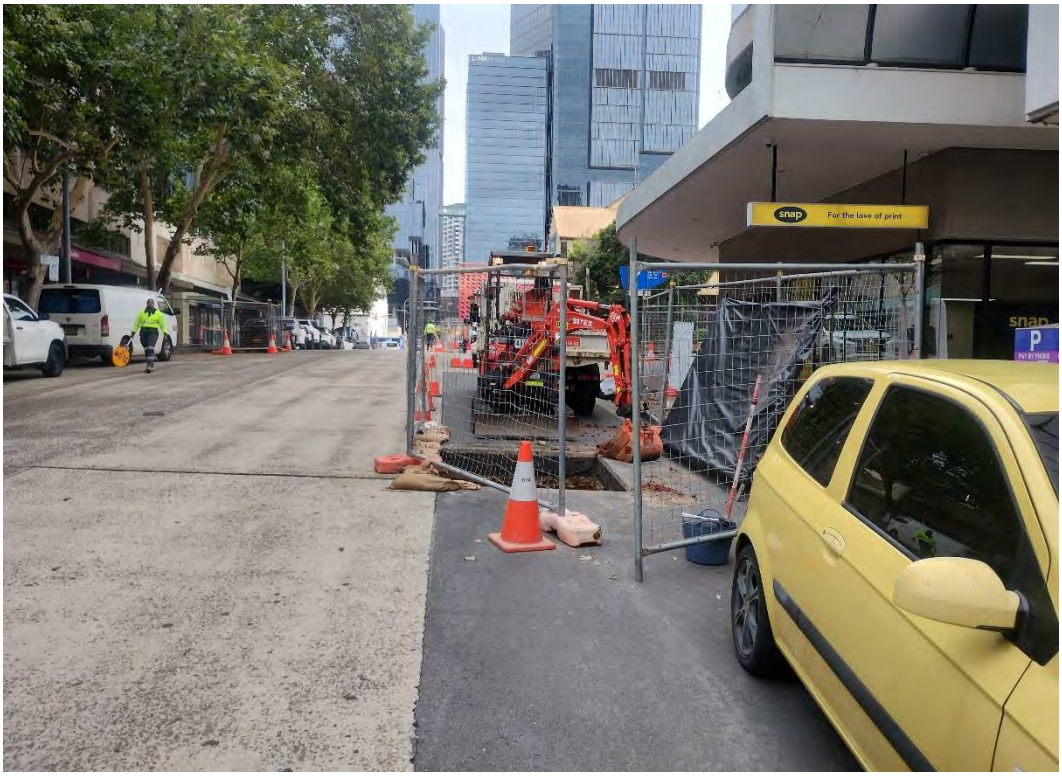

Photo 9: Horwood Place (facing south)

Photo 10: Horwood Place and Phillip St (facing south)

Douglas PARTNERS	**Site Photographs**	PROJECT:	231981.00
	Parramatta Civil Link - Block 3	PLATE No:	5
	Horwood place, Parramatta NSW	REV:	1
	CLIENT	RMA Group	

Photo 11: Footpath on Phillip St

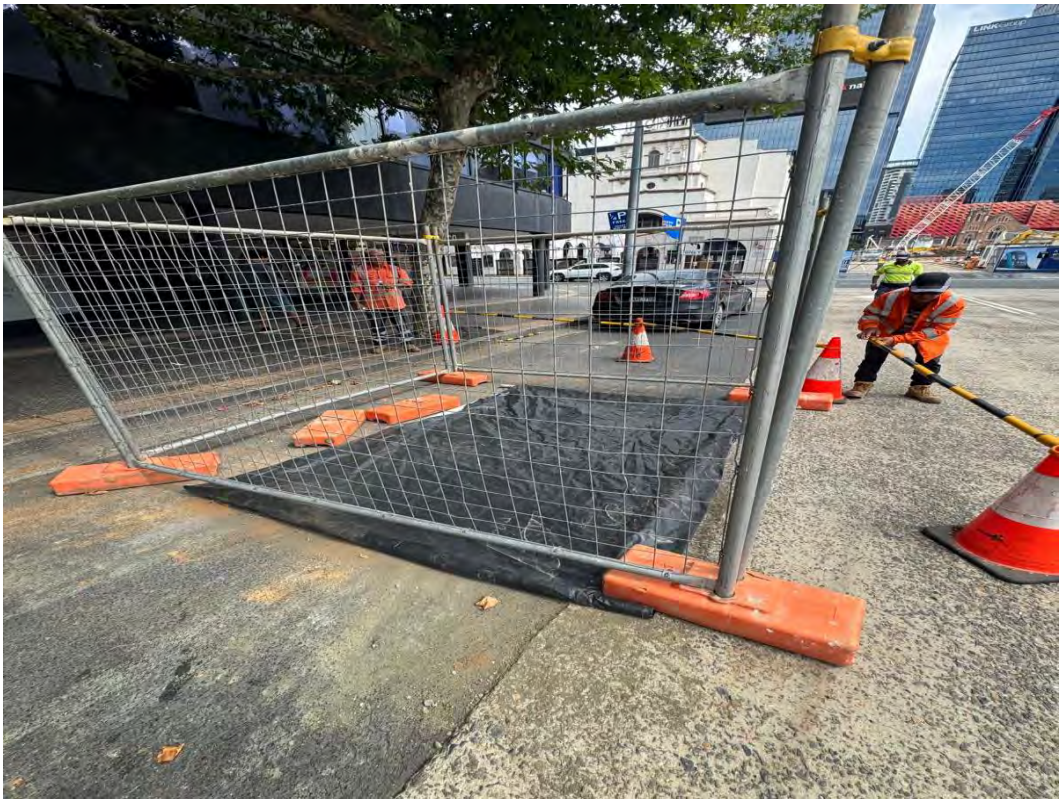

Photo 12: Previous test location TL02 following the archaeological investigation, prior to the DSI sampling, photograph provided by RMA

Douglas PARTNERS	**Site Photographs**	PROJECT:	231981.00
	Parramatta Civil Link - Block 3	PLATE No:	6
	Horwood place, Parramatta NSW	REV:	1
	CLIENT	RMA Group	

Photo 13: An ACM observed by others in fill at TL02 following the archaeological investigation, prior to the DSI sampling, photograph provided by RMA

Photo 14: Part of the ACM expansion joint observed by others remaining within the wall of the TL02 excavation pit at the completion of the field investigation, photograph provided by RMA

Douglas PARTNERS	**Site Photographs**	PROJECT:	231981.00
	Parramatta Civil Link - Block 3	PLATE No:	7
	Horwood place, Parramatta NSW	REV:	1
	CLIENT	RMA Group	

Appendix E

Data Quality Objectives

1. Data quality objectives

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

Table 1: Data quality objectives

Step	Summary
1: State the problem	The objective of the investigation is to assess the contamination status of the site with respect to the proposed land use. The report is being undertaken as the site is to be redeveloped. A preliminary conceptual site model (CSM) has been prepared (Section 9) for the proposed development. The project team consisted of experienced environmental engineers and scientists working in the roles of Project Principal, Project Reviewer, Project Manager and field staff.
2: Identify the decisions / goal of the study	The site history has identified possible contaminating previous uses which are identified in the CSM (Section 9). The CSM identifies the associated contaminants of potential concern (CoPC) and the likely impacted media. The site assessment criteria (SAC) for each of the CoPC are detailed in Appendix G. The decision is to establish whether or not the results fall below the SAC. On this basis, an assessment of the site's suitability from a contamination perspective will be derived and a decision made on whether (or not) further assessment and / or remediation will be required.
3: Identify the information inputs	Inputs will be the field results, analytical results for the CoPC and media (identified in the CSM, Section 9) from NATA accredited laboratories and methods, where possible. The SAC for each of the CoPC are detailed in Appendix G. Field results and observations such as photoionisation detector (PID) and observations of building debris, ash, odours, staining etc will be used to inform sample selection for laboratory analysis.
4: Define the study boundaries	The lateral boundaries of the investigation area are shown on Drawing 1, Appendix A. The vertical boundaries are to the extent of contamination impact as determined from the site history assessment and site observations. The assessment is limited to the timeframe over which the field works were undertaken. Constraints to the assessment are identified and discussed in the conclusions of the report, Section 16.
5: Develop the analytical approach (or decision rule)	The decision rule is to compare all analytical results with the SAC (Appendix G, based on NEPC (2013)). Where guideline values are absent, other sources of guideline values accepted by NEPC (2013) shall be adopted where available and warranted. Where a sample result exceeds the adopted criterion, a further site-specific assessment will be made as to the risk posed by the presence of that contaminant(s).

Step	Summary
	Initial comparisons will be with individual results then, where required and appropriate, summary statistics (including mean, standard deviation and 95% upper confidence limit (UCL) of the arithmetic mean (95% UCL)) to assess potential risks posed by the site contamination. Quality control results are to be assessed according to their relative percent difference (RPD) values. For field duplicates, triplicates and laboratory results, RPD values should generally be below 30%; for field blanks and rinsates, results should be at or less than the limits of reporting (NEPC, 2013). The field and laboratory quality assurance assessment is included in Appendix X.
6: Specify the performance or acceptance criteria	Baseline condition: Contaminants at the site and/or statistical analysis of data (in line with NEPC (2013)) exceed the human health and environmental SAC and pose a potentially unacceptable risk to receptors (null hypothesis). Alternative condition: Contaminants at the site and statistical analysis of data (in line with NEPC (2013)) comply with the human health and environmental SAC and therefore, do not pose a potentially unacceptable risk to receptors (alternative hypothesis). Unless conclusive information from the collected data is sufficient to reject the null hypothesis, it is assumed that the baseline condition is true.
7: Optimise the design for obtaining data	As the purpose of the investigation is to assess the contamination status of the site, the sampling program is reliant on professional judgement to identify and sample the potentially affected areas. Further details regarding the proposed sampling plan are presented in Section 10.

2. References

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

Appendix F

Field Work Methodology

1. Guidelines

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

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).
- HEPA *PFAS National Environmental Management Plan (NEMP)* (HEPA, 2025).

2. Soil sampling

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

- Collect soil samples directly from the excavator bucket / solid flight auger / hand tools at the nominated sample depth;
- Place samples into laboratory-prepared glass jars with Teflon lined lids, capping immediately and minimising headspace within the sample jar;
- Place samples into laboratory-prepared containers (specific for PFAS), capping immediately and minimising headspace within the sample jar;
- Collect replicate samples in zip-lock bags for photoionisation detector (PID) screening;
- Collect ~500 ml samples in zip-lock bags for fibrous asbestos and asbestos fines (FA and AF) analysis;
- Wear a new disposable nitrile glove for each sample point thereby minimising potential for cross-contamination;
- Collect 10% replicate samples for quality control (QC) purposes;
- Label sample containers with individual and unique identification details, including project number, sample location and sample depth (where applicable);
- Place samples into a cooled, insulated and sealed container for transport to the laboratory; and
- Use chain of custody documentation.

Reference was made to HEPA (2025) for requirements specific to PFAS.

2.1 Field testing

Field testing is carried out in accordance with Douglas' standard operating procedures. The general sampling and sample management procedures comprise:

PID field test

- Calibrate the PID with isobutylene gas at 100 ppm and with fresh air prior to commencement of each successive day's field work;
- Allow the headspace in the PID zip-lock bag samples to equilibrate; and

- Screen using the PID.

3. References

HEPA. (2025). *PFAS National Environmental Management Plan (NEMP).* Version 3.0: Heads of EPAs Australia and New Zealand and Australian Government Department of the Environment.

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

Appendix G

Site Assessment Criteria

1. Introduction

1.1 Guidelines

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

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).
- CRC CARE *Health screening levels for petroleum hydrocarbons in soil and groundwater* (CRC CARE, 2011).
- HEPA *PFAS National Environmental Management Plan (NEMP)* (HEPA, 2025).

1.2 General

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

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

- Land use: recreational:
  - Corresponding to land use category 'C', public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate.
- Soil type: clay.

2. Soils

2.1 Health investigation and screening levels

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

Table 1: Health investigation levels (mg/kg)

Contaminant	HIL-C
Metals	
Arsenic	300
Cadmium	90
Chromium (VI)	300

Contaminant	HIL-C
Copper	17 000
Lead	600
Mercury (inorganic)	80
Nickel	1200
Zinc	30 000
Cyanide	
Cyanide (free)	240
PAH	
B(a)P TEQ	3
Total PAH	300
Phenols	
Phenol	40 000
Pentachlorophenol	120
OCP	
DDT+DDE+DDD	400
Aldrin and dieldrin	10
Chlordane	70
Endosulfan	340
Endrin	20
Heptachlor	10
HCB	10
Methoxychlor	400
OPP	
Chlorpyrifos	250
PCB	
PCB	1

Table 2: Health screening levels (mg/kg)

Contaminant	HSL-D
CLAY	**0 m to <1 m**
Benzene	NL
Toluene	NL
Ethylbenzene	NL

Contaminant	HSL-D
Xylenes	NL
Naphthalene	NL
TRH F1	NL
TRH F2	NL

Notes: TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} minus naphthalene
The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would results in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'

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

Table 3: Health screening levels for direct contact (mg/kg)

Contaminant	DC HSL-C	DC HSL-IMW
Benzene	120	1100
Toluene	18 000	120 000
Ethylbenzene	5300	85 000
Xylenes	15 000	130 000
Naphthalene	1900	29 000
TRH F1	5100	82 000
TRH F2	3800	62 000
TRH F3	5300	85 000
TRH F4	7400	120 000

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

2.2 Health investigation levels for per- and poly-fluoroalkyl substances in soil

The laboratory analytical results for per- and poly-fluoroalkyl substances (PFAS) in soil have been assessed against HIL published in HEPA (2020). The HIL represent a nationally-agreed suite that should be used to inform site investigations. The HIL are intentionally conservative, and an exceedance of these criteria may not constitute a risk if other exposure pathways are controlled. An exceedance of the HIL should trigger further investigations, such as a site-specific risk assessment. At the time of this investigation, screening values were available only for perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexane sulfonate (PFHxS).

The HIL derived from Table 2 of HEPA (HEPA, 2025)are in Table 4.

Table 4: Health investigation levels (mg/kg)

Contaminant	HIL-C
PFOS and PFHxS *	1
PFOA	10

Notes: * Includes PFOS only, PFHxS only and the sum of the two.

2.3 Asbestos in soil

The HSL for asbestos in soil are based on likely exposure levels for different scenarios published in NEPC (2013) for the following forms of asbestos:

- Bonded asbestos containing material (ACM); and
- Fibrous asbestos and asbestos fines (FA and AF).

The HSL are in Table 5.

Table 5: Health screening levels for asbestos

Form of asbestos	HSL-C
ACM	0.02%
FA and AF	0.001%
FA and AF and ACM	No visible asbestos for surface soil *

Notes: Surface soils defined as top 10 cm.
* Based on site observations at the sampling points and the analytical results of surface samples.

2.4 Ecological investigation levels

Ecological investigation levels (EIL) and added contaminant limits (ACL), where appropriate, have been derived in NEPC (2013) for arsenic, copper, chromium (III), nickel, lead, zinc, DDT and naphthalene. The adopted EIL, derived using the interactive (excel) calculation spreadsheet on the NEPM toolbox website are shown in Table 7, with inputs into their derivation shown in Table 6.

Table 6: Inputs to the derivation of the ecological investigation levels

Variable	Input		Rationale
Age of contaminants	"Aged" (>2 years)		No significant change in land use in the past 2 years
pH	8.3 (fill)	5.7 (natural)	Based on the average measurement by the laboratory
CEC	6.9 cmolc/kg (fill)	9.0 $cmol_c$/kg (natural)	Based on the average measurement by the laboratory
Clay content	10 %		Measured

Variable	Input	Rationale
Traffic volumes	high	Urbanised area
State / Territory	NSW	

Table 7: Ecological investigation levels (mg/kg)

Contaminant	EIL-A-B-C (Fill)	EIL-A-B-C (Natural)
Metals		
Arsenic	100	100
Copper	160	180
Nickel	75	140
Chromium III	410	410
Lead	1100	1100
Zinc	420	430
PAH		
Naphthalene	170	170
OCP		
DDT	180	180

Note: ESL-A-B-C urban residential and public open space

2.5 Ecological screening levels

Ecological screening levels (ESL) are used to assess the risk of selected petroleum hydrocarbon compounds, BTEX and benzo(a)pyrene to terrestrial ecosystems. The adopted ESL are shown in Table 8.

Table 8: Ecological screening levels (mg/kg)

Contaminant	Soil type	ESL-A-B-C
Benzene	Fine	65
Toluene	Fine	105
Ethylbenzene	Fine	125
Xylenes	Fine	45
TRH F1	Coarse/ Fine	180*
TRH F2	Coarse/ Fine	120*
TRH F3	Fine	1300
TRH F4	Fine	5600
B(a)P	Fine	0.7

Notes: ESL are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability
TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} including naphthalene
ESL-A-B-C urban residential and public open space

2.6 Ecological soil guideline values

The interim ecological soil guideline values (EGV) derived from Table3 of HEPA (2025)are in Table 9.

Table 9: Ecological soil guideline values (mg/kg) – all land uses

Contaminant	Direct exposure	Indirect exposure
PFOS	1	0.003
PFOA	10 (0.005 for protection of reptiles)	0.003
PFHxS	NC	NC

Notes: NC no criterion
*For intensely developed sites with no secondary consumers and minimal potential for indirect ecological exposure, a higher criterion of up to 0.14 mg/kg PFOS may be appropriate.

2.7 Management limits

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

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

The adopted management limits are in Table 10.

Table 10: Management limits (mg/kg)

Contaminant	Soil type	ML-A-B-C
TRH F1	Fine	800
TRH F2	Fine	1000
TRH F3	Fine	3500
TRH F4	Fine	10 000

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

3. References

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

HEPA. (2025). *PFAS National Environmental Management Plan (NEMP).* Version 3.0: Heads of EPAs Australia and New Zealand and Australian Government Department of the Environment.

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

Appendix H

Summary Result Tables

Table H1: Summary of results of soil analysis

				Priority metals								Non-metal inorganics	Priority PAH				Priority TRH					
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Cyanide (total)	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)
			PQL	4	0.4	1	1	1	0.1	1	1	0.5	1	0.05	0.5	0.05	25	50	25	50	100	100
Sample ID	Depth	Fill/Natural/material	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Current Investigation																						
TL01	0.3 - 0.4 m	Fill	05/02/25	4	<0.4	9	5	14	<0.1	8	36	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL01	0.5 - 0.6 m	Fill	05/02/25	5	<0.4	14	28	160	4	8	170	<0.5	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL01 - [TRIPLICATE]	0.5 - 0.6 m	Fill	05/02/25	<4	<0.4	14	24	110	3	11	130	-	-	-	-	-	-	-	-	-	-	-
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL01	1.7 - 1.9 m	Fill	05/02/25	<4	<0.4	13	45	94	3.5	5	23	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL01	1.9 - 2.1 m	Fill	05/02/25	5	<0.4	17	18	28	0.5	6	23	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL01	3 - 3.2 m	Natural	13/02/25	5	<0.4	15	14	21	0.3	8	25	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL01	4.8 - 5 m	Natural	13/02/25	4	<0.4	12	9	15	0.1	6	19	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL02	0.3 - 0.5 m	Fill	29/01/25	6	<0.4	18	11	15	<0.1	6	21	<0.5	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL02	0.8 - 1 m	Natural	29/01/25	6	<0.4	17	12	19	<0.1	6	22	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL02	1.3 - 1.5 m	Natural	29/01/25	6	<0.4	18	12	22	<0.1	6	24	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL03	0.1 - 0.2 m	Fill	05/02/25	<4	<0.4	17	53	5	<0.1	110	43	<0.5	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
BD2/20250205	0.1 - 0.2 m	Fill	05/02/25	<4	<0.4	16	50	6	<0.1	100	38	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL03	0.3 - 0.4 m	Fill	05/02/25	5	<0.4	11	14	160	<0.1	25	41	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL03	0.4 - 0.6 m	Fill	05/02/25	5	<0.4	19	9	26	<0.1	6	20	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL03	1 - 1.2 m	Natural	05/02/25	5	<0.4	17	13	27	<0.1	8	25	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL04	0.1 - 0.2 m	Fill	05/02/25	<4	<0.4	16	59	6	<0.1	110	44	<0.5	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL04	0.3 - 0.4 m	Fill	05/02/25	4	<0.4	10	10	12	<0.1	22	35	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL04	0.4 - 0.6 m	Fill	05/02/25	4	<0.4	13	6	18	<0.1	5	14	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
BD1/20250205	0.4 - 0.6 m	Fill	05/02/25	<4	<0.4	14	6	15	<0.1	5	12	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600

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Table H1: Summary of results of soil analysis

				Priority metals								Non-metal inorganics	Priority PAH					Priority TRH					
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Cyanide (total)	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)
			PQL	4	0.4	1	1	1	0.1	1	1	0.5	1	0.05	0.5	0.05	25	50	25	50	100	100
Sample ID	Depth	Fill/Natural/material	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TL04	1.3 - 1.5 m	Natural	05/02/25	5	<0.4	18	9	12	<0.1	5	19	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL05	0.3 - 0.4 m	Fill	05/02/25	<4	<0.4	22	58	4	<0.1	150	48	<0.5	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL05	0.5 - 0.7 m	Fill	05/02/25	5	<0.4	18	11	19	<0.1	14	14	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL05	1 - 1.2 m	Natural	05/02/25	5	<0.4	23	10	14	<0.1	7	14	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL05	2 - 2.2 m	Natural	13/02/25	4	<0.4	15	9	13	<0.1	7	18	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL05	5 - 5.5 m	Natural	13/02/25	5	<0.4	11	10	12	<0.1	8	28	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL06	0.3 - 0.5 m	Fill	29/01/25	6	<0.4	10	7	19	<0.1	12	60	<0.5	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL06	0.8 - 1 m	Natural	29/01/25	5	<0.4	16	6	14	<0.1	5	10	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
BD1/20250129	0.8 - 1 m	Natural	29/01/25	5	<0.4	15	6	13	<0.1	5	10	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL06	3 - 3.2 m	Natural	13/02/25	<4	<0.4	9	7	9	<0.1	4	13	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL06	4.8 - 5 m	Natural	13/02/25	5	<0.4	8	8	7	<0.1	5	20	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL07	0.25 - 0.3 m	Fill	17/02/25	<4	<0.4	10	53	16	<0.1	7	33	<0.5	<1	0.2	<0.5	2.7	<25	<50	<25	<50	210	270
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL08	0.3 - 0.5 m	Fill	17/02/25	<4	<0.4	8	16	39	0.3	9	15	-	<1	0.2	<0.5	3.8	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
BD01/20250217	0.3 - 0.5 m	Fill	17/02/25	4	<0.4	9	9	47	0.3	5	14	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL08	1.3 - 1.5 m	Fill	17/02/25	<4	<0.4	5	5	13	<0.1	3	8	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL08	1.8 - 2 m	Fill	17/02/25	<4	<0.4	8	6	10	<0.1	4	12	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL08	2.1 - 2.3 m	Natural	17/02/25	<4	<0.4	7	6	9	<0.1	3	9	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL09	0.3 - 0.5 m	Fill	29/01/25	<4	0.5	11	14	55	0.3	12	94	<0.5	<1	0.09	<0.5	0.61	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL09	0.8 - 1 m	Natural	29/01/25	<4	<0.4	12	11	13	<0.1	6	7	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL09	1.3 - 1.5 m	Natural	29/01/25	<4	<0.4	7	6	6	<0.1	3	11	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL10	0.3 - 0.5 m	Fill	29/01/25	5	<0.4	15	8	19	<0.1	6	17	<0.5	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL10	0.8 - 1 m	Natural	29/01/25	4	<0.4	15	8	14	<0.1	5	13	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL10	1.3 - 1.5 m	Natural	29/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
TL11	0.3 - 0.4 m	Fill	05/02/25	5	<0.4	15	9	17	<0.1	10	22	<0.5	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL11 - [TRIPLICATE]	0.3 - 0.4 m	Fill	05/02/25	6	<0.4	13	11	18	<0.1	18	39	-	-	-	-	-	-	-	-	-	-	-
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL11	0.4 - 0.6 m	Fill	5/02/2025	5	<0.4	18	9	13	<0.1	6	19	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL11	0.8 - 1 m	Natural	05/02/25	5	<0.4	17	12	14	<0.1	6	22	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 180	600 1,100	80 -	1,200 140	30,000 430	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
ASP1	0 m		05/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
ASP2	0 m		05/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Douglas PARTNERS

Table H1: Summary of results of soil analysis

				Priority metals								Non-metal inorganics	Priority PAH					Priority TRH					
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Cyanide (total)	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)
			PQL	4	0.4	1	1	1	0.1	1	1	0.5	1	0.05	0.5	0.05	25	50	25	50	100	100
Sample ID	Depth	Fill/Natural/material	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
ASP3	0 m		05/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
ASP4	0 m		05/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
TL12	0.3 - 0.5 m	Fill	17/02/25	4	<0.4	26	8	12	<0.1	6	7	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL12	0.8 - 1 m	Fill	17/02/25	5	<0.4	20	11	19	<0.1	9	17	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
TL13	0.3 - 0.4 m	Fill	17/02/25	4	0.7	12	30	32	0.2	34	100	<0.5	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
ASP1	0 m	Fill	5/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP2	0 m	Fill	5/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP3	0 m	Fill	5/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Douglas (2025)																						
RB-SP-1	0 m	Fill	29/01/25	<4	<0.4	17	59	9	<0.1	110	44	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
RB-SP-2	0 m	Fill	29/01/25	<4	<0.4	21	66	14	<0.1	120	50	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
RB-SP-3	0 m	Fill	29/01/25	<4	<0.4	25	71	7	<0.1	160	55	-	<1	<0.05	<0.5	<0.05	<25	<50	<25	<50	<100	<100
				300 100	90 -	300 410	17,000 160	600 1,100	80 -	1,200 75	30,000 420	240 -	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 1,300	- 5,600
RB-ACM-1	Unknown depth (from roadbase)	Material	45695	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Lab result

HIL/HSL value EIL/ESL/EGV value

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

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

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

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

Notes:

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

b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Commercial/ industrial D

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

HIL	HIL-D (NEPC, 2013 or HEPA, 2025 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2025)
HSL (vapour intrusion)	HSL-D (NEPC, 2013)	ESL	Commercial and Industrial (NEPC, 2013)
DC	Direct contact HSL D Commercial/Industrial (CRC CARE, 2011)	ML	Commercial and Industrial (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2025)

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Table H1: Summary of results of soil analysis

				BTEX				VOC	Priority phenols	Priority OCP									Priority OPP	PCB	Priority PFAS				
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Total VOC	Total Phenolics	DDT+DDE+DDD c	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyriphos	Total PCB	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS
			PQL	0.2	0.5	1	1	1	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001
Sample ID	Depth	Fill/Natural/material	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Current Investigation																									
TL01	0.3 - 0.4 m	Fill	05/02/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL01	0.5 - 0.6 m	Fill	05/02/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0001	0.0001	<0.0001	<0.0001	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL01 - [TRIPLICATE]	0.5 - 0.6 m	Fill	05/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL01	1.7 - 1.9 m	Fill	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL01	1.9 - 2.1 m	Fill	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL01	3 - 3.2 m	Natural	13/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL01	4.8 - 5 m	Natural	13/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL02	0.3 - 0.5 m	Fill	29/01/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0002	<0.0001	0.0002	0.0002	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL02	0.8 - 1 m	Natural	29/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL02	1.3 - 1.5 m	Natural	29/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL03	0.1 - 0.2 m	Fill	05/02/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
BD2/20250205	0.1 - 0.2 m	Fill	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL03	0.3 - 0.4 m	Fill	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL03	0.4 - 0.6 m	Fill	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL03	1 - 1.2 m	Natural	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL04	0.1 - 0.2 m	Fill	05/02/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0002	<0.0001	0.0002	0.0002	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL04	0.3 - 0.4 m	Fill	05/02/25	<0.2	<0.5	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL04	0.4 - 0.6 m	Fill	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
BD1/20250205	0.4 - 0.6 m	Fill	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -

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Table H1: Summary of results of soil analysis

				BTEX				VOC	Priority phenols	Priority OCP									Priority OPP	PCB	Priority PFAS				
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Total VOC	Total Phenolics	DDT+DDE+DDD c	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyriphos	Total PCB	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS
			PQL	0.2	0.5	1	1	1	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001
Sample ID	Depth	Fill/Natural/material	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TL04	1.3 - 1.5 m	Natural	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL05	0.3 - 0.4 m	Fill	05/02/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL05	0.5 - 0.7 m	Fill	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL05	1 - 1.2 m	Natural	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL05	2 - 2.2 m	Natural	13/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL05	5 - 5.5 m	Natural	13/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL06	0.3 - 0.5 m	Fill	29/01/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL06	0.8 - 1 m	Natural	29/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
BD1/20250129	0.8 - 1 m	Natural	29/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL06	3 - 3.2 m	Natural	13/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL06	4.8 - 5 m	Natural	13/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL07	0.25 - 0.3 m	Fill	17/02/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0004	<0.0001	0.0004	0.0004	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL08	0.3 - 0.5 m	Fill	17/02/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
BD01/20250217	0.3 - 0.5 m	Fill	17/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL08	1.3 - 1.5 m	Fill	17/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0031	<0.0001	0.0031	**0.0031**	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL08	1.8 - 2 m	Fill	17/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL08	2.1 - 2.3 m	Natural	17/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL09	0.3 - 0.5 m	Fill	29/01/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL09	0.8 - 1 m	Natural	29/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL09	1.3 - 1.5 m	Natural	29/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL10	0.3 - 0.5 m	Fill	29/01/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL10	0.8 - 1 m	Natural	29/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL10	1.3 - 1.5 m	Natural	29/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	50 10	20 -	20 1	20 -
TL11	0.3 - 0.4 m	Fill	05/02/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL11 - [TRIPLICATE]	0.3 - 0.4 m	Fill	05/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL11	0.4 - 0.6 m	Fill	5/02/2025	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL11	0.8 - 1 m	Natural	05/02/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
ASP1	0 m		05/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
ASP2	0 m		05/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Table H1: Summary of results of soil analysis

				BTEX				VOC	Priority phenols	Priority OCP									Priority OPP	PCB	Priority PFAS				
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Total VOC	Total Phenolics	DDT+DDE+DDD c	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyriphos	Total PCB	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS
			PQL	0.2	0.5	1	1	1	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001
Sample ID	Depth	Fill/Natural/material	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
ASP3	0 m		05/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
ASP4	0 m		05/02/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
TL12	0.3 - 0.5 m	Fill	17/02/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL12	0.8 - 1 m	Fill	17/02/25	<0.2	<0.5	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	0.0007	<0.0001	0.0007	0.0007	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
TL13	0.3 - 0.4 m	Fill	17/02/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0006	<0.0001	0.0006	0.0006	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
ASP1	0 m	Fill	5/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP2	0 m	Fill	5/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASP3	0 m	Fill	5/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Douglas (2025)																									
RB-SP-1	0 m	Fill	29/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0002	<0.0001	0.0002	0.0002	<0.0001
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
RB-SP-2	0 m	Fill	29/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
RB-SP-3	0 m	Fill	29/01/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				NL 65	NL 105	NL 125	NL 45	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 10	1 -	1 1	1 -
RB-ACM-1	Unknown depth (from roadbase)	Material	45695	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Lab result

HIL/HSL value EIL/ESL/EGV value

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

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

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

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

Notes:

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

b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Commercial/ industrial D

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

HIL	HIL-D (NEPC, 2013 or HEPA, 2025 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2025)
HSL (vapour intrusion)	HSL-D (NEPC, 2013)	ESL	Commercial and Industrial (NEPC, 2013)
DC	Direct contact HSL D Commercial/Industrial (CRC CARE, 2011)	ML	Commercial and Industrial (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2025)

Table H1: Summary of results of soil analysis

				Asbestos						Coal tar	pH, EC and CEC	
				FA and AF Estimation	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	Total Asbestos#1	Asbestos ID in matrial	Coal tar	pH 1:5 soil:water	Cation Exchange Capacity
			PQL	0.001				0.1	0.1			1
Sample ID	Depth	Fill/Natural/material	Sample Date	%(w/w)	-	-	-	g/kg		-	pH Units	cmol/kg
Current Investigation												
TL01	0.3 - 0.4 m	Fill	05/02/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	- - -	- - -
TL01	0.5 - 0.6 m	Fill	05/02/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	- - -	- - -
TL01 - [TRIPLICATE]	0.5 - 0.6 m	Fill	05/02/25	- - -	-	-	-	-	-	-	- - -	- - -
TL01	1.7 - 1.9 m	Fill	05/02/25	- - -	-	-	-	-	-	-	- - -	- - -
TL01	1.9 - 2.1 m	Fill	05/02/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	- - -	- - -
TL01	3 - 3.2 m	Natural	13/02/25	- - -	-	-	-	-	-	-	- - -	- - -
TL01	4.8 - 5 m	Natural	13/02/25	- - -	-	-	-	-	-	-	- - -	- - -
TL02	0.3 - 0.5 m	Fill	29/01/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	- - -	- - -
TL02	0.8 - 1 m	Natural	29/01/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	- - -	- - -
TL02	1.3 - 1.5 m	Natural	29/01/25	- - -	-	-	-	-	-	-	7.7 - -	8.3 - -
TL03	0.1 - 0.2 m	Fill	05/02/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	- - -	- - -
BD2/20250205	0.1 - 0.2 m	Fill	05/02/25	- - -	-	-	-	-	-	-	- - -	- - -
TL03	0.3 - 0.4 m	Fill	05/02/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	9.6 - -	7.4 - -
TL03	0.4 - 0.6 m	Fill	05/02/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	- - -	- - -
TL03	1 - 1.2 m	Natural	05/02/25	- - -	-	-	-	-	-	-	6 - -	8.3 - -
TL04	0.1 - 0.2 m	Fill	05/02/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	- - -	- - -
TL04	0.3 - 0.4 m	Fill	05/02/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	- - -	- - -
TL04	0.4 - 0.6 m	Fill	05/02/25	<0.001 0.001 -	NAD	NAD	NAD	<0.1	-	-	- - -	- - -
BD1/20250205	0.4 - 0.6 m	Fill	05/02/25	- - -	-	-	-	-	-	-	- - -	- - -

Table H1: Summary of results of soil analysis

				Asbestos						Coal tar	pH, EC and CEC	
				FA and AF Estimation	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	Total Asbestos#1	Asbestos ID in matrial	Coal tar	pH 1:5 soil:water	Cation Exchange Capacity
			PQL	0.001				0.1	0.1			1
Sample ID	Depth	Fill/Natural/material	Sample Date	%(w/w)	-	-	-	g/kg		-	pH Units	cmol/kg
TL04	1.3 - 1.5 m	Natural	05/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL05	0.3 - 0.4 m	Fill	05/02/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL05	0.5 - 0.7 m	Fill	05/02/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL05	1 - 1.2 m	Natural	05/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL05	2 - 2.2 m	Natural	13/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL05	5 - 5.5 m	Natural	13/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL06	0.3 - 0.5 m	Fill	29/01/25	<0.001	NAD	NAD	NAD	<0.1	-	-	8.3	3.9
				0.001 -							- -	- -
TL06	0.8 - 1 m	Natural	29/01/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
BD1/20250129	0.8 - 1 m	Natural	29/01/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL06	3 - 3.2 m	Natural	13/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL06	4.8 - 5 m	Natural	13/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL07	0.25 - 0.3 m	Fill	17/02/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL08	0.3 - 0.5 m	Fill	17/02/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
BD01/20250217	0.3 - 0.5 m	Fill	17/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL08	1.3 - 1.5 m	Fill	17/02/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL08	1.8 - 2 m	Fill	17/02/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL08	2.1 - 2.3 m	Natural	17/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL09	0.3 - 0.5 m	Fill	29/01/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL09	0.8 - 1 m	Natural	29/01/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL09	1.3 - 1.5 m	Natural	29/01/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL10	0.3 - 0.5 m	Fill	29/01/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL10	0.8 - 1 m	Natural	29/01/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL10	1.3 - 1.5 m	Natural	29/01/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL11	0.3 - 0.4 m	Fill	05/02/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL11 - [TRIPLICATE]	0.3 - 0.4 m	Fill	05/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL11	0.4 - 0.6 m	Fill	5/02/2025	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL11	0.8 - 1 m	Natural	05/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
ASP1	0 m		05/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
ASP2	0 m		05/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -

Table H1: Summary of results of soil analysis

				Asbestos						Coal tar	pH, EC and CEC	
				FA and AF Estimation	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	Total Asbestos#1	Asbestos ID in matrial	Coal tar	pH 1:5 soil:water	Cation Exchange Capacity
			PQL	0.001				0.1	0.1			1
Sample ID	Depth	Fill/Natural/material	Sample Date	%(w/w)	-	-	-	g/kg		-	pH Units	cmol/kg
ASP3	0 m		05/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
ASP4	0 m		05/02/25	-	-	-	-	-	-	-	-	-
				- -							- -	- -
TL12	0.3 - 0.5 m	Fill	17/02/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL12	0.8 - 1 m	Fill	17/02/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
TL13	0.3 - 0.4 m	Fill	17/02/25	<0.001	NAD	NAD	NAD	<0.1	-	-	-	-
				0.001 -							- -	- -
ASP1	0 m	Fill	5/02/2025	-	-	-	-	-	-	Absent	-	-
ASP2	0 m	Fill	5/02/2025	-	-	-	-	-	-	Absent	-	-
ASP3	0 m	Fill	5/02/2025	-	-	-	-	-	-	Absent	-	-
Douglas (2025)												
RB-SP-1	0 m	Fill	29/01/25	<0.001	NAD	NAD	NAD	<0.1	-		-	-
				0.001 -							- -	- -
RB-SP-2	0 m	Fill	29/01/25	<0.001	NAD	NAD	NAD	<0.1	-		-	-
				0.001 -							- -	- -
RB-SP-3	0 m	Fill	29/01/25	<0.001	NAD	NAD	NAD	<0.1	-		-	-
				0.001 -							- -	- -
RB-ACM-1	Unknown depth (from roadbase)	Material	45695	-	-	-	-	-	Chrysotile asbestos		-	-

Lab result

HIL/HSL value EIL/ESL/EGV value

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

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

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

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

Notes:

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

b Naphthalene reported as highest detection from the BTEXN or PAH suite, or if both results <PQL as lowest PQL

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Commercial/ industrial D

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

HIL	HIL-D (NEPC, 2013 or HEPA, 2025 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2025)
HSL (vapour intrusion)	HSL-D (NEPC, 2013)	ESL	Commercial and Industrial (NEPC, 2013)
DC	Direct contact HSL D Commercial/Industrial (CRC CARE, 2011)	ML	Commercial and Industrial (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2025)

2. Table H2 Summary Result Table -ASS.xlsx

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Table H2: Summary of Results - Acid Sulfate Soils

Project No: 231981.00

Project Name: Parramatta Civil Link - Block 3

Location: Horwood place, Parramatta NSW

Sample information						Screening test results				Laboratory analysis results (acid base accounting)									
Location ID	Depth from (m)	Depth to (m)	Reduced level (AHD)	Sample description	Adopted texture	pH_F (pH units)	pH_{FOX} (pH units)	Reaction strength	pH change (pH units)	pH_{KCl} (pH units)	S_{KCl} (%S)	S_{HCl} (%S)	Scr (%S)	TAA (%S)	S_{NAS} (%S)	ANC_{BT} (%S)	ANC corroborated (Y/N or NA)	Net acidity (%S)
												Coarse texture: sands to loamy sands and peats						0.03
				Assessment criteria (pH units)		**<4**	**<3**	-	**1.0**	Action criteria (%S)		Medium texture: clayey sand to light clays						0.06[a]/0.03[b]
												Fine texture: light medium to heavy clays						0.1[a]/0.03[b]
Location ID	Depth from (m)	Depth to (m)	Reduced level (AHD)	Sample Description	Adopted Texture	pH_F (pH units)	pH_{FOX} (pH units)	Reaction Strength	pH change (pH units)	pH_{KCl} (pH units)	S_{KCl} (%S)	S_{HCl} (%S)	Scr (%S)	TAA (%S)	S_{NAS} (%S)	ANC_{BT} (%S)	ANC corroborated (Y/N or NA)	Net Acidity (%S)
TL01	1.50	1.70	-	Silty Clay	C	8.1	6.2	L	**1.9**									
TL01	3.00	3.20	-	Silty Clay	C	6.6	6.0	L	0.6									
TL01	4.00	4.20	-	Sandy Clay	C	8.3	6.2	L	**2.1**									
TL01	4.80	5.00	-	Sandy Clay	C	7.5	5.9	L	**1.6**									
TL05	2.00	2.20	-	Silty Clay	C	7.4	6.0	L	**1.4**									
TL05	3.00	3.20	-	Silty Clay	C	7.2	6.1	L	**1.1**									
TL05	4.00	4.20	-	Silty Clay	C	7.6	6.2	L	**1.4**									
TL05	5.00	5.20	-	Sandy Clay	C	7.0	5.9	L	**1.1**									
TL05	6.00	6.20	-	Sandy Clay	C	6.8	5.8	L	**1.0**									
TL05	8.00	8.20	-	Sand	C	6.9	5.2	L	**1.7**	5.4	NT	NT	<0.005	<0.01	NT	NT	N	0.008
TL05	9.00	9.20	-	Sand	C	6.6	5.4	L	**1.2**	5.6	NT	NT	0.006	<0.01	NT	NT	N	0.010
TL06	1.50	2.00	-	Silty Clay	C	6.3	5.7	L	0.6									
TL06	2.00	2.20	-	Silty Clay	C	7.0	5.8	L	**1.2**									
TL06	3.00	3.20	-	Sandy Clay	C	7.5	5.8	L	**1.7**									
TL06	4.00	4.20	-	Sandy Clay	C	7.4	5.8	L	**1.6**									
TL06	4.80	5.00	-	Clayey Sand	C	6.5	5.8	L	0.7									
TL08	0.80	1.00	-	Clayey Sand	C	8.6	6.5	M	**2.1**									
TL08	1.80	2.00	-	Sandy Clay	C	7.4	6.8	H	0.6									
TL08	2.50	2.70	-	Sandy Clay	C	6.9	4.3	L	**2.6**	5.8	NT	NT	0.020	<0.01	NT	NT	N	0.016
			-															

Notes:
Adopted texture - C = coarse, M = medium, F = fine
pH_F - Soil pH in water
pH_{FOX} - Soil pH in peroxide
Reaction strength: L - Low , M - Medium, H - High, X - Extreme, V - Volcanic, F - Frothing (indicative of organic material)
pH change = pH_F - pH_{FOX}
pH_{KCL} - KCl extractable pH
S_{KCl} - KCl extractable sulfur
S_{HCl} - HCl extractable sulfur
S_{cr} - potential sulfidic acidity
TAA - titratable actual acidity (reported if pH_{KCL}<6.5)
S_{NAS} – retained acidity (reported if pHkCl < 4.5)
ANC_{BT} – acid neutralising capacity (reported if pH_{KCl} ≥ 6.5)
NT - Not tested
Blue depths indicate where samples have been collected at or below the groundwater table
Bold results are indicators of ASS conditions, noting:
- Assessment criteria are considered a reasonable initial screening for AASS or PASS
- pH_F<4 is indicative of the presence of actual ASS (AASS), although it is not conclusive of ASS on its own as naturally occurring non ASS soils can have pH_F<5
- pH_{FOX}<3 or pH Change ≥1 may indicate potential ASS (PASS), although exceptions apply. Laboratory testing required to confirm presence of Reduced Inorganic Sulfur (RIS)
- Refer to Table 5.1, A2, A3 of Sullivan,L. et al (2018) for further details
Shaded results trigger action (i.e. equal to or exceed the action criteria). Criteria is specific for soil texture and anticipated tonnage of soil disturbed.
Net Acidity can only include the measured ANC where the ANC has been corroborated by other data (for example slab incubation data) that demonstrates the soil material does not experience acidification during complete oxidation under field conditions.
a - Action criterion for disturbance of 1-1000 tonnes of material
b - Action criterion for disturbance of more than 1000 tonnes of material

Douglas PARTNERS

Table H3: Summary of results of preliminary waste classification

				Metals										TRH		BTEX				PAH		Phenols	OCP				OPP	PCB	VOC																						PFAS				Asbestos				
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	TCLP Lead	Mercury (inorganic)	Nickel	TCLP Nickel	Zinc	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)pyrene (BaP) TEQ	Total PAH	Total Phenolics	Dichlorodiphenyldichloroethylene (sum of isomers)	Total Endosulfan	Total Assigned OCP	Mirex	Total Assigned OPP	Total PCB	carbon tetrachloride	Monochlorobenzene	Chloroform	1,2-dichlorobenzene	1,4-dichlorobenzene	1,2-dichloroethane	1,1-Dichloroethene	Styrene (Ethylbenzene)	1,1,1,2-tetrachloroethane	1,1,2,2-tetrachloroethane	Tetrachloroethene	1,2,3-trichloropropane	1,3,5-trimethylbenzene	1,2,4-trimethylbenzene	Vinyl Chloride	PFOA	TCLP PFOA	PFOS + PFHxS	TCLP PFOS + PFHxS	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Total Asbestos#	Asbestos Comment
			PQL	4	0.4	1	1	1	0.03	0.1	1	0.02	1	25	50	0.2	0.5	1	1	0.05	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.0001	0.00001	0.0001	0.00001						0.001	0.1	
Sample ID	Depth	Fill/Natural/Material	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L						g	g	%(w/w)	g/kg	
Waste Classification																																																								
TL01	0.3 - 0.4 m	Fill	05/02/25	4	<0.4	9	5	14	-	<0.1	8	-	36	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL01	0.5 - 0.6 m	Fill	05/02/25	5	<0.4	14	24	160	<0.03	4	8	-	170	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.0001	<0.00001	<0.0001	<0.00001	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL01 - ITEM15_LATE1			05/02/25	<4	<0.4	14	24	110	-	3	11	-	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL01	1.7 - 1.9 m	Fill	05/02/25	<4	<0.4	13	45	94	-	3.5	5	-	23	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL01	1.9 - 2.1 m	Fill	05/02/25	5	<0.4	17	18	28	-	0.5	6	-	23	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL02	0.3 - 0.5 m	Fill	29/01/25	6	<0.4	18	11	15	-	<0.1	6	-	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.0001	<0.00001	0.0002	<0.00001	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL03	0.1 - 0.2 m	Fill	05/02/25	<4	<0.4	17	53	5	-	<0.1	110	0.1	43	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.0001	-	<0.0001	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
BD02/202502051	0.1 - 0.2 m	Fill	05/02/25	<4	<0.4	16	50	6	-	<0.1	100	-	38	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0001	-	-	-	-	-	-	-	-
TL03	0.3 - 0.4 m	Fill	05/02/25	5	<0.4	11	14	160	<0.03	<0.1	25	-	41	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL03	0.4 - 0.6 m	Fill	05/02/25	5	<0.4	19	9	26	-	<0.1	6	-	20	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL04	0.1 - 0.2 m	Fill	05/02/25	<4	<0.4	16	59	6	-	<0.1	110	0.1	44	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.0001	<0.00001	0.0002	<0.00001	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL04	0.3 - 0.4 m	Fill	05/02/25	4	<0.4	10	10	12	-	<0.1	22	-	35	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL04	0.4 - 0.6 m	Fill	05/02/25	4	<0.4	13	6	18	-	<0.1	5	-	14	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
BD01/202502051	0.4 - 0.6 m	Fill	05/02/25	<4	<0.4	14	6	15	-	<0.1	5	-	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL05	0.3 - 0.4 m	Fill	05/02/25	<4	<0.4	22	58	4	-	<0.1	150	0.46	48	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.0001	-	<0.0001	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL05	0.5 - 0.7 m	Fill	05/02/25	5	<0.4	18	11	19	-	<0.1	14	-	14	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL06	0.3 - 0.5 m	Fill	29/01/25	6	<0.4	10	7	19	-	<0.1	12	-	60	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL07	0.25 - 0.3 m	Fill	17/02/25	<4	<0.4	10	16	16	-	<0.1	7	-	15	<25	190	<0.2	<0.5	<1	<1	0.2	2.7	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.0001	<0.00001	0.0004	0.00001	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL08	0.3 - 0.5 m	Fill	17/02/25	<4	<0.4	8	9	39	-	0.3	9	-	14	<25	<50	<0.2	<0.5	<1	<1	0.2	3.8	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
BD01/202502077	0.3 - 0.5 m	Fill	17/02/25	4	<0.4	9	53	47	-	0.3	5	-	33	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL08	1.3 - 1.5 m	Fill	17/02/25	<4	<0.4	5	5	13	-	<0.1	3	-	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.00001	0.0031	0.0001	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL08	1.8 - 2 m	Fill	17/02/25	<4	<0.4	8	6	10	-	<0.1	4	-	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL09	0.3 - 0.5 m	Fill	29/01/25	<4	0.5	11	14	55	-	0.3	12	-	94	<25	<50	<0.2	<0.5	<1	<1	0.09	0.61	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL10	0.3 - 0.5 m	Fill	29/01/25	5	<0.4	15	8	19	-	<0.1	6	-	17	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL11	0.3 - 0.4 m	Fill	05/02/25	5	<0.4	15	9	17	-	<0.1	10	-	22	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.0001	<0.00001	0.0007	0.00002	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL11 - ITEM15_LATE1			05/02/25	6	<0.4	13	11	18	-	<0.1	18	-	39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL12	0.3 - 0.5 m	Fill	17/02/25	4	<0.4	26	8	12	-	<0.1	6	-	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL12	0.8 - 1 m	Fill	17/02/25	5	<0.4	20	11	19	-	<0.1	9	-	17	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.0001	<0.00001	0.0007	0.00002	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL13	0.3 - 0.4 m	Fill	17/02/25	4	0.7	12	30	32	-	0.2	34	-	100	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.0001	<0.00001	0.0006	0.00002	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
Waste Classification Criteria																																																								
CT1				100	20	100	-	100	-	4	40	-	-	650	10,000	10	288	600	1,000	0.8	200	288	<50	60	-	-	4	<50	10	2,000	120	86	150	10	14	60	200	26	14	600	24	10	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCC1				500	100	1,900	-	1,500	-	50	1,050	-	-	650	10,000	18	518	1,080	1,800	10	200	518	<50	108	-	-	7.5	<50	18	3,600	126	155	270	18	25	108	360	46.8	25.2	1,080	43.2	18	7.2	18	-	18	-	-	-	-	-	-	-	-	-	-	-
TCLP1					-		-		5			2	-																																											
CT2				400	80	400	-	400	-	16	160	-	-	2,600	40,000	40	1,152	2,400	4,000	3.2	800	1,152	<50	240	-	-	16	<50	40	8,000	480	344	600	40	56	240	800	104	56	2,400	96	40	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCC2				2,000	400	7,600	-	6,000	-	200	4,200	-	-	2,600	40,000	72	2,073	4,320	7,200	23	800	2,073	<50	432	-	-	30	<50	72	14,400	864	620	1,080	72	100	432	1,440	187.2	100.8	4,320	172.8	72	28.8	72	-	72	-	-	-	-	-	-	-	-	-	-	-
TCLP2				-	-	-	-	-	20	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	0.2	-	-	-	-	-	-	-	-	-	-
VENM Classification																																																							
TL01	3 - 3.2 m	Natural	13/02/25	5	<0.4	15	14	21	-	0.3	8	-	25	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL01	4.8 - 5 m	Natural	13/02/25	4	<0.4	12	9	15	-	0.1	6	-	19	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL02	0.8 - 1 m	Natural	29/01/25	6	<0.4	17	12	19	-	<0.1	6	-	22	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL02	1.3 - 1.5 m	Natural	29/01/25	6	<0.4	18	12	22	-	<0.1	6	-	24	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL03	1 - 1.2 m	Natural	05/02/25	5	<0.4	17	13	27	-	<0.1	8	-	25	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL04	1.3 - 1.5 m	Natural	05/02/25	5	<0.4	18	9	12	-	<0.1	5	-	19	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL05	1 - 1.2 m	Natural	05/02/25	5	<0.4	23	10	14	-	<0.1	7	-	14	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL05	2 - 2.2 m	Natural	13/02/25	4	<0.4	15	9	13	-	<0.1	7	-	18	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL05	5 - 5.5 m	Natural	13/02/25	5	<0.4	11	10	12	-	<0.1	8	-	28	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL06	0.8 - 1 m	Natural	29/01/25	5	<0.4	16	6	14	-	<0.1	5	-	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	-	<0.0001	-	-	-	-	-	-	-	-
BD01/202501129	0.8 - 1 m	Natural	29/01/25	5	<0.4	15	6	13	-	<0.1	5	-	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL06	3 - 3.2 m	Natural	13/02/25	4	<0.4	9	7	9	-	<0.1	4	-	13	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL06	4.8 - 5 m	Natural	13/02/25	5	<0.4	8	8	7	-	<0.1	5	-	20	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL08	2.1 - 2.3 m	Natural	17/02/25	<4	<0.4	7	6	9	-	<0.1	3	-	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL09	0.8 - 1 m	Natural	29/01/25	<4	<0.4	12	11	13	-	<0.1	6	-	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NAD	NAD	NAD	-	-	<0.001	<0.1	NAD
TL09	1.3 - 1.5 m	Natural	29/01/25	<4	<0.4	7	6	6	-	<0.1	3	-	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL10	0.8 - 1 m	Natural	29/01/25	4	<0.4	15	8	14	-	<0.1	5	-	13	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL10	1.3 - 1.5 m	Natural	29/01/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TL11	0.8 - 1 m	Natural	05/02/25	5	<0.4	17	12	14	-	<0.1	6	-	22	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VENM Classification Criteria																																																							
NEPC (1999)				1-50	1	5-1000	2-100	2-200	-	0.03	5-500	-	10-300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZECC (1992)				0.2-20	0.04-2	0.5-110	1-190	<2-200	-	0.001-0.1	2-400	-	2-180	-	-	0.05 - 1	0.1 - 1	-	-	-	-	0.95-5	0.03 - 0.5	-	<0.001 - <0.97	-	-	-	0.02 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZECC (2000)				1-53	0.016-0.78	2.5-673	0.4-412	2-81	-	-	1-377	-	1-263	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Background concentration exceedance

- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

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

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

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

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

f NSW EPA, 2014, Waste Classification Guidelines Part 1: Classifying Waste

PQL Practical quantitation limit

CT1 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste

SCC1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

TCLP1 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste

CT2 Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste

SCC2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

TCLP2 Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

Statical analysis (Nickel) - Run 1, all fill samples, excluding road base and duplicate samples

		Nickel
TL01	0.3 - 0.4 m	8
TL01	0.5 - 0.6 m	
TL01 - [TRIPLICATE]	0.5 - 0.6 m	11
TL01	1.7 - 1.9 m	5
TL01	1.9 - 2.1 m	6
TL02	0.3 - 0.5 m	6
TL03	0.1 - 0.2 m	
BD2/20250205	0.1 - 0.2 m	
TL03	0.3 - 0.4 m	25
TL03	0.4 - 0.6 m	6
TL04	0.1 - 0.2 m	
TL04	0.3 - 0.4 m	22
TL04	0.4 - 0.6 m	5
BD1/20250205	0.4 - 0.6 m	
TL05	0.3 - 0.4 m	150
TL05	0.5 - 0.7 m	14
TL06	0.3 - 0.5 m	12
TL07	0.25 - 0.3 m	
TL08	0.3 - 0.5 m	9
BD01/20250217	0.3 - 0.5 m	
TL08	1.3 - 1.5 m	3
TL08	1.8 - 2 m	4
TL09	0.3 - 0.5 m	12
TL10	0.3 - 0.5 m	6
TL11	0.3 - 0.4 m	
TL11 - [TRIPLICATE]	0.3 - 0.4 m	18
TL11	0.4 - 0.6 m	6
TL12	0.3 - 0.5 m	6
TL12	0.8 - 1 m	9
TL13	0.3 - 0.4 m	

Normal UCL Statistics for Uncensored Full Data Sets

User Selected Options	
Date/Time of Computation	ProUCL 5.17/03/2025 11:05:32 AM
From File	Stats_in_Run_Fill_b.xls
Full Precision	OFF
Confidence Coefficient	95%

Nickel

General Statistics

Total Number of Observations	21	Number of Distinct Observations	13
		Number of Missing Observations	0
Minimum	3	Mean	16.33
Maximum	150	Median	8
SD	31.19	SD of logged Data	0.841
Coefficient of Variation	1.909	Skewness	4.324

Normal GOF Test

Shapiro Wilk Test Statistic	0.377	**Shapiro Wilk GOF Test**	
5% Shapiro Wilk Critical Value	0.908	Data Not Normal at 5% Significance Level	
Lilliefors Test Statistic	0.343	**Lilliefors GOF Test**	
5% Lilliefors Critical Value	0.188	Data Not Normal at 5% Significance Level	

Data Not Normal at 5% Significance Level

Assuming Normal Distribution

95% Normal UCL		**95% UCLs (Adjusted for Skewness)**	
95% Student's-t UCL	28.07	95% Adjusted-CLT UCL (Chen-1995)	34.39
		95% Modified-t UCL (Johnson-1978)	29.14

Suggested UCL to Use

Data appear Approximate Lognormal, May want to try Lognormal Distribution

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.

Recommendations are based upon data size, data distribution, and skewness.

These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).

However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.

Douglas (2025)

Table A1: Summary of Laboratory Results

		Metals							TRH		BTEX				PAH		Phenols	OCP			
		Total Arsenic	Cadmium	Total Chromium	Lead	Mercury (inorganic)	Nickel	TCLP-Nickel	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)pyrene (B(a)P)	Total PAH	Total Phenolics	Scheduled Chemical Waste (standard)	Total Endosulfan	Total Analysed OCP	Mirex
	PQL	4	0.4	1	1	0.1	1	0.02	25	50	0.2	0.5	1	1	0.05	0.05	5	0.1	0.1	0.1	0.1
Sample ID	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RB-SP-1	29/01/25	<4	<0.4	**17**	**9**	<0.1	**110**	**0.1**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1
RB-SP-2	29/01/25	<4	<0.4	**21**	**14**	<0.1	**120**	**0.1**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1
RB-SP-3	29/01/25	<4	<0.4	**25**	**7**	<0.1	**160**	**0.26**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1
RB-ACM-1	7/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Waste Classification Criteria [f]																					
CT1		100	20	100	100	4	40	-	650	10,000	10	288	600	1000	0.8	200	288	<50	60	-	-
SCC1		500	100	1,900	1,500	50	1,050		650	10,000	18	518	1,080	1,800	10	200	518	<50	108	-	-
TCLP1		-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
CT2		400	80	400	400	16	160	-	2,600	40,000	40	1,152	2,400	4,000	3.2	800	1,152	<50	240	-	-
SCC2		2,000	400	7,600	6,000	200	4,200		2,600	40,000	72	2,073	4,320	7,200	23	800	2,073	<50	432	-	-
TCLP2		-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-

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

- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

a	QA/QC replicate of sample listed directly below the primary sample
b	Total chromium used as initial screen for chromium(VI).
c	Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)
d	Criteria for scheduled chemicals used as an initial screen
e	Criteria for Chlorpyrifos used as initial screen
f	NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste
PQL	Practical quantitation limit
CT1	Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste
SCC1	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
TCLP1	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
CT2	Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste
SCC2	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste
TCLP2	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

Table A1: Summary of Laboratory Results

		OPP	PCB	PFAS				Asbestos							
		Total Analysed OPP	Total PCB	PFOA	TCLP PFOA	PFOS + PFHxS	TCLP PFOS + PFHxS	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Total Asbestos#1	Asbestos ID in Material
	PQL	0.1	0.1	0.0001	0.00001	0.0001	0.00001						0.001	0.1	-
Sample ID	Sample Date	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	-	-	-	g	g	%(w/w)	g/kg	-
RB-SP-1	29/01/25	<0.1	<0.1	<0.0001	<0.00001	**0.0002**	<0.00001	NAD	NAD	NAD	–	–	<0.001	<0.1	-
RB-SP-2	29/01/25	<0.1	<0.1	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	-
RB-SP-3	29/01/25	<0.1	<0.1	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	-
RB-ACM-1	7/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	**Chrysotile asbestos**
CT1		4	<50	-	-	-	-	-	-	-	-	-	-	-	-
SCC1		7.5	<50	18	-	1.8	-	-	-	-	-	-	-	-	-
TCLP1		-	-	-	0.5	-	0.05	-	-	-	-	-	-	-	-
CT2		16	<50	-	-	-	-	-	-	-	-	-	-	-	-
SCC2		30	<50	72	-	7.2	-	-	-	-	-	-	-	-	-
TCLP2		-	-	-	2	-	0.2	-	-	-	-	-	-	-	-

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

- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

a	QA/QC replicate of sample listed directly below the primary sample
b	Total chromium used as initial screen for chromium(VI).
c	Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)
d	Criteria for scheduled chemicals used as an initial screen
e	Criteria for Chlorpyrifos used as initial screen
f	NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste
PQL	Practical quantitation limit
CT1	Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste
SCC1	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
TCLP1	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
CT2	Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste
SCC2	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste
TCLP2	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

Appendix B: Data Summary Tables

JN05778-WCC-RN18702
Waste Classification Assessment
Horwood Place,
Parramatta, NSW 2150

LR01 - Soil Results

				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sample Date:	22/01/2025	22/01/2025	22/01/2025	22/01/2025	22/01/2025	22/01/2025
				Sample ID:	SP01	SP02	SP03	DUP01	Trip Spike	Trip Blank
Analyte grouping/Analyte	**Unit**	**NSW EPA (2014) CT1**	**NSW EPA (2014) SCC1**	**Limit of reporting**						
Total Metals										
Arsenic	mg/kg	100	500	5	<5	**5**	**6**	<5	----	----
Cadmium	mg/kg	20	100	1	<1	<1	<1	<1	----	----
Chromium	mg/kg	100	1900	2	**13**	**16**	**23**	**12**	----	----
Copper	mg/kg	----	----	5	**9**	**11**	**11**	**11**	----	----
Lead	mg/kg	100	1500	5	**31**	**14**	**28**	**27**	----	----
Nickel	mg/kg	40	1050	2	**16**	**8**	**8**	**17**	----	----
Zinc	mg/kg	----	----	5	**51**	**24**	**25**	**44**	----	----
Mercury	mg/kg	4	20	0.1	<0.1	<0.1	<0.1	<0.1	----	----
Polychlorinated Biphenyls (PCB)										
Total Polychlorinated biphenyls	mg/kg	<50	<50	0.1	----	<0.1	----	----	----	----
Organochlorine Pesticides (OC)										
alpha-BHC	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
beta-BHC	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
gamma-BHC - (Lindane)	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
delta-BHC	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Heptachlor	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Aldrin	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Heptachlor epoxide	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Total Chlordane (sum)	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
trans-Chlordane	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
alpha-Endosulfan	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
cis-Chlordane	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Dieldrin	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
4.4`-DDE	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Endrin	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Endosulfan (sum)	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
beta-Endosulfan	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
4.4`-DDD	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Endrin aldehyde	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Endosulfan sulfate	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
4.4`-DDT	mg/kg	----	----	0.2	----	<0.2	----	----	----	----
Endrin ketone	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Methoxychlor	mg/kg	----	----	0.2	----	<0.2	----	----	----	----
Sum of DDD + DDE + DDT	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Sum of Aldrin + Dieldrin	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Total OC VIC EPA	mg/kg	<50	<50							
Organophosphorus Pesticides (OP)										
Dichlorvos	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Demeton-S-methyl	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Monocrotophos	mg/kg	----	----	0.2	----	<0.2	----	----	----	----
Dimethoate	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Diazinon	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Chlorpyrifos-methyl	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Parathion-methyl	mg/kg	----	----	0.2	----	<0.2	----	----	----	----
Malathion	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Fenthion	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Chlorpyrifos	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Parathion	mg/kg	----	----	0.2	----	<0.2	----	----	----	----
Pirimphos-ethyl	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Chlorfenvinphos	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Bromophos-ethyl	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Fenamiphos	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Prothiofos	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Ethion	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Carbophenothion	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Azinphos Methyl	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Total OP Pesticides	mg/kg	<50	<50							
Phenolic Compounds										
Phenol	mg/kg	288	518	0.5	----	<0.5	----	----	----	----
2-Chlorophenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
2-Methylphenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
3- & 4-Methylphenol	mg/kg	----	----	1	----	<1	----	----	----	----
2-Nitrophenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
2.4-Dimethylphenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
2.4-Dichlorophenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
2.6-Dichlorophenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
4-Chloro-3-methylphenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
2.4.6-Trichlorophenol	mg/kg	40	70	0.5	----	<0.5	----	----	----	----
2.4.5-Trichlorophenol	mg/kg	8000	14400	0.5	----	<0.5	----	----	----	----
Pentachlorophenol	mg/kg	----	----	2	----	<2	----	----	----	----
		----	----							
Polynuclear Aromatic Hydrocarbons										
Naphthalene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Acenaphthylene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Acenaphthene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Fluorene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Phenanthrene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Anthracene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Fluoranthene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Pyrene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Chrysene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	mg/kg	0.8	10	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Sum of polycyclic aromatic hydrocarbons	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene TEQ (zero)	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene TEQ (half LOR)	mg/kg	----	----	0.5	**0.6**	**0.6**	**0.6**	**0.6**	----	----
Benzo(a)pyrene TEQ (LOR)	mg/kg	----	----	0.5	**1.2**	**1.2**	**1.2**	**1.2**	----	----
Total PAH(18)	mg/kg	200	200							
Total Recoverable Hydrocarbons										
C6 - C10 Fraction	mg/kg			10	----	<10	----	----	----	----
C6 - C10 Fraction minus BTEX (F1)	mg/kg			10	----	<10	----	----	----	----
>C10 - C16 Fraction	mg/kg			50	----	<50	----	----	----	----
>C16 - C34 Fraction	mg/kg			100	----	<100	----	----	----	----
>C34 - C40 Fraction	mg/kg			100	----	<100	----	----	----	----
>C10 - C40 Fraction (sum)	mg/kg			50	----	<50	----	----	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	mg/kg			50	----	<50	----	----	----	----
Total Petroleum Hydrocarbons										
C6 - C9 Fraction	mg/kg	650	650	10	----	<10	----	----	----	----
C10 - C14 Fraction	mg/kg	----	----	50	----	<50	----	----	----	----
C15 - C28 Fraction	mg/kg	----	----	100	----	<100	----	----	----	----
C29 - C36 Fraction	mg/kg	----	----	100	----	<100	----	----	----	----
C10 - C36 Fraction (sum)	mg/kg	10000	10000	50	----	<50	----	----	----	----
BTEXN										
Benzene	mg/kg	10	18	0.2	----	<0.2	----	----	[100%]	<0.2
Toluene	mg/kg	288	518	0.5	----	<0.5	----	----	[77%]	<0.5
Ethylbenzene	mg/kg	600	1080	0.5	----	<0.5	----	----	[85%]	<0.5
meta- & para-Xylene	mg/kg	----	----	0.5	----	<0.5	----	----	[85%]	<0.5
ortho-Xylene	mg/kg	----	----	0.5	----	<0.5	----	----	[85%]	<0.5
Total Xylenes	mg/kg	1000	1800	0.5	----	<0.5	----	----	[86%]	<0.5
Sum of BTEX	mg/kg	----	----	0.2	----	<0.2	----	----	[84%]	<0.2
Naphthalene	mg/kg	----	----	1	----	<1	----	----	[100%]	<1
		----	----							
Asbestos		----	----							
Asbestos ID	Detection	----	----		NAD,OF	NAD,OF	NAD,OF	----	----	----

NAD - No Asbestos Detected
OF - Organic Fibers Detected

JN05778-WCC-RN18702
Waste Classification Assessment
Horwood Place,
Parramatta, NSW 2150

LR02- RPD

		Sample ID	SP01	DUP01	RPD %
		Sample Date	22/01/2025	22/01/2025	
		Matrix	Soil	Soil	
Analyte Name	**Units**	**Reporting Limit**	Result	Result	
PAH					
Naphthalene	mg/kg	0.5	<0.5	<0.5	NC
Acenaphthylene	mg/kg	0.5	<0.5	<0.5	NC
Acenaphthene	mg/kg	0.5	<0.5	<0.5	NC
Fluorene	mg/kg	0.5	<0.5	<0.5	NC
Phenanthrene	mg/kg	0.5	<0.5	<0.5	NC
Anthracene	mg/kg	0.5	<0.5	<0.5	NC
Fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Pyrene	mg/kg	0.5	<0.5	<0.5	NC
Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	NC
Chrysene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene	mg/kg	0.5	<0.5	<0.5	NC
Indeno(1.2.3.cd)pyrene	mg/kg	0.5	<0.5	<0.5	NC
Dibenz(a.h)anthracene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(g.h.i)perylene	mg/kg	0.5	<0.5	<0.5	NC
Sum of polycyclic aromatic hydrocarbons	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene TEQ (zero)	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene TEQ (half LOR)	mg/kg	0.5	**0.6**	**0.6**	NC
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	**1.2**	**1.2**	NC
Metals					
Arsenic, As	mg/kg	5	<5	<5	NC
Cadmium, Cd	mg/kg	1	<1	<1	NC
Chromium, Cr	mg/kg	2	**13**	**12**	8%
Copper, Cu	mg/kg	5	**9**	**11**	20%
Lead, Pb	mg/kg	5	**31**	**27**	14%
Nickel, Ni	mg/kg	2	**16**	**17**	6%
Zinc, Zn	mg/kg	5	**51**	**44**	15%
Mercury	mg/kg	0.1	<0.1	<0.1	NC

NC - non computable

Appendix B: Data Summary Tables

JN05778-WCC-RN18685
Waste Classification Assessment
Horwood Place,
Parramatta, NSW 2150

LR01 - Soil Results

					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Date:	13/01/2025	13/01/2025	13/01/2025	13/01/2025	06/01/2025	06/01/2025
					Sample ID:	SP01	SP02	SP03	DUP01	Trip Spike	Trip Blank
Analyte grouping/Analyte	**Unit**	**NSW EPA (2014) CT1**	**NSW EPA (2014) SCC1**	**NSW EPA (2014) TCLP1**	**Limit of reporting**						
Total Metals											
Arsenic	mg/kg	100	500		5	<5	<5	<5	<5	----	----
Cadmium	mg/kg	20	100		1	<1	<1	<1	<1	----	----
Chromium	mg/kg	100	1900		2	**23**	**12**	**23**	**23**	----	----
Copper	mg/kg	----	----		5	**59**	**15**	**33**	**67**	----	----
Lead	mg/kg	100	1500		5	**6**	**29**	**11**	<5	----	----
Nickel	mg/kg	40	1050		2	**86**	**31**	**82**	**94**	----	----
Nickel TCLP	mg/L	----	----	2	0.1	----	----	0.1	<0.1	----	----
Zinc	mg/kg	----	----		5	**54**	**71**	**57**	**51**	----	----
Mercury	mg/kg	4	20		0.1	<0.1	<0.1	<0.1	<0.1	----	----
Polychlorinated Biphenyls (PCB)											
Total Polychlorinated biphenyls	mg/kg	<50	<50		0.1	----	<0.1	----	----	----	----
Organochlorine Pesticides (OC)											
alpha-BHC	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
beta-BHC	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
gamma-BHC - (Lindane)	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
delta-BHC	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Heptachlor	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Aldrin	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Heptachlor epoxide	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Total Chlordane (sum)	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
trans-Chlordane	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
alpha-Endosulfan	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
cis-Chlordane	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Dieldrin	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
4.4`-DDE	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Endrin	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Endosulfan (sum)	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
beta-Endosulfan	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
4.4`-DDD	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Endrin aldehyde	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Endosulfan sulfate	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
4.4`-DDT	mg/kg	----	----		0.2	----	<0.2	----	----	----	----
Endrin ketone	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Methoxychlor	mg/kg	----	----		0.2	----	<0.2	----	----	----	----
Sum of DDD + DDE + DDT	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Sum of Aldrin + Dieldrin	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Total OC VIC EPA	mg/kg	<50	<50								
Organophosphorus Pesticides (OP)											
Dichlorvos	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Demeton-S-methyl	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Monocrotophos	mg/kg	----	----		0.2	----	<0.2	----	----	----	----
Dimethoate	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Diazinon	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Chlorpyrifos-methyl	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Parathion-methyl	mg/kg	----	----		0.2	----	<0.2	----	----	----	----
Malathion	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Fenthion	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Chlorpyrifos	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Parathion	mg/kg	----	----		0.2	----	<0.2	----	----	----	----
Pirimphos-ethyl	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Chlorfenvinphos	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Bromophos-ethyl	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Fenamiphos	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Prothiofos	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Ethion	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Carbophenothion	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Azinphos Methyl	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Total OP Pesticides	mg/kg	<50	<50								
Phenolic Compounds											
Phenol	mg/kg	288	518		0.5	----	<0.5	----	----	----	----
2-Chlorophenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
2-Methylphenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
3- & 4-Methylphenol	mg/kg	----	----		1	----	<1	----	----	----	----
2-Nitrophenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
2.4-Dimethylphenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
2.4-Dichlorophenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
2.6-Dichlorophenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
4-Chloro-3-methylphenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
2.4.6-Trichlorophenol	mg/kg	40	70		0.5	----	<0.5	----	----	----	----
2.4.5-Trichlorophenol	mg/kg	8000	14400		0.5	----	<0.5	----	----	----	----
Pentachlorophenol	mg/kg	----	----		2	----	<2	----	----	----	----
		----	----								
Polynuclear Aromatic Hydrocarbons											
Naphthalene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Acenaphthylene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Acenaphthene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Fluorene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Phenanthrene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Anthracene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Fluoranthene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Pyrene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Chrysene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	mg/kg	0.8	10		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Sum of polycyclic aromatic hydrocarbons	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene TEQ (zero)	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene TEQ (half LOR)	mg/kg	----	----		0.5	**0.6**	**0.6**	**0.6**	**0.6**	----	----
Benzo(a)pyrene TEQ (LOR)	mg/kg	----	----		0.5	**1.2**	**1.2**	**1.2**	**1.2**	----	----
Total PAH(18)	mg/kg	200	200								
Total Petroleum Hydrocarbons											
C6 - C9 Fraction	mg/kg	650	650		10	----	<10	----	----	----	----
C10 - C14 Fraction	mg/kg	----	----		50	----	<50	----	----	----	----
C15 - C28 Fraction	mg/kg	----	----		100	----	<100	----	----	----	----
C29 - C36 Fraction	mg/kg	----	----		100	----	<100	----	----	----	----
C10 - C36 Fraction (sum)	mg/kg	10000	10000		50	----	<50	----	----	----	----
BTEXN											
Benzene	mg/kg	10	18		0.2	----	<0.2	----	----	**100%**	<0.2
Toluene	mg/kg	288	518		0.5	----	<0.5	----	----	**81%**	<0.5
Ethylbenzene	mg/kg	600	1080		0.5	----	<0.5	----	----	**84%**	<0.5
meta- & para-Xylene	mg/kg	----	----		0.5	----	<0.5	----	----	**85%**	<0.5
ortho-Xylene	mg/kg	----	----		0.5	----	<0.5	----	----	**83%**	<0.5
Total Xylenes	mg/kg	1000	1800		0.5	----	<0.5	----	----	**85%**	<0.5
Sum of BTEX	mg/kg	----	----		0.2	----	<0.2	----	----	**84%**	<0.2
Naphthalene	mg/kg	----	----		1	----	<1	----	----	**100%**	<1
		----	----								
Asbestos		----	----								
Asbestos ID	Detection	----	----			NAD,OF	NAD,OF	NAD,OF	----	----	----

NAD - No Asbestos Detected
OF - Organic Fibers Detected

JN05778-WCC-RN18685
Waste Classification Assessment
Horwood Place,
Parramatta, NSW 2150

LR02- RPD

		Sample ID	SP01	DUP01	RPD %
		Sample Date	13/01/2025	13/01/2025	
		Matrix	Soil	Soil	
Analyte Name	**Units**	**Reporting Limit**	Result	Result	
PAH					
Naphthalene	mg/kg	0.5	<0.5	<0.5	NC
Acenaphthylene	mg/kg	0.5	<0.5	<0.5	NC
Acenaphthene	mg/kg	0.5	<0.5	<0.5	NC
Fluorene	mg/kg	0.5	<0.5	<0.5	NC
Phenanthrene	mg/kg	0.5	<0.5	<0.5	NC
Anthracene	mg/kg	0.5	<0.5	<0.5	NC
Fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Pyrene	mg/kg	0.5	<0.5	<0.5	NC
Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	NC
Chrysene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene	mg/kg	0.5	<0.5	<0.5	NC
Indeno(1.2.3.cd)pyrene	mg/kg	0.5	<0.5	<0.5	NC
Dibenz(a.h)anthracene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(g.h.i)perylene	mg/kg	0.5	<0.5	<0.5	NC
Sum of polycyclic aromatic hydrocarbons	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene TEQ (zero)	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene TEQ (half LOR)	mg/kg	0.5	**0.6**	**0.6**	NC
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	**1.2**	**1.2**	NC
Metals					
Arsenic, As	mg/kg	5	<5	<5	NC
Cadmium, Cd	mg/kg	1	<1	<1	NC
Chromium, Cr	mg/kg	2	**23**	**23**	0%
Copper, Cu	mg/kg	5	**59**	**67**	13%
Lead, Pb	mg/kg	5	**6**	<5	NC
Nickel, Ni	mg/kg	2	**86**	**94**	9%
Zinc, Zn	mg/kg	5	**54**	**51**	6%
Mercury	mg/kg	0.1	<0.1	<0.1	NC

NC - non computable

Appendix I

Laboratory Certificates

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 371670

Client Details

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

Sample Details

Your Reference	**231981.00 Parramatta**
Number of Samples	17 Soil
Date samples received	30/01/2025
Date completed instructions received	30/01/2025

Analysis Details

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

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

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

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

Report Details

Date results requested by	06/02/2025
Date of Issue	06/02/2025

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

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Lucy Zhu, Asbestos Supervisor
Sean McAlary, Senior Chemist
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

VOCs in soil					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date Extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date Analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Dichlorodifluoromethane	mg/kg	<1	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1	<1
trans-1,2-Dichloroethene	mg/kg	<1	<1	<1	<1
1,1-Dichloroethane	mg/kg	<1	<1	<1	<1
cis-1,2-Dichloroethene	mg/kg	<1	<1	<1	<1
Bromochloromethane	mg/kg	<1	<1	<1	<1
Chloroform	mg/kg	<1	<1	<1	<1
2,2-Dichloropropane	mg/kg	<1	<1	<1	<1
1,2-Dichloroethane	mg/kg	<1	<1	<1	<1
1,1,1-Trichloroethane	mg/kg	<1	<1	<1	<1
1,1-Dichloropropene	mg/kg	<1	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1	<1
Carbon Tetrachloride	mg/kg	<1	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Dibromomethane	mg/kg	<1	<1	<1	<1
1,2-Dichloropropane	mg/kg	<1	<1	<1	<1
Trichloroethene	mg/kg	<1	<1	<1	<1
Bromodichloromethane	mg/kg	<1	<1	<1	<1
trans-1,3-Dichloropropene	mg/kg	<1	<1	<1	<1
cis-1,3-Dichloropropene	mg/kg	<1	<1	<1	<1
1,1,2-Trichloroethane	mg/kg	<1	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	mg/kg	<1	<1	<1	<1
Dibromochloromethane	mg/kg	<1	<1	<1	<1
1,2-Dibromoethane	mg/kg	<1	<1	<1	<1
Tetrachloroethene	mg/kg	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	mg/kg	<1	<1	<1	<1
Chlorobenzene	mg/kg	<1	<1	<1	<1

VOCs in soil					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Ethylbenzene	mg/kg	<1	<1	<1	<1
Bromoform	mg/kg	<1	<1	<1	<1
m+p-Xylene	mg/kg	<2	<2	<2	<2
Styrene	mg/kg	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	mg/kg	<1	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1	<1
1,2,3-Trichloropropane	mg/kg	<1	<1	<1	<1
Isopropylbenzene	mg/kg	<1	<1	<1	<1
Bromobenzene	mg/kg	<1	<1	<1	<1
n-Propylbenzene	mg/kg	<1	<1	<1	<1
2-Chlorotoluene	mg/kg	<1	<1	<1	<1
4-Chlorotoluene	mg/kg	<1	<1	<1	<1
1,3,5-Trimethylbenzene	mg/kg	<1	<1	<1	<1
tert-Butylbenzene	mg/kg	<1	<1	<1	<1
1,2,4-Trimethylbenzene	mg/kg	<1	<1	<1	<1
1,3-Dichlorobenzene	mg/kg	<1	<1	<1	<1
sec-Butylbenzene	mg/kg	<1	<1	<1	<1
1,4-Dichlorobenzene	mg/kg	<1	<1	<1	<1
4-Isopropyltoluene	mg/kg	<1	<1	<1	<1
1,2-Dichlorobenzene	mg/kg	<1	<1	<1	<1
n-Butylbenzene	mg/kg	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	mg/kg	<1	<1	<1	<1
1,2,4-Trichlorobenzene	mg/kg	<1	<1	<1	<1
Hexachlorobutadiene	mg/kg	<1	<1	<1	<1
1,2,3-Trichlorobenzene	mg/kg	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	128	129	127	128
Surrogate aaa-Trifluorotoluene	%	83	87	86	87
Surrogate Toluene-d_8	%	101	101	101	101
Surrogate 4-Bromofluorobenzene	%	92	92	93	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371670-1	371670-2	371670-3	371670-4	371670-5
Your Reference	UNITS	TL02	TL02	TL02	TL06	TL06
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-0.1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	83	84	89	87	82

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371670-6	371670-7	371670-8	371670-9	371670-10
Your Reference	UNITS	TL09	TL09	TL09	TL10	TL10
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	86	84	87	87	86

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371670-12	371670-13	371670-14	371670-15	371670-16
Your Reference	UNITS	BD1/20250129	TS1	TB1	RB-SP-1	RB-SP-2
Depth		-	-	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
TRH C_6 - C_9	mg/kg	<25	[NA]	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	[NA]	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	[NA]	<25	<25	<25
Benzene	mg/kg	<0.2	103%	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	104%	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	103%	<1	<1	<1
m+p-xylene	mg/kg	<2	103%	<2	<2	<2
o-Xylene	mg/kg	<1	103%	<1	<1	<1
Naphthalene	mg/kg	<1	[NA]	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	[NA]	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	84	80	91	89	89

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		371670-17
Your Reference	UNITS	RB-SP-3
Depth		-
Date Sampled		29/01/2025
Type of sample		Soil
Date extracted	-	31/01/2025
Date analysed	-	03/02/2025
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTRH 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		371670-1	371670-2	371670-3	371670-4	371670-5
Your Reference	UNITS	TL02	TL02	TL02	TL06	TL06
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-0.1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	01/02/2025	01/02/2025	01/02/2025	01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	90	91	89	92	91

svTRH (C10-C40) in Soil						
Our Reference		371670-6	371670-7	371670-8	371670-9	371670-10
Your Reference	UNITS	TL09	TL09	TL09	TL10	TL10
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	01/02/2025	01/02/2025	01/02/2025	01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	91	90	88	90	89

svTRH (C10-C40) in Soil					
Our Reference		371670-12	371670-15	371670-16	371670-17
Your Reference	UNITS	BD1/20250129	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	01/02/2025	01/02/2025	01/02/2025	01/02/2025
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	%	88	89	87	88

PAHs in Soil						
Our Reference		371670-1	371670-2	371670-3	371670-4	371670-5
Your Reference	UNITS	TL02	TL02	TL02	TL06	TL06
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-0.1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	04/02/2025	04/02/2025	03/02/2025	04/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	104	87	87	102	87

PAHs in Soil						
Our Reference		371670-6	371670-7	371670-8	371670-9	371670-10
Your Reference	UNITS	TL09	TL09	TL09	TL10	TL10
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	04/02/2025	04/02/2025	03/02/2025	04/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.09	<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	0.61	<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	%	100	85	86	102	87

PAHs in Soil					
Our Reference		371670-12	371670-15	371670-16	371670-17
Your Reference	UNITS	BD1/20250129	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025
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	%	89	77	76	78

Organochlorine Pesticides in soil					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025
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
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	105	104	103	104

Organophosphorus Pesticides in Soil					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025
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	%	105	104	103	104

PCBs in Soil					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025
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	%	99	99	98	98

Misc Soil - Inorg					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5
Total Cyanide	mg/kg	<0.5	<0.5	<0.5	<0.5

Acid Extractable metals in soil						
Our Reference		371670-1	371670-2	371670-3	371670-4	371670-5
Your Reference	UNITS	TL02	TL02	TL02	TL06	TL06
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-0.1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Arsenic	mg/kg	6	6	6	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	18	17	18	10	16
Copper	mg/kg	11	12	12	7	6
Lead	mg/kg	15	19	22	19	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	6	6	12	5
Zinc	mg/kg	21	22	24	60	10

Acid Extractable metals in soil						
Our Reference		371670-6	371670-7	371670-8	371670-9	371670-10
Your Reference	UNITS	TL09	TL09	TL09	TL10	TL10
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Arsenic	mg/kg	<4	<4	<4	5	4
Cadmium	mg/kg	0.5	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	12	7	15	15
Copper	mg/kg	14	11	6	8	8
Lead	mg/kg	55	13	6	19	14
Mercury	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	6	3	6	5
Zinc	mg/kg	94	7	11	17	13

Acid Extractable metals in soil					
Our Reference		371670-12	371670-15	371670-16	371670-17
Your Reference	UNITS	BD1/20250129	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Arsenic	mg/kg	5	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	17	21	25
Copper	mg/kg	6	59	66	71
Lead	mg/kg	13	9	14	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	110	120	160
Zinc	mg/kg	10	44	50	55

Moisture						
Our Reference		371670-1	371670-2	371670-3	371670-4	371670-5
Your Reference	UNITS	TL02	TL02	TL02	TL06	TL06
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-0.1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Moisture	%	17	16	14	10	17

Moisture						
Our Reference		371670-6	371670-7	371670-8	371670-9	371670-10
Your Reference	UNITS	TL09	TL09	TL09	TL10	TL10
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Moisture	%	12	18	12	12	16

Moisture						
Our Reference		371670-11	371670-12	371670-15	371670-16	371670-17
Your Reference	UNITS	TL10	BD1/20250129	RB-SP-1	RB-SP-2	RB-SP-3
Depth		1.3-1.5	-	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Moisture	%	16	16	4.1	5.7	7.2

Asbestos ID - soils NEPM						
Our Reference		371670-1	371670-2	371670-4	371670-6	371670-7
Your Reference	UNITS	TL02	TL02	TL06	TL09	TL09
Depth		0.3-0.5	0.8-1	0.3-0.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Sample mass tested	g	631	681.35	615.42	795.05	810.52
Sample Description	-	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks	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	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	–	–	–	–	–
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM					
Our Reference		371670-9	371670-15	371670-16	371670-17
Your Reference	UNITS	TL10	RB-SP-1	RB-SP-2	RB-SP-3
Depth		0.3-0.5	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Sample mass tested	g	737.82	1,218	1,032.39	1,112.21
Sample Description	-	Brown clayey 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	–	–	–	–
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil

Misc Inorg - Soil			
Our Reference		371670-3	371670-4
Your Reference	UNITS	TL02	TL06
Depth		1.3-1.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025
Type of sample		Soil	Soil
Date prepared	-	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025
pH 1:5 soil:water	pH Units	7.7	8.3

CEC			
Our Reference		371670-3	371670-4
Your Reference	UNITS	TL02	TL06
Depth		1.3-1.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025
Type of sample		Soil	Soil
Date prepared	-	05/02/2025	05/02/2025
Date analysed	-	05/02/2025	05/02/2025
Exchangeable Ca	meq/100g	3.7	1.7
Exchangeable K	meq/100g	0.3	0.1
Exchangeable Mg	meq/100g	3.6	2.0
Exchangeable Na	meq/100g	0.7	<0.1
Cation Exchange Capacity	meq/100g	8.3	3.9

Clay 50-120g			
Our Reference		371670-3	371670-4
Your Reference	UNITS	TL02	TL06
Depth		1.3-1.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025
Type of sample		Soil	Soil
Date prepared	-	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025
Clay in soils <2µm	% (w/w)	26	10

PFAS in Soils Short					
Our Reference		371670-1	371670-5	371670-11	371670-15
Your Reference	UNITS	TL02	TL06	TL10	RB-SP-1
Depth		0.3-0.5	0.8-0.1	1.3-1.5	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.2	<0.1	<0.1	0.2
Perfluorooctanoic acid PFOA	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
Surrogate $^{13}C_8$ *PFOS*	%	99	100	101	99
Surrogate $^{13}C_2$ *PFOA*	%	98	95	100	99
Extracted ISTD $^{13}C_3$ *PFBS*	%	89	89	89	98
Extracted ISTD $^{18}O_2$ *PFHxS*	%	98	96	97	107
Extracted ISTD $^{13}C_4$ *PFOS*	%	101	96	99	107
Extracted ISTD $^{13}C_4$ *PFOA*	%	100	94	95	108
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	97	94	97	106
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	98	96	96	110
Total Positive PFHxS & PFOS	µg/kg	0.2	<0.1	<0.1	0.2
Total Positive PFOS & PFOA	µg/kg	0.2	<0.1	<0.1	0.2
Total Positive PFAS	µg/kg	0.2	<0.1	<0.1	0.2

PFAS in TCLP Short			
Our Reference		371670-1	371670-15
Your Reference	UNITS	TL02	RB-SP-1
Depth		0.3-0.5	-
Date Sampled		29/01/2025	29/01/2025
Type of sample		Soil	Soil
Date prepared	-	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025
pH of soil for fluid# determ.	pH units	7.6	8.4
pH of soil TCLP (after HCl)	pH units	1.9	1.9
Extraction fluid used		1	1
pH of final Leachate	pH units	5.0	5.1
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	100	102
Surrogate $^{13}C_2$ *PFOA*	%	97	93
Extracted ISTD $^{13}C_3$ *PFBS*	%	95	92
Extracted ISTD $^{18}O_2$ *PFHxS*	%	115	108
Extracted ISTD $^{13}C_4$ *PFOS*	%	110	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	115	113
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	118	112
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	124	111
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

Method ID	Methodology Summary
AS1289.3.6.3	Particle Size Distribution using in house method INORG-107 by way of sieving and/or hydrometer sedimentation testing. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-001	pH - Measured using pH meter and electrode. 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.

Method ID	Methodology Summary
Inorg-014	Cyanide - free, total, weak acid dissociable by segmented flow analyser (in line dialysis with colourimetric finish). Solids/Filters and sorbents are extracted in a caustic media prior to analysis. Impingers are pH adjusted as required prior to analysis. Cyanides amenable to Chlorination - samples are analysed untreated and treated with hypochlorite to assess the potential for chlorination of cyanide forms. Based on APHA latest edition, 4500-CN_G,H.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	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.

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-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.

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date Extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date Analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
trans-1,2-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	104	100
cis-1,2-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroform	mg/kg	1	Org-023	<1	1	<1	<1	0	112	107
2,2-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	111	105
1,1,1-Trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	106	102
1,1-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Carbon Tetrachloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	101	97
Dibromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	98	94
Bromodichloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	107	102
trans-1,3-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-Trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	106	101
1,3-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	107	101
1,2-Dibromoethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	93	90
1,1,1,2-Tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	106	102
Bromoform	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
m+p-Xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	99	95
Styrene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	107	102
1,2,3-Trichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Isopropylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-Propylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-Chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-Chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-Trimethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
tert-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-Trimethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
sec-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-Isopropyltoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dibromo-3-chloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-Trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-Trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	127	1	128	128	0	123	125
Surrogate aaa-Trifluorotoluene	%		Org-023	89	1	83	86	4	86	87
Surrogate Toluene-d_8	%		Org-023	100	1	101	101	0	98	97
Surrogate 4-Bromofluorobenzene	%		Org-023	94	1	92	92	0	98	97

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date Extracted	-			[NT]	9	31/01/2025	31/01/2025		31/01/2025	[NT]
Date Analysed	-			[NT]	9	03/02/2025	03/02/2025		03/02/2025	[NT]
Dichlorodifluoromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
trans-1,2-Dichloroethene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,1-Dichloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	104	[NT]
cis-1,2-Dichloroethene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Bromochloromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Chloroform	mg/kg	1	Org-023	[NT]	9	<1	<1	0	112	[NT]
2,2-Dichloropropane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2-Dichloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	112	[NT]
1,1,1-Trichloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	105	[NT]
1,1-Dichloropropene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Carbon Tetrachloride	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	9	<0.2	<0.2	0	101	[NT]
Dibromomethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2-Dichloropropane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Trichloroethene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	97	[NT]
Bromodichloromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	107	[NT]
trans-1,3-Dichloropropene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
cis-1,3-Dichloropropene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,1,2-Trichloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	9	<0.5	<0.5	0	106	[NT]
1,3-Dichloropropane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Dibromochloromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	107	[NT]
1,2-Dibromoethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Tetrachloroethene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	93	[NT]
1,1,1,2-Tetrachloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Chlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	106	[NT]
Bromoform	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
m+p-Xylene	mg/kg	2	Org-023	[NT]	9	<2	<2	0	98	[NT]
Styrene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	106	[NT]
1,2,3-Trichloropropane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Isopropylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Bromobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
n-Propylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
2-Chlorotoluene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
4-Chlorotoluene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,3,5-Trimethylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
tert-Butylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2,4-Trimethylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,3-Dichlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
sec-Butylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,4-Dichlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
4-Isopropyltoluene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2-Dichlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
n-Butylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2-Dibromo-3-chloropropane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2,4-Trichlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2,3-Trichlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	[NT]	9	128	128	0	126	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	9	87	84	4	86	[NT]
Surrogate Toluene-d_8	%		Org-023	[NT]	9	101	101	0	97	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	[NT]	9	92	92	0	98	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	102	98
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	102	98
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	101	97
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	106	101
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	106	102
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	99	95
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	107	102
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	89	1	83	86	4	86	87

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		31/01/2025	[NT]
Date analysed	-			[NT]	9	03/02/2025	03/02/2025		03/02/2025	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	9	<25	<25	0	102	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	9	<25	<25	0	102	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	9	<0.2	<0.2	0	101	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	9	<0.5	<0.5	0	106	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	106	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	9	<2	<2	0	98	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	106	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	9	87	84	4	86	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			01/02/2025	1	01/02/2025	01/02/2025		01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	93	86
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	89	79
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	92
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	93	86
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	89	79
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	92
Surrogate o-Terphenyl	%		Org-020	93	1	90	92	2	86	92

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Date analysed	-			[NT]	9	01/02/2025	01/02/2025		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	9	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	9	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	9	90	88	2	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	86
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	88	88
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	86
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	88
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	88	101
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	99
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	88	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	82	90
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	89	1	104	103	1	92	94

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		31/01/2025	[NT]
Date analysed	-			[NT]	9	03/02/2025	03/02/2025		04/02/2025	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	102	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	98	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	86	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	100	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	104	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	118	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	96	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	9	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	9	<0.05	<0.05	0	124	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	9	102	103	1	114	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	92
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	88	88
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	86	86
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	88	88
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	92
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	82	82
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	102
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	86
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	92	92
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	76	76
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	108	1	105	105	0	98	99

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Date analysed	-			[NT]	9	03/02/2025	03/02/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	9	104	104	0	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	92
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	88	86
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	102
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	102
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	98
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	102	98
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	92	92
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	108	1	105	105	0	98	99

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Date analysed	-			[NT]	9	03/02/2025	03/02/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	9	104	104	0	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
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	85	80
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	101	1	99	100	1	92	94

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Date analysed	-			[NT]	9	03/02/2025	03/02/2025		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	9	98	99	1	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Date analysed	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	101	[NT]
Total Cyanide	mg/kg	0.5	Inorg-014	<0.5	[NT]	[NT]	[NT]	[NT]	77	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date prepared	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Arsenic	mg/kg	4	Metals-020	<4	1	6	6	0	107	104
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	107	99
Chromium	mg/kg	1	Metals-020	<1	1	18	20	11	102	97
Copper	mg/kg	1	Metals-020	<1	1	11	11	0	101	98
Lead	mg/kg	1	Metals-020	<1	1	15	20	29	103	98
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	107	118
Nickel	mg/kg	1	Metals-020	<1	1	6	6	0	101	94
Zinc	mg/kg	1	Metals-020	<1	1	21	20	5	101	90

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Date analysed	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	9	5	4	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	9	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	9	15	16	6	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	9	8	8	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	9	19	15	24	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	9	6	6	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	9	17	14	19	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Date analysed	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	371670-4
Date prepared	-			05/02/2025	3	05/02/2025	05/02/2025		05/02/2025	05/02/2025
Date analysed	-			05/02/2025	3	05/02/2025	05/02/2025		05/02/2025	05/02/2025
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	3	3.7	3.6	3	96	99
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	3	0.3	0.3	0	97	84
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	3	3.6	3.5	3	94	89
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	3	0.7	0.7	0	86	89

QUALITY CONTROL: PFAS in Soils Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date prepared	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Date analysed	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	92	[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]	99	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	106	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	106	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	108	[NT]

QUALITY CONTROL: PFAS in TCLP Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Date analysed	-			03/02/2025	[NT]	[NT]	[NT]	[NT]	03/02/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	112	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	99	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	95	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	90	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	120	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	123	[NT]	[NT]	[NT]	[NT]	121	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	132	[NT]	[NT]	[NT]	[NT]	123	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	132	[NT]	[NT]	[NT]	[NT]	131	[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

Asbestos-ID in soil: NEPM
This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

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CERTIFICATE OF ANALYSIS 371670-A

Client Details

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

Sample Details

Your Reference	**231981.00 Parramatta**
Number of Samples	Additional analysis
Date samples received	30/01/2025
Date completed instructions received	06/02/2025

Analysis Details

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

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

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

Report Details

Date results requested by	07/02/2025
Date of Issue	07/02/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Diego Bigolin, Inorganics Supervisor
Giovanni Agosti, Group Technical Manager
Jack Wallis, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

Organochlorine Pesticides in soil				
Our Reference		371670-A-15	371670-A-16	371670-A-17
Your Reference	UNITS	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	91	87	96

Organophosphorus Pesticides in Soil				
Our Reference		371670-A-15	371670-A-16	371670-A-17
Your Reference	UNITS	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	91	87	96

PCBs in Soil				
Our Reference		371670-A-15	371670-A-16	371670-A-17
Your Reference	UNITS	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	93	79	87

Misc Soil - Inorg				
Our Reference		371670-A-15	371670-A-16	371670-A-17
Your Reference	UNITS	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Metals from Leaching Fluid pH 2.9 or 5				
Our Reference	UNITS	371670-A-15	371670-A-16	371670-A-17
Your Reference		RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
pH of soil for fluid# determ.	pH units	9.9	9.6	9.5
pH of soil TCLP (after HCl)	pH units	1.9	1.9	1.9
Extraction fluid used		1	1	1
pH of final Leachate	pH units	5.2	5.1	5.2
Nickel	mg/L	0.1	0.1	0.26

Method ID	Methodology Summary
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-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES 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.
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.

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	90	[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]	92	[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]	82	[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]	86	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	86	[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]	78	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	80	[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]	86	[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]	80	[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	96	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[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]	76	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[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]	88	[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]	78	[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	96	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	81	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	94	[NT]	[NT]	[NT]	[NT]	90	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	95	[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	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Nickel	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	107	[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.

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:**	Parramatta	**To:**	Envirolab Services
Project Manager:	Cathy Li	**Order Number:**		**Sampler:** SAF	12 Ashley St, Chatswood NSW 2067
Email:	cathy.li@douglaspartners.com.au ; sam.ferguson@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☐ Standard ☐ 72 hour ☐ 48 hour ☑ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.com
Prior Storage:	☐ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Asbestos ID in Material	Phenols	OCP,OPP,PCB	TCLP-Nickel								Notes/ Preservation/ Additional Requirements
1	RB-ACM-1			6/02/25	M	P	X											
15	RB-SP-1			29/01/25	S	G,P		X	X	X								samples have been sent under ELS Job 371670
16	RB-SP-2			29/01/25	S	G,P		X	X	X								
17	RB-SP-3			29/01/25	S	G,P		X	X	X								

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

ENVIROLAB GROUP

Job No: 372687
Date Received: 6/2/25
Time Received: 1710
Received By: SY
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:

Number of samples in container: | **Transported to laboratory by:**

Send results to: Douglas Partners Pty Ltd

Address: 96 Hermitage Road, West Ryde NSW 211 | **Phone:** (02) 9809 0666

Relinquished by: | **Date:** | **Signed:**

LAB RECEIPT

Lab Ref. No: ~~372687~~ 371670-A
Received by: Shann Tolo
Date & Tim: 6/2/25 1710
Signed: SY

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	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	231981.00 Parramatta
Envirolab Reference	371670-A
Date Sample Received	30/01/2025
Date Instructions Received	06/02/2025
Date Results Expected to be Reported	07/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	6
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	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Nickel	On Hold
TL02-0.3-0.5										✓
TL02-0.8-1										✓
TL02-1.3-1.5										✓
TL06-0.3-0.5										✓
TL06-0.8-0.1										✓
TL09-0.3-0.5										✓
TL09-0.8-1										✓
TL09-1.3-1.5										✓
TL10-0.3-0.5										✓
TL10-0.8-1										✓
TL10-1.3-1.5										✓
BD1/20250129										✓
TS1										✓
TB1										✓
RB-SP-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	
RB-SP-2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
RB-SP-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	

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.

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:**	Parramatta	**To:**	Envirolab Services
Project Manager:	Cathy Li	**Order Number:**		**Sampler:**	SAF
					12 Ashley St, Chatswood NSW 2067
Email:	cathy.li@douglaspartners.com.au ; sam.ferguson@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.com
Prior Storage:	☑ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo 8AN.	Combo 3AN	Combo 3	PFAS (short suite)	PFAS TCLP (short suite)	pH,CEC, & Clay Content	VOC	Cyanide	BTEX			Notes/ Preservation/ Additional Requirements
1	TL02	0.3	0.5	29/01/25	S	G/P	X			X	X		X	X				
2	TL02	0.8	1	29/01/25	S	G/P		X										
3	TL02	1.3	1.5	29/01/25	S	G/P			X			X						
NR	TL02	1.8	2	29/01/25	S	G/P												
4	TL06	0.3	0.5	29/01/25	S	G/P	X					X	X	X				
5	TL06	0.8	1	29/01/25	S	G/P			X	X								
NR	TL06	1.3	1.5	29/01/25	S	G/P												
6	TL09	0.3	0.5	29/01/25	S	G/P	X						X	X				
7	TL09	0.8	1	29/01/25	S	G/P		X										
8	TL09	1.3	1.5	29/01/25	S	G/P			X									
9	TL10	0.3	0.5	29/01/25	S	G/P	X						X	X				
10	TL10	0.8	1	29/01/25	S	G/P			X									
11	TL10	1.3	1.5	29/01/25	S	G/P				X								
12	BD1/20250129			29/01/25	S	G			X									

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

Job No: 371670
Date Received: 30/1/25
Time Received: 1545
Received By: DL
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:		**LAB RECEIPT**	
Number of samples in container:	**Transported to laboratory by:**	**Lab Ref. No:**	371670
Send results to:	Douglas Partners Pty Ltd	**Received by:**	Da Hyun Lee
Address:	96 Hermitage Road, West Ryde NSW 211	**Phone:** (02) 9809 0666	**Date & Tim** 30/1/25 1545
Relinquished by:	**Date:**	**Signed:**	**Signed:**

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:** Parramatta	**To:** Envirolab Services
Project Manager:	Cathy Li		**Dispatch date:** 0/01/1900

Lab ID	Sample ID: Location / Other ID	Sample ID: Depth From	Sample ID: Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo 8AN	Combo 3AN	Combo 3	PFAS (short suite)	PFAS TCLP (short suite)	pH,CEC, & Clay Content	VOC	Cyanide	BTEX			Notes/ Preservation/ Additional Requirements
13	TS1			29/01/25	S	v									X			
14	TB1			29/01/25	S	v									X			
15	RB-SP-1			29/01/25	S	G/P		X		X	X							
16	RB-SP-2			29/01/25	S	G/P		X										
17	RB-SP-3			29/01/25	S	G/P		X										

#371670
OL 30/01/25

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

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	231981.00 Parramatta
Envirolab Reference	371670
Date Sample Received	30/01/2025
Date Instructions Received	30/01/2025
Date Results Expected to be Reported	06/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	17 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	6
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Samples with no testing, NR

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	VOCs in soil	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 Soil - Inorg	Acid Extractable metalsin soil	Asbestos ID - soils NEPM	Misc Inorg - Soil	CEC	Clay 50-120g	PFAS in Soils Short	PFAS in TCLP Short
TL02-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓
TL02-0.8-1		✓	✓	✓					✓	✓					
TL02-1.3-1.5		✓	✓	✓					✓		✓	✓	✓		
TL06-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
TL06-0.8-0.1		✓	✓	✓					✓					✓	
TL09-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
TL09-0.8-1		✓	✓	✓					✓	✓					
TL09-1.3-1.5		✓	✓	✓					✓						
TL10-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
TL10-0.8-1		✓	✓	✓					✓						
TL10-1.3-1.5														✓	
BD1/20250129		✓	✓	✓					✓						
TS1		✓													
TB1		✓													
RB-SP-1		✓	✓	✓					✓	✓				✓	✓
RB-SP-2		✓	✓	✓					✓	✓					
RB-SP-3		✓	✓	✓					✓	✓					

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.

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12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 372287

Client Details

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

Sample Details

Your Reference	**231981.00 Parramatta**
Number of Samples	1 Material
Date samples received	06/02/2025
Date completed instructions received	06/02/2025

Analysis Details

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

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

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

Report Details

Date results requested by	07/02/2025
Date of Issue	07/02/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

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

Results Approved By
Lucy Zhu, Asbestos Supervisor

Authorised By
Nancy Zhang, Laboratory Manager

Asbestos ID - materials		
Our Reference		372287-1
Your Reference	UNITS	RB-ACM-1
Date Sampled		06/02/2025
Type of sample		Material
Date analysed	-	07/02/2025
Mass / Dimension of Sample	-	78.69g
Sample Description	-	Grey fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected
Trace Analysis	-	[NT]

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.

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

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:**	Parramatta	**To:**	Envirolab Services
Project Manager:	Cathy Li	**Order Number:**		**Sampler:** SAF	12 Ashley St, Chatswood NSW 2067
Email:	cathy.li@douglaspartners.com.au ; sam.ferguson@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☐ Standard ☐ 72 hour ☐ 48 hour ☑ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.com
Prior Storage:	☐ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil, W - water, M - Material	Container Type: G - glass, P - plastic	Analytes: Asbestos ID in Material	Phenols	OCP,OPP,PCB	TCLP-Nickel								Notes/ Preservation/ Additional Requirements
1	RB-ACM-1			6/02/25	M	P	X											
	RB-SP-1			29/01/25	S	G,P		X	X	X								samples have been sent under ELS Job 371670
	RB-SP-2			29/01/25	S	G,P		X	X	X								
	RB-SP-3			29/01/25	S	G,P		X	X	X								

ENVIROLAB GROUP

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

Job No: 372287
Date Received: 6/2/25
Time Received: 17:10
Received By: SY
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:

Number of samples in container:

Send results to: Douglas Partners Pty Ltd

Address: 96 Hermitage Road, West Ryde NSW 211

Phone: (02) 9809 0666

Relinquished by:

Date:

Signed:

Transported to laboratory by:

LAB RECEIPT

Lab Ref. No: 372287

Received by: Shanni Tolc

Date & Tim: 6/2/25 17:10

Signed:

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	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	231981.00 Parramatta
Envirolab Reference	372287
Date Sample Received	06/02/2025
Date Instructions Received	06/02/2025
Date Results Expected to be Reported	07/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Material
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	3
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	Asbestos ID - materials
RB-ACM-1	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info
Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 372294

Client Details

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

Sample Details

Your Reference	**231981.00 Parramatta**
Number of Samples	22 Soil, 4 Material
Date samples received	06/02/2025
Date completed instructions received	06/02/2025

Analysis Details

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

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

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

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

Report Details

Date results requested by	13/02/2025
Date of Issue	13/02/2025

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

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Jack Wallis, Senior Chemist
Lucy Zhu, Asbestos Supervisor
Nancy Zhang, Laboratory Manager, Sydney
Sean McAlary, Senior Chemist
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

VOCs in soil						
Our Reference		372294-2	372294-5	372294-10	372294-13	372294-16
Your Reference	UNITS	TL01	TL03	TL04	TL05	TL11
Depth		0.5-0.6	0.1-0.2	0.3-0.4	0.3-0.4	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date Analysed	-	10/02/2025	10/02/2025	10/02/2025	11/02/2025	11/02/2025
Dichlorodifluoromethane	mg/kg	<1	<1	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	mg/kg	<1	<1	<1	<1	<1
1,1-Dichloroethane	mg/kg	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	mg/kg	<1	<1	<1	<1	<1
Bromochloromethane	mg/kg	<1	<1	<1	<1	<1
Chloroform	mg/kg	<1	<1	<1	<1	<1
2,2-Dichloropropane	mg/kg	<1	<1	<1	<1	<1
1,2-Dichloroethane	mg/kg	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	mg/kg	<1	<1	<1	<1	<1
1,1-Dichloropropene	mg/kg	<1	<1	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1	<1	<1
Carbon Tetrachloride	mg/kg	<1	<1	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dibromomethane	mg/kg	<1	<1	<1	<1	<1
1,2-Dichloropropane	mg/kg	<1	<1	<1	<1	<1
Trichloroethene	mg/kg	<1	<1	<1	<1	<1
Bromodichloromethane	mg/kg	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	mg/kg	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	mg/kg	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	mg/kg	<1	<1	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	mg/kg	<1	<1	<1	<1	<1
Dibromochloromethane	mg/kg	<1	<1	<1	<1	<1
1,2-Dibromoethane	mg/kg	<1	<1	<1	<1	<1
Tetrachloroethene	mg/kg	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	mg/kg	<1	<1	<1	<1	<1
Chlorobenzene	mg/kg	<1	<1	<1	<1	<1

VOCs in soil						
Our Reference		372294-2	372294-5	372294-10	372294-13	372294-16
Your Reference	UNITS	TL01	TL03	TL04	TL05	TL11
Depth		0.5-0.6	0.1-0.2	0.3-0.4	0.3-0.4	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
Bromoform	mg/kg	<1	<1	<1	<1	<1
m+p-Xylene	mg/kg	<2	<2	<2	<2	<2
Styrene	mg/kg	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	mg/kg	<1	<1	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1	<1	<1
1,2,3-Trichloropropane	mg/kg	<1	<1	<1	<1	<1
Isopropylbenzene	mg/kg	<1	<1	<1	<1	<1
Bromobenzene	mg/kg	<1	<1	<1	<1	<1
n-Propylbenzene	mg/kg	<1	<1	<1	<1	<1
2-Chlorotoluene	mg/kg	<1	<1	<1	<1	<1
4-Chlorotoluene	mg/kg	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene	mg/kg	<1	<1	<1	<1	<1
tert-Butylbenzene	mg/kg	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	mg/kg	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
sec-Butylbenzene	mg/kg	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
4-Isopropyltoluene	mg/kg	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	mg/kg	<1	<1	<1	<1	<1
n-Butylbenzene	mg/kg	<1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	mg/kg	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	mg/kg	<1	<1	<1	<1	<1
Hexachlorobutadiene	mg/kg	<1	<1	<1	<1	<1
1,2,3-Trichlorobenzene	mg/kg	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	101	97	121	104	104
Surrogate aaa-Trifluorotoluene	%	93	94	94	93	91
Surrogate Toluene-d_8	%	101	98	108	101	102
Surrogate 4-Bromofluorobenzene	%	97	97	106	98	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		372294-1	372294-2	372294-3	372294-4	372294-5
Your Reference	UNITS	TL01	TL01	TL01	TL01	TL03
Depth		0.3-0.4	0.5-0.6	1.7-1.9	1.9-2.1	0.1-0.2
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	105	114	111	94	105

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		372294-6	372294-7	372294-8	372294-9	372294-10
Your Reference	UNITS	TL03	TL03	TL03	TL04	TL04
Depth		0.3-0.4	0.4-0.6	1-1.2	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	102	105	97	101	112

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		372294-11	372294-12	372294-13	372294-14	372294-15
Your Reference	UNITS	TL04	TL04	TL05	TL05	TL05
Depth		0.4-0.6	1.3-1.5	0.3-0.4	0.5-0.7	1-1.2
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	11/02/2025	10/02/2025	10/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	102	108	93	95	90

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		372294-16	372294-17	372294-18	372294-19	372294-20
Your Reference	UNITS	TL11	TL11	TL11	BD1/20250205	BD2/20250205
Depth		0.3-0.4	0.4-0.6	0.8-1	-	-
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	11/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	91	102	99	102	113

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		372294-21	372294-22
Your Reference	UNITS	TS2	TB2
Depth		-	-
Date Sampled		05/02/2025	05/02/2025
Type of sample		Soil	Soil
Date extracted	-	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025
TRH C_6 - C_9	mg/kg	[NA]	<25
TRH C_6 - C_{10}	mg/kg	[NA]	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	[NA]	<25
Benzene	mg/kg	98%	<0.2
Toluene	mg/kg	97%	<0.5
Ethylbenzene	mg/kg	98%	<1
m+p-xylene	mg/kg	98%	<2
o-Xylene	mg/kg	98%	<1
Naphthalene	mg/kg	[NA]	<1
Total +ve Xylenes	mg/kg	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	99	118

svTRH (C10-C40) in Soil						
Our Reference		372294-1	372294-2	372294-3	372294-4	372294-5
Your Reference	UNITS	TL01	TL01	TL01	TL01	TL03
Depth		0.3-0.4	0.5-0.6	1.7-1.9	1.9-2.1	0.1-0.2
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	08/02/2025	08/02/2025	08/02/2025	08/02/2025	08/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	79	81	81	82	81

svTRH (C10-C40) in Soil						
Our Reference		372294-6	372294-7	372294-8	372294-9	372294-10
Your Reference	UNITS	TL03	TL03	TL03	TL04	TL04
Depth		0.3-0.4	0.4-0.6	1-1.2	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	08/02/2025	08/02/2025	08/02/2025	08/02/2025	08/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	77	79	79	78	78

svTRH (C10-C40) in Soil						
Our Reference		372294-11	372294-12	372294-13	372294-14	372294-15
Your Reference	UNITS	TL04	TL04	TL05	TL05	TL05
Depth		0.4-0.6	1.3-1.5	0.3-0.4	0.5-0.7	1-1.2
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	08/02/2025	08/02/2025	08/02/2025	08/02/2025	08/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	78	79	78	79	79

svTRH (C10-C40) in Soil						
Our Reference		372294-16	372294-17	372294-18	372294-19	372294-20
Your Reference	UNITS	TL11	TL11	TL11	BD1/20250205	BD2/20250205
Depth		0.3-0.4	0.4-0.6	0.8-1	-	-
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	08/02/2025	08/02/2025	08/02/2025	08/02/2025	08/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	78	81	81	80	80

PAHs in Soil						
Our Reference		372294-1	372294-2	372294-3	372294-4	372294-5
Your Reference	UNITS	TL01	TL01	TL01	TL01	TL03
Depth		0.3-0.4	0.5-0.6	1.7-1.9	1.9-2.1	0.1-0.2
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	90	89	89	92	96

PAHs in Soil						
Our Reference		372294-6	372294-7	372294-8	372294-9	372294-10
Your Reference	UNITS	TL03	TL03	TL03	TL04	TL04
Depth		0.3-0.4	0.4-0.6	1-1.2	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	93	92	92	97	93

PAHs in Soil						
Our Reference		372294-11	372294-12	372294-13	372294-14	372294-15
Your Reference	UNITS	TL04	TL04	TL05	TL05	TL05
Depth		0.4-0.6	1.3-1.5	0.3-0.4	0.5-0.7	1-1.2
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	92	88	93	98	94

PAHs in Soil						
Our Reference		372294-16	372294-17	372294-18	372294-19	372294-20
Your Reference	UNITS	TL11	TL11	TL11	BD1/20250205	BD2/20250205
Depth		0.3-0.4	0.4-0.6	0.8-1	-	-
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	95	92	92	93	95

Organochlorine Pesticides in soil						
Our Reference		372294-1	372294-2	372294-5	372294-9	372294-13
Your Reference	UNITS	TL01	TL01	TL03	TL04	TL05
Depth		0.3-0.4	0.5-0.6	0.1-0.2	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	102	101	108	106	104

Organochlorine Pesticides in soil		
Our Reference		372294-16
Your Reference	UNITS	TL11
Depth		0.3-0.4
Date Sampled		05/02/2025
Type of sample		Soil
Date extracted	-	07/02/2025
Date analysed	-	07/02/2025
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Mirex	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	101

Organophosphorus Pesticides in Soil						
Our Reference		372294-1	372294-2	372294-5	372294-9	372294-13
Your Reference	UNITS	TL01	TL01	TL03	TL04	TL05
Depth		0.3-0.4	0.5-0.6	0.1-0.2	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	102	101	108	106	104

Organophosphorus Pesticides in Soil		
Our Reference		372294-16
Your Reference	UNITS	TL11
Depth		0.3-0.4
Date Sampled		05/02/2025
Type of sample		Soil
Date extracted	-	07/02/2025
Date analysed	-	07/02/2025
Dichlorvos	mg/kg	<0.1
Mevinphos	mg/kg	<0.1
Phorate	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Disulfoton	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Parathion-Methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenthion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Methidathion	mg/kg	<0.1
Fenamiphos	mg/kg	<0.1
Ethion	mg/kg	<0.1
Phosalone	mg/kg	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1
Coumaphos	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	101

PCBs in Soil						
Our Reference		372294-1	372294-2	372294-5	372294-9	372294-13
Your Reference	UNITS	TL01	TL01	TL03	TL04	TL05
Depth		0.3-0.4	0.5-0.6	0.1-0.2	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	99	97	104	103	100

PCBs in Soil		
Our Reference		372294-16
Your Reference	UNITS	TL11
Depth		0.3-0.4
Date Sampled		05/02/2025
Type of sample		Soil
Date extracted	-	07/02/2025
Date analysed	-	07/02/2025
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-Fluorobiphenyl	%	101

Misc Soil - Inorg						
Our Reference		372294-1	372294-2	372294-5	372294-9	372294-13
Your Reference	UNITS	TL01	TL01	TL03	TL04	TL05
Depth		0.3-0.4	0.5-0.6	0.1-0.2	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5
Total Cyanide	mg/kg	[NA]	<0.5	<0.5	<0.5	<0.5

Misc Soil - Inorg		
Our Reference		372294-16
Your Reference	UNITS	TL11
Depth		0.3-0.4
Date Sampled		05/02/2025
Type of sample		Soil
Date prepared	-	07/02/2025
Date analysed	-	10/02/2025
Total Phenolics (as Phenol)	mg/kg	<5
Total Cyanide	mg/kg	<0.5

Acid Extractable metals in soil						
Our Reference		372294-1	372294-2	372294-3	372294-4	372294-5
Your Reference	UNITS	TL01	TL01	TL01	TL01	TL03
Depth		0.3-0.4	0.5-0.6	1.7-1.9	1.9-2.1	0.1-0.2
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
Arsenic	mg/kg	4	5	<4	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	14	13	17	17
Copper	mg/kg	5	28	45	18	53
Lead	mg/kg	14	160	94	28	5
Mercury	mg/kg	<0.1	4.0	3.5	0.5	<0.1
Nickel	mg/kg	8	8	5	6	110
Zinc	mg/kg	36	170	23	23	43

Acid Extractable metals in soil						
Our Reference		372294-6	372294-7	372294-8	372294-9	372294-10
Your Reference	UNITS	TL03	TL03	TL03	TL04	TL04
Depth		0.3-0.4	0.4-0.6	1-1.2	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
Arsenic	mg/kg	5	5	5	<4	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	19	17	16	10
Copper	mg/kg	14	9	13	59	10
Lead	mg/kg	160	26	27	6	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	25	6	8	110	22
Zinc	mg/kg	41	20	25	44	35

Acid Extractable metals in soil						
Our Reference		372294-11	372294-12	372294-13	372294-14	372294-15
Your Reference	UNITS	TL04	TL04	TL05	TL05	TL05
Depth		0.4-0.6	1.3-1.5	0.3-0.4	0.5-0.7	1-1.2
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
Arsenic	mg/kg	4	5	<4	5	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	18	22	18	23
Copper	mg/kg	6	9	58	11	10
Lead	mg/kg	18	12	4	19	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	5	150	14	7
Zinc	mg/kg	14	19	48	14	14

Acid Extractable metals in soil						
Our Reference		372294-16	372294-17	372294-18	372294-19	372294-20
Your Reference	UNITS	TL11	TL11	TL11	BD1/20250205	BD2/20250205
Depth		0.3-0.4	0.4-0.6	0.8-1	-	-
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
Arsenic	mg/kg	5	5	5	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	18	17	14	16
Copper	mg/kg	9	9	12	6	50
Lead	mg/kg	17	13	14	15	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	6	6	5	100
Zinc	mg/kg	22	19	22	12	38

Acid Extractable metals in soil			
Our Reference	UNITS	372294-27	372294-28
Your Reference		TL01 - [TRIPLICATE]	TL11 - [TRIPLICATE]
Depth		0.5-0.6	0.3-0.4
Date Sampled		05/02/2025	05/02/2025
Type of sample		Soil	Soil
Date prepared	-	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025
Arsenic	mg/kg	<4	6
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	14	13
Copper	mg/kg	24	11
Lead	mg/kg	110	18
Mercury	mg/kg	3.0	<0.1
Nickel	mg/kg	11	18
Zinc	mg/kg	130	39

Moisture						
Our Reference		372294-1	372294-2	372294-3	372294-4	372294-5
Your Reference	UNITS	TL01	TL01	TL01	TL01	TL03
Depth		0.3-0.4	0.5-0.6	1.7-1.9	1.9-2.1	0.1-0.2
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
Moisture	%	7.0	11	18	17	4.7

Moisture						
Our Reference		372294-6	372294-7	372294-8	372294-9	372294-10
Your Reference	UNITS	TL03	TL03	TL03	TL04	TL04
Depth		0.3-0.4	0.4-0.6	1-1.2	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
Moisture	%	7.1	14	15	4.2	6.8

Moisture						
Our Reference		372294-11	372294-12	372294-13	372294-14	372294-15
Your Reference	UNITS	TL04	TL04	TL05	TL05	TL05
Depth		0.4-0.6	1.3-1.5	0.3-0.4	0.5-0.7	1-1.2
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
Moisture	%	12	12	7.3	15	17

Moisture						
Our Reference		372294-16	372294-17	372294-18	372294-19	372294-20
Your Reference	UNITS	TL11	TL11	TL11	BD1/20250205	BD2/20250205
Depth		0.3-0.4	0.4-0.6	0.8-1	-	-
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	10/02/2025	10/02/2025	10/02/2025	10/02/2025	10/02/2025
Moisture	%	8.0	15	15	11	4.8

Asbestos ID - soils NEPM						
Our Reference		372294-1	372294-2	372294-4	372294-5	372294-6
Your Reference	UNITS	TL01	TL01	TL01	TL03	TL03
Depth		0.3-0.4	0.5-0.6	1.9-2.1	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	11/02/2025	11/02/2025	11/02/2025	11/02/2025	11/02/2025
Sample mass tested	g	939.27	752.41	614.8	1,098.57	992.88
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Grey 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	–	–	–	–	–
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM						
Our Reference		372294-7	372294-9	372294-10	372294-11	372294-13
Your Reference	UNITS	TL03	TL04	TL04	TL04	TL05
Depth		0.4-0.6	0.1-0.2	0.3-0.4	0.4-0.6	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	11/02/2025	11/02/2025	11/02/2025	11/02/2025	11/02/2025
Sample mass tested	g	791.43	1,117.1	910.82	927.12	1,028.31
Sample Description	-	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown 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	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	–	–	–	–	–
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM				
Our Reference		372294-14	372294-16	372294-17
Your Reference	UNITS	TL05	TL11	TL11
Depth		0.5-0.7	0.3-0.4	0.4-0.6
Date Sampled		05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil
Date analysed	-	11/02/2025	11/02/2025	11/02/2025
Sample mass tested	g	644.68	820.92	731.35
Sample Description	-	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
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos[#1]	g/kg	<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
ACM >7mm Estimation*	g	–	–	–
FA and AF Estimation*	g	–	–	–
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil

PFAS in Soils Short						
Our Reference		372294-2	372294-5	372294-9	372294-13	372294-16
Your Reference	UNITS	TL01	TL03	TL04	TL05	TL11
Depth		0.5-0.6	0.1-0.2	0.1-0.2	0.3-0.4	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Perfluorobutanesulfonic 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
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Perfluorooctanoic acid PFOA	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
Surrogate $^{13}C_8$ *PFOS*	%	100	101	102	99	102
Surrogate $^{13}C_2$ *PFOA*	%	107	97	94	98	103
Extracted ISTD $^{13}C_3$ *PFBS*	%	99	97	99	95	94
Extracted ISTD $^{18}O_2$ *PFHxS*	%	97	100	101	96	93
Extracted ISTD $^{13}C_4$ *PFOS*	%	97	101	101	97	92
Extracted ISTD $^{13}C_4$ *PFOA*	%	93	101	102	103	94
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	106	101	102	99	93
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	122	110	104	103	103
Total Positive PFHxS & PFOS	µg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	0.1	<0.1	0.2	<0.1	<0.1
Total Positive PFAS	µg/kg	0.1	<0.1	0.2	<0.1	<0.1

PFAS in Soils Short		
Our Reference		372294-20
Your Reference	UNITS	BD2/20250205
Depth		-
Date Sampled		05/02/2025
Type of sample		Soil
Date prepared	-	07/02/2025
Date analysed	-	07/02/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	99
Surrogate $^{13}C_2$ *PFOA*	%	101
Extracted ISTD $^{13}C_3$ *PFBS*	%	94
Extracted ISTD $^{18}O_2$ *PFHxS*	%	95
Extracted ISTD $^{13}C_4$ *PFOS*	%	97
Extracted ISTD $^{13}C_4$ *PFOA*	%	97
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	98
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	105
Total Positive PFHxS & PFOS	µg/kg	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1
Total Positive PFAS	µg/kg	<0.1

PFAS in TCLP Short				
Our Reference		372294-2	372294-9	372294-16
Your Reference	UNITS	TL01	TL04	TL11
Depth		0.5-0.6	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	10/02/2025
Date analysed	-	11/02/2025	11/02/2025	10/02/2025
pH of soil for fluid# determ.	pH units	8.0	9.3	8.5
pH of soil TCLP (after HCl)	pH units	1.6	1.6	1.6
Extraction fluid used		1	1	1
pH of final Leachate	pH units	4.9	5.1	4.9
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	102	106	114
Surrogate $^{13}C_2$ *PFOA*	%	90	96	98
Extracted ISTD $^{13}C_3$ *PFBS*	%	101	96	109
Extracted ISTD $^{18}O_2$ *PFHxS*	%	88	88	103
Extracted ISTD $^{13}C_4$ *PFOS*	%	93	88	104
Extracted ISTD $^{13}C_4$ *PFOA*	%	101	94	106
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	73	73	82
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	78	80	83
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01
Total Positive PFOS & PFOA	µg/L	<0.01	<0.01	<0.01
Total Positive PFAS	µg/L	<0.01	<0.01	<0.01

Misc Inorg - Soil			
Our Reference		372294-6	372294-8
Your Reference	UNITS	TL03	TL03
Depth		0.3-0.4	1-1.2
Date Sampled		05/02/2025	05/02/2025
Type of sample		Soil	Soil
Date prepared	-	10/02/2025	10/02/2025
Date analysed	-	10/02/2025	10/02/2025
pH 1:5 soil:water	pH Units	9.6	6.0

Clay 50-120g			
Our Reference		372294-6	372294-8
Your Reference	UNITS	TL03	TL03
Depth		0.3-0.4	1-1.2
Date Sampled		05/02/2025	05/02/2025
Type of sample		Soil	Soil
Date prepared	-	11/02/2025	11/02/2025
Date analysed	-	12/02/2025	12/02/2025
Clay in soils <2µm	% (w/w)	9	35

CEC			
Our Reference		372294-6	372294-8
Your Reference	UNITS	TL03	TL03
Depth		0.3-0.4	1-1.2
Date Sampled		05/02/2025	05/02/2025
Type of sample		Soil	Soil
Date prepared	-	12/02/2025	12/02/2025
Date analysed	-	12/02/2025	12/02/2025
Exchangeable Ca	meq/100g	4.9	2.7
Exchangeable K	meq/100g	0.2	0.3
Exchangeable Mg	meq/100g	1.8	5.0
Exchangeable Na	meq/100g	0.5	0.3
Cation Exchange Capacity	meq/100g	7.4	8.3

Coal Tar					
Our Reference		372294-23	372294-24	372294-25	372294-26
Your Reference	UNITS	ASP1	ASP2	ASP3	ASP4
Depth		-	-	-	-
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Material	Material	Material	Material
Date prepared	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025	07/02/2025
Presence of Coal Tar*	-	Absent	Absent	Absent	Absent

Method ID	Methodology Summary
AS1289.3.6.3	Particle Size Distribution using in house method INORG-107 by way of sieving and/or hydrometer sedimentation testing. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-001	pH - Measured using pH meter and electrode. 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.

Method ID	Methodology Summary
Inorg-014	Cyanide - free, total, weak acid dissociable by segmented flow analyser (in line dialysis with colourimetric finish). Solids/Filters and sorbents are extracted in a caustic media prior to analysis. Impingers are pH adjusted as required prior to analysis. Cyanides amenable to Chlorination - samples are analysed untreated and treated with hypochlorite to assess the potential for chlorination of cyanide forms. Based on APHA latest edition, 4500-CN_G,H.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate).
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	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.

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-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.
RTA T542	Determination of Phenol in core samples as per RTA test method T542. This procedure gives and indication of whether a sample of asphalt has been made with coal tar. The coal tar method gives an approximate result with a high degree of uncertainty.

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	372294-5
Date Extracted	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Date Analysed	-			10/02/2025	2	10/02/2025	10/02/2025		10/02/2025	10/02/2025
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
trans-1,2-Dichloroethene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,1-Dichloroethane	mg/kg	1	Org-023	<1	2	<1	<1	0	104	108
cis-1,2-Dichloroethene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Bromochloromethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Chloroform	mg/kg	1	Org-023	<1	2	<1	<1	0	108	132
2,2-Dichloropropane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2-Dichloroethane	mg/kg	1	Org-023	<1	2	<1	<1	0	98	104
1,1,1-Trichloroethane	mg/kg	1	Org-023	<1	2	<1	<1	0	95	102
1,1-Dichloropropene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Carbon Tetrachloride	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	2	<0.2	<0.2	0	95	98
Dibromomethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2-Dichloropropane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Trichloroethene	mg/kg	1	Org-023	<1	2	<1	<1	0	89	89
Bromodichloromethane	mg/kg	1	Org-023	<1	2	<1	<1	0	99	130
trans-1,3-Dichloropropene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
cis-1,3-Dichloropropene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,1,2-Trichloroethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	2	<0.5	<0.5	0	103	108
1,3-Dichloropropane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Dibromochloromethane	mg/kg	1	Org-023	<1	2	<1	<1	0	99	130
1,2-Dibromoethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Tetrachloroethene	mg/kg	1	Org-023	<1	2	<1	<1	0	92	113
1,1,1,2-Tetrachloroethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Chlorobenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	97	80
Bromoform	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
m+p-Xylene	mg/kg	2	Org-023	<2	2	<2	<2	0	99	82
Styrene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	372294-5
o-Xylene	mg/kg	1	Org-023	<1	2	<1	<1	0	101	80
1,2,3-Trichloropropane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Isopropylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Bromobenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
n-Propylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
2-Chlorotoluene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
4-Chlorotoluene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,3,5-Trimethylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
tert-Butylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2,4-Trimethylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,3-Dichlorobenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
sec-Butylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,4-Dichlorobenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
4-Isopropyltoluene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2-Dichlorobenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
n-Butylbenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2-Dibromo-3-chloropropane	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2,4-Trichlorobenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
1,2,3-Trichlorobenzene	mg/kg	1	Org-023	<1	2	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	112	2	101	112	10	98	107
Surrogate aaa-Trifluorotoluene	%		Org-023	111	2	93	104	11	95	109
Surrogate Toluene-d_8	%		Org-023	109	2	101	113	11	100	107
Surrogate 4-Bromofluorobenzene	%		Org-023	88	2	97	87	11	98	83

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date Extracted	-			[NT]	16	07/02/2025	07/02/2025		[NT]	[NT]
Date Analysed	-			[NT]	16	11/02/2025	10/02/2025		[NT]	[NT]
Dichlorodifluoromethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
trans-1,2-Dichloroethene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,1-Dichloroethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
cis-1,2-Dichloroethene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Bromochloromethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Chloroform	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
2,2-Dichloropropane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,2-Dichloroethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,1,1-Trichloroethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,1-Dichloropropene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Carbon Tetrachloride	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	16	<0.2	<0.2	0	[NT]	[NT]
Dibromomethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,2-Dichloropropane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Trichloroethene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Bromodichloromethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
trans-1,3-Dichloropropene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
cis-1,3-Dichloropropene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,1,2-Trichloroethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	16	<0.5	<0.5	0	[NT]	[NT]
1,3-Dichloropropane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Dibromochloromethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,2-Dibromoethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Tetrachloroethene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,1,1,2-Tetrachloroethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Chlorobenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Bromoform	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
m+p-Xylene	mg/kg	2	Org-023	[NT]	16	<2	<2	0	[NT]	[NT]
Styrene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,2,3-Trichloropropane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Isopropylbenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Bromobenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
n-Propylbenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
2-Chlorotoluene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
4-Chlorotoluene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,3,5-Trimethylbenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
tert-Butylbenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,2,4-Trimethylbenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,3-Dichlorobenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
sec-Butylbenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,4-Dichlorobenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
4-Isopropyltoluene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,2-Dichlorobenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
n-Butylbenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,2-Dibromo-3-chloropropane	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,2,4-Trichlorobenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
1,2,3-Trichlorobenzene	mg/kg	1	Org-023	[NT]	16	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	[NT]	16	104	116	11	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	16	91	102	11	[NT]	[NT]
Surrogate Toluene-d_8	%		Org-023	[NT]	16	102	113	10	[NT]	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	[NT]	16	98	89	10	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	372294-5
Date extracted	-			07/02/2025	19	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Date analysed	-			11/02/2025	19	10/02/2025	10/02/2025		10/02/2025	10/02/2025
TRH C_6 - C_9	mg/kg	25	Org-023	<25	19	<25	<25	0	91	90
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	19	<25	<25	0	91	90
Benzene	mg/kg	0.2	Org-023	<0.2	19	<0.2	<0.2	0	99	98
Toluene	mg/kg	0.5	Org-023	<0.5	19	<0.5	<0.5	0	110	108
Ethylbenzene	mg/kg	1	Org-023	<1	19	<1	<1	0	80	80
m+p-xylene	mg/kg	2	Org-023	<2	19	<2	<2	0	82	82
o-Xylene	mg/kg	1	Org-023	<1	19	<1	<1	0	80	80
Naphthalene	mg/kg	1	Org-023	<1	19	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	111	19	102	117	14	111	109

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	372294-20
Date extracted	-			[NT]	[NT]	[NT]	[NT]	[NT]	07/02/2025	07/02/2025
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	10/02/2025	10/02/2025
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	84	80
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	84	80
Benzene	mg/kg	0.2	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	90	87
Toluene	mg/kg	0.5	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	102	97
Ethylbenzene	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	74	71
m+p-xylene	mg/kg	2	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	77	73
o-Xylene	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	75	71
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	105	99

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	372294-5
Date extracted	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Date analysed	-			08/02/2025	2	08/02/2025	08/02/2025		08/02/2025	08/02/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	2	<50	<50	0	92	88
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	2	<100	<100	0	88	84
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	2	<100	<100	0	114	<100
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	2	<50	<50	0	92	88
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	2	<100	<100	0	88	84
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	2	<100	<100	0	114	<100
Surrogate o-Terphenyl	%		Org-020	81	2	81	79	2	84	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]	16	07/02/2025	07/02/2025		[NT]	[NT]
Date analysed	-			[NT]	16	08/02/2025	08/02/2025		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	16	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	16	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	16	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	16	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	16	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	16	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	16	78	77	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	372294-5
Date extracted	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Date analysed	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	88	84
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	90	86
Fluorene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	80	74
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	88	82
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	86	81
Pyrene	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	84	80
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	80	74
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	0.06	18	80	78
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	96	2	89	88	1	103	95

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	16	07/02/2025	07/02/2025		[NT]	[NT]
Date analysed	-			[NT]	16	07/02/2025	07/02/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	16	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	16	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	16	95	96	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	372294-5
Date extracted	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Date analysed	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	86	82
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	86	81
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	92	88
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	82	76
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	100	96
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	88	84
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	96	91
Endrin	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	84	86
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	92	86
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	98	96
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	112	2	101	102	1	112	102

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	16	07/02/2025	07/02/2025		[NT]	[NT]
Date analysed	-			[NT]	16	07/02/2025	07/02/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	16	101	107	6	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	372294-5
Date extracted	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Date analysed	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	100	88
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	92	86
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	96	92
Malathion	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	102	98
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	2	<0.1	<0.1	0	92	86
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	82
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	90	86
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	112	2	101	102	1	112	102

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	16	07/02/2025	07/02/2025		[NT]	[NT]
Date analysed	-			[NT]	16	07/02/2025	07/02/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	16	101	107	6	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	372294-5
Date extracted	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Date analysed	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
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	96	80
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	106	2	97	96	1	109	100

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	16	07/02/2025	07/02/2025		[NT]	[NT]
Date analysed	-			[NT]	16	07/02/2025	07/02/2025		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	16	101	102	1	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	372294-5
Date prepared	-			10/02/2025	2	07/02/2025	07/02/2025		10/02/2025	10/02/2025
Date analysed	-			10/02/2025	2	10/02/2025	10/02/2025		10/02/2025	10/02/2025
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	2	<5	<5	0	103	96
Total Cyanide	mg/kg	0.5	Inorg-014	<0.5	2	<0.5	<0.5	0	92	83

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	372294-5
Date prepared	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Date analysed	-			10/02/2025	2	10/02/2025	10/02/2025		10/02/2025	10/02/2025
Arsenic	mg/kg	4	Metals-020	<4	2	5	<4	22	106	75
Cadmium	mg/kg	0.4	Metals-020	<0.4	2	<0.4	<0.4	0	98	77
Chromium	mg/kg	1	Metals-020	<1	2	14	11	24	100	78
Copper	mg/kg	1	Metals-020	<1	2	28	26	7	99	94
Lead	mg/kg	1	Metals-020	<1	2	160	120	29	99	#
Mercury	mg/kg	0.1	Metals-021	<0.1	2	4.0	3.5	13	118	120
Nickel	mg/kg	1	Metals-020	<1	2	8	7	13	100	89
Zinc	mg/kg	1	Metals-020	<1	2	170	110	43	99	#

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	16	07/02/2025	07/02/2025		[NT]	[NT]
Date analysed	-			[NT]	16	10/02/2025	10/02/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	16	5	5	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	16	<0.4	0.6	40	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	16	15	13	14	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	16	9	16	56	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	16	17	13	27	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	16	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	16	10	21	71	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	16	22	31	34	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	[NT]
Date analysed	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	92	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	91	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	95	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	2	0.1	0.1	0	94	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	2	<0.1	<0.1	0	99	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	2	<0.2	<0.2	0	104	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	103	2	100	102	2	102	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	98	2	107	101	6	94	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	101	2	99	99	0	101	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	102	2	97	97	0	105	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	100	2	97	97	0	105	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	107	2	93	96	3	102	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	106	2	106	101	5	105	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	114	2	122	110	10	107	[NT]

QUALITY CONTROL: PFAS in TCLP Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	372294-9
Date prepared	-			07/02/2025	2	07/02/2025	07/02/2025		07/02/2025	07/02/2025
Date analysed	-			11/02/2025	2	11/02/2025	11/02/2025		11/02/2025	11/02/2025
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	95	111
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	103	99
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	120	115
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	101	101
6:2 FTS	µg/L	0.01	Org-029	<0.01	2	<0.01	<0.01	0	112	107
8:2 FTS	µg/L	0.02	Org-029	<0.02	2	<0.02	<0.02	0	105	115
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	121	2	102	104	2	118	100
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	93	2	90	99	10	96	96
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	100	2	101	96	5	106	85
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	92	2	88	81	8	99	89
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	94	2	93	89	4	100	83
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	98	2	101	89	13	97	91
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	70	2	73	69	6	82	82
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	82	2	78	83	6	95	86

QUALITY CONTROL: Misc Inorg - Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			10/02/2025	[NT]	[NT]	[NT]	[NT]	10/02/2025	[NT]
Date analysed	-			10/02/2025	[NT]	[NT]	[NT]	[NT]	10/02/2025	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			12/02/2025	6	12/02/2025	12/02/2025		12/02/2025	[NT]
Date analysed	-			12/02/2025	6	12/02/2025	12/02/2025		12/02/2025	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	6	4.9	5.7	15	95	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	6	0.2	0.2	0	98	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	6	1.8	1.9	5	93	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	6	0.5	0.4	22	84	[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

Acid Extractable Metals in Soil:
-The laboratory RPD acceptance criteria has been exceeded for 372294-2 for Zn. Therefore a triplicate result has been issued as laboratory sample number 372294-27.
-The laboratory RPD acceptance criteria has been exceeded for 372294-16 for Cu and Ni. Therefore a triplicate result has been issued as laboratory sample number 372294-28.
-# 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
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CERTIFICATE OF ANALYSIS 372294-A

Client Details

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

Sample Details

Your Reference	**231981.00 Parramatta**
Number of Samples	Additional analysis
Date samples received	06/02/2025
Date completed instructions received	13/02/2025

Analysis Details

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

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

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

Report Details

Date results requested by	20/02/2025
Date of Issue	20/02/2025

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Results Approved By
Giovanni Agosti, Group Technical Manager

Authorised By
Nancy Zhang, Laboratory Manager

Metals from Leaching Fluid pH 2.9 or 5						
Our Reference		372294-A-2	372294-A-5	372294-A-6	372294-A-9	372294-A-13
Your Reference	UNITS	TL01	TL03	TL03	TL04	TL05
Depth		0.5-0.6	0.1-0.2	0.3-0.4	0.1-0.2	0.3-0.4
Date Sampled		05/02/2025	05/02/2025	05/02/2025	05/02/2025	05/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025	20/02/2025
pH of soil for fluid# determ.	pH units	6.6	8.3	8.2	8.5	8.8
pH of soil TCLP (after HCl)	pH units	1.9	1.5	1.4	1.5	1.6
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	5.0	5.4	5.1	5.2	5.2
Lead	mg/L	<0.03	[NA]	<0.03	[NA]	[NA]
Nickel	mg/L	[NA]	0.1	[NA]	0.1	0.46

Method ID	Methodology Summary
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.
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.

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	372294-A-6
Date extracted	-			18/02/2025	5	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Date analysed	-			20/02/2025	5	20/02/2025	20/02/2025		20/02/2025	20/02/2025
Lead	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	98	89
Nickel	mg/L	0.02	Metals-020	<0.02	5	0.1	0.1	0	102	92

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.

Anna Bui

From: Nancy Zhang
Sent: Thursday, 13 February 2025 4:20 PM
To: Cathy Li
Cc: Sam Ferguson; Jiaqi Zhou; Anna Bui; Envirolab Sydney Sample Receipt
Subject: RE: Results for Registration 372294 231981.00 Parramatta

Hi Cathy,

No problem.

ELS REF: 372294 -A
TAT: STANDARD
DUE: 20/2/25
AB -

Kind Regards,

Nancy Zhang | Laboratory Manager | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E NZhang@envirolab.com.au | W www.envirolab.com.au

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Samples will be analysed per our T&C's.

From: Cathy Li <cathy.li@douglaspartners.com.au>
Sent: Thursday, February 13, 2025 3:47 PM
To: Nancy Zhang <NZhang@envirolab.com.au>
Cc: Sam Ferguson <Sam.Ferguson@douglaspartners.com.au>; Jiaqi Zhou <Jiaqi.Zhou@douglaspartners.com.au>
Subject: RE: Results for Registration 372294 231981.00 Parramatta

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.

Thanks Nancy. Can we please order TCLP on the below samples on standard TAT:

2, 6 - TCLP of lead on sample TL01/0.5 - 0.6 m and TL03/0.3 - 0.4 m

5, 9, 13 - TCLP of Nickel on sample TL03/0.1 - 0.2 m , TL04/0.1 - 0.2 m and TL05 / 0.3 - 0.4 m

Kind regards,

Cathy Li | Environmental Engineer

02 9809 0666 | 0484 789 919 | Cathy.Li@douglaspartners.com.au

www.douglaspartners.com.au | 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685

Douglas PARTNERS | GROUNDED EXPERTISE

Click here to learn about our awards and achievements.

From: Nancy Zhang <NZhang@envirolab.com.au>
Sent: Thursday, 13 February 2025 3:27 PM

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SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	231981.00 Parramatta
Envirolab Reference	372294-A
Date Sample Received	06/02/2025
Date Instructions Received	13/02/2025
Date Results Expected to be Reported	20/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	3
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead	Nickel	On Hold
TL01-0.3-0.4							✓
TL01-0.5-0.6	✓	✓	✓	✓	✓		
TL01-1.7-1.9							✓
TL01-1.9-2.1							✓
TL03-0.1-0.2	✓	✓	✓	✓		✓	
TL03-0.3-0.4	✓	✓	✓	✓	✓		
TL03-0.4-0.6							✓
TL03-1-1.2							✓
TL04-0.1-0.2	✓	✓	✓	✓		✓	
TL04-0.3-0.4							✓
TL04-0.4-0.6							✓
TL04-1.3-1.5							✓
TL05-0.3-0.4	✓	✓	✓	✓		✓	
TL05-0.5-0.7							✓
TL05-1-1.2							✓
TL11-0.3-0.4							✓
TL11-0.4-0.6							✓
TL11-0.8-1							✓
BD1/20250205							✓
BD2/20250205							✓
TS2							✓
TB2							✓
ASP1							✓
ASP2							✓
ASP3							✓
ASP4							✓
TL01 - [TRIPLICATE]-0.5-0.6							✓
TL11 - [TRIPLICATE]-0.3-0.4							✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

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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.

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:**	Parramatta	**To:**	Envirolab Services
Project Manager:	Cathy Li	**Order Number:**		**Sampler:** SAF	12 Ashley St, Chatswood NSW 2067
Email:	cathy.li@douglaspartners.com.au ; sam.ferguson@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.com
Prior Storage:	☑ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo 8AN	Combo 3AN	Combo 3	PFAS (short suite)	PFAS TCLP (short suite)	pH, CEC, & Clay Content	VOC	Cyanide	BTEX	Coal tar (RTA T542)		Notes/ Preservation/ Additional Requirements
1	TL01	0.3	0.4	5/05/25	S	G/P	X											
2	TL01	0.5	0.6	5/05/25	S	G/P	X	X		X	X		X	X				
NR 3	TL01	1.4	1.7	5/05/25	S	G/P												
4	TL01	1.7	1.9	5/05/25	S	G/P		X	X									
5	TL01	1.9	2.1	5/05/25	S	G/P		X										
6	TL03	0.1	0.2	5/05/25	S	G/P	X			X			X	X				
7	TL03	0.3	0.4	5/05/25	S	G/P		X				X						
8	TL03	0.4	0.6	5/05/25	S	G/P		X										
NR 9	TL03	0.8	1	5/05/25	S	G/P												
10	TL03	1	1.2	5/05/25	S	G/P			X			X						
11	TL04	0.1	0.2	5/05/25	S	G/P	X			X	X			X				
12	TL04	0.3	0.4	5/05/25	S	G/P		X					X					
13	TL04	0.4	0.6	5/05/25	S	G/P		X										
NR 14	TL04	0.8	1	5/05/25	S	G												

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

Job No: 372294
Date Received: 6/12/25
Time Received: 1710
Received By: ST
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:			**LAB RECEIPT**
Number of samples in container:	**Transported to laboratory by:**		**Lab Ref. No:** 372294
Send results to:	Douglas Partners Pty Ltd		**Received by:** Shaun Tok
Address:	96 Hermitage Road, West Ryde NSW 211	**Phone:** (02) 9809 0666	**Date & Tim** 6/12/25 1710
Relinquished by:	**Date:**	**Signed:**	**Signed:**

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:** Parramatta	**To:** Envirolab Services
Project Manager:	Cathy Li		**Dispatch date:** 0/01/1900

	Lab ID	Sample ID: Location / Other ID	Sample ID: Depth From	Sample ID: Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo 8AN	Combo 3AN	Combo 3	PFAS (short suite)	PFAS TCLP (short suite)	pH,CEC, & Clay Content	VOC	Cyanide	BTEX	Coal tar (RTA T542)		Notes/ Preservation/ Additional Requirements
12	15	TL04	1.3	1.5	5/05/25	S	G/P			X									
13	16	TL05	0.3	0.4	5/05/25	S	G/P	X			X			X	X				
14	17	TL05	0.5	0.7	5/05/25	S	G/P		X										
15	18	TL05	1	1.2	5/05/25	S	G/P			X									
16	19	TL11	0.3	0.4	5/05/25	S	G/P	X			X	X		X	X				
17	20	TL11	0.4	0.6	5/05/25	S	G/P		X										
18	21	TL11	0.8	1	5/05/25	S	G/P			X									
19	22	BD1/20250205								X									
20	23	BD2/20250205								X	X								
21	24	TS2														X			
22	25	TB2														X			
23	26	ASP1															x		
24	27	ASP2															x		
25	28	ASP3															x		
26	29	ASP4															x		#572296 612625 57

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SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	231981.00 Parramatta
Envirolab Reference	372294
Date Sample Received	06/02/2025
Date Instructions Received	06/02/2025
Date Results Expected to be Reported	13/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	22 Soil, 4 Material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	3
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Samples on hold not received.

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	VOCs in soil	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 Soil - Inorg	Acid Extractable metalsin soil	Asbestos ID - soils NEPM	PFAS in Soils Short	PFAS in TCLP Short	Misc Inorg - Soil	Clay 50-120g	CEC	Coal Tar
TL01-0.3-0.4		✓	✓	✓	✓	✓	✓	✓	✓	✓						
TL01-0.5-0.6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
TL01-1.7-1.9		✓	✓	✓					✓							
TL01-1.9-2.1		✓	✓	✓					✓	✓						
TL03-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
TL03-0.3-0.4		✓	✓	✓					✓	✓			✓	✓	✓	
TL03-0.4-0.6		✓	✓	✓					✓	✓						
TL03-1-1.2		✓	✓	✓					✓				✓	✓	✓	
TL04-0.1-0.2		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
TL04-0.3-0.4	✓	✓	✓	✓					✓	✓						
TL04-0.4-0.6		✓	✓	✓					✓	✓						
TL04-1.3-1.5		✓	✓	✓					✓							
TL05-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
TL05-0.5-0.7		✓	✓	✓					✓	✓						
TL05-1-1.2		✓	✓	✓					✓							
TL11-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
TL11-0.4-0.6		✓	✓	✓					✓	✓						
TL11-0.8-1		✓	✓	✓					✓							
BD1/20250205		✓	✓	✓					✓							
BD2/20250205		✓	✓	✓					✓		✓					
TS2		✓														
TB2		✓														
ASP1																✓
ASP2																✓
ASP3																✓
ASP4																✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

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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.

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CERTIFICATE OF ANALYSIS 373216

Client Details

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

Sample Details

Your Reference	**231981.00 Parramatta**
Number of Samples	18 Soil
Date samples received	17/02/2025
Date completed instructions received	17/02/2025

Analysis Details

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

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

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

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

Report Details

Date results requested by	24/02/2025
Date of Issue	24/02/2025

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

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Jack Wallis, Senior Chemist
Lucy Zhu, Asbestos Supervisor
Sean McAlary, Senior Chemist
Steven Luong, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

VOCs in soil					
Our Reference		373216-1	373216-2	373216-8	373216-9
Your Reference	UNITS	TL07	TL08	TL12	TL13
Depth		0.25-0.3	0.3-0.5	0.8-1	0.3-0.4
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil
Date Extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date Analysed	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025
Dichlorodifluoromethane	mg/kg	<1	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1	<1
trans-1,2-Dichloroethene	mg/kg	<1	<1	<1	<1
1,1-Dichloroethane	mg/kg	<1	<1	<1	<1
cis-1,2-Dichloroethene	mg/kg	<1	<1	<1	<1
Bromochloromethane	mg/kg	<1	<1	<1	<1
Chloroform	mg/kg	<1	<1	<1	<1
2,2-Dichloropropane	mg/kg	<1	<1	<1	<1
1,2-Dichloroethane	mg/kg	<1	<1	<1	<1
1,1,1-Trichloroethane	mg/kg	<1	<1	<1	<1
1,1-Dichloropropene	mg/kg	<1	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1	<1
Carbon Tetrachloride	mg/kg	<1	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Dibromomethane	mg/kg	<1	<1	<1	<1
1,2-Dichloropropane	mg/kg	<1	<1	<1	<1
Trichloroethene	mg/kg	<1	<1	<1	<1
Bromodichloromethane	mg/kg	<1	<1	<1	<1
trans-1,3-Dichloropropene	mg/kg	<1	<1	<1	<1
cis-1,3-Dichloropropene	mg/kg	<1	<1	<1	<1
1,1,2-Trichloroethane	mg/kg	<1	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	mg/kg	<1	<1	<1	<1
Dibromochloromethane	mg/kg	<1	<1	<1	<1
1,2-Dibromoethane	mg/kg	<1	<1	<1	<1
Tetrachloroethene	mg/kg	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	mg/kg	<1	<1	<1	<1
Chlorobenzene	mg/kg	<1	<1	<1	<1

VOCs in soil					
Our Reference		373216-1	373216-2	373216-8	373216-9
Your Reference	UNITS	TL07	TL08	TL12	TL13
Depth		0.25-0.3	0.3-0.5	0.8-1	0.3-0.4
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil
Ethylbenzene	mg/kg	<1	<1	<1	<1
Bromoform	mg/kg	<1	<1	<1	<1
m+p-Xylene	mg/kg	<2	<2	<2	<2
Styrene	mg/kg	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	mg/kg	<1	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1	<1
1,2,3-Trichloropropane	mg/kg	<1	<1	<1	<1
Isopropylbenzene	mg/kg	<1	<1	<1	<1
Bromobenzene	mg/kg	<1	<1	<1	<1
n-Propylbenzene	mg/kg	<1	<1	<1	<1
2-Chlorotoluene	mg/kg	<1	<1	<1	<1
4-Chlorotoluene	mg/kg	<1	<1	<1	<1
1,3,5-Trimethylbenzene	mg/kg	<1	<1	<1	<1
tert-Butylbenzene	mg/kg	<1	<1	<1	<1
1,2,4-Trimethylbenzene	mg/kg	<1	<1	<1	<1
1,3-Dichlorobenzene	mg/kg	<1	<1	<1	<1
sec-Butylbenzene	mg/kg	<1	<1	<1	<1
1,4-Dichlorobenzene	mg/kg	<1	<1	<1	<1
4-Isopropyltoluene	mg/kg	<1	<1	<1	<1
1,2-Dichlorobenzene	mg/kg	<1	<1	<1	<1
n-Butylbenzene	mg/kg	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	mg/kg	<1	<1	<1	<1
1,2,4-Trichlorobenzene	mg/kg	<1	<1	<1	<1
Hexachlorobutadiene	mg/kg	<1	<1	<1	<1
1,2,3-Trichlorobenzene	mg/kg	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	97	100	97	97
Surrogate aaa-Trifluorotoluene	%	97	97	97	100
Surrogate Toluene-d_8	%	100	108	102	103
Surrogate 4-Bromofluorobenzene	%	97	97	98	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		373216-1	373216-2	373216-4	373216-5	373216-6
Your Reference	UNITS	TL07	TL08	TL08	TL08	TL08
Depth		0.25-0.3	0.3-0.5	1.3-1.5	1.8-2	2.1-2.3
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025	20/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	97	97	94	95

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		373216-7	373216-8	373216-9	373216-10	373216-11
Your Reference	UNITS	TL12	TL12	TL13	TL01	TL01
Depth		0.3-0.5	0.8-1	0.3-0.4	3-3.2	4.8-5
Date Sampled		17/02/2025	17/02/2025	17/02/2025	13/02/2025	13/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025	20/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	92	97	100	94	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		373216-12	373216-13	373216-14	373216-15	373216-16
Your Reference	UNITS	TL05	TL05	TL06	TL06	BD01/20250217
Depth		2-2.2	5-5.5	3-3.2	4.8-5	-
Date Sampled		13/02/2025	13/02/2025	13/02/2025	13/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025	20/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	99	95	96	100

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		373216-17	373216-18
Your Reference	UNITS	TB3	TS3
Depth		-	-
Date Sampled		17/02/2025	17/02/2025
Type of sample		Soil	Soil
Date extracted	-	18/02/2025	18/02/2025
Date analysed	-	20/02/2025	20/02/2025
TRH C_6 - C_9	mg/kg	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	[NA]
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	[NA]
Benzene	mg/kg	<0.2	102%
Toluene	mg/kg	<0.5	102%
Ethylbenzene	mg/kg	<1	101%
m+p-xylene	mg/kg	<2	103%
o-Xylene	mg/kg	<1	105%
Naphthalene	mg/kg	<1	[NA]
Total +ve Xylenes	mg/kg	<1	[NA]
Surrogate aaa-Trifluorotoluene	%	98	102

svTRH (C10-C40) in Soil						
Our Reference		373216-1	373216-2	373216-4	373216-5	373216-6
Your Reference	UNITS	TL07	TL08	TL08	TL08	TL08
Depth		0.25-0.3	0.3-0.5	1.3-1.5	1.8-2	2.1-2.3
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	19/02/2025	19/02/2025	19/02/2025	19/02/2025	19/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	190	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	190	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	210	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	270	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	480	<50	<50	<50	<50
Surrogate o-Terphenyl	%	85	80	83	91	80

svTRH (C10-C40) in Soil						
Our Reference		373216-7	373216-8	373216-9	373216-10	373216-11
Your Reference	UNITS	TL12	TL12	TL13	TL01	TL01
Depth		0.3-0.5	0.8-1	0.3-0.4	3-3.2	4.8-5
Date Sampled		17/02/2025	17/02/2025	17/02/2025	13/02/2025	13/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	19/02/2025	19/02/2025	19/02/2025	19/02/2025	19/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	92	80	77	80	80

svTRH (C10-C40) in Soil						
Our Reference		373216-12	373216-13	373216-14	373216-15	373216-16
Your Reference	UNITS	TL05	TL05	TL06	TL06	BD01/20250217
Depth		2-2.2	5-5.5	3-3.2	4.8-5	-
Date Sampled		13/02/2025	13/02/2025	13/02/2025	13/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	19/02/2025	19/02/2025	19/02/2025	19/02/2025	19/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	78	79	78	90	83

PAHs in Soil						
Our Reference		373216-1	373216-2	373216-4	373216-5	373216-6
Your Reference	UNITS	TL07	TL08	TL08	TL08	TL08
Depth		0.25-0.3	0.3-0.5	1.3-1.5	1.8-2	2.1-2.3
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	21/02/2025	21/02/2025	21/02/2025	21/02/2025	21/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.2	0.7	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.5	0.8	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.6	0.7	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.2	0.2	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.3	0.3	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.4	0.4	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.2	0.2	<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	0.2	0.2	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	2.7	3.8	<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	%	84	85	92	93	93

PAHs in Soil						
Our Reference		373216-7	373216-8	373216-9	373216-10	373216-11
Your Reference	UNITS	TL12	TL12	TL13	TL01	TL01
Depth		0.3-0.5	0.8-1	0.3-0.4	3-3.2	4.8-5
Date Sampled		17/02/2025	17/02/2025	17/02/2025	13/02/2025	13/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	21/02/2025	21/02/2025	21/02/2025	21/02/2025	21/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	85	92	84	90	90

PAHs in Soil						
Our Reference		373216-12	373216-13	373216-14	373216-15	373216-16
Your Reference	UNITS	TL05	TL05	TL06	TL06	BD01/20250217
Depth		2-2.2	5-5.5	3-3.2	4.8-5	-
Date Sampled		13/02/2025	13/02/2025	13/02/2025	13/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	21/02/2025	21/02/2025	21/02/2025	21/02/2025	21/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	90	89	91	93	90

Organochlorine Pesticides in soil					
Our Reference		373216-1	373216-2	373216-7	373216-9
Your Reference	UNITS	TL07	TL08	TL12	TL13
Depth		0.25-0.3	0.3-0.5	0.3-0.5	0.3-0.4
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	21/02/2025	21/02/2025	21/02/2025	21/02/2025
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
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	105	115	110	106

Organophosphorus Pesticides in Soil					
Our Reference		373216-1	373216-2	373216-7	373216-9
Your Reference	UNITS	TL07	TL08	TL12	TL13
Depth		0.25-0.3	0.3-0.5	0.3-0.5	0.3-0.4
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	21/02/2025	21/02/2025	21/02/2025	21/02/2025
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	%	105	115	110	106

PCBs in Soil					
Our Reference		373216-1	373216-2	373216-7	373216-9
Your Reference	UNITS	TL07	TL08	TL12	TL13
Depth		0.25-0.3	0.3-0.5	0.3-0.5	0.3-0.4
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	21/02/2025	21/02/2025	21/02/2025	21/02/2025
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	%	85	90	90	85

Misc Soil - Inorg					
Our Reference		373216-1	373216-2	373216-7	373216-9
Your Reference	UNITS	TL07	TL08	TL12	TL13
Depth		0.25-0.3	0.3-0.5	0.3-0.5	0.3-0.4
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	19/02/2025	19/02/2025	19/02/2025	19/02/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5
Total Cyanide	mg/kg	<0.5	[NA]	[NA]	<0.5

Acid Extractable metals in soil						
Our Reference		373216-1	373216-2	373216-4	373216-5	373216-6
Your Reference	UNITS	TL07	TL08	TL08	TL08	TL08
Depth		0.25-0.3	0.3-0.5	1.3-1.5	1.8-2	2.1-2.3
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025	20/02/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	8	5	8	7
Copper	mg/kg	53	16	5	6	6
Lead	mg/kg	16	39	13	10	9
Mercury	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Nickel	mg/kg	7	9	3	4	3
Zinc	mg/kg	33	15	8	12	9

Acid Extractable metals in soil						
Our Reference		373216-7	373216-8	373216-9	373216-10	373216-11
Your Reference	UNITS	TL12	TL12	TL13	TL01	TL01
Depth		0.3-0.5	0.8-1	0.3-0.4	3-3.2	4.8-5
Date Sampled		17/02/2025	17/02/2025	17/02/2025	13/02/2025	13/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025	20/02/2025
Arsenic	mg/kg	4	5	4	5	4
Cadmium	mg/kg	<0.4	<0.4	0.7	<0.4	<0.4
Chromium	mg/kg	26	20	12	15	12
Copper	mg/kg	8	11	30	14	9
Lead	mg/kg	12	19	32	21	15
Mercury	mg/kg	<0.1	<0.1	0.2	0.3	0.1
Nickel	mg/kg	6	9	34	8	6
Zinc	mg/kg	7	17	100	25	19

Acid Extractable metals in soil						
Our Reference		373216-12	373216-13	373216-14	373216-15	373216-16
Your Reference	UNITS	TL05	TL05	TL06	TL06	BD01/20250217
Depth		2-2.2	5-5.5	3-3.2	4.8-5	-
Date Sampled		13/02/2025	13/02/2025	13/02/2025	13/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025	20/02/2025
Arsenic	mg/kg	4	5	<4	5	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	11	9	8	9
Copper	mg/kg	9	10	7	8	9
Lead	mg/kg	13	12	9	7	47
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Nickel	mg/kg	7	8	4	5	5
Zinc	mg/kg	18	28	13	20	14

Moisture						
Our Reference		373216-1	373216-2	373216-4	373216-5	373216-6
Your Reference	UNITS	TL07	TL08	TL08	TL08	TL08
Depth		0.25-0.3	0.3-0.5	1.3-1.5	1.8-2	2.1-2.3
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	19/02/2025	19/02/2025	19/02/2025	19/02/2025	19/02/2025
Moisture	%	9.5	13	14	16	17

Moisture						
Our Reference		373216-7	373216-8	373216-9	373216-10	373216-11
Your Reference	UNITS	TL12	TL12	TL13	TL01	TL01
Depth		0.3-0.5	0.8-1	0.3-0.4	3-3.2	4.8-5
Date Sampled		17/02/2025	17/02/2025	17/02/2025	13/02/2025	13/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	19/02/2025	19/02/2025	19/02/2025	19/02/2025	19/02/2025
Moisture	%	18	18	11	18	16

Moisture						
Our Reference		373216-12	373216-13	373216-14	373216-15	373216-16
Your Reference	UNITS	TL05	TL05	TL06	TL06	BD01/20250217
Depth		2-2.2	5-5.5	3-3.2	4.8-5	-
Date Sampled		13/02/2025	13/02/2025	13/02/2025	13/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	18/02/2025	18/02/2025	18/02/2025	18/02/2025	18/02/2025
Date analysed	-	19/02/2025	19/02/2025	19/02/2025	19/02/2025	19/02/2025
Moisture	%	13	15	13	14	13

Asbestos ID - soils NEPM						
Our Reference		373216-1	373216-2	373216-4	373216-5	373216-7
Your Reference	UNITS	TL07	TL08	TL08	TL08	TL12
Depth		0.25-0.3	0.3-0.5	1.3-1.5	1.8-2	0.3-0.5
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	19/02/2025	21/02/2025	19/02/2025	19/02/2025	19/02/2025
Sample mass tested	g	336.92	556.83	971.69	920.82	719.57
Sample Description	-	Beige coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	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	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	–	–	–	–	–
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM			
Our Reference		373216-8	373216-9
Your Reference	UNITS	TL12	TL13
Depth		0.8-1	0.3-0.4
Date Sampled		17/02/2025	17/02/2025
Type of sample		Soil	Soil
Date analysed	-	19/02/2025	19/02/2025
Sample mass tested	g	705.77	841.75
Sample Description	-	Brown clayey 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	–	–
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001
Asbestos comments	-	Nil	Nil

PFAS in Soils Short					
Our Reference		373216-1	373216-4	373216-8	373216-9
Your Reference	UNITS	TL07	TL08	TL12	TL13
Depth		0.25-0.3	1.3-1.5	0.8-1	0.3-0.4
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025
Date analysed	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.4	3.1	0.7	0.6
Perfluorooctanoic acid PFOA	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
Surrogate $^{13}C_8$ *PFOS*	%	109	103	103	102
Surrogate $^{13}C_2$ *PFOA*	%	101	104	97	100
Extracted ISTD $^{13}C_3$ *PFBS*	%	81	85	84	98
Extracted ISTD $^{18}O_2$ *PFHxS*	%	82	86	82	96
Extracted ISTD $^{13}C_4$ *PFOS*	%	85	88	89	102
Extracted ISTD $^{13}C_4$ *PFOA*	%	88	89	90	99
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	68	76	72	83
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	73	77	74	93
Total Positive PFHxS & PFOS	µg/kg	0.4	3.1	0.7	0.6
Total Positive PFOS & PFOA	µg/kg	0.4	3.1	0.7	0.6
Total Positive PFAS	µg/kg	0.4	3.1	0.7	0.6

PFAS in TCLP Short					
Our Reference		373216-1	373216-4	373216-8	373216-9
Your Reference	UNITS	TL07	TL08	TL12	TL13
Depth		0.25-0.3	1.3-1.5	0.8-1	0.3-0.4
Date Sampled		17/02/2025	17/02/2025	17/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	19/02/2025	19/02/2025	19/02/2025	19/02/2025
Date analysed	-	20/02/2025	20/02/2025	20/02/2025	20/02/2025
pH of soil for fluid# determ.	pH units	10.4	9.1	8.4	8.5
pH of soil TCLP (after HCl)	pH units	1.9	1.8	1.9	1.8
Extraction fluid used		1	1	1	1
pH of final Leachate	pH units	7.6	5.2	5.2	5.3
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	0.1	0.02	0.02
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	103	107	116	105
Surrogate $^{13}C_2$ *PFOA*	%	94	99	97	96
Extracted ISTD $^{13}C_3$ *PFBS*	%	95	98	99	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%	103	100	100	95
Extracted ISTD $^{13}C_4$ *PFOS*	%	93	91	90	100
Extracted ISTD $^{13}C_4$ *PFOA*	%	109	109	109	108
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	85	89	82	77
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	88	89	88	86
Total Positive PFHxS & PFOS	µg/L	0.01	0.1	0.02	0.02
Total Positive PFOS & PFOA	µg/L	0.01	0.1	0.02	0.02
Total Positive PFAS	µg/L	0.01	0.1	0.02	0.02

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-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.

Method ID	Methodology Summary
Inorg-014	Cyanide - free, total, weak acid dissociable by segmented flow analyser (in line dialysis with colourimetric finish). Solids/Filters and sorbents are extracted in a caustic media prior to analysis. Impingers are pH adjusted as required prior to analysis. Cyanides amenable to Chlorination - samples are analysed untreated and treated with hypochlorite to assess the potential for chlorination of cyanide forms. Based on APHA latest edition, 4500-CN_G,H.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate).
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
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.

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-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.

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	373216-9
Date Extracted	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Date Analysed	-			20/02/2025	1	20/02/2025	20/02/2025		20/02/2025	20/02/2025
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
trans-1,2-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	120	114
cis-1,2-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroform	mg/kg	1	Org-023	<1	1	<1	<1	0	110	103
2,2-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	107	101
1,1,1-Trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	102	87
1,1-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Carbon Tetrachloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	109	105
Dibromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	103	98
Bromodichloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	116	94
trans-1,3-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-Trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	116	109
1,3-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	107	88
1,2-Dibromoethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	111	104
1,1,1,2-Tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	111	105
Bromoform	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
m+p-Xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	108	103
Styrene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	373216-9
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	111	106
1,2,3-Trichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Isopropylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-Propylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-Chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-Chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-Trimethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
tert-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-Trimethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
sec-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-Isopropyltoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dibromo-3-chloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-Trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-Trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	1	97	97	0	97	95
Surrogate aaa-Trifluorotoluene	%		Org-023	107	1	97	99	2	102	95
Surrogate Toluene-d_8	%		Org-023	109	1	100	100	0	100	98
Surrogate 4-Bromofluorobenzene	%		Org-023	100	1	97	96	1	100	100

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	373216-9
Date extracted	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Date analysed	-			20/02/2025	1	20/02/2025	20/02/2025		20/02/2025	20/02/2025
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	110	105
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	110	105
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	109	105
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	116	109
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	111	105
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	108	103
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	111	106
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	100	1	97	99	2	102	95

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]	11	18/02/2025	18/02/2025		[NT]	[NT]
Date analysed	-			[NT]	11	20/02/2025	20/02/2025		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	11	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	11	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	11	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	11	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	11	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	11	98	96	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	373216-9
Date extracted	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Date analysed	-			19/02/2025	1	19/02/2025	19/02/2025		19/02/2025	19/02/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	107	93
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	150	40	102	76
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	190	240	23	114	85
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	107	93
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	210	300	35	102	76
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	270	310	14	114	85
Surrogate o-Terphenyl	%		Org-020	82	1	85	94	10	128	77

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	18/02/2025	18/02/2025		[NT]	[NT]
Date analysed	-			[NT]	11	19/02/2025	19/02/2025		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	11	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	11	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	11	80	92	14	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	373216-9
Date extracted	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Date analysed	-			21/02/2025	1	21/02/2025	21/02/2025		21/02/2025	21/02/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	84
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	66	70
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	82
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.3	40	78	82
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	0.5	0.8	46	78	84
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.6	0.8	29	80	88
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.4	67	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	0.3	0.5	50	100	108
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	0.4	0.6	40	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	0.2	0.4	67	72	80
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.2	67	[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	0.3	40	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	80	1	84	85	1	79	85

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	18/02/2025	18/02/2025		[NT]	[NT]
Date analysed	-			[NT]	11	21/02/2025	21/02/2025		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	11	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	11	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	11	90	92	2	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	373216-9
Date extracted	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Date analysed	-			21/02/2025	1	21/02/2025	21/02/2025		21/02/2025	21/02/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	90
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	82	86
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	70	86
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	88	90
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	100
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	80	84
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	100
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	82	86
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	94
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	80	84
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	103	1	105	99	6	100	103

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	373216-9
Date extracted	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Date analysed	-			21/02/2025	1	21/02/2025	21/02/2025		21/02/2025	21/02/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	98
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	76	82
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	122	130
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	98
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	82	90
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	134	131
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	82	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	103	1	105	99	6	100	103

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	373216-9
Date extracted	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Date analysed	-			21/02/2025	1	21/02/2025	21/02/2025		21/02/2025	21/02/2025
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	79	80
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	86	1	85	87	2	84	87

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	373216-2
Date prepared	-			19/02/2025	1	18/02/2025	18/02/2025		19/02/2025	19/02/2025
Date analysed	-			19/02/2025	1	19/02/2025	19/02/2025		19/02/2025	19/02/2025
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	99	95
Total Cyanide	mg/kg	0.5	Inorg-014	<0.5	1	<0.5	[NT]		84	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	373216-9
Date prepared	-			18/02/2025	1	18/02/2025	18/02/2025		18/02/2025	18/02/2025
Date analysed	-			20/02/2025	1	20/02/2025	20/02/2025		20/02/2025	20/02/2025
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	107	92
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	97	82
Chromium	mg/kg	1	Metals-020	<1	1	10	12	18	97	84
Copper	mg/kg	1	Metals-020	<1	1	53	42	23	101	93
Lead	mg/kg	1	Metals-020	<1	1	16	16	0	97	79
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	97	104
Nickel	mg/kg	1	Metals-020	<1	1	7	8	13	98	72
Zinc	mg/kg	1	Metals-020	<1	1	33	35	6	94	#

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date prepared	-			[NT]	11	18/02/2025	18/02/2025		18/02/2025	[NT]
Date analysed	-			[NT]	11	20/02/2025	20/02/2025		20/02/2025	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	11	4	4	0	103	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	11	<0.4	<0.4	0	95	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	11	12	13	8	94	[NT]
Copper	mg/kg	1	Metals-020	[NT]	11	9	9	0	97	[NT]
Lead	mg/kg	1	Metals-020	[NT]	11	15	15	0	96	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	11	0.1	<0.1	0	93	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	11	6	6	0	95	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	11	19	19	0	91	[NT]

QUALITY CONTROL: PFAS in Soils Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			20/02/2025	1	20/02/2025	20/02/2025		20/02/2025	[NT]
Date analysed	-			20/02/2025	1	20/02/2025	20/02/2025		20/02/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	101	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	97	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	0.4	0.3	29	106	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	99	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	101	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	103	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	99	1	109	105	4	103	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	100	1	101	102	1	103	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	101	1	81	90	11	100	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	104	1	82	89	8	103	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	101	1	85	94	10	102	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	102	1	88	94	7	102	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	87	1	68	76	11	94	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	90	1	73	81	10	103	[NT]

QUALITY CONTROL: PFAS in TCLP Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			19/02/2025	[NT]	[NT]	[NT]	[NT]	19/02/2025	[NT]
Date analysed	-			20/02/2025	[NT]	[NT]	[NT]	[NT]	20/02/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	94	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	94	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	99	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	103	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	109	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	87	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	87	[NT]	[NT]	[NT]	[NT]	93	[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

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.

Note: All samples analysed as received. However, sample 373216-1 is below the minimum recommended 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

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.

PAHs in Soil - The RPD for duplicate results is accepted due to the non homogenous nature of sample 373216-1.

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:**	Parramatta	**To:**	Envirolab Services
Project Manager:	Cathy Li	**Order Number:**		**Sampler:**	NE
Email:	cathy.li@douglaspartners.com.au ;			**Attn:**	Sample Receipt
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.com
Prior Storage:	☑ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☒ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo 8AN	Combo 3AN	Combo 3	PFAS (short suite)	PFAS TCLP (short suite)		VOC	Cyanide	BTEX			Notes/ Preservation/ Additional Requirements
[redacted]	TL07	0.25	0.3	17/02/25	S	G/P	X			X	X		X	X				
	TL08	0.3	0.5	17/02/25	S	G/P	X						X					
	TL08	0.8	1	17/02/25	S	G/P												
	TL08	1.3	1.5	17/02/25	S	G/P		X		X	X							
	TL08	1.8	2	17/02/25	S	G/P		X										
	TL08	2.1	2.3	17/02/25	S	G/P			X									
	TL12	0.3	0.5	17/02/25	S	G/P	X											
	TL12	0.8	1	17/02/25	S	G/P		X		X	X		X					
	TL13	0.3	0.4	17/02/25	S	G/P	X			X	X		X	X				
	TL01	3	3.2	13/02/25	S	G/P			X									
	TL01	4.8	5	13/02/25	S	G/P			X									
	TL05	2	2.2	13/02/25	S	G/P			X									
	TL05	5	5.2	13/02/25	S	G/P			X									
	TL06	3	3.2	13/02/25	S	G/P			X									

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

Job No: 373216
Date Received: 17/02/25
Time Received: 1525
Received By: DLD
Temp: Cool/Ambient
Cooling: Ice/icepack 6°C
Security: Intact/Broken/None

Metals to analyse:		**LAB RECEIPT**	
Number of samples in container:	**Transported to laboratory by:**	**Lab Ref. No:**	373216
Send results to:	Douglas Partners Pty Ltd	**Received by:**	Dan'elle L
Address:	96 Hermitage Road, West Ryde NSW 2114 **Phone:** (02) 9809 0666	**Date & Time**	17/02/25 1525
Relinquished by:	**Date:** **Signed:**	**Signed:**	

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No: 231981.00 **Suburb:** Parramatta **To:** Envirolab Services

Project Manager: Cathy Li **Dispatch date:** 0/01/1900

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo 8AN	Combo 3AN	Combo 3	PFAS (short suite)	PFAS TCLP (short suite)		VOC	Cyanide	BTEX			Notes/ Preservation/ Additional Requirements
15	TL06	4.8	5	13/02/25	S	G/P			X									
16	BD01/20250217			17/02/25	S	G			X									
17	TB3			17/02/25	S	V									X			
18	TS3			17/02/25	S	V									X			

#373216
17/02/25

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

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	231981.00 Parramatta
Envirolab Reference	373216
Date Sample Received	17/02/2025
Date Instructions Received	17/02/2025
Date Results Expected to be Reported	24/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	18 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	6
Cooling Method	Ice
Sampling Date Provided	YES

Comments

No bag received for sample TL08 (0.3-0.5)

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	VOCs in soil	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 Soil - Inorg	Acid Extractable metalsin soil	Asbestos ID - soils NEPM	PFAS in Soils Short	PFAS in TCLP Short	On Hold
TL07-0.25-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
TL08-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓				
TL08-0.8-1													✓
TL08-1.3-1.5		✓	✓	✓					✓	✓	✓	✓	
TL08-1.8-2		✓	✓	✓					✓	✓			
TL08-2.1-2.3		✓	✓	✓					✓				
TL12-0.3-0.5		✓	✓	✓	✓	✓	✓	✓	✓	✓			
TL12-0.8-1	✓	✓	✓	✓					✓	✓	✓	✓	
TL13-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
TL01-3-3.2		✓	✓	✓					✓				
TL01-4.8-5		✓	✓	✓					✓				
TL05-2-2.2		✓	✓	✓					✓				
TL05-5-5.5		✓	✓	✓					✓				
TL06-3-3.2		✓	✓	✓					✓				
TL06-4.8-5		✓	✓	✓					✓				
BD01/20250217		✓	✓	✓					✓				
TB3		✓											
TS3		✓											

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.

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CERTIFICATE OF ANALYSIS 373359-A

Client Details

Client	Douglas Partners Pty Ltd
Attention	Joshua Bendit
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**231981.01, Parramatta**
Number of Samples	Additional analysis
Date samples received	18/02/2025
Date completed instructions received	26/02/2025

Analysis Details

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

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

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

Report Details

Date results requested by	05/03/2025
Date of Issue	05/03/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Jenny He, Inorganic Team Leader
Nick Sarlamis, Assistant Operation Manager

Authorised By
Nancy Zhang, Laboratory Manager

Misc Inorg - Soil				
Our Reference		373359-A-1	373359-A-4	373359-A-10
Your Reference	UNITS	TL01	TL01	TL05
Depth		1.5-1.7	4.8-5.0	8.0-8.2
Date Sampled		13/02/2025	13/02/2025	13/02/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	19/02/2025	19/02/2025	19/02/2025
Date analysed	-	27/02/2025	27/02/2025	27/02/2025
pH 1:5 soil:water	pH Units	8.2	8.0	7.6
Electrical Conductivity 1:5 soil:water	µS/cm	95	69	37
Chloride, Cl 1:5 soil:water	mg/kg	<10	10	10
Sulphate, SO4 1:5 soil:water	mg/kg	31	83	49

Chromium Suite				
Our Reference	UNITS	373359-A-10	373359-A-11	373359-A-19
Your Reference		TL05	TL05	TL08
Depth		8.0-8.2	9.0-9.2	2.5-2.7
Date Sampled		13/02/2025	13/02/2025	17/02/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	19/02/2025	19/02/2025	19/02/2025
Date analysed	-	27/02/2025	27/02/2025	27/02/2025
pH $_{kcl}$	pH units	5.4	5.6	5.8
s-TAA pH 6.5	%w/w S	<0.01	<0.01	<0.01
TAA pH 6.5	moles H^+ /t	<5	<5	<5
Chromium Reducible Sulfur	%w/w	<0.005	0.006	0.02
a-Chromium Reducible Sulfur	moles H^+ /t	<3	4	10
S_{HCl}	%w/w S	[NT]	[NT]	[NT]
S_{KCl}	%w/w S	[NT]	[NT]	[NT]
S_{NAS}	%w/w S	[NT]	[NT]	[NT]
ANC_{BT}	% $CaCO_3$	[NT]	[NT]	[NT]
s-ANC_{BT}	%w/w S	[NT]	[NT]	[NT]
s-Net Acidity	%w/w S	0.0080	0.010	0.016
a-Net Acidity	moles H^+ /t	<5	6.0	10
Liming rate	kg $CaCO_3$ /t	<0.75	<0.75	0.8
a-Net Acidity without ANCE	moles H^+ /t	<5	6.0	10
Liming rate without ANCE	kg $CaCO_3$ /t	<0.75	<0.75	0.75
s-Net Acidity without ANCE	%w/w S	0.0080	0.010	0.016

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode. 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.
Inorg-068	Chromium Reducible Sulfur - Hydrogen Sulfide is quantified by iodometric titration after distillation to determine potential acidity. Net acidity including ANC has a safety factor of 1.5 applied. Neutralising value (NV) of 100% is assumed for liming rate. The recommendation that the SHCL concentration be multiplied by a factor of 2 to ensure retained acidity is not underestimated, has not been applied in the SHCL result. However, it has been applied in the SNAS calculation: SNAS % = (SHCL-SKCL)x2
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA latest edition, 4110-B. Waters samples are filtered on receipt prior to analysis. Alternatively determined by colourimetry/turbidity using Discrete Analyser.

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	373359-A-4
Date prepared	-			19/02/2025	1	19/02/2025	19/02/2025		19/02/2025	19/02/2025
Date analysed	-			27/02/2025	1	27/02/2025	27/02/2025		27/02/2025	27/02/2025
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	1	8.2	8.3	1	102	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	<1	1	95	98	3	101	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	<10	1	<10	<10	0	108	125
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	<10	1	31	32	3	109	105

QUALITY CONTROL: Chromium Suite						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			19/02/2025	10	19/02/2025	19/02/2025		19/02/2025	[NT]
Date analysed	-			27/02/2025	10	27/02/2025	27/02/2025		27/02/2025	[NT]
pH $_{kcl}$	pH units		Inorg-068	[NT]	10	5.4	5.4	0	99	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-068	<0.01	10	<0.01	<0.01	0	[NT]	[NT]
TAA pH 6.5	moles H^+ /t	5	Inorg-068	<5	10	<5	<5	0	95	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	<0.005	10	<0.005	<0.005	0	101	[NT]
a-Chromium Reducible Sulfur	moles H^+ /t	3	Inorg-068	<3	10	<3	<3	0	[NT]	[NT]
S_{HCl}	%w/w S	0.005	Inorg-068	<0.005	10	[NT]	[NT]		[NT]	[NT]
S_{KCl}	%w/w S	0.005	Inorg-068	<0.005	10	[NT]	[NT]		[NT]	[NT]
S_{NAS}	%w/w S	0.005	Inorg-068	<0.005	10	[NT]	[NT]		[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.05	Inorg-068	<0.05	10	[NT]	[NT]		100	[NT]
s-ANC_{BT}	%w/w S	0.05	Inorg-068	<0.05	10	[NT]	[NT]		[NT]	[NT]
s-Net Acidity	%w/w S	0.005	Inorg-068	<0.005	10	0.0080	0.0050	46	[NT]	[NT]
a-Net Acidity	moles H^+ /t	5	Inorg-068	<5	10	<5	<5	0	[NT]	[NT]
Liming rate	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	10	<0.75	<0.75	0	[NT]	[NT]
a-Net Acidity without ANCE	moles H^+ /t	5	Inorg-068	<5	10	<5	<5	0	[NT]	[NT]
Liming rate without ANCE	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	10	<0.75	<0.75	0	[NT]	[NT]
s-Net Acidity without ANCE	%w/w S	0.005	Inorg-068	<0.005	10	0.0080	0.0050	46	[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.

Anna Bui

From: Joshua Bendit <joshua.bendit@douglaspartners.com.au>
Sent: Wednesday, 26 February 2025 2:31 PM
To: Stuart Chen; Envirolab Sydney Sample Receipt
Subject: RE: Results for Registration 373359 231981.01, Parramatta

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,

Can I please schedule the following additional testing (standard TAT) for Parramatta (ELS project 373359)

- Chromium Suite
  - 373359-10 (TL05_8.0-8.2)
  - 373359-11 (TL05_9.0-9.2)
  - 373359-19 (TL08_2.5-2.7)
- Aggressivity
  - 373359-1 (TL01_1.5 – 1.7)
  - 373359-4 (TL01_4.8 – 5.0)
  - 373359-10 (TL05_8.0 – 8.2)

ELS REF: 373359-A
TAT: STANDARD
DUE: 5/3/25
AB

Regards,

Joshua Bendit | Associate / Geotechnical Engineer

02 9809 0666 +61 439 915 143 Joshua.Bendit@douglaspartners.com.au

www.douglaspartners.com.au 96 Hermitage Road, West Ryde
NSW 2114 | Wallumedegal Country
PO Box 472, West Ryde, NSW 1685

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From: Stuart Chen <SChen2@envirolab.com.au>
Sent: Thursday, 20 February 2025 12:30 PM
To: Joshua Bendit <joshua.bendit@douglaspartners.com.au>; Cathy Li <cathy.li@douglaspartners.com.au>
Subject: Results for Registration 373359 231981.01, Parramatta

Please refer to attached for:
a copy of the Certificate of Analysis
a copy of the COC/paperwork received from you
ESDAT Extracts
an Excel or .csv file containing the results

Please note that a hard copy will not be posted.

Enquiries should be made directly to:
customerservice@envirolab.com.au

To view information on uncertainty guidelines click here

How did we do? Send Feedback

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www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Joshua Bendit

Sample Login Details

Your reference	231981.01, Parramatta
Envirolab Reference	373359-A
Date Sample Received	18/02/2025
Date Instructions Received	26/02/2025
Date Results Expected to be Reported	05/03/2025

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoiced accordingly.

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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

Sample ID	Misc Inorg - Soil	Chromium Suite	On Hold
TL01-1.5-1.7	✓		
TL01-3.0-3.2			✓
TL01-4.0-4.2			✓
TL01-4.8-5.0	✓		
TL05-2.0-2.2			✓
TL05-3.0-3.2			✓
TL05-4.0-4.2			✓
TL05-5.0-5.2			✓
TL05-6.0-6.0			✓
TL05-8.0-8.2	✓	✓	
TL05-9.0-9.2		✓	
TL06-1.5-2.0			✓
TL06-2.0-2.2			✓
TL06-3.0-3.2			✓
TL06-4.0-4.2			✓
TL06-4.8-5.0			✓
TL08-0.8-1.0			✓
TL08-1.8-2.0			✓
TL08-2.5-2.7		✓	

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.

Appendix J

Borehole and Test Pit Logs

TEST PIT LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 8.9 AHD
COORDINATE: E:315379.2, N:6256702.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL01
PROJECT No: 231981.00
DATE: 05/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
05/02/25 No groundwater encountered	0.06	ASPHALTIC CONCRETE				ND						
		FILL / GRAVEL: dark grey ; fine to coarse; igneous gravel, cemented (roadbase).		FILL		D						
	0.28	FILL / Clayey Gravelly SAND: pale brown; fine to coarse; angular to sub-angular igneous and sandstone gravel, trace brick .		FILL		M		ES		0.30	PID	<1ppm
										0.40		
	0.50	FILL / Sandy CLAY: dark brown; low plasticity; fine to medium sand; trace brick, ceramic, tile and glass fragments and sandstone gravel.		FILL	ND			ES		0.50	PID	<1ppm
	8									0.60		
	1									1		
	1.20	FILL / Sandy SILT, with clay: dark brown; low plasticity; low to medium plasticity, trace brick, ceramic, tile, glass and sandstone gravel.		FILL		w=PL				1.40		
								ES			PID	<1ppm
	1.70	FILL / Silty CLAY: orange-brown; low to medium plasticity, trace brick and sandstone gravel.		FILL				ES		1.70	PID	<1ppm
	7											
	1.90	FILL / CLAY: brown; medium to high plasticity; trace brick and siltstone gravel.		FILL				ES		1.90	PID	<1ppm
	2									2		
		Test Pit discontinued at 2.10m depth. Refusal on stiff clay fill.								2.10		
	6											

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: HA to 2.1 m
REMARKS:

OPERATOR: SAF

LOGGED: SAF

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 9.2 AHD
COORDINATE: E:315388.1, N:6256708.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL02
PROJECT No: 231981.00
DATE: 29/01/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
29/01/25 No groundwater encountered	9	0.06	ASPHALTIC CONCRETE				ND						
			FILL / GRAVEL: dark grey ; fine to coarse; igneous gravel, cemented (roadbase).		FILL		M						
		0.25	FILL / CLAY: brown to orange brown; medium to high plasticity; trace siltstone and ironstone gravel.		FILL				ES		0.30	PID	<1ppm
											0.50		
		0.80	CLAY (CI): brown and grey; medium to high plasticity; trace ironstone gravel .		ALV	ND	w<PL		ES		0.80	PID	<1ppm
	8	1									1.00		
									ES		1.30	PID	<1ppm
											1.50		
									ES		1.80	PID	<1ppm
	7	2	Test Pit discontinued at 2.00m depth. Target depth reached.								2.00		

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2t excavator with 350mm tooth bucket
OPERATOR: RMA
LOGGED: SAF

METHOD: TB (350) to 1.5 m, HA to 2 m

REMARKS: Asbestos expansion joints recorded by others in slab and base course fill prior to Douglas sampling

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 9.2 AHD
COORDINATE: E:315384.3, N:6256723.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL03
PROJECT No: 231981.00
DATE: 05/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
05/02/25 No groundwater encountered	9	ASPHATIC CONCRETE				ND						
	0.06	FILL / Gravelly SAND; dark grey, fine to coarse, angular to sub-angular igneous, sandstone and concrete gravel (roadbase).		FILL		D		* ES		0.10	PID	<1ppm
	0.26	FILL / Clayey Sandy: pale brown; fine to coarse sand; with angular to sub-angular sandstone gravel.		FILL				ES		0.20 0.30	PID	<1ppm
	0.40	FILL / Sandy CLAY: red-brown; medium to high plasticity, trace ironstone gravel.		FILL	ND			ES		0.40	PID	<1ppm
	8					w<PL		ES		0.60 0.80	PID	<1ppm
	1.00	Sandy CLAY (CI): browm-grey mottled orange; medium to high plasticity.		ALV				ES		1.00	PID	<1ppm
	7									1.20		
	2	Test Pit discontinued at 1.50m depth. Target depth reached.										

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2t excavator with 350mm tooth bucket
METHOD: TB (350) to 1.5 m
OPERATOR: RMA
LOGGED: SAF

REMARKS: * Duplicate sample BD2/20250205 collected at 0.1-0.2m

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 9.3 AHD
COORDINATE: E:315387.5, N:6256736.7
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL04
PROJECT No: 231981.00
DATE: 05/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] / DENSITY.[*]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
05/02/25 No groundwater encountered	0.06	ASPHATIC CONCRETE				ND						
	9 / 0.26	FILL / Gravelly SAND: dark grey; fine to coarse; igneous, sandstone and concrete gravel (roadbase).		FILL		D		ES		0.10 / 0.20	PID	<1ppm
		FILL / Clayey SAND: pale brown; fine to coarse; with sandstone gravel.		FILL				ES		0.30 / 0.40	PID	<1ppm
	0.40	FILL / Sandy CLAY: red-brown; medium to high plasticity; trace ironstone gravel, fine to coarse sand.		FILL	ND			ES		0.60	PID	<1ppm
	0.80	Sandy CLAY: brown mottled grey; medium to high plasticity; fine to coarse sand.		ALV		w<PL		ES		0.80 / 1.00	PID	<1ppm
	1 / 8											
		Test Pit discontinued at 1.50m depth. Target depth reached.						ES		1.30 / 1.50	PID	<1ppm
	2 / 7											

NOTES: [#] Soil origin is "probable" unless otherwise stated. [*] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2t excavator with 350mm tooth bucket
METHOD: TB (350) to 1.5 m
REMARKS:

OPERATOR: RMA
LOGGED: SAF

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 9.2 AHD
COORDINATE: E:315383.3, N:6256766.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL05
PROJECT No: 231981.00
DATE: 05/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
05/02/25 No groundwater encountered	9	BRICK PAVEMENT				ND						
	0.08	FILL / Gravelly SAND: dark grey; fine to coarse; angular to sub-angular igneous, sandstone and concrete gravel (roadbase).		FILL								
	0.26	FILL / SAND: dark grey; fine to coarse; trace igneous and sandstone gravel.		FILL		D		ES		0.30 0.40	PID	<1ppm
	0.50	FILL / Sandy CLAY: red-brown; medium to high plasticity.		FILL	ND			ES		0.50 0.70	PID	<1ppm
	0.90	Sandy CLAY (CI): red-brown mottled pale brown and grey; medium to high plasticity.		ALV		w<PL		ES		1.00 1.20	PID	<1ppm
	1											
	8											
	2	Test Pit discontinued at 1.50m depth. Target depth reached.										
	7											

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2t excavator with 350mm tooth bucket
METHOD: TB (350) to 1.5 m
REMARKS:

OPERATOR: RMA
LOGGED: SAF

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 8.0 AHD
COORDINATE: E:315401.3, N:6256788.5
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL06
PROJECT No: 231981.00
DATE: 29/01/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
29/01/25 No groundwater encountered	0.06	ASPHALTIC CONCRETE				ND						
		FILL / GRAVEL: dark grey; fine to coarse; igneous, sandstone and concrete gravel (roadbase).		FILL		M				0.30		
	0.30	FILL / Sandy CLAY: pale brown; low to medium plasticity; fine to coarse sand; with sandstone gravel, trace igneous gravel.		FILL				ES		0.50	PID	<1ppm
	0.70	Sandy CLAY (CI): red and brown, mottled grey; medium plasticity; fine to coarse sand.		ALV	ND	w<PL		* ES		0.80	PID	<1ppm
	7 1									1.00		
								ES		1.30	PID	<1ppm
	6 2	Test Pit discontinued at 1.50m depth. Target depth reached.								1.50		
	5											

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2t excavator with 350mm tooth bucket
METHOD: TB (350) to 1.5 m
OPERATOR: RMA
LOGGED: SAF

REMARKS: * Duplicate sample BD01/20250124 collected at 0.8-1.0 m

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

BOREHOLE LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 6.7 AHD
COORDINATE: E:315398.9, N:6256824.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL07
PROJECT No: 231981.00
DATE: 17/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] / DENSITY.[*]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
17/02/25 No groundwater encountered	0.06	PAVERS: 60mm thick				ND						
		CONCRETE SLAB: 180mm			ND	D						
	0.24	FILL / Sandy GRAVEL: brown-grey; igneous; fine to coarse sand; (roadbase).		FILL		M		ES		0.25 0.30	PID	<1ppm
		Borehole discontinued at 0.30m depth. Refusal on cemented gravels (possible trench backfill).										

NOTES: [#] Soil origin is "probable" unless otherwise stated. [*] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: HA to 0.3 m
REMARKS:

OPERATOR: SAF

LOGGED: NW
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

BOREHOLE LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 6.4 AHD
COORDINATE: E:315388.5, N:6256838.1
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL08
PROJECT No: 231981.00
DATE: 17/02/25
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^]	DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
		0.06	PAVERS: 60mm thick					ND						
			FILL / SAND: yellow-brown; fine to medium.		FILL			D						
		0.15	CONCRETE SLAB: 80mm					ND						
		0.23	FILL / Clayey Gravelly SAND: brown; fine to medium, igneous; fine to medium gravel.		FILL			M		* ES		0.30	PID	<1ppm
												0.50		
		0.80	FILL / Sandy SILT, with clay: dark brown; non plastic; fine to coarse sand.		FILL					ES		0.80	PID	<1ppm
												1.00		
		1.30	FILL / Sandy CLAY: brown; medium plasticity; fine to medium sand.		FILL		ND	w=PL		ES		1.30	PID	<1ppm
												1.50		
			From 1.80m: trace fine to medium siltstone gravel							ES		1.80	PID	<1ppm
												2.00		
		2.10	Silty CLAY (CI-CH), trace sand: yellow-brown; medium to high plasticity; fine sand.		ALV			w=PL		ES		2.10	PID	<1ppm
▼		2.30	SAND (SP): yellow-brown; fine to coarse.		ALV			W		ES		2.30	PID	<1ppm
		2.50	Sandy CLAY (CL-CI): dark grey; low to medium plasticity; fine sand. Sulfidic odour.		ALV			w>PL		ES		2.50	PID	<1ppm
			Borehole discontinued at 2.70m depth. Target depth reached.									2.70		

Groundwater was encountered at 2.3 m 17/02/25

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: HA to 2.7 m
REMARKS: * Duplicate sample BD1/20250217 collected at 0.3-0.5 m

OPERATOR: SAF

LOGGED: NW
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 7.3 AHD
COORDINATE: E:315412.3, N:6256800.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL09
PROJECT No: 231981.00
DATE: 29/01/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
29/01/25 No groundwater encountered	7.3 / 0.00	CONCRETE SLAB				ND						
	7.1 / 0.20	FILL / GRAVEL: dark grey; fine to coarse; igneous gravel, cemented (roadbase).		FILL		ND						
	7.05 / 0.25	FILL / Sandy CLAY: brown to dark grey; low to medium plasticity; fine to coarse sand; trace igneous and siltstone gravel.		FILL				ES		0.30	PID	<1ppm
										0.50		
	6.6 / 0.70	Sandy CLAY (CI): yellow, grey, and pale brown ; medium plasticity; fine to coarse sand.		ALV	ND	w<PL		ES		0.80	PID	<1ppm
										1.00		
								ES		1.30	PID	<1ppm
	5.8 / 1.50	Test Pit discontinued at 1.50m depth. Target depth reached.								1.50		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2t excavator with 350mm tooth bucket
METHOD: TB (350) to 1.5 m
REMARKS:

OPERATOR: RMA
LOGGED: SAF

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 9.2 AHD
COORDINATE: E:315399.2, N:6256761.2
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL10
PROJECT No: 231981.00
DATE: 29/01/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
29/01/25 No groundwater encountered	9	CONCRETE SLAB				ND						
	0.27			FILL		D				0.30		
	0.30	FILL / GRAVEL: dark grey; fine to coarse; igneous gravel, cemented (roadbase).						ES			PID	<1ppm
		FILL / CLAY: brown; medium to high plasticity; trace siltstone gravel.		FILL						0.50		
	0.60	CLAY (CI): brown and mottled grey; medium to high plasticity.			ND					0.80		
	8					w<PL		ES			PID	<1ppm
	1			ALV						1.00		
										1.30		
								ES			PID	<1ppm
	7	Test Pit discontinued at 1.50m depth. Target depth reached.								1.50		
	2											

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2t excavator with 350mm tooth bucket
METHOD: TB (350) to 1.5 m
REMARKS: The elevation was adjusted based on the nearby test location LT05 due to the float solution

OPERATOR: RMA
LOGGED: SAF

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

TEST PIT LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 8.9 AHD
COORDINATE: E:315382.1, N:6256714.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL11
PROJECT No: 231981.00
DATE: 05/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] / DENSITY.[*]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
05/02/25 No groundwater encountered	0.06	ASPHATIC CONCRETE				ND						
		FILL / GRAVEL: dark grey ; fine to coarse; igneous gravel, cemented (roadbase).		FILL		D						
	0.23	FILL / Clayey SAND: pale brown; fine to coarse; with angular to sub-angular sandstone gravel.		FILL				ES		0.30	PID	<1ppm
	0.40	FILL / Sandy CLAY: red-brown; medium to high plasticity; fine to coarse sand, trace siltstone gravel.		FILL	ND			ES		0.40	PID	<1ppm
										0.60		
	0.70	Sandy CLAY (CI): red-brown mottled grey; medium to high plasticity.		ALV		w<PL		ES		0.80	PID	<1ppm
	8									1.00		
	1											
		Test Pit discontinued at 1.30m depth. Target depth reached.										
	7											
	2											
	6											

NOTES: [#] Soil origin is "probable" unless otherwise stated. [*] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2t excavator with 350mm tooth bucket
METHOD: TB (350) to 1.5 m
REMARKS:

OPERATOR: RMA
LOGGED: SAF

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 9.1 AHD
COORDINATE: E:315351.7, N:6256679.3
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL12
PROJECT No: 231981.00
DATE: 17/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] / DENSITY.[*]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
17/02/25 No groundwater encountered	9 / 0.06	PAVERS				ND						
	0.10	FILL / SAND: yellow-brown; fine to medium.		FILL		D						
		FILL / Silty Sandy CLAY: yello-brown; medium to high plasticity; fine to coarse sand; trace igneous gravel.		FILL								
	0.30	FILL / Silty CLAY: red-brown mottle grey; medium to high plasticity; trace igneous gravel (possible natural).		FILL	ND	w>PL		ES		0.30 0.50	PID	<1ppm
								ES		0.80 1.00	PID	<1ppm
	1 / 8	Borehole discontinued at 1.00m depth. Refusal on fill (stiff clay).										
	2 / 7											

NOTES: [#] Soil origin is "probable" unless otherwise stated. [*] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: HA to 1.0 m
REMARKS:

OPERATOR: SAF

LOGGED: NW
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: RMA Group Australia Pty Ltd
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW

SURFACE LEVEL: 7.1 AHD
COORDINATE: E:315416.8, N:6256807.6
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL13
PROJECT No: 231981.00
DATE: 17/02/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] / DENSITY.[*]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No groundwater encountered 17/02/25	7 / 0.06	PAVERS										
		CONCRETE SLAB				ND						
	0.25	FILL / Sandy GRAVEL: grey-brown; angular to sub-angular; fine to coarse sand; trace glass (roadbase).		FILL	ND	D		ES		0.30 – 0.40	PID	<1ppm
	6 / 1	Borehole discontinued at 0.45m depth. Refusal on fill (gravel).										
	5 / 2											

NOTES: [#] Soil origin is "probable" unless otherwise stated. [*] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand tools
METHOD: HA to 0.45 m
REMARKS:

OPERATOR: SAF

LOGGED: NW
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: City of Parramatta
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW 2150

SURFACE LEVEL: 8.8 AHD
COORDINATE: E:315379.2, N:6256702.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL01_d
PROJECT No: 231981.01
DATE: 13/02/25
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
13/02/25 No Free Ground Water Observed Whilst Augering	8	0.00	FILL / Sandy GRAVEL: pale grey; fine to coarse, igneous; fine to coarse sand; (Backfilled test pit - refer to log TL01 for the soil profile from 0.0-1.5m).		FILL	NA	M		ES		0.07			Bentonite	
											0.20				
									ES		0.40				
											0.70				
	1								ES		1.00				
											1.20				
	1.50		FILL / Sandy SILT, with clay: dark grey; low plasticity; fine to coarse sand; trace brick rubble and fine sandstone gravel.		FILL										
	1.70				FILL							SPT	2,3,5 N=8	Gravel	
	7		FILL / Sandy CLAY: orange-brown; low to medium plasticity; fine to medium sand; trace tile and glass fragments.		FILL										
	1.90														
	2								ES		2.00				
	2.20		FILL / CLAY: brown; medium to high plasticity; trace brick rubble.								2.20				
			Silty CLAY (CI-CH): pale grey and brown; medium to high plasticity.		ALV	St	w=PL								
	6														
	3								ES		3.00				
											3.20	SPT	3,4,7 N=11	Gravel	
	3.80														
	5		Sandy CLAY (CL-CI): grey and brown; low to medium plasticity; fine to medium sand.		ALV	St to VSt									
	4								ES		4.00				
											4.20				
	4											SPT	4,8,10 N=18		
	5								ES		4.80				
											5.00				
			Borehole discontinued at 5.00m depth. Target depth reached.												
	3														
	6														
	2														
	7														
	1														

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Massenza MI3
METHOD: AD/T to 5.0m
REMARKS: Groundwater monitoring well installed upon completion

OPERATOR: Stratacore

LOGGED: N. Woodward
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: City of Parramatta
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW 2150

SURFACE LEVEL: 9.2 AHD
COORDINATE: E:315383.3, N:6256767.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL05_d
PROJECT No: 231981.01
DATE: 13/02/25
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS
	9	0.00	FILL / Sandy GRAVEL; fine to coarse, igneous; fine to coarse sand; (Backfill material - refer to log TL05 for soil profile from 0.0-1.5m).		FILL	NA	M		ES	0.00–0.20	0.00		
									ES	0.50–0.70	0.50		
	8	1							ES	1.00–1.20	1.00		
		1.50	Sandy CLAY (CL), with silt: brown and red-brown; low plasticity; fine to medium sand.						SPT	1.50–1.95	1.50	SPT	3,7,8 N=15
	7	2							ES	2.00–2.20	1.95		
			From 2.50m: with occasional bands of medium plasticity silty clay		ALV	St	w<PL to w=PL				2.20		
	6	3							SPT	3.00–3.45	3.00	SPT	3,4,5 N=9
									ES	4.00–4.20	3.45		
	5	4									4.00		
		4.20	Silty CLAY (CI-CH): brown; medium to high plasticity.		ALV	VSt	w=PL		SPT	4.50–4.95	4.20	SPT	7,13,17 N=30
	4	5.00	Sandy CLAY (CL-CI) AND Clayey SAND (SC): Sandy clay, with silt: orange-brown; low to medium plasticity; fine to medium sand. Clayey sand: brown; fine to medium.		ALV	F to St	w=PL / W		* ES	5.00–5.20	4.50		
▼ 13/02/25	3	6							SPT	6.00–6.45	4.95	SPT	3,4,4 N=8
		6.80	SAND (SP): pale grey-brown; fine to medium.		ALV	L to MD	W				5.00		
	2	7							SPT	7.50–	6.00		
											6.45		
											7		
											7.50	SPT	5,8,7 N=15

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Massenza MI3
METHOD: AD/T to 10.0m
REMARKS: Blind duplicate sample BD1/20250213 taken at 5.0-5.2m

OPERATOR: Stratacore

LOGGED: N. Woodward
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: City of Parramatta
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW 2150

SURFACE LEVEL: 9.2 AHD
COORDINATE: E:315383.3, N:6256767.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL05_d
PROJECT No: 231981.01
DATE: 13/02/25
SHEET: 2 of 2

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	1 0 -1 -2 -3 -4 -5 -6	9 9.80 10 11 12 13 14 15	[CONT] SAND (SP): pale grey-brown; fine to medium. 9.50m: dark grey Silty CLAY (CI-CH), trace sand: dark brown; medium to high plasticity; fine sand. Sulfidic odour. Borehole discontinued at 10.00m depth. Target depth reached.		ALV ALV	L to MD (F) to (St)	W w<PL		ES SPT ES		7.95 8.20 9.00 9.45 9.80 10.00	SPT	2,3,3 N=6

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Massenza MI3
METHOD: AD/T to 10.0m
REMARKS: Blind duplicate sample BD1/20250213 taken at 5.0-5.2m

OPERATOR: Stratacore

LOGGED: N. Woodward
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: City of Parramatta
PROJECT: Parramatta Civil Link - Block 3
LOCATION: Horwood Place, Parramatta, NSW 2150

SURFACE LEVEL: 8.0 AHD
COORDINATE: E:315401.3, N:6256789.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: TL06_d
PROJECT No: 231981.01
DATE: 13/02/25
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
13/02/25 No Free Ground Water Observed Whilst Augering	7	1	FILL / Sandy GRAVEL; fine to coarse, igneous; fine to coarse sand; (Backfill material - refer to log TL06 for soil profile from 0.0-1.5m).		FILL	NA	M		ES		0.20		
									ES		0.40 0.50		
									ES		1.00 1.20		
	6	1.50 2.00	Sandy CLAY (CI), with silt: red-brown; medium plasticity; fine to medium sand.		ALV	St	w=PL		SPT		1.50	SPT	4,7,10 N=17
			Silty CLAY (CI-CH): red-brown, pale grey; medium to high plasticity.		ALV				ES		1.95 2.20		
	5	2.50 3	Sandy CLAY (CL-CI): grey mottled red-brown; low to medium plasticity; fine to medium sand.		ALV				SPT		3.00	SPT	3,3,6 N=9
											3.45		
	4	4							ES		4.00		
		4.20	Clayey SAND (SC): orange-brown and pale grey; fine to medium.		ALV	L to MD	w=PL				4.20		
	3	5							SPT		4.50	SPT	12,6,4 N=10
											4.95		
	2	6	Borehole discontinued at 5.00m depth. Target depth reached.										
	1	7											

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Massenza MI3
METHOD: AD/T to 10.0m
REMARKS:

OPERATOR: Stratacore

LOGGED: N. Woodward
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Terminology, Symbols and Abbreviations

November 2023

Introduction to Terminology, Symbols and Abbreviations

Douglas Partners' reports, investigation logs, and other correspondence may use terminology which has quantitative or qualitative connotations. To remove ambiguity or uncertainty surrounding the use of such terms, the following sets of notes pages may be attached Douglas Partners' reports, depending on the work performed and conditions encountered:

- Soil Descriptions;
- Rock Descriptions; and
- Sampling, insitu testing, and drilling methodologies

In addition to these pages, the following notes generally apply to most documents.

Abbreviation Codes

Site conditions may also be presented in a number of different formats, such as investigation logs, field mapping, or as a written summary. In some of these formats textual or symbolic terminology may be presented using textual abbreviation codes or graphic symbols, and, where commonly used, these are listed alongside the terminology definition. For ease of identification in these note pages, textual codes are presented in these notes in the following style XW. Code usage conforms with the following guidelines:

- Textual codes are case insensitive, although herein they are generally presented in upper case; and
- Textual codes are contextual (i.e. the same or similar combinations of characters may be used in different contexts with different meanings (for example `PL` is used for plastic limit in the context of soil moisture condition, as well as in `PL(A)` for point load test result in the testing results column)).

Data Integrity Codes

Subsurface investigation data recorded by Douglas Partners is generally managed in a highly structured database environment, where records "span" between a top and bottom depth interval. Depth interval "gaps" between records are considered to introduce ambiguity, and, where appropriate, our practice guidelines may require contiguous data sets. Recording meaningful data is not always appropriate (for example assigning a "strength" to a concrete pavement) and the following codes may be used to maintain contiguity in such circumstances.

Term	Description	Abbreviation Code
Core loss	No core recovery	KL
Unknown	Information was not available to allow classification of the property. For example, when auguring in loose, saturated sand auger cuttings may not be returned.	UK
No data	Information required to allow classification of the property was not available. For example if drilling is commenced from the base of a hole predrilled by others	ND
Not Applicable	Derivation of the properties not appropriate or beyond the scope of the investigation. For example providing a description of the strength of a concrete pavement	NA

Graphic Symbols

Douglas Partners' logs contain a "graphic" column which provides a pictorial representation of the basic composition of the material. The symbols used are directly representing the material name stated in the adjacent "Description of Strata" column, and as such no specific graphic symbology legend has been provided in these notes.

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Soil Descriptions

Terminology
Symbols
Abbreviations

March 2024

Introduction

All materials which are not considered to be "in-situ rock" are described in general accordance with the soil description model of AS 1726-2017 Part 6.1.3, and can be broken down into the following description structure:

The "classification" comprises a two character "group symbol" providing a general summary of dominant soil characteristics. The "name" summarises the particle sizes within the soil which most influence its behaviour. The detailed description presents more information about composition, condition, structure, and origin of the soil.

Classification, naming and description of soils require the relative proportion of particles of different sizes within the whole soil mixture to be considered.

Particle size designation and Behaviour Model

Solid particles within a soil are differentiated on the basis of size.

The engineering behaviour properties of a soil can subsequently be modelled to be either "fine grained" (also known as "cohesive" behaviour) or "coarse grained" ("non cohesive" behaviour), depending on the relative proportion of fine or coarse fractions in the soil mixture.

Particle Size Designation	Particle Size (mm)	Behaviour Model	
		Behaviour	Approximate Dry Mass
Boulder	>200	Excluded from particle behaviour model as "oversize"	
Cobble	63 - 200		
Gravel[1]	2.36 - 63	Coarse	>65%
Sand[1]	0.075 - 2.36		
Silt	0.002 - 0.075	Fine	>35%
Clay	<0.002		

[1] – refer grain size subdivision descriptions below

The behaviour model boundaries defined above are not precise, and the material behaviour should be assumed from the name given to the material (which considers the particle fraction which dominates the behaviour, refer "component proportions" below), rather than strict observance of the proportions of particle sizes. For example, if a material is named a "Sandy CLAY", this is indicative that the material exhibits fine grained behaviour, even if the dry mass of coarse grained material may exceed 65%.

Component proportions

The relative proportion of the dry mass of each particle size fraction is assessed to be a "primary", "secondary", or "minor" component of the soil mixture, depending on its influence over the soil behaviour.

Component Proportion Designation	Definition[1]	Relative Proportion	
		In Fine Grained Soil	In Coarse Grained Soil
Primary	The component (particle size designation, refer above) which dominates the engineering behaviour of the soil	The clay/silt component with the greater proportion	The sand/gravel component with the greater proportion
Secondary	Any component which is not the primary, but is significant to the engineering properties of the soil	Any component with greater than 30% proportion	Any granular component with greater than 30%; or Any fine component with greater than 12%
Minor[2]	Present in the soil, but not significant to its engineering properties	All other components	All other components

[1] As defined in AS1726-2017 6.1.4.4

[2] In the detailed material description, minor components are split into two further sub-categories. Refer "identification of minor components" below.

Composite Materials

In certain situations, a lithology description may describe more than one material, for example, collectively describing a layer of interbedded sand and clay. In such a scenario, the two materials would be described independently, with the names preceded or followed by a statement describing the arrangement by which the materials co-exist. For example, "INTERBEDDED Silty CLAY AND SAND".

Soil Descriptions

Classification

The soil classification comprises a two character group symbol. The first character identifies the primary component. The second character identifies either the grading or presence of fines in a coarse grained soil, or the plasticity in a fine grained soil. Refer AS1726-2017 6.1.6 for further clarification.

Soil Name

For most soils, the name is derived with the primary component included as the noun (in upper case), preceded by any secondary components stated in an adjective form. In this way, the soil name also describes the general composition and indicates the dominant behaviour of the material.

Component [1]	Prominence in Soil Name
Primary	Noun (eg "CLAY")
Secondary	Adjective modifier (eg "Sandy")
Minor	No influence

[1] – for determination of component proportions, refer component proportions on previous page

For materials which cannot be disaggregated, or which are not comprised of rock or mineral fragments, the names "ORGANIC MATTER" or "ARTIFICIAL MATERIAL" may be used, in accordance with AS1726-2017 Table 14.

Commercial or colloquial names are not used for the soil name where a component derived name is possible (for example "Gravelly SAND" rather than "CRACKER DUST").

Materials of "fill" or "topsoil" origin are generally assigned a name derived from the primary/secondary component (where appropriate). In log descriptions this is preceded by uppercase "FILL" or "TOPSOIL". Origin uncertainty is indicated in the description by the characters (?), with the degree of uncertainty described (using the terms "probably" or "possibly" in the origin column, or at the end of the description).

Identification of minor components

Minor components are identified in the soil description immediately following the soil name. The minor component fraction is usually preceded with a term indicating the relative proportion of the component.

Minor Component Proportion Term	Relative Proportion	
	In Fine Grained Soil	In Coarse Grained Soil
With	All fractions: 15-30%	Clay/silt: 5-12% sand/gravel: 15-30%
Trace	All fractions: 0-15%	Clay/silt: 0-5% sand/gravel: 0-15%

The terms "with" and "trace" generally apply only to gravel or fine particle fractions. Where cobbles/boulders are encountered in minor proportions (generally less than about 12%) the term "occasional" may be used. This term describes the sporadic distribution of the material within the confines of the investigation excavation only, and there may be considerable variation in proportion over a wider area which is difficult to factually characterise due to the relative size of the particles and the investigation methods.

Soil Composition

Plasticity

Descriptive Term	Laboratory liquid limit range	
	Silt	Clay
Non-plastic materials	Not applicable	Not applicable
Low plasticity	≤50	≤35
Medium plasticity	Not applicable	>35 and ≤50
High plasticity	>50	>50

Note, Plasticity descriptions generally describe the plasticity behaviour of the whole of the fine grained soil, not individual fine grained fractions.

Grain Size

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

Grading

Grading Term	Particle size (mm)
Well	A good representation of all particle sizes
Poorly	An excess or deficiency of particular sizes within the specified range
Uniformly	Essentially of one size
Gap	A deficiency of a particular size or size range within the total range

Note, AS1726-2017 provides terminology for additional attributes not listed here.

Soil Condition

Moisture

The moisture condition of soils is assessed relative to the plastic limit for fine grained soils, while for coarse grained soils it is assessed based on the appearance and feel of the material. The moisture condition of a material is considered to be independent of stratigraphy (although commonly these are related), and this data is presented in its own column on logs.

Applicability	Term	Tactile Assessment	Abbreviation code
Fine	Dry of plastic limit	Hard and friable or powdery	w<PL
	Near plastic limit	Can be moulded	w=PL
	Wet of plastic limit	Water residue remains on hands when handling	w>PL
	Near liquid limit	"oozes" when agitated	w=LL
	Wet of liquid limit	"oozes"	w>LL
Coarse	Dry	Non-cohesive and free running	D
	Moist	Feels cool, darkened in colour, particles may stick together	M
	Wet	Feels cool, darkened in colour, particles may stick together, free water forms when handling	W

The abbreviation code NDF, meaning "not-assessable due to drilling fluid use" may also be used.

Note, observations relating to free ground water or drilling fluids are provided independent of soil moisture condition.

Consistency/Density/Compaction/Cementation/Extremely Weathered Material

These concepts give an indication of how the material may respond to applied forces (when considered in conjunction with other attributes of the soil). This behaviour can vary independent of the composition of the material, and on logs these are described in an independent column and are generally mutually exclusive (i.e it is inappropriate to describe both consistency and compaction at the same time). The method by which the behaviour is described depends on the behaviour model and other characteristics of the soil as follows:

- In fine grained soils, the "consistency" describes the ease with which the soil can be remoulded, and is generally correlated against the materials undrained shear strength;
- In granular materials, the relative density describes how tightly packed the particles are, and is generally correlated against the density index;
- In anthropogenically modified materials, the compaction of the material is described qualitatively;
- In cemented soils (both natural and anthropogenic), the cemented "strength" is described qualitatively, relative to the difficulty with which the material is disaggregated; and
- In soils of extremely weathered material origin, the engineering behaviour may be governed by relic rock features, and expected behaviour needs to be assessed based the overall material description.

Quantitative engineering performance of these materials may be determined by laboratory testing or estimated by correlated field tests (for example penetration or shear vane testing). In some cases, performance may be assessed by tactile or other subjective methods, in which case investigation logs will show the estimated value enclosed in round brackets, for example (VS).

Consistency (fine grained soils)

Consistency Term	Tactile Assessment	Undrained Shear Strength (kPa)	Abbreviation Code
Very soft	Extrudes between fingers when squeezed	<12	VS
Soft	Mouldable with light finger pressure	>12 - ≤25	S
Firm	Mouldable with strong finger pressure	>25 - ≤50	F
Stiff	Cannot be moulded by fingers	>50 - ≤100	St
Very stiff	Indented by thumbnail	>100 - ≤200	VSt
Hard	Indented by thumbnail with difficulty	>200	H
Friable	Easily crumbled or broken into small pieces by hand	-	Fr

Relative Density (coarse grained soils)

Relative Density Term	Density Index	Abbreviation Code
Very loose	<15	VL
Loose	>15 - ≤35	L
Medium dense	>35 - ≤65	MD
Dense	>65 - ≤85	D
Very dense	>85	VD

Note, tactile assessment of relative density is difficult, and generally requires penetration testing, hence a tactile assessment guide is not provided.

Compaction (anthropogenically modified soil)

Compaction Term	Abbreviation Code
Well compacted	WC
Poorly compacted	PC
Moderately compacted	MC
Variably compacted	VC

Cementation (natural and anthropogenic)

Cementation Term	Abbreviation Code
Moderately cemented	MOD
Weakly cemented	WEK

Extremely Weathered Material

AS1726-2017 considers weathered material to be soil if the unconfined compressive strength is less than 0.6 MPa (i.e. less than very low strength rock). These materials may be identified as "extremely weathered material" in reports and by the abbreviation code XWM on log sheets. This identification is not correlated to any specific qualitative or quantitative behaviour, and the engineering properties of this material must therefore be assessed according to engineering principles with reference to any relic rock structure, fabric, or texture described in the description.

Soil Origin

Term	Description	Abbreviation Code
Residual	Derived from in-situ weathering of the underlying rock	RS
Extremely weathered material	Formed from in-situ weathering of geological formations. Has strength of less than 'very low' as per as1726 but retains the structure or fabric of the parent rock.	XWM
Alluvial	Deposited by streams and rivers	ALV
Fluvial	Deposited by channel fill and overbank (natural levee, crevasse splay or flood basin)	FLV
Estuarine	Deposited in coastal estuaries	EST
Marine	Deposited in a marine environment	MAR
Lacustrine	Deposited in freshwater lakes	LAC
Aeolian	Carried and deposited by wind	AEO
Colluvial	Soil and rock debris transported down slopes by gravity	COL
Slopewash	Thin layers of soil and rock debris gradually and slowly deposited by gravity and possibly water	SW
Topsoil	Mantle of surface soil, often with high levels of organic material	TOP
Fill	Any material which has been moved by man	FILL
Littoral	Deposited on the lake or seashore	LIT
Unidentifiable	Not able to be identified	UID

Cobbles and Boulders

The presence of particles considered to be "oversize" may be described using one of the following strategies:

- Oversize encountered in a minor proportion (when considered relative to the wider area) are noted in the soil description; or
- Where a significant proportion of oversize is encountered, the cobbles/boulders are described independent of the soil description, in a similar manner to composite soils (described above) but qualified with "MIXTURE OF".

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Rock Strength

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

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

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

[1] Rock strength classification is based on UCS. The UCS to $I_{s(50)}$ ratio varies significantly for different rock types and specific ratios may be required for each site. The point load Index ranges shown above are as suggested in AS1726 and should not be relied upon without supporting evidence.

The following abbreviation codes are used for soil layers or seams of material "within rock" but for which the equivalent UCS strength is less than 0.6 MPa.

Scenario	Abbreviation Code
The material encountered has an equivalent UCS strength of less than 0.6 MPa, and therefore is considered to be soil (as per Note 1 of Table 20 of AS 1726-2017). The properties of the material encountered over this interval are described in the "Description of Strata" and soil properties columns.	SOIL
The material encountered has an equivalent UCS strength of less than 0.6 MPa, and therefore is considered to be soil (as per Note 1 of Table 20 of AS 1726-2017). The prominence of the material is such that it can be considered to be a seam (as defined in Table 22 of AS1726-2017) and the properties of the material are described in the defect column.	SEAM

Degree of Weathering

The degree of weathering of rock is classified as follows:

Weathering Term	Description	Abbreviation Code
Residual Soil[1]	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.	RS
Extremely weathered[1]	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	XW
Highly weathered	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.	HW
Moderately weathered	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.	MW
Slightly weathered	Rock is partially discoloured with staining or bleaching along joints but shows little or no change of strength from fresh rock.	SW
Fresh	No signs of decomposition or staining.	FR
Note: If HW and MW cannot be differentiated use DW (see below)		
Distinctly weathered	Rock strength usually changed by weathering. The rock may be highly discoloured, usually by iron staining. Porosity may be increased by leaching or may be decreased due to deposition of weathered products in pores.	DW

[1] The parent rock type, of which the residual/extremely weathered material is a derivative, will be stated in the description (where discernible).

Degree of Alteration

The degree of alteration of the rock material (physical or chemical changes caused by hot gasses or liquids at depth) is classified as follows:

Term	Description	Abbreviation Code
Extremely altered	Material is altered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are still visible.	XA
Highly altered	The whole of the rock material is discoloured, usually by staining or bleaching to the extent that the colour of the original rock is not recognisable. Rock strength is changed by alteration. Some primary minerals are altered to clay minerals. Porosity may be increased by leaching or may be decreased due to precipitation of secondary materials in pores.	HA
Moderately altered	The whole of the rock material is discoloured, usually by 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.	MA
Slightly altered	Rock is slightly discoloured but shows little or no change of strength from fresh rock	SA
Note: If HA and MA cannot be differentiated use DA (see below)		
Distinctly altered	Rock strength usually changed by alteration. The rock may be highly discoloured, usually by staining or bleaching. Porosity may be increased by leaching or may be decreased due to precipitation of secondary minerals in pores.	DA

Degree of Fracturing

The following descriptive classification apply to the spacing of natural occurring fractures in the rock mass. It includes bedding plane partings, joints and other defects, but excludes drilling breaks. These terms are generally not required on investigation logs where fracture spacing is presented as a histogram, and where used are presented in an unabbreviated format.

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

Rock Quality Designation

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

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

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

Stratification Spacing

These terms may be used to describe the spacing of bedding partings in sedimentary rocks. Where used, these terms are generally presented in an unabbreviated format

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

Defect Descriptions

Defect Type

Term	Abbreviation Code
Bedding plane	B
Cleavage	CL
Crushed seam	CS
Crushed zone	CZ
Drilling break	DB
Decomposed seam	DS
Drill lift	DL
Extremely Weathered seam	EW
Fault	F
Fracture	FC
Fragmented	FG
Handling break	HB
Infilled seam	IS
Joint	JT
Lamination	LAM
Shear seam	SS
Shear zone	SZ
Vein	VN
Mechanical break	MB
Parting	P
Sheared Surface	S

Rock Defect Orientation

Term	Abbreviation Code
Horizontal	H
Vertical	V
Sub-horizontal	SH
Sub-vertical	SV

Rock Defect Coating

Term	Abbreviation Code
Clean	CN
Coating	CT
Healed	HE
Infilled	INF
Stained	SN
Tight	TI
Veneer	VNR

Rock Defect Infill

Term	Abbreviation Code
Calcite	CA
Carbonaceous	CBS
Clay	CLAY
Iron oxide	FE
Manganese	MN
Pyrite	Py
Secondary material	MS
Silt	M
Quartz	Qz
Unidentified material	MU

Rock Defect Shape/Planarity

Term	Abbreviation Code
Curved	CU
Discontinuous	DIS
Irregular	IR
Planar	PR
Stepped	ST
Undulating	UN

Rock Defect Roughness

Term	Abbreviation Code
Polished	PO
Rough	RF
Smooth	SM
Slickensided	SL
Very rough	VR

Defect Orientation

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

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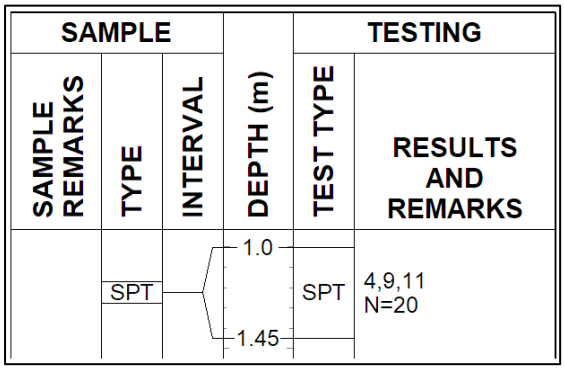
Sampling, Testing and Excavation Methodology

Terminology
Symbols
Abbreviations

March 2024

Sampling and Testing

A record of samples retained, and field testing performed is usually shown on a Douglas Partners' log with samples appearing to the left of a depth scale, and selected field and laboratory testing (including results, where relevant) appearing to the right of the scale, as illustrated below:



Sampling

The type or intended purpose for which a sample was taken is indicated by the following abbreviation codes.

Sample Type	Code
Auger sample	A
Acid Sulfate sample	ASS
Bulk sample	B
Core sample	C
Disturbed sample	D
Environmental sample	ES
Gas sample	G
Piston sample	P
Sample from SPT test	SPT
Undisturbed tube sample	U[1]
Water sample	W
Material Sample	MT
Core sample for unconfined compressive strength testing	UCS

[1] – numeric suffixes indicate tube diameter/width in mm

The above codes only indicate that a sample was retained, and not that testing was scheduled or performed.

Field and Laboratory Testing

A record that field and laboratory testing was performed is indicated by the following abbreviation codes.

Test Type	Code
Pocket penetrometer (kPa)	PP
Photo ionisation detector (ppm)	PID
Standard Penetration Test x/y =x blows for y mm penetration HB = hammer bouncing HW = fell under weight of hammer	SPT
Shear vane (kPa)	V
Unconfined compressive strength, (MPa)	UCS

Field and laboratory testing (continued)

Test Type	Code
Point load test, (MPa), axial (A), diametric (D), irregular (I)	PLT(_)
Dynamic cone penetrometer, followed by blow count penetration increment in mm (cone tip, generally in accordance with AS1289.6.3.2)	DCP/150
Perth sand penetrometer, followed by blow count penetration increment in mm (flat tip, generally in accordance with AS1289.6.3.3)	PSP/150

Groundwater Observations

▷	seepage/inflow
▽	standing or observed water level
NFGWO	no free groundwater observed
OBS	observations obscured by drilling fluids

Drilling or Excavation Methods/Tools

The drilling/excavation methods used to perform the investigation may be shown either in a dedicated column down the left-hand edge of the log, or stated in the log footer. In some circumstances abbreviation codes may be used.

Method	Abbreviation Code
Direct Push	DP
Solid flight auger. Suffixes: /T = tungsten carbide tip, /V = v-shaped tip	AD[1]
Air Track	AT
Diatube	DT[1]
Hand auger	HA[1]
Hand tools (unspecified)	HAND
Existing exposure	X
Hollow flight auger	HSA[1]
HQ coring	HQ3
HMLC series coring	HMLC
NMLC series coring	NMLC
NQ coring	NQ3
PQ coring	PQ3
Predrilled	PD
Push tube	PT[1]
Ripping tyne/ripper	R
Rock roller	RR[1]
Rock breaker/hydraulic hammer	□□
Sonic drilling	SON[1]
Mud/blade bucket	MB[1]
Toothed bucket	TB[1]
Vibrocore	VC[1]
Vacuum excavation	VE
Wash bore (unspecified bit type)	WB[1]

[1] – numeric suffixes indicate tool diameter/width in mm

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Appendix K

Quality Assurance and Quality Control

1. Field and laboratory data quality assurance and quality control

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

Table 1: Field and laboratory quality control

Item	Evaluation / acceptance criteria	Compliance
Analytical laboratories used	NATA accreditation	C
Holding times	Various based on type of analysis	C
Intra-laboratory replicates	10% of primary samples; <30% RPD	PC
Trip spikes	1 per sampling event; 60-140% recovery	C
Trip blanks	1 per sampling event; <PQL	C
Laboratory / reagent blanks	1 per batch; <PQL	C
Laboratory duplicate	1 per lab batch; as laboratory certificate	C
Matrix spikes	1 per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Surrogate spikes	All organics analysis; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Control samples	1 per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics)	C
Standard operating procedures (SOP)	Adopting SOP for all aspects of the sampling field work	C

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

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

- The actual differences in the concentrations of the replicate pairs where RPD exceedances occurred were typically low;
- The replicate pairs were collected from fill soils which by its nature are heterogeneous;
- Replicates, rather than homogenised duplicates, were used to minimise risk of volatile loss, hence greater analytical variability between replicate pairs can be expected;
- Most of the recorded concentrations were relatively close to the PQL;

- The majority of RPD results from a replicate pair were within the acceptable limits; and
- All other QA / QC parameters met the data quality indicators.

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

2. Data quality indicators

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

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

The results of the assessment are summarised in Table 2.

Table 2: Data quality indicators

Data quality indicator	Method(s) of achievement
Completeness	Systematic sampled.
	Preparation of borehole/test pit logs, sample location plan and chain of custody records.
	Laboratory sample receipt information received confirming receipt of samples intact and appropriateness of the chain of custody.
	Samples analysed for contaminants of potential concern (CoPC) identified in the conceptual site model (CSM).
	Completion of chain of custody documentation.
	NATA accredited laboratory results certificates provided by the laboratory.
	Satisfactory frequency and results for field and laboratory quality control (QC) samples as discussed in Section 1.
Comparability	Using appropriate techniques for sample recovery, storage and transportation, which were the same for the duration of the project.
	Experienced sampler(s) used.
	Use of NATA registered laboratories, with test methods the same or similar between laboratories.
	Satisfactory results for field and laboratory QC samples.

Data quality indicator	Method(s) of achievement
Representativeness	Target media sampled.
	Sample numbers recovered and analysed are considered to be representative of the target media and complying with DQO.
	Samples were extracted and analysed within holding times.
	Samples were analysed in accordance with the chain of custody.
Precision	Field staff followed standard operating procedures.
	Acceptable RPD between original samples and replicates.
	Satisfactory results for all other field and laboratory QC samples.
Accuracy	Field staff followed standard operating procedures.
	Satisfactory results for all field and laboratory QC samples.

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

3. Conclusion

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

4. References

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

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Table QA1: Relative Percentage Difference Results – Soil Sampling

Lab Report No	Sample ID	Depth	Sample Date	Sample Type	Units	Priority metals								Priority PAH				PAH											
						Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
371670	TL06	0.8 - 1 m	29/01/25	Soil	mg/kg	5	<0.4	16	6	14	<0.1	5	10	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
371670	BD1/20250129	0 m	29/01/25	Soil	mg/kg	5	<0.4	15	6	13	<0.1	5	10	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			Difference		mg/kg	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			RPD		%	0%	0%	6%	0%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
372294	TL03	0.1 - 0.2 m	05/02/25	Soil	mg/kg	<4	<0.4	17	53	5	<0.1	110	43	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
372294	BD2/20250205	0 m	05/02/25	Soil	mg/kg	<4	<0.4	16	50	6	<0.1	100	38	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			Difference		mg/kg	0	0	1	3	1	0	10	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			RPD		%	0%	0%	6%	6%	18%	0%	10%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
372294	TL04	0.4 - 0.6 m	05/02/25	Soil	mg/kg	4	<0.4	13	6	18	<0.1	5	14	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
372294	BD1/20250205	0 m	05/02/25	Soil	mg/kg	<4	<0.4	14	6	15	<0.1	5	12	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			Difference		mg/kg	0	0	1	0	3	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			RPD		%	0%	0%	7%	0%	18%	0%	0%	15%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
373216	TL08	0.3 - 0.5 m	17/02/25	Soil	mg/kg	<4	<0.4	8	16	39	0.3	9	15	<1	0.2	<0.5	3.8	<0.1	<0.1	0.1	0.2	0.2	0.3	<0.1	0.8	<0.1	0.1	0.7	0.7
373216	BD01/20250217	0 m	17/02/25	Soil	mg/kg	4	<0.4	9	9	47	0.3	5	14	<1	<0.05	<0.5	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
			Difference		mg/kg	0	0	1	7	8	0	4	1	0	0.15	0	3.75	0	0	0	0.1	0.1	0.2	0	0.7	0	0	0.6	0.6
			RPD		%	0%	0%	12%	**56%**	19%	0%	**57%**	7%	0%	**120%**	0%	**195%**	0%	0%	0%	**67%**	**67%**	**100%**	0%	**156%**	0%	0%	**150%**	**150%**

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Table QA1: Relative Percentage Difference Results – Soil Sampling

Lab Report No	Sample ID	Depth	Sample Date	Sample Type	Units	Priority TRH						TRH		BTEX				Priority PFAS					PFAS		
						TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS	Perfluorobutanesulfonic acid	6:2 FTS	8:2 FTS
371670	TL06	0.8 - 1 m	29/01/25	Soil	mg/kg	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
371670	BD1/20250129	0 m	29/01/25	Soil	mg/kg	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-
			Difference		mg/kg	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			RPD		%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	-	-	-	-
372294	TL03	0.1 - 0.2 m	05/02/25	Soil	mg/kg	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
372294	BD2/20250205	0 m	05/02/25	Soil	mg/kg	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002
			Difference		mg/kg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			RPD		%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
372294	TL04	0.4 - 0.6 m	05/02/25	Soil	mg/kg	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-
372294	BD1/20250205	0 m	05/02/25	Soil	mg/kg	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-
			Difference		mg/kg	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			RPD		%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	-	-	-	-
373216	TL08	0.3 - 0.5 m	17/02/25	Soil	mg/kg	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-
373216	BD01/20250217	0 m	17/02/25	Soil	mg/kg	<25	<50	<25	<50	<100	<100	<25	<50	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-
			Difference		mg/kg	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			RPD		%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	-	-	-	-

Table QA2: Trip Blank Results - Soil Sampling

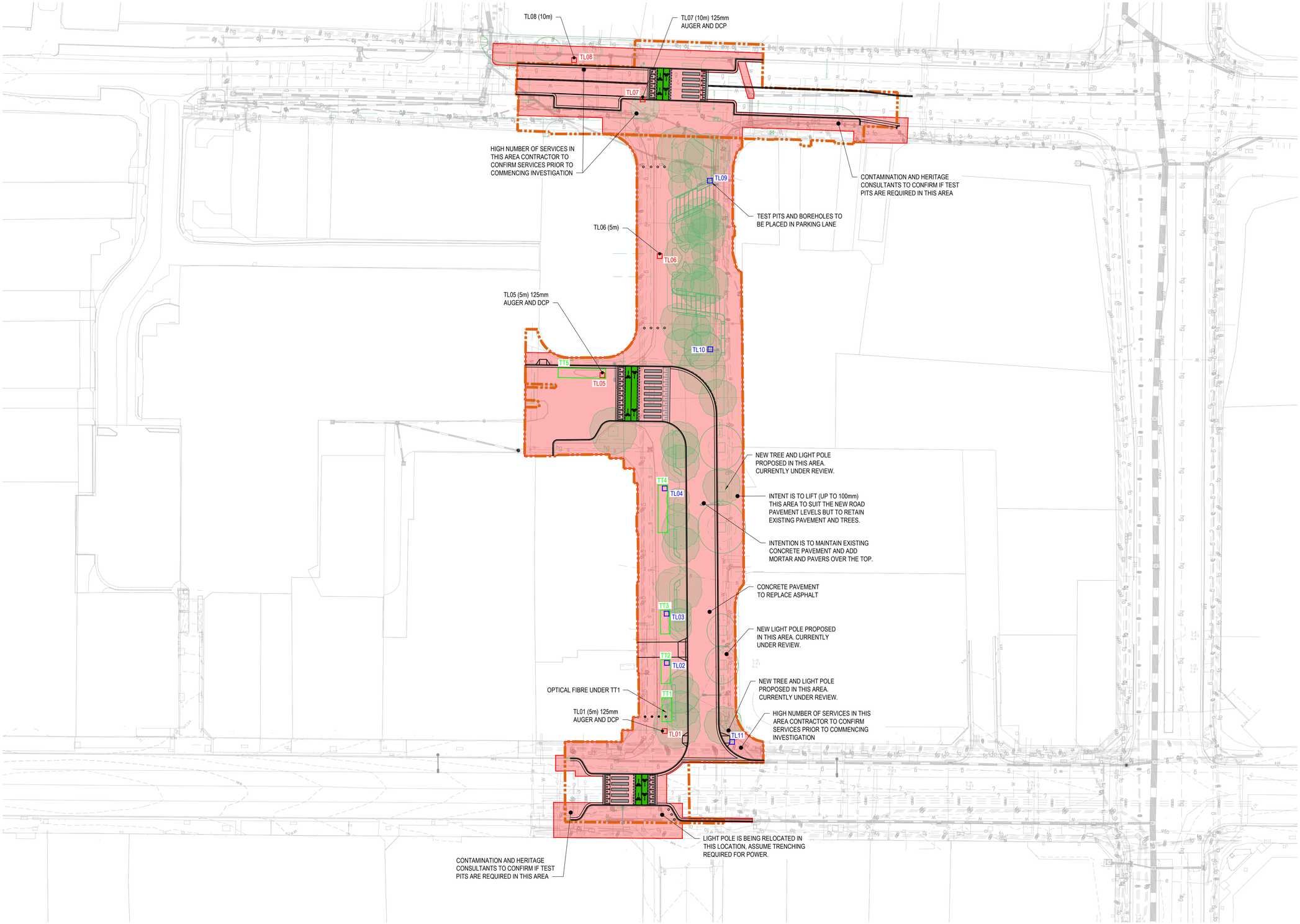
Sample ID	Sample Date	Media Being Sampled	Sample Type	Units	Priority PAH	Priority TRH		TRH	BTEX				Lab Report No
					Naphthalene [b]	TRH C6 - C10	FI ((C6-C10)-BTEX)	TRH C6 - C9	Benzene	Toluene	Ethylbenzene	Total Xylenes	
TB1	29/01/25	Soil	Soil	mg/kg	<1	<25	<25	<25	<0.2	<0.5	<1	<1	371670
TB2	05/02/25	Soil	Soil	mg/kg	<1	<25	<25	<25	<0.2	<0.5	<1	<1	372294
TB3	17/02/25	Soil	Soil	mg/kg	<1	<25	<25	<25	<0.2	<0.5	<1	<1	373216

Table QA3: Trip Spike Results – Soil Sampling (% Recovery)

Sample ID	Sample Date	Media Being Sampled	Sample Type	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Lab Report No
TS1	29/01/25	Soil	Soil	103	104	103	103	103	371670
TS2	05/02/25	Soil	Soil	98	97	98	98	98	372294
TS3	17/02/25	Soil	Soil	102	102	101	105	103	373216

Appendix B

Appendix B – Site Plans



LEGEND

- TT5 — HERITAGE TEST PIT
- TL05 — CONTAMINATION TEST LOCATION
- TL06 — GEOTECHNICAL & CONTAMINATION TEST LOCATION
- DISTURBED AREA
- STAGE BOUNDARY

CONTAMINATION TEST LOCATIONS

TL02
TL03
TL04
TL09
TL10
TL11

GEOTECHNICAL AND CONTAMINATION TEST LOCATIONS

TL01
TL05
TL06
TL07
TL08

Issue	Description	DR	CH	VE	Date
03	ISSUED FOR INFORMATION	RD		GD	26.08.2024
02	ISSUED FOR INFORMATION	RD		GD	01.08.2024
01	ISSUED FOR INFORMATION	RD		GD	12.06.2024

Scales

NOT TO SCALE

Surveyor: DURKIN

Architect: MCGREGOR COXALL

Client: CITY OF PARRAMATTA

Status: PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

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Original Issue Signatures

Drawn	R.DIESTA	Original Size	A1
Designed		Height Datum	AHD
Project Manager	G.DUNSTAN	Grid	MGA2020
Verified			

Project: PARRAMATTA CIVIC LINK

Title: AREA OF DISTURBANCE PLAN

ARCADIS
Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289
Tel No: +61 2 8907 9000
www.arcadis.com/au

Project Number: 30190380

Drawing No.: PCL-AAP-MW-00-SKE-CI-000003

Issue: 03

100mm on Original

Date Plotted: 26 Aug 2024 - 05:22PM File Name: C:\Users\rdaz1286\DC\ACCDocs\Arcadis ACC US\AAU-30190380-Parramatta Civic Link\Project Files\10_WIP\10_ARC_Civil_CI\Stage_MainWorks\DRG\PCL-AAP-MW-00-SKE-CI-000003-AreaOfDisturbancePlan.dwg

General

- Site Boundary
- Awning overhead
- Provisional proposed lighting
- Grey precast seats

Walls & Edges

- WA01A
  Custom ribbon edge
  Brick, timber & steel elements
- WA01B
  Custom ribbon edge
  Brick, timber & steel elements
- WA01C
  Custom ribbon edge
  Brick, timber & steel elements
- New concrete kerb
- Existing kerb retained

Pavements & Surfaces

- Existing Asphalt
- COP Standard Paver
- Pavement Type
  PV01
  Civic Link granite paver 01 (veh)
- Pavement Type
  PV02
  Civic Link granite paver 02 (ped)
- Pavement Type
  PV03
  Stone setts (veh)
- Pavement Type
  PV04
  Timber planks

Softscape

- Softscape Type
  MP01
  Native Mix 'The Gully'
- Softscape Type
  MP02
  Native Mix Streetscape
- Softscape Type
  MP03
  Biofiltration swale
- TR
  Proposed tree

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UK 10199853
PRC ID NO. 06000022016070800O8
MCGREGOR COXALL
Sydney Melbourne Shenzhen Bristol
www.mcgregorcoxall.com

Client
City of Parramatta

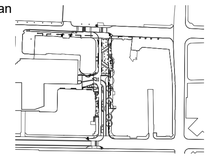
Project Team
ARCADIS
TERROIR

Project Name
Civic Link Block 3

Project No.
1066SYD

Address
Horwood Pl, Parramatta

Key Plan



Issue Log

Rev	Revision Description	By / Checked	Date
A	Concept Design Verification	AD/OM	16/11/2023

Scale
1: 350 @ A1

0 5 10 15 20 25 m

All dimensions are in millimetres unless otherwise noted.
Do not scale from this drawing.

North

Phase
Schematic Design

Sheet Title
Concept Plan End State

Sheet No.
MCGC-SK-004

Rev
A

PHILLIP STREET

MAKE SMOOTH CONNECTION TO PHILLIP STREET WORKS DESIGN LEVELS.

PIT TO BE CONSTRUCTED ON EXISTING LINE. PIT TO INTERFACE WITH WATER SENSITIVE URBAN DESIGN TREATMENT MEASURES WITHIN THE GREEN SPINE.

MAKE SMOOTH CONNECTION TO PHILLIP STREET WORKS DESIGN LEVELS.

EXISTING PIT TO BE CONVERTED TO GRATED INLET PIT

PIT POTENTIALLY CONTAINS DIRECT CONNECTION FROM ADJACENT BUILDINGS. EXISTING PIT TO BE CONVERTED TO JUNCTION PIT.

ACCESS TO BUSINESSES TO BE RETAINED DURING CONSTRUCTION.

PIT POTENTIALLY CONTAINS DIRECT CONNECTION FROM ADJACENT BUILDINGS. EXISTING PIT TO BE CONVERTED TO JUNCTION PIT.

ACCESS TO BUSINESSES TO BE RETAINED DURING CONSTRUCTION.

FOR CONTINUATION REFER TO DRAWING PCL-AAP-MW-00-DRG-CI-0202

LEGEND

- HORWOOD PLACE WORKS SITE BOUNDARY
- PHILLIP STREET WORKS SITE BOUNDARY
- DESIGN CONTOURS
- EXISTING CONTOURS
- ARCHITECTURAL WORKS
- PROPOSED KERB INLET PIT
- PROPOSED JUNCTION PIT
- PROPOSED GRATED PIT
- PROPOSED GRATED DRAIN
- EXISTING INLET PIT
- EXISTING JUNCTION PIT
- EXISTING GRATED PIT
- K&G — PROPOSED KERB AND GUTTER (K&G) AS PER CITY OF PARRAMATTA COUNCIL STANDARDS
- SK — PROPOSED SLOTTED KERB (SK) AS PER CITY OF PARRAMATTA COUNCIL STANDARDS
- KO — PROPOSED KERB ONLY (KO) AS PER CITY OF PARRAMATTA COUNCIL STANDARDS
- ES — PROPOSED KERB ONLY (KO) AS PER CITY OF PARRAMATTA COUNCIL STANDARDS
- KR — PROPOSED KERB RAMP
- VC — PROPOSED DRIVEWAY
- PROPOSED SIGN POST
- PROPOSED PAVEMENT MARKING BA-1
- PROPOSED PAVEMENT MARKING PS-3
- LINEMARKING DELINEATION BL1
- LINEMARKING DELINEATION TF
- LINEMARKING DELINEATION NS1
- B — FIXED BOLLARDS
- RB — REMOVABLE BOLLARDS
- PROPOSED FOOTPATH
- PROPOSED SHARED FOOTPATH
- PROPOSED ROAD PAVEMENT
- PROPOSED LANDSCAPING
- EXISTING LIGHT POLES
- PROPOSED MFP

NOTES

1. PAVEMENT MARKINGS AS PER NSW DELINEATION GUIDELINES.
2. SIGNS AS PER TfNSW GUIDELINES.
3. REFER TO DRAWING PCL-AAP-MW-00-DRG-CI-0251 FOR THE ROAD LONGITUDINAL SECTIONS.
4. REFER TO DRAWING PCL-AAP-MW-00-DRG-CI-0281 FOR THE ROAD CROSS SECTIONS.
5. STRATAVAULT CELLS TO BE DESIGNED AND DOCUMENTED AS PART OF LANDSCAPE ARCHITECTS DETAILS.
6. FOR DEMOLITION PLANS REFER TO LANDSCAPE ARCHITECTS DESIGN DRAWING MCGC_L_101 TO MCGC_L_103.
7. REFER TO DRAWING PCL-AAP-MW-00-DRG-CI-0361 FOR CIVILWORKS DETAILS.

Issue	Description	DR	CH	VE	Date
01	ISSUED FOR INFORMATION - 50% DETAILED DESIGN	RS	GD	MK	19.02.25

100mm on Original

Scales

0 1 2 4 6 8 10m

1 : 100

Surveyor: surveyplus, DURKIN

Architect: MCGREGOR COXALL

Client: CITY OF PARRAMATTA

Status: PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

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Original Issue Signatures			
Drawn	R. SANTOS	Original Size	A1
Designed	I. SUMMERS	Height Datum	AHD
Project Manager	G. DUNSTAN	Grid	MGA/20-56
Verified	M. KURTZ		

Project: PARRAMATTA CIVIC LINK HORWOOD PLACE WORKS

Title: CIVIL WORKS PLAN SHEET 1

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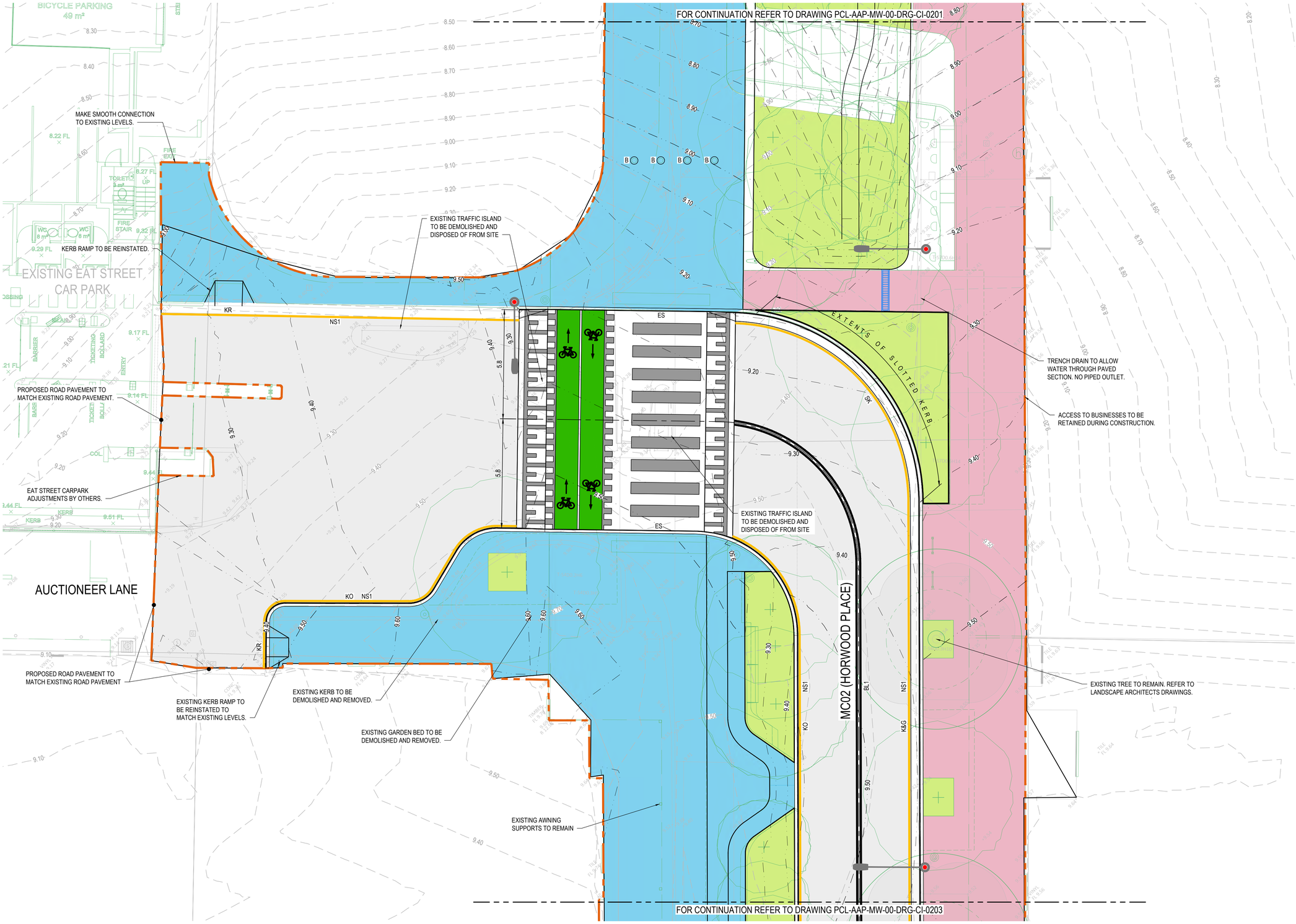
Drawing No.: PCL-AAP-MW-00-DRG-CI-0201

Issue: 01

Date Plotted: 19 Feb 2025 - 04:29pm File Name: C:\Users\santosa4174\DC\ACCDocs\Arcadis ACC US\AAU-30190380-Parramatta Civic Link\Project Files\10_WIP\10_ARC_Civil_CI\Stage_MainWorks\DRG\PCL-AAP-MW-00-DRG-CI-0201-CivilWorksPlanSheet1.dwg



LEGEND

- HORWOOD PLACE WORKS SITE BOUNDARY
- PHILLIP STREET WORKS SITE BOUNDARY
- DESIGN CONTOURS
- EXISTING CONTOURS
- ARCHITECTURAL WORKS
- PROPOSED KERB INLET PIT
- PROPOSED JUNCTION PIT
- PROPOSED GRATED PIT
- PROPOSED GRATED DRAIN
- EXISTING INLET PIT
- EXISTING JUNCTION PIT
- EXISTING GRATED PIT
- K&G — PROPOSED KERB AND GUTTER (K&G) AS PER CITY OF PARRAMATTA COUNCIL STANDARDS
- SK — PROPOSED SLOTTED KERB (SK) AS PER CITY OF PARRAMATTA COUNCIL STANDARDS
- KO — PROPOSED KERB ONLY (KO) AS PER CITY OF PARRAMATTA COUNCIL STANDARDS
- ES — PROPOSED KERB ONLY (KO) AS PER CITY OF PARRAMATTA COUNCIL STANDARDS
- KR — PROPOSED KERB RAMP
- VC — PROPOSED DRIVEWAY
- PROPOSED SIGN POST
- PROPOSED PAVEMENT MARKING BA-1
- PROPOSED PAVEMENT MARKING PS-3
- LINEMARKING DELINEATION BL1
- LINEMARKING DELINEATION TF
- LINEMARKING DELINEATION NS1
- B — FIXED BOLLARDS
- RB — REMOVABLE BOLLARDS
- PROPOSED FOOTPATH
- PROPOSED SHARED FOOTPATH
- PROPOSED ROAD PAVEMENT
- PROPOSED LANDSCAPING
- EXISTING LIGHT POLES
- PROPOSED MFP

NOTES

1. PAVEMENT MARKINGS AS PER NSW DELINEATION GUIDELINES.
2. SIGNS AS PER TINSW GUIDELINES.
3. REFER TO DRAWING PCL-AAP-MW-00-DRG-CI-0251 FOR THE ROAD LONGITUDINAL SECTIONS.
4. REFER TO DRAWING PCL-AAP-MW-00-DRG-CI-0281 FOR THE ROAD CROSS SECTIONS.
5. STRATAVAULT CELLS TO BE DESIGNED AND DOCUMENTED AS PART OF LANDSCAPE ARCHITECTS DETAILS.
6. FOR DEMOLITION PLANS REFER TO LANDSCAPE ARCHITECTS DESIGN DRAWING MCGC_L_101 TO MCGC_L_103.
7. REFER TO DRAWING PCL-AAP-MW-00-DRG-CI-0361 FOR CIVILWORKS DETAILS.

Issue	Description	DR	CH	VE	Date
01	ISSUED FOR INFORMATION - 50% DETAILED DESIGN	RS	GD	MK	19.02.25

Scales

0 1 2 4 6 8 10m

1 : 100

100mm on Original

Surveyor: surveyplus, DURKIN

Architect: MCGREGOR COXALL

Client: CITY OF PARRAMATTA

Status: PRELIMINARY
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Original Issue Signatures

Drawn	R. SANTOS	Original Size	A1
Designed	I. SUMMERS	Height Datum	AHD
Project Manager	G. DUNSTAN	Grid	MGA/20-56
Verified	M. KURTZ		

Project: PARRAMATTA CIVIC LINK
HORWOOD PLACE WORKS

Title: CIVIL WORKS PLAN
SHEET 2

ARCADIS
Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
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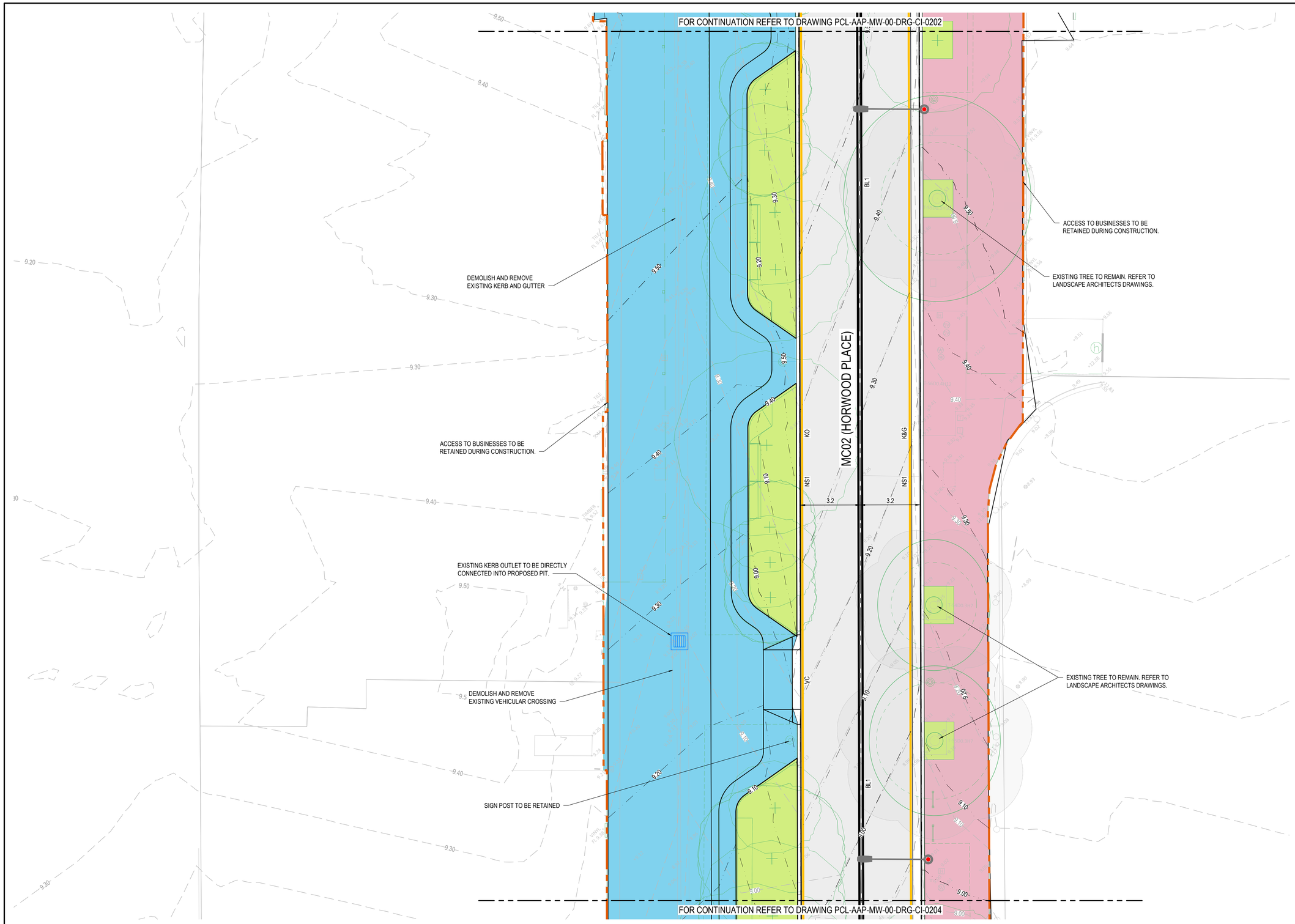
Tel No: +61 2 8907 9000
www.arcadis.com/au

Project Number: 30190380

Drawing No.: PCL-AAP-MW-00-DRG-CI-0202

Issue: 01

Date Plotted: 19 Feb 2025 - 04:29pm File Name: C:\Users\santosa4174\DC\ACCDocs\Arcadis ACC US\AAU-30190380-Parramatta Civic Link\Project Files\10_WIP\10_ARC_Civil_CI\Stage_MainWorks\DRG\PCL-AAP-MW-00-DRG-CI-0202-CivilWorksPlanSheet2.dwg



LEGEND

- HORWOOD PLACE WORKS SITE BOUNDARY
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- EXISTING CONTOURS
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NOTES

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3. REFER TO DRAWING PCL-AAP-MW-00-DRG-CI-0251 FOR THE ROAD LONGITUDINAL SECTIONS.
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Issue	Description	DR	CH	VE	Date
01	ISSUED FOR INFORMATION - 50% DETAILED DESIGN	RS	GD	MK	19.02.25

100mm on Original

Scales

0 1 2 4 6 8 10m

1 : 100

Surveyor: surveyplus, DURKIN

Architect: MCGREGOR COXALL

Client: CITY OF PARRAMATTA

Status: PRELIMINARY
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Original Issue Signatures			
Drawn	R. SANTOS	Original Size	A1
Designed	I. SUMMERS	Height Datum	AHD
Project Manager	G. DUNSTAN	Grid	MGA/20-56
Verified	M. KURTZ		

Project: PARRAMATTA CIVIC LINK
HORWOOD PLACE WORKS

Title: CIVIL WORKS PLAN
SHEET 3

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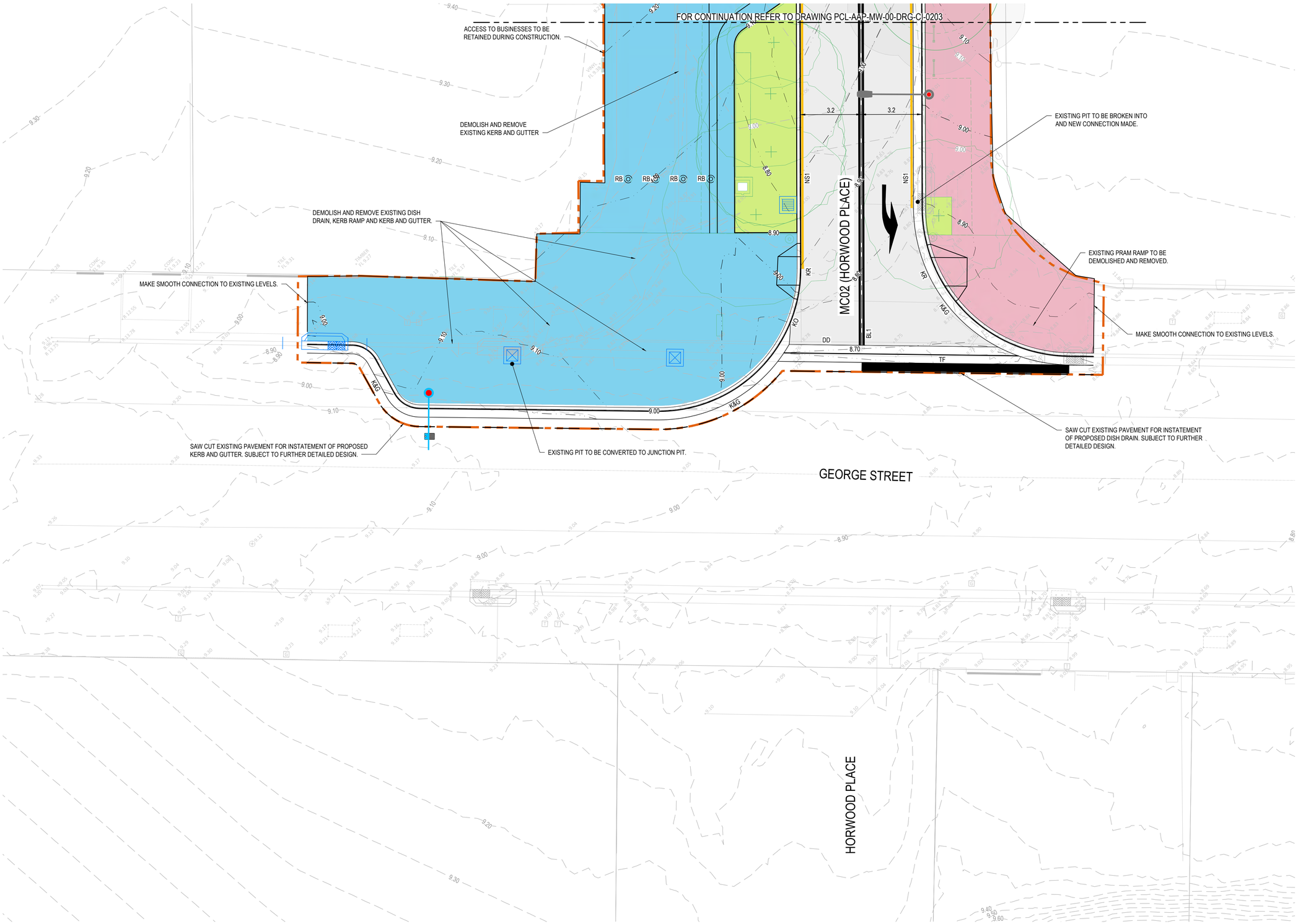
Project Number: 30190380

Drawing No.: PCL-AAP-MW-00-DRG-CI-0203

Issue: 01

Date Plotted: 19 Feb 2025 - 04:29pm File Name: C:\Users\santosa4174\DC\ACCDocs\Arcadis ACC US\AAU-30190380-Parramatta Civic Link\Project Files\10_WIP\10_ARC_Civil_CI\Stage_Main\Works\DRG\PCL-AAP-MW-00-DRG-CI-0203-CivilWorksPlanSheet3.dwg



LEGEND

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Issue	Description	DR	CH	VE	Date
01	ISSUED FOR INFORMATION - 50% DETAILED DESIGN	RS	GD	MK	19.02.25

Scales

0 1 2 4 6 8 10m

1 : 100

100mm on Original

Surveyor: surveyplus, DURKIN

Architect: MCGREGOR COXALL

Client: CITY OF PARRAMATTA

Status: PRELIMINARY
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Drawn	R. SANTOS	Original Size	A1
Designed	I. SUMMERS	Height Datum	AHD
Project Manager	G. DUNSTAN	Grid	MGA/20-56
Verified	M. KURTZ		

Project: PARRAMATTA CIVIC LINK
HORWOOD PLACE WORKS

Title: CIVIL WORKS PLAN
SHEET 4

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Project Number: 30190380

Drawing No.: PCL-AAP-MW-00-DRG-CI-0204

Issue: 01

Date Plotted: 19 Feb 2025 - 04:30pm File Name: C:\Users\santosa4174\DC\ACCDocs\Arcadis ACC US\AAU-30190380-Parramatta Civic Link\Project Files\10_WIP\10_ARC_Civil_CI\Stage_MainWorks\DRG\PCL-AAP-MW-00-DRG-CI-0204-CivilWorksPlanSheet4.dwg

Appendix C

Appendix C – Meteorology

Daily Maximum Temperature (degrees Celsius)

PARRAMATTA NORTH (MASONS DRIVE)

Station Number: 066124 · State: NSW · Opened: 1965 · Status: Open · Latitude: 33.79°S · Longitude: 151.02°E · Elevation: 55 m

2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1st	24.4	30.5	29.6	29.6	18.8	15.4	14.8	15.3	27.0	22.2	23.7	31.5
2nd	29.2	31.6	26.2	27.0	18.8	16.2	15.0	16.4	25.0	19.8	21.2	36.0
3rd	30.2	29.0	31.2	24.4	17.4	17.4	15.6	20.8	18.2	21.0	31.2	32.5
4th	27.8	39.2	24.0	21.2	19.8	17.5	16.8	15.5	22.6	22.8	22.3	27.0
5th	25.0	34.0	26.2	20.2	18.5	16.2	16.4	15.4	26.5	26.2	24.2	28.8
6th	27.0	25.0	30.3	27.0	20.5	16.2	16.0	18.5	29.3	27.8	31.5	33.0
7th	30.0	24.6	28.0	26.6	19.6	17.0	16.2	18.8	24.8	29.0	32.4	29.5
8th	26.2	24.4	29.0	24.6	19.4	20.0	16.8	19.0	20.7	16.2	31.0	30.2
9th	27.5	25.5	29.5	21.8	19.8	19.8	19.6	21.4	25.0	17.0	26.5	24.6
10th	30.2	25.6	29.6	21.5	20.0	17.6	19.6	19.0	22.2	24.6	27.0	26.4
11th	30.5	25.5	29.1	22.5	17.2	16.4	16.2	19.2	26.2	25.3	21.2	28.0
12th	30.4	31.2	33.5	25.7	20.0	18.5	17.5	15.8	19.8	18.8	25.2	31.8
13th	32.2	33.0	29.1	25.2	21.2	15.4	16.5	19.0	18.2	21.2	26.0	35.0
14th	27.6	31.0	34.5	25.2	22.0	14.8	16.6	17.8	23.0	26.4	22.0	28.8
15th	23.6	21.2	24.0	26.0	22.8	14.8	15.5	18.2	16.8	17.7	21.2	29.2
16th	25.2	27.6	25.1	24.0	21.5	15.3	15.2	22.2	18.8	19.6	25.1	33.5
17th	28.2	32.0	23.0	22.0	22.8	16.3	18.0	20.4	21.5	25.0	31.5	38.5
18th	30.8	30.2	25.6	24.0	15.2	16.6	17.4	17.2	26.0	26.2	30.2	23.5
19th	30.2	27.0	28.5	21.5	18.0	15.6	15.2	18.4	26.5	25.2	21.5	25.0
20th	27.5	23.0	25.0	19.6	17.8	16.5	16.2	22.5	25.4	22.8	25.8	27.0
21st	37.5	26.8	22.0	21.6	18.8	16.8	17.5	26.2	24.5	21.5	25.8	33.0
22nd	24.5	31.4	24.2	23.5	18.5	12.9	18.6	22.7	25.6	25.2	28.4	29.0
23rd	26.8	35.5	25.5	24.8	20.5	15.0	20.0	22.2	28.5	29.6	31.2	29.8
24th	31.0	22.0	27.2	25.1	20.4	17.2	19.4	27.0	25.8	22.5	33.2	25.2
25th	31.0	28.6	29.6	21.4	18.0	18.4	21.7	22.5	28.0	21.8	32.2	30.0
26th	37.5	28.4	27.6	20.2	21.2	20.5	20.2	24.5	13.4	20.0	37.5	32.0
27th	23.8	24.3	26.2	21.6	20.0	18.5	15.8	26.0	17.4	26.6	37.0	36.5
28th	27.5	29.6	25.0	24.5	20.8	18.4	14.6	28.2	19.2	26.2	29.2	28.2
29th	31.2	37.6	25.6	26.0	20.4	18.2	15.2	24.6	20.8	24.5	22.8	30.0
30th	26.2		28.6	18.0	23.5	14.2	15.8	30.0	20.8	27.7	26.0	28.5
31st	27.0		26.6		21.0		16.2	24.8		29.8		30.0
Highest daily	37.5	39.2	34.5	29.6	23.5	20.5	21.7	30.0	29.3	29.8	37.5	38.5
Lowest daily	23.6	21.2	22.0	18.0	15.2	12.9	14.6	15.3	13.4	16.2	21.2	23.5
Monthly mean	28.6	28.8	27.4	23.5	19.8	16.8	17.0	21.0	22.9	23.6	27.5	30.1

Quality control: 12.3 Done & acceptable, *12.3* Not quality controlled or uncertain, *12.3* Precise date unknown

Product code: IDCJAC0010 reference: 119813960

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Australian Government
Bureau of Meteorology

Daily Maximum Temperature (degrees Celsius)

PARRAMATTA NORTH (MASONS DRIVE)

Station Number: 066124 · State: NSW · Opened: 1965 · Status: Open · Latitude: 33.79°S · Longitude: 151.02°E · Elevation: 55 m

Statistics for this station calculated over all years of data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean	28.6	27.9	26.3	23.9	20.6	17.8	17.5	19.2	21.8	24.1	25.5	27.6
Highest monthly mean	32.0	31.7	29.5	27.1	23.3	20.0	20.1	22.2	25.2	28.9	28.6	31.3
Lowest monthly mean	25.1	24.9	23.9	21.3	18.5	16.2	15.2	16.9	18.6	20.7	22.9	22.9
Highest daily	47.0	44.5	40.5	37.0	29.2	25.5	26.8	30.6	36.5	40.1	42.7	44.0
Date of highest daily	4th 2020	1st 2020	9th 1983	4th 1986	1st 1994	14th 2004	30th 2017	26th 1995	23rd 2017	21st 1988	25th 1982	31st 2019
Lowest daily	17.3	17.5	16.2	15.5	12.5	9.5	9.0	11.0	12.7	13.1	15.1	15.2
Date of lowest daily	13th 1972	7th 1973	1st 1987	22nd 1985	7th 1984	10th 2021	3rd 1984	19th 1996	1st 1970	3rd 1967	5th 1996	10th 2002

1) Calculation of statistics

Summary statistics, other than the Highest and Lowest values, are only calculated if there are at least 10 years of data available.

2) Gaps and missing data

Gaps may be caused by a damaged instrument, a temporary change to the site operation, or due to the absence or illness of an observer.

3) Further information

http://www.bom.gov.au/climate/cdo/about/about-airtemp-data.shtml.

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http://www.bom.gov.au/other/copyright.shtml

Daily Rainfall (millimetres)

PARRAMATTA NORTH (MASONS DRIVE)

Station Number: 066124 · State: NSW · Opened: 1965 · Status: Open · Latitude: 33.79°S · Longitude: 151.02°E · Elevation: 55 m

2024	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1st	2.0	0.2	0	0	5.0	0.6	2.6	0	0	0	8.0	1.4
2nd	0.2	0	0	0	1.6	72.0	5.0	0.4	0	4.0	0.4	5.2
3rd	0	0	3.0	4.8	1.0	0	2.0	0	0	0.4	1.6	0
4th	0.2	0		0	14.2	0	5.0	0	0	0	0	0
5th	3.6	0	0	46.0	3.6	0	8.8	0	0	1.8	0.2	0.2
6th	0	27.0	0	103.0	49.6	6.4	1.4	0	0	0	0	0
7th	0	0.2	0	0	0.8	33.0	0.2	0	0	0	0	9.2
8th	0	0	0	0	2.2	2.0	0.6	0	0	0	6.2	12.0
9th	5.4	0	0	0	6.4	0	2.8	0	0	0.2	0	0.6
10th	0	1.4	0	13.4	0.4	0	0.2	0.8	0	0.8	0	0
11th	0	2.0	0	0	7.8	0	0	0	0	0	0	0.2
12th	6.6	0	0	0	20.0	0	0	0.6	0	0	0	0
13th	4.0	0	0	0	0.6	0	0	2.2	0	0.4	0	0
14th	0.4	0	0	0	0	0	0	1.0	0	0	0	0
15th	75.0	3.6	5.0	0	0	14.0	0	6.0	0	7.6	1.6	0
16th	47.0	7.0	0.2	0	0	0.2	0	0.2	0	4.0	1.4	0
17th	1.4	0.2	12.0	0	0	0	0.2	0	0	0	0	0
18th	49.0	0	0	2.0	0	0	1.0	0	0	1.4	14.6	3.0
19th	0	0.4	3.0	0.2	0.8	0	0	0	0	1.0	0.8	1.4
20th	0	10.0	0.2	0	0	0	0	0	0	4.0	0	0
21st	0	18.4	1.6	0.6	0	0	0	0	0	0	0	0
22nd	0	0	0	0	0	22.0	0	0	0	0	0	0
23rd	0.2	0	0	0	0	6.2	0	0	0	0	0	0
24th	0.8	6.0	1.4	0	0	0.6	0	0	0	0	0	0
25th	0	0	0	0	0	0	0	0	0	3.2	0	0
26th	0	0	0	0	0	0	6.0	0	10.0	0	0	0
27th	1.4	0	0	0	0	0	8.0	0	27.0	0	0	1.4
28th	1.0	0	0.4	0	0	0	1.4	0	1.6	0	2.0	0.2
29th	0	0	0.2	0	0	0	0	0	0.2	0	3.8	0
30th	7.4		0	0	0	7.8	0	0	3.0	0	14.6	0
31st	0.8		0		0		0	0		0		0
Highest daily	75.0	27.0	12.0	103.0	49.6	72.0	8.8	6.0	27.0	7.6	14.6	12.0
Monthly Total	206.4	76.4	27.0	170.0	114.0	164.8	45.2	11.2	41.8	28.8	55.2	34.8

Annual total for 2024 = 975.6mm

↓ This day is part of an accumulated total
Quality control: 12.3 Done & acceptable, *12.3* Not completed or unknown

Product code: IDCJAC0009 reference: 119814165

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Daily Rainfall (millimetres)

PARRAMATTA NORTH (MASONS DRIVE)

Station Number: 066124 · State: NSW · Opened: 1965 · Status: Open · Latitude: 33.79°S · Longitude: 151.02°E · Elevation: 55 m

Statistics for this station calculated over all years of data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean	105.3	125.8	121.4	89.3	69.0	89.4	50.1	54.6	49.8	68.5	83.3	71.2
Median	90.9	106.1	93.7	55.8	45.5	62.4	33.8	32.0	35.7	47.2	67.6	65.2
Highest daily	100.0	190.4	168.1	140.1	153.8	209.1	138.4	293.0	164.1	106.5	104.0	91.4
Date of highest daily	29th 1978	3rd 1990	6th 1967	30th 1988	1st 1988	11th 1991	6th 1988	6th 1986	2nd 1970	25th 1987	14th 1986	9th 1970

1) Calculation of statistics

Summary statistics, other than the Highest and Lowest values, are only calculated if there are at least 20 years of data available.

2) Gaps and missing data

Gaps may be caused by a damaged instrument, a temporary change to the site operation, or due to the absence or illness of an observer.

3) Further information

http://www.bom.gov.au/climate/cdo/about/about-rain-data.shtml.

Australian Government
Bureau of Meteorology

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Appendix D

Appendix D – Waste Classification Reports

Douglas PARTNERS | GROUNDED EXPERTISE

RMA Group
27/6-20 Braidwood St
Strathfield South, NSW 2136

Attention: Charlie Dutra
Email: charlie@rmagroup.com.au

Project 231981.00
10 February 2025
R.002.Rev0
CL

Stockpile Waste Classification
Parramatta Civil Link - Block 3
George Khattar Lane, Parramatta NSW

1. Executive summary

This report describes the methodology and results of a stockpile waste classification undertaken by Douglas Partners Pty Ltd (Douglas) on a stockpile of fill located at George Khattar Lane, Parramatta NSW (the site)(refer to Section 2 for further details).

The results are summarised in the following Table 1.

Table 1: Summary of waste classification

Waste identification	Stockpile as shown on attached Drawing 1
Approximate area [1]	20 m^3
Waste description	Pale grey to dark grey gravelly sand, fine to coarse, with igneous and sandstone gravel, concrete and asphalt, trace clay
Classification	Special Waste Asbestos – General Solid Waste (non-putrescible)
Conditions specific to this classification	(Refer to Section 7 for general conditions)

Notes: 1. Dimensions and / or volume and / or tonnage approximations have been estimated to inform the sampling rationale. Douglas recommends that if accurate volumes and / or tonnages are required, surveys and weighbridge measurements are undertaken.

2. Introduction

This waste classification was commissioned by Charlie Dutra of RMA Group and was undertaken in accordance with Douglas' email proposal dated 6 February 2025.

The subject of the waste classification is a stockpile of fill located at George Khattar Lane, Parramatta NSW as shown on the attached Drawing 1. It is understood that the stockpile

originated from the excavation of archaeological test pits to a maximum depth of 0.3 m below ground level (bgl) from locations across Horwood Place, Parramatta shown on Drawing 2. Douglas was advised by the client that the material below 0.3 m bgl was stockpiled and classified separately.

It is understood the intention is to remove the stockpile to landfill under an assigned waste classification. The waste classification was prepared with reference to the *Waste Classification Guidelines, Part 1: Classifying Waste* (NSW EPA, 2014a).

3. Scope of work

The scope of work was as follows:

- Brief discussions with site personnel (Luke Slechta) to assess the possible source and history of the stockpiled fill and potential for contamination;
- Brief review of historical aerial photographs to assess the potential for historical sources of contamination;
- Review of geological and acid sulfate soil mapping;
- Inspection of the stockpile to estimate the volume and note the likely composition;
- Collection of samples and dispatch to a NATA accredited laboratory for analysis for the identified contaminants of concern; and
- Preparation of this waste classification report.

4. Sampling and analytical rationale

The following table presents the analytical rationale.

Table 2: Site information

Item	Description
Site description	At the time of conducting the field work for the waste classification (29 January 2025 and 6 February 2025) the source site of the stockpile was a public road.
Site history	A review of historical aerial photographs indicates that the site has been used as public road since 1975 and was used as residential and commercial prior to that.
Geology and soil landscapes	Reference to published mapping indicates that the site is underlain by sedimentary siliciclastic of Wianamatta Group which typically comprises sandstone, siltstone and shale. The published landscaping map indicated that the site is dominated by silt and clay sized alluvial materials derived from the Wianamatta Group.
Acid sulfate soils	Reference to published mapping indicates that the site is mapped as low probability of occurrence of acid sulfate soil (ASS).

Item	Description
	Reference to the published ASS risk map indicates that the site is located within an area of Disturbed Terrain with elevation greater than 4m Australia Height Datum (AHD), which soil investigation is required to assess area below 4 m AHD for ASS. Given the material subject to this assessment originates form shallow excavation and mainly comprises road base material to a maximum depth of 0.3 m bgl, the risk of ASS in the waste is considered to be low. The visual assessment of the material conferred that there was a low risk of ASS (no sulphidic odours or other signs of ASS were observed).
Identified potential sources of contamination	Imported fill, previous buildings (potential hazardous materials such as asbestos).

Based on the above, analysis was undertaken for the following:

- Eight metals – arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc;
- Polycyclic aromatic hydrocarbons (PAH);
- Benzene, toluene, ethylbenzene and xylene (BTEX);
- Total recoverable hydrocarbons (TRH);
- Organochlorine pesticides (OCP);
- Organophosphorus pesticides (OPP);
- Total phenols;
- Polychlorinated biphenyls (PCB);
- Per- and poly- fluoroalkyl substances (PFAS);
- Fibrous asbestos and asbestos fines (FA and AF); and
- Toxicity characteristic leaching procedure (TCLP) testing on Nickel and PFAS.

The following table presents the sampling rationale.

Table 3: Sampling rationale

Item	Description
Approximate stockpile dimensions	Approximately 10 m x 4 m x 0.5 m.
Approximate stockpile volume	Calculated from the above 20 m^3.
Number of samples	A total of three primary samples (RB-SP-1 to RB-SP-3) for chemical and asbestos (FA and AF) analysis with reference to NSW EPA *Sampling Design, Part 1: Application; Part 2: Interpretation* (NSW EPA, 2022), and one asbestos containing material (ACM) fragment (RM-ACM-1) were collected.

Number of sampling locations	Three sampling locations as shown on the attached Drawing 1.

Dimensions and/or tonnage approximations have been estimated to inform the sampling rationale. Douglas recommends that if accurate volumes and/or tonnages are required surveys and weighbridge measurements are undertaken.

5. Field work observations

At the time of inspection, the stockpile was observed to comprise pale grey to dark grey gravelly sand, fine to coarse, with igneous and sandstone gravel, concrete and asphalt, and trace clay.

There were no obvious indications of gross contamination (e.g. staining, or odours) within the test locations. Few ACM fragments were observed on stockpile surface, and one representative ACM fragment was collected to confirm the absence or presence of asbestos.

Representative photographs are included as Figures 1 and 2 below.

Figure 1: Representative photo of the stockpile

Figure 2: Representative photo of the ACM fragment observed

6. Waste classification

The following Table 4 presents the results of the six-step procedure outlined in NSW EPA (2014) for determining the type of waste and the waste classification.

Table 4: Six step classification procedure

No.	Item	Comment	Rationale
1.	Is the waste special waste?	Yes	Asbestos-containing materials (ACM) was observed on the surface of the stockpile and was confirmed by laboratory testing.
2.	Is the waste liquid waste?	No	The stockpile comprised a soil matrix.

No.	Item	Comment	Rationale
3.	Is the waste "pre-classified"?	No	The stockpiled fill not pre-classified with reference to NSW EPA (2014).
4.	Does the waste possess hazardous waste characteristics?	No	The fill was not observed to contain or considered at risk to contain explosives, gases, flammable solids, oxidising agents, organic peroxides, toxic substances, corrosive substances, coal tar, batteries, lead paint or dangerous goods containers.
5.	Determining a wastes classification using chemical assessment.	Conducted	Refer to attached Table A1.
6.	Is the waste putrescible or non-putrescible? [1]	Non-putrescible	The stockpile does not contain materials considered to be putrescible.

Notes: 1. Wastes that are generally not classified as putrescible include soils, timber, garden trimmings, agricultural, forestry and crop materials, and natural fibrous organic and vegetative materials (NSW EPA, 2014).

The field and laboratory data quality assurance and quality control results for the samples have been reviewed and are considered to be acceptable. It is noted that this waste classification assessment was conducted together with the Detailed Site (Contamination) Investigation (DSI) of the source site, which will be reported separately. The data quality assurance and quality control results for the DSI is also adopted for this waste classification assessment. The laboratory certificate is attached. Only samples RB-SP-1 to RB-SP-3, and RM-ACM-1 on the laboratory report are related to this waste classification assessment.

As shown in the attached Table A1, all contaminant concentrations for the analysed fill samples were below the contaminant thresholds (CT1) for general solid waste, except for the concentration of nickel in all three samples exceeded the CT1. TCLP tests were conducted for the nickel on all three samples. The specific contaminant concentration (SCC1) and TCLP concentrations for those samples were below the contaminant thresholds SCC1 and TCLP1 for general solid waste, respectively. Noting there are no CT thresholds for PFAS, which was assessed by TCLP1.

Table 5: Waste classification summary

Item	Description
Based on the observations at the time of sampling and the reported analytical results, the fill described as:	Pale grey to dark grey gravelly sand, fine to coarse, with igneous and sandstone gravel, concrete and asphalt, and trace clay
Within the stockpile subject to classification as shown on Drawing 1, is classified as:	Special Waste Asbestos – General Solid Waste (non-putrescible)
The form of asbestos identified within the waste was:	Fragments of bonded ACM (non-friable)

7. Conditions

During excavation and loading of the stockpile, it is recommended that appropriate inspections are conducted. If any fill is encountered which is different to that sampled and tested or exhibit signs of potential contamination (e.g. anthropogenic inclusions, staining or odours) this waste classification does not apply. The fill should be appropriately segregated for further assessment and the advice of a qualified environmental consultant should be sought.

Both the receiving site and the site disposing of the fill should satisfy the requirements of the licence of the receiving site before disposal of the fill is undertaken. Note that appropriate prior arrangement with the receiving site/relevant authorities should be obtained prior to the disposal of any fill off site. The receiving site should check to ensure that the fill received matches the description provided in this report and contains no cross contamination. The handling, transport and disposal of the waste should be conducted in accordance with regulatory and statutory requirements.

8. References

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

NSW EPA. (2014a). *Waste Classification Guidelines, Part 1: Classifying Waste*. NSW Environment Protection Authority.

NSW EPA. (2014b). *Waste Classification Guidelines, Part 2: Immobilisation of Waste*. NSW Environment Protection Authority.

NSW EPA. (2014c). *Waste Classification Guidelines, Part 4: Acid Sulfate Soils*. NSW Environment Protection Authority.

NSW EPA. (2016). *Addendum to the Waste Classification Guidelines (2014) - Part 1: Classifying Waste*. NSW Environment Protection Authority.

9. Limitations

Douglas Partners Pty Ltd (Douglas) has prepared this report for this project at Horwood Place, Parramatta NSW in accordance with Douglas' email proposal dated 6 February 2025 and acceptance received from Charlie Dutra dated 6 February 2025. The work was carried out under Douglas' Engagement Terms. This report is provided for the exclusive use of RMA Group for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of Douglas, does so entirely at its own risk and without recourse to Douglas for any loss or damage. In preparing this report Douglas has necessarily relied upon information provided by the client and/or their agents.

Douglas' advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by Douglas in this report may be affected by undetected

variations in conditions across the stockpile between and beyond the sampling locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

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

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

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

Douglas personnel are not licensed or accredited quantity surveyors. Any quantities quoted in this report are provided for general guidance only and should not be relied upon. The services of a licensed/accredited quantity surveyor should be engaged if reliable quantities are required.

Part 5.6, Section 143 of The Protection of the Environment Operations Act 1997 states that it is an offence for waste to be transported to a place that cannot lawfully be used as a facility to accept that waste. It is the duty of the owner and transporter of the waste to ensure that the waste is disposed of appropriately. Douglas does not accept liability for the unlawful transport or disposal of materials from any site. Douglas accepts no responsibility for tracking, loading, management, transport or disposal of the materials from the site.

Please contact the undersigned if you have any questions on this matter.

Yours faithfully
Douglas Partners Pty Ltd

Reviewed by

Cathy Li
Environmental Engineer

Kurt Plambeck
Senior Associate

Attachments: About this report
Drawing 1
Drawing 2
Sampling methodology
Summary of laboratory results
NATA laboratory certificate of analysis chain of custody documentation, chain of custody documentation and sample receipt advice

About this Report

November 2023

Introduction

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

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

Copyright

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

Borehole and Test Pit Logs

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

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

Groundwater

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

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

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

Reports

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

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

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

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

continued next page

About this Report

Site Anomalies

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

Information for Contractual Purposes

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

Site Inspection

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

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SITE LOCATION

LEGEND

- Stockpile Sampling Locations
- Stockpile RB-SP location

NOTE:

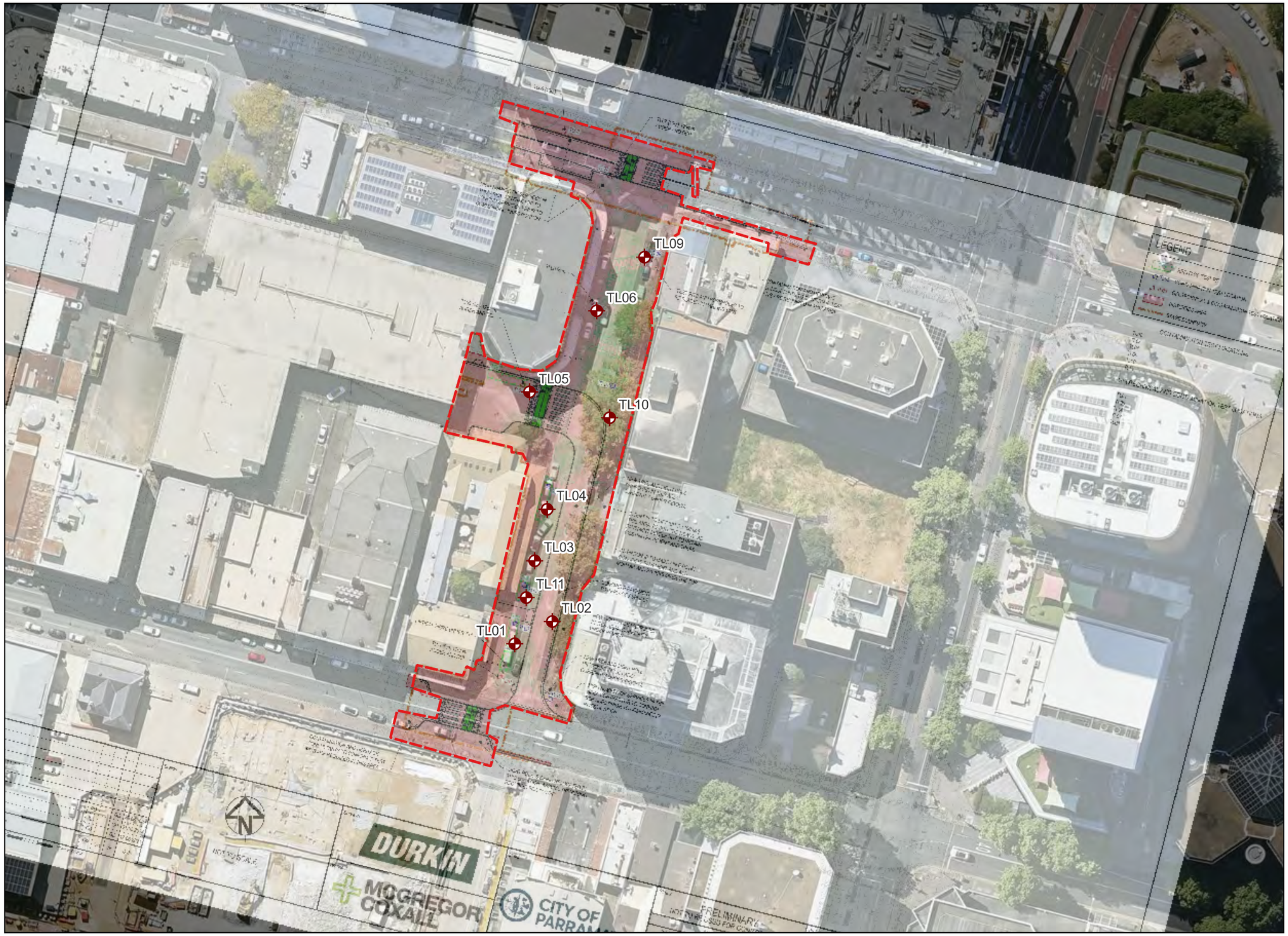
1. Drawing projection in GDA94 / MGA zone 56, adapted from aerial imagery from "xxx" dated 00.00.0000, Client supplied drawing titled "xxx" dated 00.00.0000
2. Test locations are approximate only and were located using differential GPS typically accurate to ± 0.1 m depending on satellite coverage

0 10 20 m

Douglas PARTNERS

CLIENT: RMA Group		TITLE: **Stockpile and Test Location Plan**	PROJECT: 231981.00
OFFICE: Sydney	DRAWN BY: CL	**Parramatta Civil Link - Block 3**	DRAWING No: 1
SCALE: 1:200 @A3	DATE: 07.February.2025	**George Khattar Lane, Parramatta NSW**	REVISION: 0

N



SITE LOCATION

LEGEND

- Archaeologist Test Locations (ie Source of Stockpile RB-SP)
- Approximate Project Boundary

NOTE:
1. Drawing projection in GDA94 / MGA zone 56, adapted from aerial imagery from "xxx" dated 00.00.0000, Client supplied drawing titled "xxx" dated 00.00.0000
2. Test locations are approximate only and were located using differential GPS typically accurate to ± 0.1 m depending on satellite coverage

0 10 20 m

Douglas PARTNERS

CLIENT:	RMA Group	TITLE:	**Stockpile and Test Location Plan**
OFFICE:	Sydney	DRAWN BY:	CL		**Parramatta Civil Link - Block 3**
SCALE:	1:1000 @A3	DATE:	07.February.2025		**George Khattar Lane, Parramatta NSW**

PROJECT:	231981.00
DRAWING No:	2
REVISION:	0

Sampling methodology

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

- Collect soil samples directly from half meter below the stockpile surface by using hand tools;
- Place samples into laboratory-prepared glass jars with Teflon lined lids, capping immediately and minimising headspace within the sample jar;
- Place samples into laboratory-prepared containers (specific for PFAS), capping immediately and minimising headspace within the sample jar;
- Collect replicate samples in zip-lock bags for photoionisation detector (PID) screening;
- Collect ~500 ml samples in zip-lock bags for fibrous asbestos and asbestos fines (FA and AF) analysis;
- Wear a new disposable nitrile glove for each sample point thereby minimising potential for cross-contamination;
- Collect 10% replicate samples for quality control (QC) purposes;
- Label sample containers with individual and unique identification details, including project number, sample location and sample depth (where applicable);
- Place samples into a cooled, insulated and sealed container for transport to the laboratory; and
- Use chain of custody documentation.

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

Table A1: Summary of Laboratory Results

		Metals							TRH		BTEX				PAH		Phenols	OCP			
		Total Arsenic	Cadmium	Total Chromium	Lead	Mercury (inorganic)	Nickel	TCLP-Nickel	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)pyrene (B(a)P)	Total PAH	Total Phenolics	Scheduled Chemical Waste (standard)	Total Endosulfan	Total Analysed OCP	Mirex
	PQL	4	0.4	1	1	0.1	1	0.02	25	50	0.2	0.5	1	1	0.05	0.05	5	0.1	0.1	0.1	0.1
Sample ID	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RB-SP-1	29/01/25	<4	<0.4	**17**	**9**	<0.1	**110**	**0.1**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1
RB-SP-2	29/01/25	<4	<0.4	**21**	**14**	<0.1	**120**	**0.1**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1
RB-SP-3	29/01/25	<4	<0.4	**25**	**7**	<0.1	**160**	**0.26**	<25	<50	<0.2	<0.5	<1	<1	<0.05	<0.05	<5	<0.1	<0.1	<0.1	<0.1
RB-ACM-1	7/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Waste Classification Criteria [f]																					
CT1		100	20	100	100	4	40	-	650	10,000	10	288	600	1000	0.8	200	288	<50	60	-	-
SCC1		500	100	1,900	1,500	50	1,050		650	10,000	18	518	1,080	1,800	10	200	518	<50	108	-	-
TCLP1		-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
CT2		400	80	400	400	16	160	-	2,600	40,000	40	1,152	2,400	4,000	3.2	800	1,152	<50	240	-	-
SCC2		2,000	400	7,600	6,000	200	4,200		2,600	40,000	72	2,073	4,320	7,200	23	800	2,073	<50	432	-	-
TCLP2		-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-

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

- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

a	QA/QC replicate of sample listed directly below the primary sample
b	Total chromium used as initial screen for chromium(VI).
c	Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)
d	Criteria for scheduled chemicals used as an initial screen
e	Criteria for Chlorpyrifos used as initial screen
f	NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste
PQL	Practical quantitation limit
CT1	Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste
SCC1	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
TCLP1	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
CT2	Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste
SCC2	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste
TCLP2	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

Table A1: Summary of Laboratory Results

		OPP	PCB	PFAS				Asbestos							
		Total Analysed OPP	Total PCB	PFOA	TCLP PFOA	PFOS + PFHxS	TCLP PFOS + PFHxS	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Total Asbestos#1	Asbestos ID in Material
	PQL	0.1	0.1	0.0001	0.00001	0.0001	0.00001						0.001	0.1	-
Sample ID	Sample Date	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	-	-	-	g	g	%(w/w)	g/kg	-
RB-SP-1	29/01/25	<0.1	<0.1	<0.0001	<0.00001	**0.0002**	<0.00001	NAD	NAD	NAD	–	–	<0.001	<0.1	-
RB-SP-2	29/01/25	<0.1	<0.1	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	-
RB-SP-3	29/01/25	<0.1	<0.1	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1	-
RB-ACM-1	7/02/2025	-	-	-	-	-	-	-	-	-	-	-	-	-	**Chrysotile asbestos**
CT1		4	<50	-	-	-	-	-	-	-	-	-	-	-	-
SCC1		7.5	<50	18	-	1.8	-	-	-	-	-	-	-	-	-
TCLP1		-	-	-	0.5	-	0.05	-	-	-	-	-	-	-	-
CT2		16	<50	-	-	-	-	-	-	-	-	-	-	-	-
SCC2		30	<50	72	-	7.2	-	-	-	-	-	-	-	-	-
TCLP2		-	-	-	2	-	0.2	-	-	-	-	-	-	-	-

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

- = Not tested, no criteria or not applicable NAD = no asbestos detected

Notes:

a	QA/QC replicate of sample listed directly below the primary sample
b	Total chromium used as initial screen for chromium(VI).
c	Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)
d	Criteria for scheduled chemicals used as an initial screen
e	Criteria for Chlorpyrifos used as initial screen
f	NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste
PQL	Practical quantitation limit
CT1	Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste
SCC1	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
TCLP1	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
CT2	Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste
SCC2	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste
TCLP2	Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

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CERTIFICATE OF ANALYSIS 371670

Client Details

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

Sample Details

Your Reference	**231981.00 Parramatta**
Number of Samples	17 Soil
Date samples received	30/01/2025
Date completed instructions received	30/01/2025

Analysis Details

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

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

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

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

Report Details

Date results requested by	06/02/2025
Date of Issue	06/02/2025

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Analysed by Asbestos Approved Analyst: Amanda Lee
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Lucy Zhu, Asbestos Supervisor
Sean McAlary, Senior Chemist
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

VOCs in soil					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date Extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date Analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Dichlorodifluoromethane	mg/kg	<1	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1	<1
trans-1,2-Dichloroethene	mg/kg	<1	<1	<1	<1
1,1-Dichloroethane	mg/kg	<1	<1	<1	<1
cis-1,2-Dichloroethene	mg/kg	<1	<1	<1	<1
Bromochloromethane	mg/kg	<1	<1	<1	<1
Chloroform	mg/kg	<1	<1	<1	<1
2,2-Dichloropropane	mg/kg	<1	<1	<1	<1
1,2-Dichloroethane	mg/kg	<1	<1	<1	<1
1,1,1-Trichloroethane	mg/kg	<1	<1	<1	<1
1,1-Dichloropropene	mg/kg	<1	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1	<1
Carbon Tetrachloride	mg/kg	<1	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Dibromomethane	mg/kg	<1	<1	<1	<1
1,2-Dichloropropane	mg/kg	<1	<1	<1	<1
Trichloroethene	mg/kg	<1	<1	<1	<1
Bromodichloromethane	mg/kg	<1	<1	<1	<1
trans-1,3-Dichloropropene	mg/kg	<1	<1	<1	<1
cis-1,3-Dichloropropene	mg/kg	<1	<1	<1	<1
1,1,2-Trichloroethane	mg/kg	<1	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	mg/kg	<1	<1	<1	<1
Dibromochloromethane	mg/kg	<1	<1	<1	<1
1,2-Dibromoethane	mg/kg	<1	<1	<1	<1
Tetrachloroethene	mg/kg	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	mg/kg	<1	<1	<1	<1
Chlorobenzene	mg/kg	<1	<1	<1	<1

VOCs in soil					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Ethylbenzene	mg/kg	<1	<1	<1	<1
Bromoform	mg/kg	<1	<1	<1	<1
m+p-Xylene	mg/kg	<2	<2	<2	<2
Styrene	mg/kg	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	mg/kg	<1	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1	<1
1,2,3-Trichloropropane	mg/kg	<1	<1	<1	<1
Isopropylbenzene	mg/kg	<1	<1	<1	<1
Bromobenzene	mg/kg	<1	<1	<1	<1
n-Propylbenzene	mg/kg	<1	<1	<1	<1
2-Chlorotoluene	mg/kg	<1	<1	<1	<1
4-Chlorotoluene	mg/kg	<1	<1	<1	<1
1,3,5-Trimethylbenzene	mg/kg	<1	<1	<1	<1
tert-Butylbenzene	mg/kg	<1	<1	<1	<1
1,2,4-Trimethylbenzene	mg/kg	<1	<1	<1	<1
1,3-Dichlorobenzene	mg/kg	<1	<1	<1	<1
sec-Butylbenzene	mg/kg	<1	<1	<1	<1
1,4-Dichlorobenzene	mg/kg	<1	<1	<1	<1
4-Isopropyltoluene	mg/kg	<1	<1	<1	<1
1,2-Dichlorobenzene	mg/kg	<1	<1	<1	<1
n-Butylbenzene	mg/kg	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	mg/kg	<1	<1	<1	<1
1,2,4-Trichlorobenzene	mg/kg	<1	<1	<1	<1
Hexachlorobutadiene	mg/kg	<1	<1	<1	<1
1,2,3-Trichlorobenzene	mg/kg	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	128	129	127	128
Surrogate aaa-Trifluorotoluene	%	83	87	86	87
Surrogate Toluene-d_8	%	101	101	101	101
Surrogate 4-Bromofluorobenzene	%	92	92	93	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371670-1	371670-2	371670-3	371670-4	371670-5
Your Reference	UNITS	TL02	TL02	TL02	TL06	TL06
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-0.1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	83	84	89	87	82

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371670-6	371670-7	371670-8	371670-9	371670-10
Your Reference	UNITS	TL09	TL09	TL09	TL10	TL10
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	86	84	87	87	86

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		371670-12	371670-13	371670-14	371670-15	371670-16
Your Reference	UNITS	BD1/20250129	TS1	TB1	RB-SP-1	RB-SP-2
Depth		-	-	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
TRH C_6 - C_9	mg/kg	<25	[NA]	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	[NA]	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	[NA]	<25	<25	<25
Benzene	mg/kg	<0.2	103%	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	104%	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	103%	<1	<1	<1
m+p-xylene	mg/kg	<2	103%	<2	<2	<2
o-Xylene	mg/kg	<1	103%	<1	<1	<1
Naphthalene	mg/kg	<1	[NA]	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	[NA]	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	84	80	91	89	89

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		371670-17
Your Reference	UNITS	RB-SP-3
Depth		-
Date Sampled		29/01/2025
Type of sample		Soil
Date extracted	-	31/01/2025
Date analysed	-	03/02/2025
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTRH 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		371670-1	371670-2	371670-3	371670-4	371670-5
Your Reference	UNITS	TL02	TL02	TL02	TL06	TL06
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-0.1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	01/02/2025	01/02/2025	01/02/2025	01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	90	91	89	92	91

svTRH (C10-C40) in Soil						
Our Reference		371670-6	371670-7	371670-8	371670-9	371670-10
Your Reference	UNITS	TL09	TL09	TL09	TL10	TL10
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	01/02/2025	01/02/2025	01/02/2025	01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	91	90	88	90	89

svTRH (C10-C40) in Soil					
Our Reference		371670-12	371670-15	371670-16	371670-17
Your Reference	UNITS	BD1/20250129	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	01/02/2025	01/02/2025	01/02/2025	01/02/2025
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	%	88	89	87	88

PAHs in Soil						
Our Reference		371670-1	371670-2	371670-3	371670-4	371670-5
Your Reference	UNITS	TL02	TL02	TL02	TL06	TL06
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-0.1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	04/02/2025	04/02/2025	03/02/2025	04/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	104	87	87	102	87

PAHs in Soil						
Our Reference		371670-6	371670-7	371670-8	371670-9	371670-10
Your Reference	UNITS	TL09	TL09	TL09	TL10	TL10
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	04/02/2025	04/02/2025	03/02/2025	04/02/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.09	<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	0.61	<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	%	100	85	86	102	87

PAHs in Soil					
Our Reference		371670-12	371670-15	371670-16	371670-17
Your Reference	UNITS	BD1/20250129	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025
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	%	89	77	76	78

Organochlorine Pesticides in soil					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025
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
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	105	104	103	104

Organophosphorus Pesticides in Soil					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025
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	%	105	104	103	104

PCBs in Soil					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025
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	%	99	99	98	98

Misc Soil - Inorg					
Our Reference		371670-1	371670-4	371670-6	371670-9
Your Reference	UNITS	TL02	TL06	TL09	TL10
Depth		0.3-0.5	0.3-0.5	0.3-0.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5
Total Cyanide	mg/kg	<0.5	<0.5	<0.5	<0.5

Acid Extractable metals in soil						
Our Reference		371670-1	371670-2	371670-3	371670-4	371670-5
Your Reference	UNITS	TL02	TL02	TL02	TL06	TL06
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-0.1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Arsenic	mg/kg	6	6	6	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	18	17	18	10	16
Copper	mg/kg	11	12	12	7	6
Lead	mg/kg	15	19	22	19	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	6	6	12	5
Zinc	mg/kg	21	22	24	60	10

Acid Extractable metals in soil						
Our Reference		371670-6	371670-7	371670-8	371670-9	371670-10
Your Reference	UNITS	TL09	TL09	TL09	TL10	TL10
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Arsenic	mg/kg	<4	<4	<4	5	4
Cadmium	mg/kg	0.5	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	12	7	15	15
Copper	mg/kg	14	11	6	8	8
Lead	mg/kg	55	13	6	19	14
Mercury	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	6	3	6	5
Zinc	mg/kg	94	7	11	17	13

Acid Extractable metals in soil					
Our Reference		371670-12	371670-15	371670-16	371670-17
Your Reference	UNITS	BD1/20250129	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Arsenic	mg/kg	5	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	17	21	25
Copper	mg/kg	6	59	66	71
Lead	mg/kg	13	9	14	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	110	120	160
Zinc	mg/kg	10	44	50	55

Moisture						
Our Reference		371670-1	371670-2	371670-3	371670-4	371670-5
Your Reference	UNITS	TL02	TL02	TL02	TL06	TL06
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-0.1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Moisture	%	17	16	14	10	17

Moisture						
Our Reference		371670-6	371670-7	371670-8	371670-9	371670-10
Your Reference	UNITS	TL09	TL09	TL09	TL10	TL10
Depth		0.3-0.5	0.8-1	1.3-1.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Moisture	%	12	18	12	12	16

Moisture						
Our Reference		371670-11	371670-12	371670-15	371670-16	371670-17
Your Reference	UNITS	TL10	BD1/20250129	RB-SP-1	RB-SP-2	RB-SP-3
Depth		1.3-1.5	-	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025	03/02/2025	03/02/2025	03/02/2025
Moisture	%	16	16	4.1	5.7	7.2

Asbestos ID - soils NEPM						
Our Reference		371670-1	371670-2	371670-4	371670-6	371670-7
Your Reference	UNITS	TL02	TL02	TL06	TL09	TL09
Depth		0.3-0.5	0.8-1	0.3-0.5	0.3-0.5	0.8-1
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Sample mass tested	g	631	681.35	615.42	795.05	810.52
Sample Description	-	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks	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	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	–	–	–	–	–
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil	Nil

Asbestos ID - soils NEPM					
Our Reference		371670-9	371670-15	371670-16	371670-17
Your Reference	UNITS	TL10	RB-SP-1	RB-SP-2	RB-SP-3
Depth		0.3-0.5	-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	04/02/2025	04/02/2025	04/02/2025	04/02/2025
Sample mass tested	g	737.82	1,218	1,032.39	1,112.21
Sample Description	-	Brown clayey 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	–	–	–	–
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001
Asbestos comments	-	Nil	Nil	Nil	Nil

Misc Inorg - Soil			
Our Reference		371670-3	371670-4
Your Reference	UNITS	TL02	TL06
Depth		1.3-1.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025
Type of sample		Soil	Soil
Date prepared	-	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025
pH 1:5 soil:water	pH Units	7.7	8.3

CEC			
Our Reference		371670-3	371670-4
Your Reference	UNITS	TL02	TL06
Depth		1.3-1.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025
Type of sample		Soil	Soil
Date prepared	-	05/02/2025	05/02/2025
Date analysed	-	05/02/2025	05/02/2025
Exchangeable Ca	meq/100g	3.7	1.7
Exchangeable K	meq/100g	0.3	0.1
Exchangeable Mg	meq/100g	3.6	2.0
Exchangeable Na	meq/100g	0.7	<0.1
Cation Exchange Capacity	meq/100g	8.3	3.9

Clay 50-120g			
Our Reference		371670-3	371670-4
Your Reference	UNITS	TL02	TL06
Depth		1.3-1.5	0.3-0.5
Date Sampled		29/01/2025	29/01/2025
Type of sample		Soil	Soil
Date prepared	-	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025
Clay in soils <2µm	% (w/w)	26	10

PFAS in Soils Short					
Our Reference		371670-1	371670-5	371670-11	371670-15
Your Reference	UNITS	TL02	TL06	TL10	RB-SP-1
Depth		0.3-0.5	0.8-0.1	1.3-1.5	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Date analysed	-	31/01/2025	31/01/2025	31/01/2025	31/01/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.2	<0.1	<0.1	0.2
Perfluorooctanoic acid PFOA	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
Surrogate $^{13}C_8$ *PFOS*	%	99	100	101	99
Surrogate $^{13}C_2$ *PFOA*	%	98	95	100	99
Extracted ISTD $^{13}C_3$ *PFBS*	%	89	89	89	98
Extracted ISTD $^{18}O_2$ *PFHxS*	%	98	96	97	107
Extracted ISTD $^{13}C_4$ *PFOS*	%	101	96	99	107
Extracted ISTD $^{13}C_4$ *PFOA*	%	100	94	95	108
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	97	94	97	106
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	98	96	96	110
Total Positive PFHxS & PFOS	µg/kg	0.2	<0.1	<0.1	0.2
Total Positive PFOS & PFOA	µg/kg	0.2	<0.1	<0.1	0.2
Total Positive PFAS	µg/kg	0.2	<0.1	<0.1	0.2

PFAS in TCLP Short			
Our Reference		371670-1	371670-15
Your Reference	UNITS	TL02	RB-SP-1
Depth		0.3-0.5	-
Date Sampled		29/01/2025	29/01/2025
Type of sample		Soil	Soil
Date prepared	-	31/01/2025	31/01/2025
Date analysed	-	03/02/2025	03/02/2025
pH of soil for fluid# determ.	pH units	7.6	8.4
pH of soil TCLP (after HCl)	pH units	1.9	1.9
Extraction fluid used		1	1
pH of final Leachate	pH units	5.0	5.1
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	100	102
Surrogate $^{13}C_2$ *PFOA*	%	97	93
Extracted ISTD $^{13}C_3$ *PFBS*	%	95	92
Extracted ISTD $^{18}O_2$ *PFHxS*	%	115	108
Extracted ISTD $^{13}C_4$ *PFOS*	%	110	105
Extracted ISTD $^{13}C_4$ *PFOA*	%	115	113
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	118	112
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	124	111
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

Method ID	Methodology Summary
AS1289.3.6.3	Particle Size Distribution using in house method INORG-107 by way of sieving and/or hydrometer sedimentation testing. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE#1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF relative to the sample mass tested) NOTE#2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-001	pH - Measured using pH meter and electrode. 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.

Method ID	Methodology Summary
Inorg-014	Cyanide - free, total, weak acid dissociable by segmented flow analyser (in line dialysis with colourimetric finish). Solids/Filters and sorbents are extracted in a caustic media prior to analysis. Impingers are pH adjusted as required prior to analysis. Cyanides amenable to Chlorination - samples are analysed untreated and treated with hypochlorite to assess the potential for chlorination of cyanide forms. Based on APHA latest edition, 4500-CN_G,H.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	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.

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-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.

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date Extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date Analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
trans-1,2-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-Dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	104	100
cis-1,2-Dichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroform	mg/kg	1	Org-023	<1	1	<1	<1	0	112	107
2,2-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	111	105
1,1,1-Trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	106	102
1,1-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Carbon Tetrachloride	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	101	97
Dibromomethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	98	94
Bromodichloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	107	102
trans-1,3-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-Dichloropropene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-Trichloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	106	101
1,3-Dichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	mg/kg	1	Org-023	<1	1	<1	<1	0	107	101
1,2-Dibromoethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	mg/kg	1	Org-023	<1	1	<1	<1	0	93	90
1,1,1,2-Tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	106	102
Bromoform	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
m+p-Xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	99	95
Styrene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	107	102
1,2,3-Trichloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Isopropylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-Propylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-Chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-Chlorotoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-Trimethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
tert-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-Trimethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
sec-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-Isopropyltoluene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-Butylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-Dibromo-3-chloropropane	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-Trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-Trichlorobenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	127	1	128	128	0	123	125
Surrogate aaa-Trifluorotoluene	%		Org-023	89	1	83	86	4	86	87
Surrogate Toluene-d_8	%		Org-023	100	1	101	101	0	98	97
Surrogate 4-Bromofluorobenzene	%		Org-023	94	1	92	92	0	98	97

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date Extracted	-			[NT]	9	31/01/2025	31/01/2025		31/01/2025	[NT]
Date Analysed	-			[NT]	9	03/02/2025	03/02/2025		03/02/2025	[NT]
Dichlorodifluoromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
trans-1,2-Dichloroethene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,1-Dichloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	104	[NT]
cis-1,2-Dichloroethene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Bromochloromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Chloroform	mg/kg	1	Org-023	[NT]	9	<1	<1	0	112	[NT]
2,2-Dichloropropane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2-Dichloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	112	[NT]
1,1,1-Trichloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	105	[NT]
1,1-Dichloropropene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Carbon Tetrachloride	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	9	<0.2	<0.2	0	101	[NT]
Dibromomethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2-Dichloropropane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Trichloroethene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	97	[NT]
Bromodichloromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	107	[NT]
trans-1,3-Dichloropropene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
cis-1,3-Dichloropropene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,1,2-Trichloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	9	<0.5	<0.5	0	106	[NT]
1,3-Dichloropropane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Dibromochloromethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	107	[NT]
1,2-Dibromoethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Tetrachloroethene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	93	[NT]
1,1,1,2-Tetrachloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Chlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	106	[NT]
Bromoform	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
m+p-Xylene	mg/kg	2	Org-023	[NT]	9	<2	<2	0	98	[NT]
Styrene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	106	[NT]
1,2,3-Trichloropropane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Isopropylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Bromobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
n-Propylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
2-Chlorotoluene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
4-Chlorotoluene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,3,5-Trimethylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
tert-Butylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2,4-Trimethylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,3-Dichlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
sec-Butylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,4-Dichlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
4-Isopropyltoluene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2-Dichlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
n-Butylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2-Dibromo-3-chloropropane	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2,4-Trichlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
1,2,3-Trichlorobenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	[NT]	9	128	128	0	126	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	9	87	84	4	86	[NT]
Surrogate Toluene-d_8	%		Org-023	[NT]	9	101	101	0	97	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	[NT]	9	92	92	0	98	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	102	98
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	102	98
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	101	97
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	106	101
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	106	102
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	99	95
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	107	102
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	89	1	83	86	4	86	87

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		31/01/2025	[NT]
Date analysed	-			[NT]	9	03/02/2025	03/02/2025		03/02/2025	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	9	<25	<25	0	102	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	9	<25	<25	0	102	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	9	<0.2	<0.2	0	101	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	9	<0.5	<0.5	0	106	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	106	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	9	<2	<2	0	98	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	106	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	9	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	9	87	84	4	86	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			01/02/2025	1	01/02/2025	01/02/2025		01/02/2025	01/02/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	93	86
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	89	79
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	92
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	93	86
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	89	79
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	92
Surrogate o-Terphenyl	%		Org-020	93	1	90	92	2	86	92

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Date analysed	-			[NT]	9	01/02/2025	01/02/2025		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	9	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	9	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	9	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	9	90	88	2	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	86
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	88	88
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	86
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	88
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	88	101
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	99
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	88	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	82	90
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	89	1	104	103	1	92	94

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		31/01/2025	[NT]
Date analysed	-			[NT]	9	03/02/2025	03/02/2025		04/02/2025	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	102	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	98	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	86	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	100	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	104	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	118	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	96	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	9	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	9	<0.05	<0.05	0	124	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	9	102	103	1	114	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	92
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	88	88
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	86	86
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	88	88
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	92
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	82	82
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	102
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	86
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	92	92
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	76	76
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	108	1	105	105	0	98	99

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Date analysed	-			[NT]	9	03/02/2025	03/02/2025		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	9	104	104	0	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	92
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	88	86
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	102
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	102
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	98
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	102	98
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	92	92
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	108	1	105	105	0	98	99

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Date analysed	-			[NT]	9	03/02/2025	03/02/2025		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Fenthion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Phosalone	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	[NT]	9	104	104	0	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date extracted	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			03/02/2025	1	03/02/2025	03/02/2025		03/02/2025	03/02/2025
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	85	80
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	101	1	99	100	1	92	94

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Date analysed	-			[NT]	9	03/02/2025	03/02/2025		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	[NT]	9	98	99	1	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Date analysed	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	101	[NT]
Total Cyanide	mg/kg	0.5	Inorg-014	<0.5	[NT]	[NT]	[NT]	[NT]	77	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	371670-4
Date prepared	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Date analysed	-			31/01/2025	1	31/01/2025	31/01/2025		31/01/2025	31/01/2025
Arsenic	mg/kg	4	Metals-020	<4	1	6	6	0	107	104
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	107	99
Chromium	mg/kg	1	Metals-020	<1	1	18	20	11	102	97
Copper	mg/kg	1	Metals-020	<1	1	11	11	0	101	98
Lead	mg/kg	1	Metals-020	<1	1	15	20	29	103	98
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	107	118
Nickel	mg/kg	1	Metals-020	<1	1	6	6	0	101	94
Zinc	mg/kg	1	Metals-020	<1	1	21	20	5	101	90

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Date analysed	-			[NT]	9	31/01/2025	31/01/2025		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	9	5	4	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	9	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	9	15	16	6	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	9	8	8	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	9	19	15	24	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	9	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	9	6	6	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	9	17	14	19	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Date analysed	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	371670-4
Date prepared	-			05/02/2025	3	05/02/2025	05/02/2025		05/02/2025	05/02/2025
Date analysed	-			05/02/2025	3	05/02/2025	05/02/2025		05/02/2025	05/02/2025
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	3	3.7	3.6	3	96	99
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	3	0.3	0.3	0	97	84
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	3	3.6	3.5	3	94	89
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	3	0.7	0.7	0	86	89

QUALITY CONTROL: PFAS in Soils Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date prepared	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Date analysed	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	92	[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]	99	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	106	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	106	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	108	[NT]

QUALITY CONTROL: PFAS in TCLP Short						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			31/01/2025	[NT]	[NT]	[NT]	[NT]	31/01/2025	[NT]
Date analysed	-			03/02/2025	[NT]	[NT]	[NT]	[NT]	03/02/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	112	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	99	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	95	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	90	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	120	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	123	[NT]	[NT]	[NT]	[NT]	121	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	132	[NT]	[NT]	[NT]	[NT]	123	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	132	[NT]	[NT]	[NT]	[NT]	131	[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

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	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	231981.00 Parramatta
Envirolab Reference	371670
Date Sample Received	30/01/2025
Date Instructions Received	30/01/2025
Date Results Expected to be Reported	06/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	17 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	6
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Samples with no testing, NR

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	VOCs in soil	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 Soil - Inorg	Acid Extractable metalsin soil	Asbestos ID - soils NEPM	Misc Inorg - Soil	CEC	Clay 50-120g	PFAS in Soils Short	PFAS in TCLP Short
TL02-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓
TL02-0.8-1		✓	✓	✓					✓	✓					
TL02-1.3-1.5		✓	✓	✓					✓		✓	✓	✓		
TL06-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
TL06-0.8-0.1		✓	✓	✓					✓					✓	
TL09-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
TL09-0.8-1		✓	✓	✓					✓	✓					
TL09-1.3-1.5		✓	✓	✓					✓						
TL10-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					
TL10-0.8-1		✓	✓	✓					✓						
TL10-1.3-1.5														✓	
BD1/20250129		✓	✓	✓					✓						
TS1		✓													
TB1		✓													
RB-SP-1		✓	✓	✓					✓	✓				✓	✓
RB-SP-2		✓	✓	✓					✓	✓					
RB-SP-3		✓	✓	✓					✓	✓					

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.

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:**	Parramatta	**To:**	Envirolab Services
Project Manager:	Cathy Li	**Order Number:**		**Sampler:**	SAF
					12 Ashley St, Chatswood NSW 2067
Email:	cathy.li@douglaspartners.com.au ; sam.ferguson@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.com
Prior Storage:	☑ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo 8AN.	Combo 3AN	Combo 3	PFAS (short suite)	PFAS TCLP (short suite)	pH,CEC, & Clay Content	VOC	Cyanide	BTEX			Notes/ Preservation/ Additional Requirements
1	TL02	0.3	0.5	29/01/25	S	G/P	X			X	X		X	X				
2	TL02	0.8	1	29/01/25	S	G/P		X										
3	TL02	1.3	1.5	29/01/25	S	G/P			X			X						
NR	TL02	1.8	2	29/01/25	S	G/P												
4	TL06	0.3	0.5	29/01/25	S	G/P	X					X	X	X				
5	TL06	0.8	1	29/01/25	S	G/P			X	X								
NR	TL06	1.3	1.5	29/01/25	S	G/P												
6	TL09	0.3	0.5	29/01/25	S	G/P	X						X	X				
7	TL09	0.8	1	29/01/25	S	G/P		X										
8	TL09	1.3	1.5	29/01/25	S	G/P			X									
9	TL10	0.3	0.5	29/01/25	S	G/P	X						X	X				
10	TL10	0.8	1	29/01/25	S	G/P			X									
11	TL10	1.3	1.5	29/01/25	S	G/P				X								
12	BD1/20250129			29/01/25	S	G			X									

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

Job No: 371670
Date Received: 30/1/25
Time Received: 1545
Received By: DL
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:		**LAB RECEIPT**	
Number of samples in container:	**Transported to laboratory by:**	**Lab Ref. No:**	371670
Send results to:	Douglas Partners Pty Ltd	**Received by:**	Da Hyun Lee
Address:	96 Hermitage Road, West Ryde NSW 211	**Phone:** (02) 9809 0666	**Date & Tim** 30/1/25 1545
Relinquished by:	**Date:**	**Signed:**	**Signed:**

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:** Parramatta	**To:** Envirolab Services
Project Manager:	Cathy Li		**Dispatch date:** 0/01/1900

Lab ID	Sample ID: Location / Other ID	Sample ID: Depth From	Sample ID: Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Combo 8AN	Combo 3AN	Combo 3	PFAS (short suite)	PFAS TCLP (short suite)	pH,CEC, & Clay Content	VOC	Cyanide	BTEX			Notes/ Preservation/ Additional Requirements
13	TS1			29/01/25	S	v									X			
14	TB1			29/01/25	S	v									X			
15	RB-SP-1			29/01/25	S	G/P		X		X	X							
16	RB-SP-2			29/01/25	S	G/P		X										
17	RB-SP-3			29/01/25	S	G/P		X										

#371670
OL 30/01/25

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CERTIFICATE OF ANALYSIS 372287

Client Details

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

Sample Details

Your Reference	**231981.00 Parramatta**
Number of Samples	1 Material
Date samples received	06/02/2025
Date completed instructions received	06/02/2025

Analysis Details

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

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

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

Report Details

Date results requested by	07/02/2025
Date of Issue	07/02/2025

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

Results Approved By
Lucy Zhu, Asbestos Supervisor

Authorised By
Nancy Zhang, Laboratory Manager

Asbestos ID - materials		
Our Reference		372287-1
Your Reference	UNITS	RB-ACM-1
Date Sampled		06/02/2025
Type of sample		Material
Date analysed	-	07/02/2025
Mass / Dimension of Sample	-	78.69g
Sample Description	-	Grey fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected
Trace Analysis	-	[NT]

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.

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

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	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	231981.00 Parramatta
Envirolab Reference	372287
Date Sample Received	06/02/2025
Date Instructions Received	06/02/2025
Date Results Expected to be Reported	07/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Material
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	3
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

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Sample ID	Asbestos ID - materials
RB-ACM-1	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info
Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:**	Parramatta	**To:**	Envirolab Services
Project Manager:	Cathy Li	**Order Number:**		**Sampler:** SAF	12 Ashley St, Chatswood NSW 2067
Email:	cathy.li@douglaspartners.com.au ; sam.ferguson@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☐ Standard ☐ 72 hour ☐ 48 hour ☑ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.com
Prior Storage:	☐ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil, W - water, M - Material	Container Type: G - glass, P - plastic	Analytes: Asbestos ID in Material	Phenols	OCP,OPP,PCB	TCLP-Nickel								Notes/ Preservation/ Additional Requirements
1	RB-ACM-1			6/02/25	M	P	X											
	RB-SP-1			29/01/25	S	G,P		X	X	X								samples have been sent under ELS Job 371670
	RB-SP-2			29/01/25	S	G,P		X	X	X								
	RB-SP-3			29/01/25	S	G,P		X	X	X								

ENVIROLAB GROUP

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

Job No: 372287
Date Received: 6/2/25
Time Received: 17:10
Received By: SY
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:

Number of samples in container:

Send results to: Douglas Partners Pty Ltd

Address: 96 Hermitage Road, West Ryde NSW 211

Phone: (02) 9809 0666

Relinquished by:

Date:

Signed:

Transported to laboratory by:

LAB RECEIPT

Lab Ref. No: 372287

Received by: Shanni Tolc

Date & Tim: 6/2/25 17:10

Signed:

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 371670-A

Client Details

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

Sample Details

Your Reference	**231981.00 Parramatta**
Number of Samples	Additional analysis
Date samples received	30/01/2025
Date completed instructions received	06/02/2025

Analysis Details

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

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

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

Report Details

Date results requested by	07/02/2025
Date of Issue	07/02/2025

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Diego Bigolin, Inorganics Supervisor
Giovanni Agosti, Group Technical Manager
Jack Wallis, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

Organochlorine Pesticides in soil				
Our Reference		371670-A-15	371670-A-16	371670-A-17
Your Reference	UNITS	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	91	87	96

Organophosphorus Pesticides in Soil				
Our Reference		371670-A-15	371670-A-16	371670-A-17
Your Reference	UNITS	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	91	87	96

PCBs in Soil				
Our Reference		371670-A-15	371670-A-16	371670-A-17
Your Reference	UNITS	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	06/02/2025	06/02/2025	06/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	93	79	87

Misc Soil - Inorg				
Our Reference		371670-A-15	371670-A-16	371670-A-17
Your Reference	UNITS	RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil
Date prepared	-	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Metals from Leaching Fluid pH 2.9 or 5				
Our Reference	UNITS	371670-A-15	371670-A-16	371670-A-17
Your Reference		RB-SP-1	RB-SP-2	RB-SP-3
Depth		-	-	-
Date Sampled		29/01/2025	29/01/2025	29/01/2025
Type of sample		Soil	Soil	Soil
Date extracted	-	07/02/2025	07/02/2025	07/02/2025
Date analysed	-	07/02/2025	07/02/2025	07/02/2025
pH of soil for fluid# determ.	pH units	9.9	9.6	9.5
pH of soil TCLP (after HCl)	pH units	1.9	1.9	1.9
Extraction fluid used		1	1	1
pH of final Leachate	pH units	5.2	5.1	5.2
Nickel	mg/L	0.1	0.1	0.26

Method ID	Methodology Summary
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-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES 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.
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.

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	90	[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]	92	[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]	82	[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]	86	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	86	[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]	78	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	80	[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]	86	[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]	80	[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	96	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[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]	76	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[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]	88	[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]	78	[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	96	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			06/02/2025	[NT]	[NT]	[NT]	[NT]	06/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	81	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	94	[NT]	[NT]	[NT]	[NT]	90	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	95	[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	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Date analysed	-			07/02/2025	[NT]	[NT]	[NT]	[NT]	07/02/2025	[NT]
Nickel	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	107	[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
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	Douglas Partners Pty Ltd
Attention	Cathy Li

Sample Login Details

Your reference	231981.00 Parramatta
Envirolab Reference	371670-A
Date Sample Received	30/01/2025
Date Instructions Received	06/02/2025
Date Results Expected to be Reported	07/02/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	6
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	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Nickel	On Hold
TL02-0.3-0.5										✓
TL02-0.8-1										✓
TL02-1.3-1.5										✓
TL06-0.3-0.5										✓
TL06-0.8-0.1										✓
TL09-0.3-0.5										✓
TL09-0.8-1										✓
TL09-1.3-1.5										✓
TL10-0.3-0.5										✓
TL10-0.8-1										✓
TL10-1.3-1.5										✓
BD1/20250129										✓
TS1										✓
TB1										✓
RB-SP-1	✓	✓	✓	✓	✓	✓	✓	✓	✓	
RB-SP-2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
RB-SP-3	✓	✓	✓	✓	✓	✓	✓	✓	✓	

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.

Douglas PARTNERS | GROUNDED EXPERTISE

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	231981.00	**Suburb:**	Parramatta	**To:**	Envirolab Services
Project Manager:	Cathy Li	**Order Number:**		**Sampler:** SAF	12 Ashley St, Chatswood NSW 2067
Email:	cathy.li@douglaspartners.com.au ; sam.ferguson@douglaspartners.com.au			**Attn:**	Sample Receipt
Turnaround time:	☐ Standard ☐ 72 hour ☐ 48 hour ☑ 24 hour ☐ Same day				(02) 9910 6200 samplereceipt@envirolab.com
Prior Storage:	☐ Fridge ☐ Freezer ☑ Esky ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water M - Material	Container Type: G - glass P - plastic	Analytes: Asbestos ID in Material	Phenols	OCP,OPP,PCB	TCLP-Nickel								Notes/ Preservation/ Additional Requirements
1	RB-ACM-1			6/02/25	M	P	X											
15	RB-SP-1			29/01/25	S	G,P		X	X	X								samples have been sent under ELS Job 371670
16	RB-SP-2			29/01/25	S	G,P		X	X	X								
17	RB-SP-3			29/01/25	S	G,P		X	X	X								

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

ENVIROLAB GROUP

Job No: 372687
Date Received: 6/2/25
Time Received: 1710
Received By: SY
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Metals to analyse:

Number of samples in container: | **Transported to laboratory by:**

Send results to: Douglas Partners Pty Ltd

Address: 96 Hermitage Road, West Ryde NSW 211 | **Phone:** (02) 9809 0666

Relinquished by: | **Date:** | **Signed:**

LAB RECEIPT

Lab Ref. No: ~~372687~~ 371670-A
Received by: Shann Tolo
Date & Tim: 6/2/25 1710
Signed: SY

24 January 2025
EHO Consulting Pty Ltd
ABN 49 620 205 192
Unit 16/380 Pennant Hills Road
Pennant Hills NSW 2120
e: info@ehoc.com.au
www.ehoc.com.au

RMA Contracting Pty Ltd
PO Box 4149 Strathfield South NSW 2136

Attention: Luke Slechta
Document Number: JN05778-WCC-RN18685
Report Date: 24 January 2025

Waste Classification Certificate

Waste Owner	RMA Contracting Pty Ltd
Client	RMA Contracting Pty Ltd
Site Address	The waste material requiring assessment was excavated from six aboriginal archaeological test pits (TL05 to TL10) located along Horwood Place, Parramatta, NSW 2150, as identified in Figure 17 of Aboriginal Archaeological Test Excavation Methodology prepared by Extent Heritage Pty Ltd (Extent (2024). The location of the Extent (2024) test pits is shown in Figure A below: Figure A: Aboriginal Archaeological Test Pits (source: Extent (2024) (yellow circle denotes the test pits excavated) The excavated material was then transported and stockpiled at 40 Smith Street, Parramatta, NSW 2150 (referred to as 'the storage site') for waste classification assessment.

	Refer to Sample Location Plan presented in Figure 1.
Quantity and Location of Waste	One stockpile of soil (approximately 10m^3) located within the northwestern portion of the storage site. Refer to the sample location plan presented in Figure 1.
Potential Contaminating Activities	Uncontrolled filling and asbestos
Sampling and Analysis Plan and Sampling Methodology	Refer to Appendix A
Description of the waste	Waste material encountered in the stockpile comprised of: FILL: Gravelly CLAY, reddish to pale grey, low to medium plasticity, soft to firm, with sandstone, shale, bitumen and roadbase (DGB20) fragments. No staining or odours detected in the samples collected from the stockpiled soil. No fragments of potential asbestos containing material (PACM) were observed on the surface or within the stockpile.
Results – Acid Sulfate Ores/Soils	A review of https://geo.seed.nsw.gov.au/vertigisstudio/web/?app=cabd04d595ec43c1aaf4298e80e83ec2 indicated that the site is located in an area mapped as: • N: No known occurrence Additionally, section 3 of Sullivan et. al (2018) provides information and examples on when the presence of acid sulfate soils should be investigated. The site did not relate to any of the information or examples provided in the document. As such, EHO considers further assessment of acid sulfate soils is not warranted.
Results – Waste Classification Discussions	The classification of waste material has been assessed using the six-step process outlined in NSW EPA (2014). Refer to Appendix B for tabulated summary of laboratory results, information on sample identifiers, sample depths, contaminants analysed and analytical results. Laboratory documents are presented in Appendix C. Step 1: The material is not considered to be special waste. Step 2: The material is not considered to be a liquid waste. Step 3: The material is not considered to be pre-classified. Step 4: The material is not considered to possess hazardous characteristics. Step 5: The detected concentrations of analytes in the samples analysed were less than the relevant CT1 and SCC1 maximum values in NSW EPA (2014) with the exception of: • Nickel in samples SP01 (86mg/kg), SP03 (82mg/kg) and DUP01 (94mg/kg) which exceeded the relevant CT1 maximum value of 40mg/kg. Samples SP03 and DUP01 were subjected to nickel toxicity characteristic leachability procedure (TCLP) analysis, and the detected concentrations were less than the relevant TCLP1 maximum values. The samples were chosen based on the highest reported nickel concentration. Step 6: The material is not considered to be putrescible.

Waste Classification	Based on the results of field observations and the laboratory analytical data, the waste assessed as at the time of this report and located onsite would classify as: **General Solid Waste (non-putrescible)**

Recommendations:

EHO recommends that:

- In the event material not consistent with that reported in this certificate is encountered during handling of the waste, works should stop, and further assessment be undertaken.
- The waste be handled and transported by suitably licensed contractors, and disposed of to a suitably licenced waste receiving facility, including following relevant NSW EPA waste licensing and tracking requirements set out at https://www.epa.nsw.gov.au/your-environment/waste/transporting-waste.
- The waste generator should retain transport and disposal records for all waste removed from site.

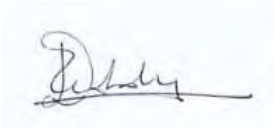
References:

- AS 4482.1-2005 Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi volatile compounds, dated 2 November 2005.
- DUAP 1998[1], 'Managing Land Contamination Planning Guidelines SEPP55 – Remediation of Land', dated April 1999, ref: 98/65.
- Extent (2024), 'Aboriginal Archaeology Test Excavation Methodology', dated: 12/08/2024, version: V03.1, ref: 0223115
- NEPC 2013, 'Schedule B(2) Guideline on Site Characterisation, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013.
- NSW EPA 2014, 'Waste Classification Guidelines', dated November 2014.
- NSW EPA 2016, 'Addendum to the Waste Classification Guidelines (2014) – Part 1; classifying waste, dated October 2016.
- NSW EPA 2020, 'Contaminated Land Guidelines: Consultants reporting on contaminated land' dated May 2020, ref: EPA2020P2233.
- NSW EPA 2022, 'Contaminated Land Guidelines: Sampling Design Part 1 - Application', dated August 2022, ref: EPA 2022P3915.
- Sullivan, L, Ward, N, Toppler, N and Lancaster, G 2018, 'National Acid Sulfate Soils Guidance: National acid sulfate soils sampling and identification methods manual' dated June 2018, ref: CC BY 4.0
- VIC EPA 2009 'Industrial Waste Resource Guidelines' dated June 2009, ref: IWRG702.

[1] This guidance document has since been redacted. However, EHO has relied on this document to get an understanding on the COPC related information associated with specific land uses.

Please contact the undersigned on 0477 016 316 if you have any questions regarding this report.

Written By



Dattatreya reddy Aladali
Graduate Environmental Consultant

Reviewed and Authorised by

Abanish Nepal
Principal Environmental Consultant

Attachments

Photo Log
Figure 1: Sample Location Plan
Appendix A: Sampling and Analysis Plan and Methodology
Appendix B: Data Summary Tables
Appendix C: Laboratory Documents

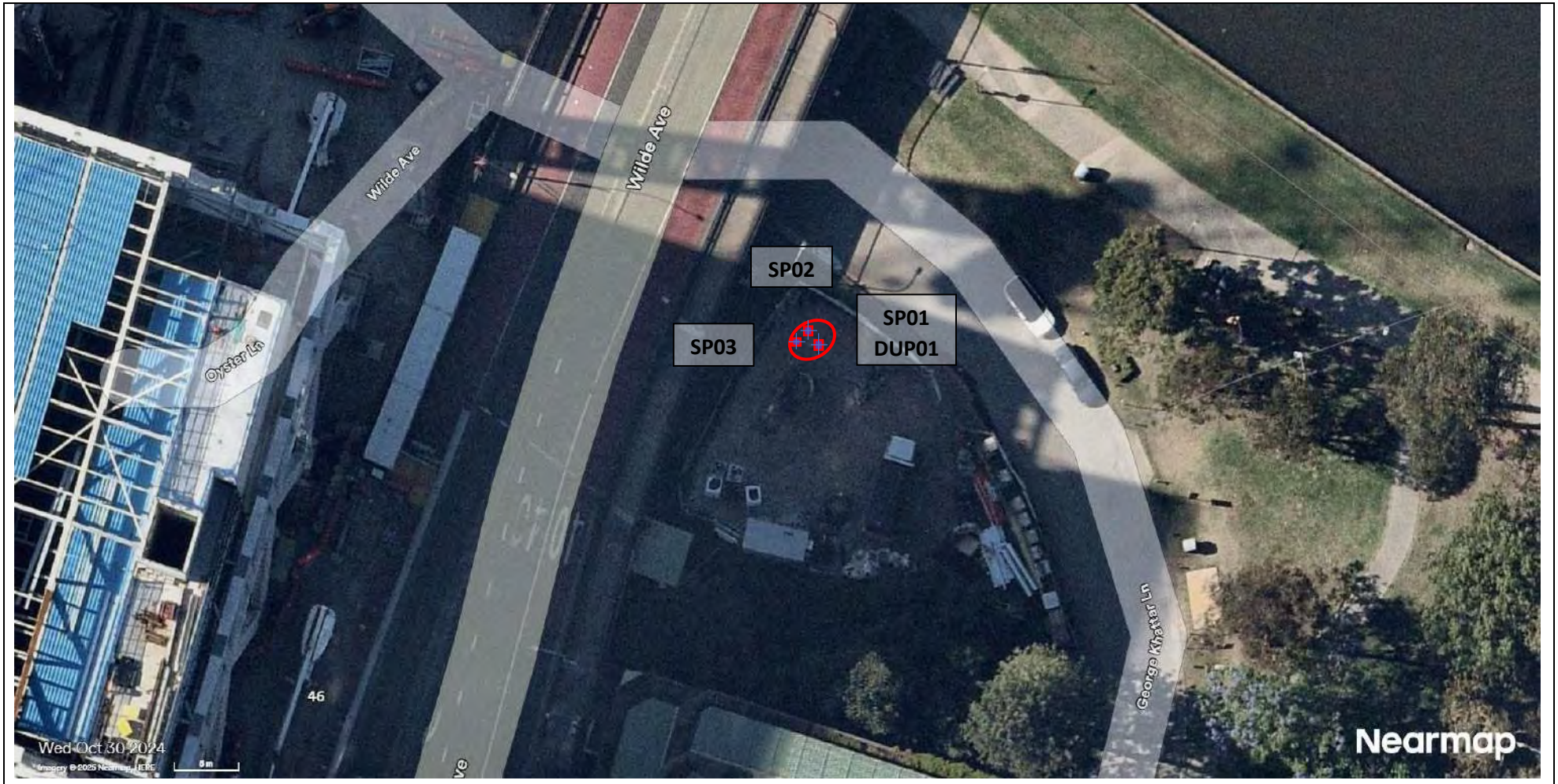
PHOTO LOG

Photo 1: View of the stockpiled material (facing east).

Photo 2: View of samples SP01 and DUP01.

FIGURE

N



Site Address:	Horwood Place, Parramatta, NSW 2150	Project Number: JN05778	Drawn By: JB
Client:	RMA Contracting Pty Ltd	Figure Name: **Sample Location Plan**	
Project Name:	Waste Classification Assessment	Figure Number: 1	Scale: As above

LEGEND

Approx. extent of stockpile

Approx. sample location

Appendix A: Sampling and Analysis Plan and Methodology

Sampling and Analysis Plan	
Date of Fieldwork	13 January 2024
Proposed Sampling Team	Dattatreya Reddy Aladali
Proposed Sampling Point Location	Refer to Figure 1
Basis for Sampling Pattern and the Number of Samples Collected and Analysed	The sampling pattern for the stockpiled material will be in accordance with Table 1 in VIC EPA (2009), and Table 3 of NSW EPA (2022) based on the volume of material proposed for offsite disposal. Based on the guidelines and our understanding that the volume of waste requiring assessment will be 10m^3, a minimum of three samples will be collected.
Sampling Method	Samples will be collected as grab samples from the stockpile. A fresh pair of nitrile gloves will be used to collect each sample. Field duplicates (ratio of 5%) will be collected by splitting a bulk sample across two separate sample containers. Samples will be placed in laboratory prepared containers and bags, each labelled with the project number, date, sampling point identifier, and sample depth identifier. A trip spike and trip blank will be kept with the samples during storage and transport.
Sampling Depth	Samples will be collected from a minimum depth of 0.2m into the stockpile.
Contaminants Tested	Based on the potential contaminating activities identified for the site, and consideration being given to Appendix A in DUAP (1998), the following contaminants of potential concern (COPC) have been adopted for sample analysis: TRH, BTEX, PAH, OCP, OPP, PCB, phenol, metals and asbestos ID.

Field and Laboratory Quality Assurance and Control

Experienced Sampling Team Used	Yes
Sampling Plan/Method Followed	Yes
Field Equipment Decontaminated Between Sampling Points	Not applicable. Samples collected using disposable nitrile gloves
Material Description Provided	Yes
Chain of Custody (COC) and Sample Receipt Advice (SRA) Provided	Yes
COC and SRA identifies the Following:	Yes

Sampling Team, Nature of Sample, Date, Analyses to be Performed, Preservation Method and Time	
Rinsate Blank Collected	Not applicable.
Trip Blank and Spike Analysed and Results Acceptable	Yes
Minimum 5% Duplicates Collected	Yes
RPDs Within Acceptable Limits	Yes
Field Instruments Calibrated and Calibration Certificate Provided	Not applicable. Field instrument was not used as part of this project
Holding Times Met	Yes
Analytical Methods Used by the Laboratory Acceptable	Yes
Appropriate LORs Used	Yes
Surrogates and Spike Recovery within Laboratory Acceptable Limits	Yes
Laboratory Duplicates within Laboratory Acceptable Limits	Yes
Laboratory Blank Results within Laboratory Acceptable Limits	Yes

Based on the above, EHO considers that the data collected and reported in this report is complete, comparable, representative, precise and accurate.

Appendix B: Data Summary Tables

JN05778-WCC-RN18685
Waste Classification Assessment
Horwood Place,
Parramatta, NSW 2150

LR01 - Soil Results

					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Sample Date:	13/01/2025	13/01/2025	13/01/2025	13/01/2025	06/01/2025	06/01/2025
					Sample ID:	SP01	SP02	SP03	DUP01	Trip Spike	Trip Blank
Analyte grouping/Analyte	**Unit**	**NSW EPA (2014) CT1**	**NSW EPA (2014) SCC1**	**NSW EPA (2014) TCLP1**	**Limit of reporting**						
Total Metals											
Arsenic	mg/kg	100	500		5	<5	<5	<5	<5	----	----
Cadmium	mg/kg	20	100		1	<1	<1	<1	<1	----	----
Chromium	mg/kg	100	1900		2	**23**	**12**	**23**	**23**	----	----
Copper	mg/kg	----	----		5	**59**	**15**	**33**	**67**	----	----
Lead	mg/kg	100	1500		5	**6**	**29**	**11**	<5	----	----
Nickel	mg/kg	40	1050		2	**86**	**31**	**82**	**94**	----	----
Nickel TCLP	mg/L	----	----	2	0.1	----	----	0.1	<0.1	----	----
Zinc	mg/kg	----	----		5	**54**	**71**	**57**	**51**	----	----
Mercury	mg/kg	4	20		0.1	<0.1	<0.1	<0.1	<0.1	----	----
Polychlorinated Biphenyls (PCB)											
Total Polychlorinated biphenyls	mg/kg	<50	<50		0.1	----	<0.1	----	----	----	----
Organochlorine Pesticides (OC)											
alpha-BHC	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
beta-BHC	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
gamma-BHC - (Lindane)	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
delta-BHC	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Heptachlor	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Aldrin	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Heptachlor epoxide	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Total Chlordane (sum)	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
trans-Chlordane	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
alpha-Endosulfan	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
cis-Chlordane	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Dieldrin	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
4.4`-DDE	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Endrin	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Endosulfan (sum)	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
beta-Endosulfan	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
4.4`-DDD	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Endrin aldehyde	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Endosulfan sulfate	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
4.4`-DDT	mg/kg	----	----		0.2	----	<0.2	----	----	----	----
Endrin ketone	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Methoxychlor	mg/kg	----	----		0.2	----	<0.2	----	----	----	----
Sum of DDD + DDE + DDT	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Sum of Aldrin + Dieldrin	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Total OC VIC EPA	mg/kg	<50	<50								
Organophosphorus Pesticides (OP)											
Dichlorvos	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Demeton-S-methyl	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Monocrotophos	mg/kg	----	----		0.2	----	<0.2	----	----	----	----
Dimethoate	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Diazinon	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Chlorpyrifos-methyl	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Parathion-methyl	mg/kg	----	----		0.2	----	<0.2	----	----	----	----
Malathion	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Fenthion	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Chlorpyrifos	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Parathion	mg/kg	----	----		0.2	----	<0.2	----	----	----	----
Pirimphos-ethyl	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Chlorfenvinphos	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Bromophos-ethyl	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Fenamiphos	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Prothiofos	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Ethion	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Carbophenothion	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Azinphos Methyl	mg/kg	----	----		0.05	----	<0.05	----	----	----	----
Total OP Pesticides	mg/kg	<50	<50								
Phenolic Compounds											
Phenol	mg/kg	288	518		0.5	----	<0.5	----	----	----	----
2-Chlorophenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
2-Methylphenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
3- & 4-Methylphenol	mg/kg	----	----		1	----	<1	----	----	----	----
2-Nitrophenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
2.4-Dimethylphenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
2.4-Dichlorophenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
2.6-Dichlorophenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
4-Chloro-3-methylphenol	mg/kg	----	----		0.5	----	<0.5	----	----	----	----
2.4.6-Trichlorophenol	mg/kg	40	70		0.5	----	<0.5	----	----	----	----
2.4.5-Trichlorophenol	mg/kg	8000	14400		0.5	----	<0.5	----	----	----	----
Pentachlorophenol	mg/kg	----	----		2	----	<2	----	----	----	----
		----	----								
Polynuclear Aromatic Hydrocarbons											
Naphthalene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Acenaphthylene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Acenaphthene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Fluorene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Phenanthrene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Anthracene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Fluoranthene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Pyrene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Chrysene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	mg/kg	0.8	10		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Sum of polycyclic aromatic hydrocarbons	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene TEQ (zero)	mg/kg	----	----		0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene TEQ (half LOR)	mg/kg	----	----		0.5	**0.6**	**0.6**	**0.6**	**0.6**	----	----
Benzo(a)pyrene TEQ (LOR)	mg/kg	----	----		0.5	**1.2**	**1.2**	**1.2**	**1.2**	----	----
Total PAH(18)	mg/kg	200	200								
Total Petroleum Hydrocarbons											
C6 - C9 Fraction	mg/kg	650	650		10	----	<10	----	----	----	----
C10 - C14 Fraction	mg/kg	----	----		50	----	<50	----	----	----	----
C15 - C28 Fraction	mg/kg	----	----		100	----	<100	----	----	----	----
C29 - C36 Fraction	mg/kg	----	----		100	----	<100	----	----	----	----
C10 - C36 Fraction (sum)	mg/kg	10000	10000		50	----	<50	----	----	----	----
BTEXN											
Benzene	mg/kg	10	18		0.2	----	<0.2	----	----	**100%**	<0.2
Toluene	mg/kg	288	518		0.5	----	<0.5	----	----	**81%**	<0.5
Ethylbenzene	mg/kg	600	1080		0.5	----	<0.5	----	----	**84%**	<0.5
meta- & para-Xylene	mg/kg	----	----		0.5	----	<0.5	----	----	**85%**	<0.5
ortho-Xylene	mg/kg	----	----		0.5	----	<0.5	----	----	**83%**	<0.5
Total Xylenes	mg/kg	1000	1800		0.5	----	<0.5	----	----	**85%**	<0.5
Sum of BTEX	mg/kg	----	----		0.2	----	<0.2	----	----	**84%**	<0.2
Naphthalene	mg/kg	----	----		1	----	<1	----	----	**100%**	<1
		----	----								
Asbestos		----	----								
Asbestos ID	Detection	----	----			NAD,OF	NAD,OF	NAD,OF	----	----	----

NAD - No Asbestos Detected
OF - Organic Fibers Detected

JN05778-WCC-RN18685
Waste Classification Assessment
Horwood Place,
Parramatta, NSW 2150

LR02- RPD

		Sample ID	SP01	DUP01	RPD %
		Sample Date	13/01/2025	13/01/2025	
		Matrix	Soil	Soil	
Analyte Name	**Units**	**Reporting Limit**	Result	Result	
PAH					
Naphthalene	mg/kg	0.5	<0.5	<0.5	NC
Acenaphthylene	mg/kg	0.5	<0.5	<0.5	NC
Acenaphthene	mg/kg	0.5	<0.5	<0.5	NC
Fluorene	mg/kg	0.5	<0.5	<0.5	NC
Phenanthrene	mg/kg	0.5	<0.5	<0.5	NC
Anthracene	mg/kg	0.5	<0.5	<0.5	NC
Fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Pyrene	mg/kg	0.5	<0.5	<0.5	NC
Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	NC
Chrysene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene	mg/kg	0.5	<0.5	<0.5	NC
Indeno(1.2.3.cd)pyrene	mg/kg	0.5	<0.5	<0.5	NC
Dibenz(a.h)anthracene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(g.h.i)perylene	mg/kg	0.5	<0.5	<0.5	NC
Sum of polycyclic aromatic hydrocarbons	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene TEQ (zero)	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene TEQ (half LOR)	mg/kg	0.5	**0.6**	**0.6**	NC
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	**1.2**	**1.2**	NC
Metals					
Arsenic, As	mg/kg	5	<5	<5	NC
Cadmium, Cd	mg/kg	1	<1	<1	NC
Chromium, Cr	mg/kg	2	**23**	**23**	0%
Copper, Cu	mg/kg	5	**59**	**67**	13%
Lead, Pb	mg/kg	5	**6**	<5	NC
Nickel, Ni	mg/kg	2	**86**	**94**	9%
Zinc, Zn	mg/kg	5	**54**	**51**	6%
Mercury	mg/kg	0.1	<0.1	<0.1	NC

NC - non computable

Appendix C: Laboratory Documents

EHO Consulting Pty Ltd
16/380 Pennant Hills Rd
Pennant Hills, NSW 2120

ABN 49 620 205 192
www.ehoc.com.au
info@ehoc.com.au

Job Number: JN05778
Lab Number: LN10140
Client: RMA Contracting Pty Limited
Contact: Shanelle Zammit - projects@rmagroup.com.au
Client Address: PO BOX 4149 STRATHFIELD SOUTH 2136
Purchase Order (PO):N/A

Requested by: RMA Contracting Pty Limited
Sample Date: Monday 13 January 2025
Sampled By: Dattatreya Aladali
Date Received: Monday 13 January 2025
Date Analysed: Tuesday 14 January 2025

Asbestos Certificate of Analysis
AS4964 (2004) Method for the Qualitative Identification of Asbestos in Bulk Samples

Site address: Horwood Place, Parramatta NSW, Australia 2150

Asbestos samples have been examined at EHO Consulting (EHOC) Sydney Laboratory, 16/380 Pennant Hills Rd, Pennant Hills, NSW 2120. Analysis undertaken is a qualitative identification of asbestos fibres in bulk and soil samples by polarised light microscopy, including dispersion staining, in accordance with AS4964 (2004) Method for the qualitative identification of asbestos in bulk samples and EHOC's Asbestos Bulk Soil ID Standard Operating Procedure (CD38) and NATA Accreditation **No# 20381**, . Trace analysis carried out on all non-homogenous samples. Accredited for compliance with ISO/IEC: 17025-Testing. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates

LAB ID NUMBER	SAMPLE NUMBER	DESCRIPTION	LOCATION	SAMPLE DIMENSIONS	RESULT	COMMENTS
LIN01	SP01	Soil	-	27g	NAD, OF	
LIN02	SP02	Soil	-	26g	NAD, OF	
LIN03	SP03	Soil	-	37g	NAD, OF	

Key:

NAD - No Asbestos Detected, CH - Chrysotile Asbestos Detected, AM - Amosite Asbestos Detected, CR - Crocidolite Asbestos Detected, UMF - Unknown Mineral Fibres Detected, SMF - Synthetic Mineral Fibres Detected, OF - Organic Fibres Detected, Trace - Trace Asbestos Detected, * - No trace asbestos detected at the reporting limit of 0.1 g/kg

Limitations

The results contained in this report relate only to the sample/s submitted for testing. The laboratory accepts no responsibility for location, sampling date, sample ID, sampler and client details provided. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964 -2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No Asbestos Detected" as specified and recommended by A4964-2004. Loose asbestos fibres/ fibre bundles are detected and reported as handpicked fibres/ fibre bundles, and they do not represent respirable fibres. All non-homogenous samples such as dust and soils are subject to trace analysis, unless impractical to do so due to nature or size of the sample.

^Dust samples taken using a tape as sample collection method (Dust on Tape) are outside of NATA sample requirements and are not accredited under EHO's scope of accreditation.

If no asbestos is detected in vinyl tiles, mastics, sealants, epoxy resins and ore samples then confirmation by another independent analytical technique is advised due to the nature of the samples. EHO Group accepts no responsibility for the initial collection, packaging or transportation of samples submitted by a non EHO consultant / employee. This document may not be reproduced except in full.

Approved Analyst : **Faz Jalali**

Date: 14-01-2025

Approved Signatory: **Faz Jalali**

Date: 14-01-2025

Report disclaimants

This report has been prepared by EHO Consulting Pty Ltd ACN 620 205 192 ("EHOC"), and its contents were provided exclusively for the use of the Client.

Every care has been taken in the preparation of this report and its contents are believed to be accurate at the date of report. However, EHOC, its officers, employees and contractors ("personnel") do not give any representations or warranties as to the reliability, accuracy or completeness of the report. Both EHOC and its personnel are not liable for any loss or damage (whether direct or indirect), howsoever arising (whether in negligence or otherwise), out of or in connection with this report, except where such liability is made non-excludable by legislation.

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1. a supply of goods (or equivalent goods) or services again; or
2. the payment of the cost of having the goods (or equivalent goods) or services supplied again.

Chain of Custody

Job Number: JN05778
Client: RMA Contracting Pty Limited
Contact: Shanelle Zammit - projects@rmagroup.com.au
Client Address: PO BOX 4149 STRATHFIELD SOUTH 2136
Site Address: Horwood Place, Parramatta NSW, Australia 2150
Purchase Order (PO):N/A
Turn around time: Standard (3-5 Days)

Sample Date: Monday 13 January 2025
Sampled By: Dattatreya Aladali
Relinquished By: Dattatreya Aladali
Relinquished Date: Monday 13 January 2025

Results

LAB ID NUMBER	SAMPLE NUMBER	SAMPLE DESCRIPTION	LOCATION
LIN01	SP01	Soil	-
LIN02	SP02	Soil	-
LIN03	SP03	Soil	-

Mandatory Fields

CHAIN OF CUSTODY

Page 1 of 1

CLIENT:	EHOCON	*PROJECT MANAGER:	Abanish Nepal	SAMPLER:	Dattatreya Reddy Aladali
OFFICE:	EHO Consulting Pty Ltd	*PM MOBILE:	0477014316	SAMPLER MOBILE:	469853793
ADDRESS:	16/380 Pennant Hills Road, Pennant Hills, NSW 2120	ALS QUOTE # (Client Ref Below)	ES24EHOCON0001	PURCHASE ORDER NO.:	
PROJECT:	1	JN05776- Norwood Place		SITE:	Parramatta
EMAIL:	anepal@ehoc.com.au	accounts@ehoc.com.au			CC Invoice to PM
EMAIL REPORT TO:	anepal@ehoc.com.au; Dattatreya@ehoc.com.au				

*TURNAROUND REQUIREMENTS (Business days)	X	Standard Storage (*)	
	☐	Extended Storage	
Specify Disposal Date:			
Note: Extended storage incurs a fee and requires a signed agreement.			
*TURNAROUND (Business days) (Prior storage may be required. Contact Client Services for more information)	X	5* days (no surcharge)	
	☐	3 day (+15%)	
	☐	2 day (+30%)	
	☐	1 day (+50%)	

*ANALYSIS REQUIRED
(Refer to Sample Receipt Notification for details of analysis received)
Where "Metals" is required, specify Total or Dissolved (or both). If Dissolved is required, please provide a filtered sample.
Mark an X in the boxes below to indicate the parameter listed above to be tested on that sample.

ALS USE ONLY	Sample ID	Depth	Date/Time	No. Bottles	MATRIX: Soil(S), Water(W), Sediment (SD), Dust (D), Product (P), Biota (B), Other (Specify)	8 VOC	EP075 SHC Pack Only	5 (15 Metals)	EP080 BTEX Only									QC Additional bottles req'd		Additional Information (Comments, Hazards, Dilutions, known high contaminants)
																		Dup	MS	
1	SP01		13/01/2025	1	S		X	X										☐	☐	
2	DP01		13/01/2025	1	S	X												☐	☐	
3	SP03		13/01/2025	1	S		X	X										☐	☐	
4	DUP01		13/01/2025	1	S		X	X										☐	☐	
5	Trip Blank -17		6/01/2025	1	S				X									☐	☐	
6	Rinse Blank		6/01/2025	1	S				X									☐	☐	Strictly BTEX only, No TRH's, CO/CO2 analysis required
7	TSC																	☐	☐	
																		☐	☐	
																		☐	☐	
																		☐	☐	

Rinse Blank: Yes / No — Ice Bricks: Present / Not Present — Date:
Sample Temp on Receipt: °C °C °C
Courier Delivery Details: ☐ Courier/Post ☐ Client
Courier Docket #:
Security Seal Intact (Circle): Yes / No / N/A (Metals)
Packaging/Condition: Hard Esky / Foam Box / Pre-Plan/Other
Cooling: Ice / Ice Pack / None

Relinquished by:	Dattatreya Reddy Aladali	Signature:		Date/Time:	13/01/2025 10am	Received by:	Signature:
Relinquished by:	Abanish Nepal	Signature:		Date/Time:	13/01/2025 11:45am	Received by:	Signature:

Date/Time: 13/1/25 1423

SIOSECURITY
Country of Origin (If not Australia):

Environmental Division
Sydney
Work Order Reference
ES2500821

Telephone : +61-2-8784 8555

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2500821**

Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: Abanish Nepal	Contact	: Customer Services ES
Address	: UNIT 16 380 PENNANT HILLS RD PENNANT HILLS 2120	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: Anepal@ehoc.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: JN05778 - Horwood Place	Page	: 1 of 2
Order number	: ----	Quote number	: ES2022EHOCON0001 (EN/333)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: Dattatreya Reddy Aladali		

Dates

Date Samples Received	: 13-Jan-2025 14:23	Issue Date	: 16-Jan-2025
Client Requested Due Date	: 21-Jan-2025	Scheduled Reporting Date	: **21-Jan-2025**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 12.0'C, 8.6'C, 15.2'C - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 7 / 7

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - EP080 BTEXN	SOIL - S-02 8 Metals (incl. Digestion)	SOIL - S-19 TRH/BTEXN/PAH/Ph/OC/OP/PCB/8 metals
ES2500821-001	13-Jan-2025 00:00	SP01	✓	✓		✓	
ES2500821-002	13-Jan-2025 00:00	SP02	✓				✓
ES2500821-003	13-Jan-2025 00:00	SP03	✓	✓		✓	
ES2500821-004	13-Jan-2025 00:00	DUP01	✓	✓		✓	
ES2500821-005	06-Jan-2025 00:00	Trip Spike			✓		
ES2500821-006	06-Jan-2025 00:00	Trip Blank			✓		
ES2500821-007	06-Jan-2025 00:00	TSC			✓		

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

Abanish Nepal

- *AU Certificate of Analysis - NATA (COA)	Email	Anepal@ehoc.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Anepal@ehoc.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Anepal@ehoc.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Anepal@ehoc.com.au
- A4 - AU Tax Invoice (INV)	Email	Anepal@ehoc.com.au
- Chain of Custody (CoC) (COC)	Email	Anepal@ehoc.com.au

ACCOUNTS

- A4 - AU Tax Invoice (INV)	Email	accounts@ehoc.com.au

D Aladali

- *AU Certificate of Analysis - NATA (COA)	Email	Daladali@ehoc.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Daladali@ehoc.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Daladali@ehoc.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Daladali@ehoc.com.au
- Chain of Custody (CoC) (COC)	Email	Daladali@ehoc.com.au

CERTIFICATE OF ANALYSIS

Work Order	: **ES2500821**	Page	: 1 of 10
Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: Abanish Nepal	Contact	: Customer Services ES
Address	: UNIT 16 380 PENNANT HILLS RD PENNANT HILLS 2120	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: JN05778 - Horwood Place	Date Samples Received	: 13-Jan-2025 14:23
Order number	: ----	Date Analysis Commenced	: 17-Jan-2025
C-O-C number	: ----	Issue Date	: 21-Jan-2025 17:33
Sampler	: Dattatreya Reddy Aladali		
Site	: ----		
Quote number	: EN/333		
No. of samples received	: 7		
No. of samples analysed	: 7		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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

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

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

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

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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01	SP02	SP03	DUP01	Trip Spike
				Sampling date / time	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	06-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2500821-001	ES2500821-002	ES2500821-003	ES2500821-004	ES2500821-005
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		----	----	7.4	7.7	----
Moisture Content	----	1.0	%		8.6	7.7	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg		23	12	23	23	----
Copper	7440-50-8	5	mg/kg		59	15	33	67	----
Lead	7439-92-1	5	mg/kg		6	29	11	<5	----
Nickel	7440-02-0	2	mg/kg		86	31	82	94	----
Zinc	7440-66-6	5	mg/kg		54	71	57	51	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	<0.1	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		----	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		----	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		----	<0.05	----	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		----	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		----	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		----	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg		----	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		----	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		----	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		----	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		----	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		----	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SP01	SP02	SP03	DUP01	Trip Spike
			Sampling date / time	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	06-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2500821-001	ES2500821-002	ES2500821-003	ES2500821-004	ES2500821-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg	----	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SP01	SP02	SP03	DUP01	Trip Spike
			Sampling date / time	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	06-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2500821-001	ES2500821-002	ES2500821-003	ES2500821-004	ES2500821-005
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	<2	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01	SP02	SP03	DUP01	Trip Spike
				Sampling date / time	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	06-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2500821-001	ES2500821-002	ES2500821-003	ES2500821-004	ES2500821-005
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg		----	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg		----	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	<100	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		----	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	<10	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		----	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	<100	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01	SP02	SP03	DUP01	Trip Spike
				Sampling date / time	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	06-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2500821-001	ES2500821-002	ES2500821-003	ES2500821-004	ES2500821-005
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	<50	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	<50	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	<0.2	----	----	<0.2
Toluene	108-88-3	0.5	mg/kg		----	<0.5	----	----	**4.8**
Ethylbenzene	100-41-4	0.5	mg/kg		----	<0.5	----	----	**5.9**
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	<0.5	----	----	**5.8**
ortho-Xylene	95-47-6	0.5	mg/kg		----	<0.5	----	----	**2.4**
^ Sum of BTEX	----	0.2	mg/kg		----	<0.2	----	----	**18.9**
^ Total Xylenes	----	0.5	mg/kg		----	<0.5	----	----	**8.2**
Naphthalene	91-20-3	1	mg/kg		----	<1	----	----	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	**98.8**	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	**87.7**	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	**87.8**	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**81.8**	**82.4**	**84.1**	**90.0**	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**85.5**	**84.2**	**86.9**	**86.6**	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**59.3**	**56.5**	**75.1**	**70.4**	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**92.5**	**88.6**	**90.2**	**91.0**	----
Anthracene-d10	1719-06-8	0.5	%		**84.6**	**90.1**	**89.1**	**86.2**	----
4-Terphenyl-d14	1718-51-0	0.5	%		**81.8**	**87.3**	**87.9**	**86.7**	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	**86.1**	----	----	**89.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01	SP02	SP03	DUP01	Trip Spike
				Sampling date / time	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	13-Jan-2025 00:00	06-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2500821-001	ES2500821-002	ES2500821-003	ES2500821-004	ES2500821-005
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
Toluene-D8	2037-26-5	0.2	%		**----**	**88.0**	**----**	**----**	**122**
4-Bromofluorobenzene	460-00-4	0.2	%		**----**	**92.8**	**----**	**----**	**126**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	Trip Blank	TSC	----	----	----
				Sampling date / time	06-Jan-2025 00:00	06-Jan-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2500821-006	ES2500821-007	--------	--------	--------
					Result	Result	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	**5.9**	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	**7.0**	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	**6.8**	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	**2.9**	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	**22.6**	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	**9.7**	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**97.5**	**81.5**	----	----	----
Toluene-D8	2037-26-5	0.2	%		**96.3**	**107**	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		**93.3**	**112**	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

QUALITY CONTROL REPORT

Work Order	: **ES2500821**	Page	: 1 of 13
Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: Abanish Nepal	Contact	: Customer Services ES
Address	: UNIT 16 380 PENNANT HILLS RD PENNANT HILLS 2120	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: JN05778 - Horwood Place	Date Samples Received	: 13-Jan-2025
Order number	: ----	Date Analysis Commenced	: 17-Jan-2025
C-O-C number	: ----	Issue Date	: 21-Jan-2025
Sampler	: Dattatreya Reddy Aladali		
Site	: ----		
Quote number	: EN/333		
No. of samples received	: 7		
No. of samples analysed	: 7		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6319860)									
ES2500821-001	SP01	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	23	22	6.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	86	88	1.5	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	59	61	2.5	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	6	<5	23.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	54	54	0.0	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6317080)									
ES2500821-001	SP01	EA055: Moisture Content	----	0.1 (1.0)*	%	8.6	9.2	6.3	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6319859)									
ES2500821-001	SP01	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6318063)									
ES2500821-002	SP02	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6318062)									
ES2500821-002	SP02	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6318062) - continued									
ES2500821-002	SP02	EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6318062)									
ES2500821-002	SP02	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 6316856)									
ES2500821-001	SP01	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)A: Phenolic Compounds (QC Lot: 6316856) - continued									
ES2500821-001	SP01	EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 6318061)									
ES2500821-002	SP02	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6316856)									
ES2500821-001	SP01	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6316856) - continued									
ES2500821-001	SP01	EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6318061)									
ES2500821-002	SP02	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6316763)									
ES2500821-002	SP02	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2501060-026	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6318060)									
ES2500821-002	SP02	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6316763)									
ES2500821-002	SP02	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2501060-026	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6318060)									
ES2500821-002	SP02	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 6316763)									
ES2500821-002	SP02	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2501060-026	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6319860)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	106	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	81.5	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	118	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	105	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	96.9	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	98.7	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	90.3	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6319859)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	89.3	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6318063)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	93.7	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 6318062)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	101	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	88.0	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	93.2	67.0	119
EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	108	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.8	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	79.7	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.0	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	91.6	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	100	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.1	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	89.3	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	83.2	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.5	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.3	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.3	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	84.3	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	62.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP068A: Organochlorine Pesticides (OC) (QCLot: 6318062) - continued								
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	95.5	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	99.5	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	74.3	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6318062)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	88.1	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	98.4	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.5	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.1	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	81.0	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	85.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	80.3	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	102	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.6	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	89.1	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.9	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	96.7	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	59.2	41.0	123
EP075(SIM)A: Phenolic Compounds (QCLot: 6316856)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	100	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	92.5	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	100	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	96.3	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	81.1	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	90.9	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	97.5	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	94.9	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	91.7	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	90.4	54.0	114

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)A: Phenolic Compounds (QCLot: 6316856) - continued								
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	93.3	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	42.2	10.0	80.0
EP075(SIM)A: Phenolic Compounds (QCLot: 6318061)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	96.5	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	91.6	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	92.2	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	97.9	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	92.3	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	93.5	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	95.2	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	98.1	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	89.5	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	83.8	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	83.9	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	31.6	10.0	80.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6316856)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	99.2	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	93.2	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	100	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	98.4	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	95.9	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	94.4	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	96.1	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	98.2	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	102	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	93.1	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	98.4	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	97.6	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	91.6	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	94.8	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	99.4	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	94.8	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6318061)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6318061) - continued								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	95.4	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	100	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	91.9	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	101	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	100	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	99.6	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	104	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	96.4	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	100	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	99.4	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	88.4	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	87.9	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	93.1	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	82.7	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	80.3	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	81.1	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6316763)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	81.5	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6318060)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	108	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	107	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	107	71.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6316763)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	81.0	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6318060)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	110	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	105	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	107	63.0	131
EP080: BTEXN (QCLot: 6316763)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	90.2	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	95.6	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	88.2	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	87.9	78.2	121

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	LCS: Spike Recovery (%)	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080: BTEXN (QCLot: 6316763) - continued								
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	86.0	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	93.4	78.8	122

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6319860)							
ES2500821-001	SP01	EG005T: Arsenic	7440-38-2	50 mg/kg	90.9	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	88.0	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	89.1	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	101	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	88.8	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	87.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	84.0	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6319859)							
ES2500821-001	SP01	EG035T: Mercury	7439-97-6	5 mg/kg	82.2	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6318063)							
ES2500821-002	SP02	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	93.3	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 6318062)							
ES2500821-002	SP02	EP068: gamma-BHC - (Lindane)	58-89-9	0.5 mg/kg	89.0	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	101	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	92.2	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	89.4	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	96.8	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	78.6	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6318062)							
ES2500821-002	SP02	EP068: Diazinon	333-41-5	0.5 mg/kg	128	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	120	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	86.0	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	88.5	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	97.9	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 6316856)							
ES2500821-001	SP01	EP075(SIM): Phenol	108-95-2	10 mg/kg	94.9	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 6316856) - continued							
ES2500821-001	SP01	EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	91.9	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	78.1	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	83.3	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	53.1	20.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 6318061)							
ES2500821-002	SP02	EP075(SIM): Phenol	108-95-2	10 mg/kg	87.3	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	92.9	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	87.6	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	89.3	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	49.0	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6316856)							
ES2500821-001	SP01	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	95.8	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	95.7	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6318061)							
ES2500821-002	SP02	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	96.6	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	102	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6316763)							
ES2500821-002	SP02	EP080: C6 - C9 Fraction	----	32.5 mg/kg	95.6	60.4	142
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6318060)							
ES2500821-002	SP02	EP071: C10 - C14 Fraction	----	480 mg/kg	106	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	112	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	125	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6316763)							
ES2500821-002	SP02	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	94.2	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6318060)							
ES2500821-002	SP02	EP071: >C10 - C16 Fraction	----	860 mg/kg	97.8	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	117	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	131	52.0	132
EP080: BTEXN (QCLot: 6316763)							
ES2500821-002	SP02	EP080: Benzene	71-43-2	2.5 mg/kg	102	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	102	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	104	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	106	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	103	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	89.8	61.1	115

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2500821**	Page	: 1 of 5
Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: Abanish Nepal	Telephone	: +61-2-8784 8555
Project	: JN05778 - Horwood Place	Date Samples Received	: 13-Jan-2025
Site	: ----	Issue Date	: 21-Jan-2025
Sampler	: Dattatreya Reddy Aladali	No. of samples received	: 7
Order number	: ----	No. of samples analysed	: 7

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
SP01, SP02, SP03, DUP01	**13-Jan-2025**	**----**	----	----	**17-Jan-2025**	27-Jan-2025	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
SP01, SP02, SP03, DUP01	**13-Jan-2025**	**20-Jan-2025**	12-Jul-2025	✓	**20-Jan-2025**	12-Jul-2025	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
SP01, SP02, SP03, DUP01	**13-Jan-2025**	**20-Jan-2025**	10-Feb-2025	✓	**21-Jan-2025**	10-Feb-2025	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
SP02	**13-Jan-2025**	**17-Jan-2025**	27-Jan-2025	✓	**20-Jan-2025**	26-Feb-2025	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
SP02	**13-Jan-2025**	**17-Jan-2025**	27-Jan-2025	✓	**20-Jan-2025**	26-Feb-2025	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
SP02	**13-Jan-2025**	**17-Jan-2025**	27-Jan-2025	✓	**20-Jan-2025**	26-Feb-2025	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP02	**13-Jan-2025**	**17-Jan-2025**	27-Jan-2025	✓	**20-Jan-2025**	26-Feb-2025	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP02	**13-Jan-2025**	**17-Jan-2025**	27-Jan-2025	✓	**20-Jan-2025**	26-Feb-2025	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP01, SP03, DUP01	**13-Jan-2025**	**20-Jan-2025**	27-Jan-2025	✓	**20-Jan-2025**	01-Mar-2025	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) SP02	**13-Jan-2025**	**17-Jan-2025**	27-Jan-2025	✓	**17-Jan-2025**	27-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP071) SP02	**13-Jan-2025**	**17-Jan-2025**	27-Jan-2025	✓	**20-Jan-2025**	26-Feb-2025	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) SP02	**13-Jan-2025**	**17-Jan-2025**	27-Jan-2025	✓	**17-Jan-2025**	27-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP071) SP02	**13-Jan-2025**	**17-Jan-2025**	27-Jan-2025	✓	**20-Jan-2025**	26-Feb-2025	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) Trip Blank	**06-Jan-2025**	**17-Jan-2025**	20-Jan-2025	✓	**17-Jan-2025**	20-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP080) Trip Spike, TSC	**06-Jan-2025**	**17-Jan-2025**	20-Jan-2025	✓	**20-Jan-2025**	20-Jan-2025	✓
Soil Glass Jar - Unpreserved (EP080) SP02	**13-Jan-2025**	**17-Jan-2025**	27-Jan-2025	✓	**17-Jan-2025**	27-Jan-2025	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	4	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	2	4	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	2	4	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	4	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

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

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

REBATCH REQUEST

Workorder / Client code / Project:	ALS Workorder ES2500821, Client EHOCON, Project JN05778 - Horwood Place			**CS Contact:**
Project Manager:	***Please include this rebatch PM plus all report recipients as per original workorder***			Additional Information:
Date samples rec'd:				
Date Instructions rec'd:				
Rebatch due date:	Thursday, 23 January 2025	FTAT approved?	NO	
Due date surcharge:	**1 DAY**			

Sample information								Analysis									
								Standard					Leach				
New Lab ID	Client ID	Sampling Date / Time	Previous Work Order Reference	Previous ALS ID	Tray Number(s)	Container	Managed Moisture						TCLP Nickel				Shortest Holding time expiry
SP03		13/01/2025 0:00	ES2500821	003	S-1116								X				27 Jan-25
DUP01		13/01/2025 0:00	ES2500821	004	S-1116								X				27-Jan-25
	0	0/01/1900 0:00															14-Jan-00
	0	0/01/1900 0:00															14-Jan-00
	0	0/01/1900 0:00															14-Jan-00
	0	0/01/1900 0:00															14-Jan-00
	0	0/01/1900 0:00															14-Jan-00
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FTAT

Environmental Division
Sydney
Work Order Reference
ES2501785

Telephone : +61-2-8784 8555

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2501785**

Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: Abanish Nepal	Contact	: Customer Services ES
Address	: UNIT 16 380 PENNANT HILLS RD PENNANT HILLS 2120	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: Anepal@ehoc.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: JN05778 - Horwood Place	Page	: 1 of 2
Order number	: ----	Quote number	: ES2024EHOCON0001 (ES24EHOCON0001)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: Dattatreya Reddy Aladali		

Dates

Date Samples Received	: 13-Jan-2025 14:23	Issue Date	: 23-Jan-2025
Client Requested Due Date	: 23-Jan-2025	Scheduled Reporting Date	: **23-Jan-2025**

Delivery Details

Mode of Delivery	: Samples On Hand	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: 4.1'C
Receipt Detail	:	No. of samples received / analysed	: 2 / 2

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	SOIL - EG005C Leachable Metals by ICPAES	SOIL - EN33a-P TCLP Leachate - Plastic Leaching Vessel
ES2501785-001	13-Jan-2025 00:00	SP03	✓	✓
ES2501785-002	13-Jan-2025 00:00	DUP01	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

Abanish Nepal

- *AU Certificate of Analysis - NATA (COA)	Email	Anepal@ehoc.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Anepal@ehoc.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Anepal@ehoc.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Anepal@ehoc.com.au
- A4 - AU Tax Invoice (INV)	Email	Anepal@ehoc.com.au
- Chain of Custody (CoC) (COC)	Email	Anepal@ehoc.com.au
- EDI Format - ENMRG (ENMRG)	Email	Anepal@ehoc.com.au
- EDI Format - ESDAT (ESDAT)	Email	Anepal@ehoc.com.au
- EDI Format - XTab (XTAB)	Email	Anepal@ehoc.com.au

ACCOUNTS

- A4 - AU Tax Invoice (INV)	Email	accounts@ehoc.com.au

D Aladali

- *AU Certificate of Analysis - NATA (COA)	Email	Daladali@ehoc.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Daladali@ehoc.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Daladali@ehoc.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Daladali@ehoc.com.au
- Chain of Custody (CoC) (COC)	Email	Daladali@ehoc.com.au
- EDI Format - ENMRG (ENMRG)	Email	Daladali@ehoc.com.au
- EDI Format - ESDAT (ESDAT)	Email	Daladali@ehoc.com.au
- EDI Format - XTab (XTAB)	Email	Daladali@ehoc.com.au

CERTIFICATE OF ANALYSIS

Work Order	: **ES2501785**	Page	: 1 of 4
Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: Abanish Nepal	Contact	: Customer Services ES
Address	: UNIT 16 380 PENNANT HILLS RD PENNANT HILLS 2120	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: JN05778 - Horwood Place	Date Samples Received	: 13-Jan-2025 14:23
Order number	: ----	Date Analysis Commenced	: 22-Jan-2025
C-O-C number	: ----	Issue Date	: 23-Jan-2025 14:40
Sampler	: Dattatreya Reddy Aladali		
Site	: ----		
Quote number	: ES24EHOCON0001		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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

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

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

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

- EN33: Where leachable PFAS analysis is requested, centrifugation rather than pressure filtration is used as the default approach for removal of particulates, in line with AS 4439.3.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP03	DUP01	----	----	----
				Sampling date / time	13-Jan-2025 00:00	13-Jan-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2501785-001	ES2501785-002	--------	--------	--------
					Result	Result	----	----	----
EN33: TCLP Leach - Inorganics/PFAS (Plastic Vessel)									
Initial pH	----	0.1	pH Unit		**9.5**	**9.4**	**----**	**----**	**----**
After HCl pH	----	0.1	pH Unit		**1.5**	**1.5**	**----**	**----**	**----**
Extraction Fluid Number	----	1	-		**1**	**1**	**----**	**----**	**----**
Final pH	----	0.1	pH Unit		**5.4**	**5.3**	**----**	**----**	**----**

Analytical Results

Sub-Matrix: TCLP LEACHATE (Matrix: WATER)			Sample ID	SP03	DUP01	----	----	----
			Sampling date / time	13-Jan-2025 00:00	13-Jan-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2501785-001	ES2501785-002	--------	--------	--------
				Result	Result	----	----	----
EG005(ED093)C: Leachable Metals by ICPAES								
Nickel	7440-02-0	0.1	mg/L	**0.1**	<0.1	**----**	**----**	**----**

QUALITY CONTROL REPORT

Work Order	: **ES2501785**	Page	: 1 of 3
Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: Abanish Nepal	Contact	: Customer Services ES
Address	: UNIT 16 380 PENNANT HILLS RD PENNANT HILLS 2120	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: JN05778 - Horwood Place	Date Samples Received	: 13-Jan-2025
Order number	: ----	Date Analysis Commenced	: 22-Jan-2025
C-O-C number	: ----	Issue Date	: 23-Jan-2025
Sampler	: Dattatreya Reddy Aladali		
Site	: ----		
Quote number	: ES24EHOCON0001		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)C: Leachable Metals by ICPAES (QC Lot: 6329841)									
ES2501785-002	DUP01	EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	<0.1	0.0	No Limit

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

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

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)C: Leachable Metals by ICPAES (QCLot: 6329841)								
EG005C: Nickel	7440-02-0	0.1	mg/L	<0.1	0.1 mg/L	103	83.0	115

Matrix Spike (MS) Report

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

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)C: Leachable Metals by ICPAES (QCLot: 6329841)							
ES2501785-001	SP03	EG005C: Nickel	7440-02-0	1 mg/L	96.0	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2501785**	Page	: 1 of 4
Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: Abanish Nepal	Telephone	: +61-2-8784 8555
Project	: JN05778 - Horwood Place	Date Samples Received	: 13-Jan-2025
Site	: ----	Issue Date	: 23-Jan-2025
Sampler	: Dattatreya Reddy Aladali	No. of samples received	: 2
Order number	: ----	No. of samples analysed	: 2

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Analysis Holding Time Compliance

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

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

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

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

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EN33: TCLP Leach - Inorganics/PFAS (Plastic Vessel)							
Non-Volatile Leach: 180 day HT (e.g. PFAS, metals ex.Hg) (EN33a-P)							
SP03, DUP01	**13-Jan-2025**	**22-Jan-2025**	12-Jul-2025	✓	**----**	----	----

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005(ED093)C: Leachable Metals by ICPAES							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG005C)							
SP03, DUP01	**22-Jan-2025**	**23-Jan-2025**	21-Jul-2025	✓	**23-Jan-2025**	21-Jul-2025	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Leachable Metals by ICPAES	EG005C	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Leachable Metals by ICPAES	EG005C	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Leachable Metals by ICPAES	EG005C	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Leachable Metals by ICPAES	EG005C	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	*Method*	*Matrix*	*Method Descriptions*
Leachable Metals by ICPAES	EG005C	SOIL	In house: referenced to APHA 3120; USEPA SW 846 - 6010: The ICPAES technique ionises leachate sample atoms emitting a characteristic spectrum. This spectrum is then compared against matrix matched standards for quantification. This method is compliant with NEPM Schedule B(3).

Preparation Methods	*Method*	*Matrix*	*Method Descriptions*
Digestion for Total Recoverable Metals in TCLP Leachate	EN25C	SOIL	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)
TCLP for Non & Semivolatile Analytes - Plastic Leaching Vessel	EN33a-P	SOIL	In house QWI-EN/33 referenced to USEPA SW846-1311: The TCLP procedure is designed to determine the mobility of both organic and inorganic analytes present in wastes. The standard TCLP leach is for non-volatile and Semivolatile test parameters.

29 January 2025
EHO Consulting Pty Ltd
ABN 49 620 205 192
Unit 16/380 Pennant Hills Road
Pennant Hills NSW 2120
e: info@ehoc.com.au
www.ehoc.com.au

RMA Contracting Pty Ltd
PO Box 4149 Strathfield South NSW 2136

Attention: Luke Slechta
Document Number: JN05778-WCC-RN18702
Report Date: 29 January 2025

Waste Classification Certificate

Waste Owner	RMA Contracting Pty Ltd
Client	RMA Contracting Pty Ltd
Site Address	The waste material requiring assessment was excavated from five aboriginal archaeological test pits (TL01 to TL04 and TL11) located along Horwood Place, Parramatta, NSW 2150, as identified in Figure 17 of Aboriginal Archaeological Test Excavation Methodology prepared by Extent Heritage Pty Ltd (Extent (2024). The location of the Extent (2024) test pits is shown in Figure A below: Figure A: Aboriginal Archaeological Test Pits (source: Extent (2024) (yellow circle denotes the test pits excavated) The excavated material was then transported and stockpiled at 40 Smith Street, Parramatta, NSW 2150 (referred to as 'the storage site') for waste classification assessment.

	Refer to Sample Location Plan presented in Figure 1.
Quantity and Location of Waste	One stockpile of soil (approximately 10m^3) is located within the northeastern portion of the storage site. Refer to the sample location plan presented in Figure 1.
Potential Contaminating Activities	Uncontrolled filling and asbestos
Sampling and Analysis Plan and Sampling Methodology	Refer to Appendix A
Description of the waste	Waste material encountered in the stockpile comprised of: FILL: CLAY, reddish to pale brown, low to medium plasticity, soft to firm, moist. No staining or odours detected in the samples collected from the stockpiled soil. No fragments of potential asbestos containing material (PACM) were observed on the surface or within the stockpile.
Results – Acid Sulfate Ores/Soils	A review of https://geo.seed.nsw.gov.au/vertigisstudio/web/?app=cabd04d595ec43c1aaf4298e80e83ec2 indicated that the site is located in an area mapped as: • N: No known occurrence Additionally, section 3 of Sullivan et. al (2018) provides information and examples on when the presence of acid sulfate soils should be investigated. The site did not relate to any of the information or examples provided in the document. As such, EHO considers further assessment of acid sulfate soils is not warranted.
Results – Waste Classification Discussions	The classification of waste material has been assessed using the six-step process outlined in NSW EPA (2014). Refer to Appendix B for tabulated summary of laboratory results, information on sample identifiers, sample depths, contaminants analysed and analytical results. Laboratory documents are presented in Appendix C. Step 1: The material is not considered to be special waste. Step 2: The material is not considered to be a liquid waste. Step 3: The material is not considered to be pre-classified. Step 4: The material is not considered to possess hazardous characteristics. Step 5: The detected concentrations of analytes in the samples analysed were less than the relevant CT1 and SCC1 maximum values in NSW EPA (2014). Step 6: The material is not considered to be putrescible.
Waste Classification	Based on the results of field observations and the laboratory analytical data, the waste assessed as at the time of this report and located onsite would classify as: **General Solid Waste (non-putrescible)**

Recommendations:

EHO recommends that:

- In the event material not consistent with that reported in this certificate is encountered during handling of the waste, works should stop, and further assessment be undertaken.
- The waste be handled and transported by suitably licensed contractors, and disposed of to a suitably licenced waste receiving facility, including following relevant NSW EPA waste licensing and tracking requirements set out at https://www.epa.nsw.gov.au/your-environment/waste/transporting-waste.
- The waste generator should retain transport and disposal records for all waste removed from site.

References:

- AS 4482.1-2005 Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi volatile compounds, dated 2 November 2005.
- DUAP 1998[1], 'Managing Land Contamination Planning Guidelines SEPP55 – Remediation of Land', dated April 1999, ref: 98/65.
- Extent (2024), 'Aboriginal Archaeology Test Excavation Methodology', dated: 12/08/2024, version: V03.1, ref: 0223115
- NEPC 2013, 'Schedule B(2) Guideline on Site Characterisation, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013.
- NSW EPA 2014, 'Waste Classification Guidelines', dated November 2014.
- NSW EPA 2016, 'Addendum to the Waste Classification Guidelines (2014) – Part 1; classifying waste, dated October 2016.
- NSW EPA 2020, 'Contaminated Land Guidelines: Consultants reporting on contaminated land' dated May 2020, ref: EPA2020P2233.
- NSW EPA 2022, 'Contaminated Land Guidelines: Sampling Design Part 1 - Application', dated August 2022, ref: EPA 2022P3915.
- Sullivan, L, Ward, N, Toppler, N and Lancaster, G 2018, 'National Acid Sulfate Soils Guidance: National acid sulfate soils sampling and identification methods manual' dated June 2018, ref: CC BY 4.0
- VIC EPA 2009 'Industrial Waste Resource Guidelines' dated June 2009, ref: IWRG702.

Please contact the undersigned on 0477 016 316 if you have any questions regarding this report.

Written By

Dattatreya reddy Aladali
Graduate Environmental Consultant

Reviewed and Authorised by

Abanish Nepal
Principal Environmental Consultant

[1] This guidance document has since been redacted. However, EHO has relied on this document to get an understanding on the COPC related information associated with specific land uses.

Attachments

Photo Log
Figure 1: Sample Location Plan
Appendix A: Sampling and Analysis Plan and Methodology
Appendix B: Data Summary Tables
Appendix C: Laboratory Documents

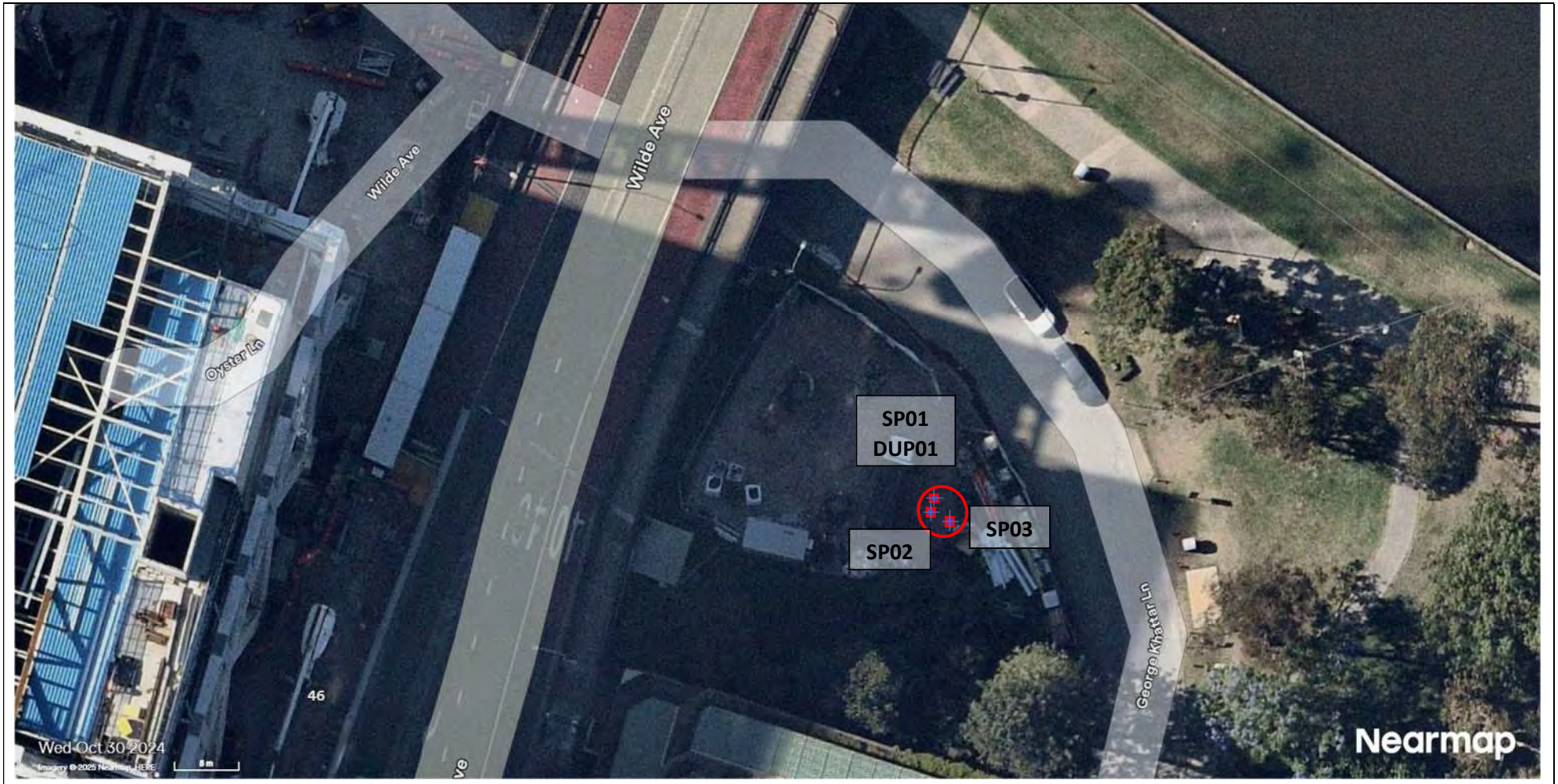
PHOTO LOG

Photo 1: View of the stockpiled waste material (facing west)

Photo 2: View of sample SP02.

FIGURE

N



Site Address:	Horwood Place, Parramatta, NSW 2150	Project Number: JN05778	Drawn By: DA
Client:	RMA Contracting Pty Ltd	Figure Name: **Sample Location Plan**	
Project Name:	Waste Classification Assessment	Figure Number: 1	Scale: As above

LEGEND

Approx. extent of stockpile

Approx. sample location

Appendix A: Sampling and Analysis Plan and Methodology

Sampling and Analysis Plan	
Date of Fieldwork	22 January 2025
Proposed Sampling Team	Dattatreya Reddy Aladali
Proposed Sampling Point Location	Refer to Figure 1
Basis for Sampling Pattern and the Number of Samples Collected and Analysed	The sampling pattern for the stockpiled material will be in accordance with Table 1 in VIC EPA (2009), and Table 3 of NSW EPA (2022) based on the volume of material proposed for offsite disposal. Based on the guidelines and our understanding that the volume of waste requiring assessment will be 10m^3, a minimum of three samples will be collected.
Sampling Method	Samples will be collected as grab samples from the stockpile. A fresh pair of nitrile gloves will be used to collect each sample. Field duplicates (ratio of 5%) will be collected by splitting a bulk sample across two separate sample containers. Samples will be placed in laboratory prepared containers and bags, each labelled with the project number, date, sampling point identifier, and sample depth identifier. A trip spike and trip blank will be kept with the samples during storage and transport.
Sampling Depth	Samples will be collected from a minimum depth of 0.2m into the stockpile.
Contaminants Tested	Based on the potential contaminating activities identified for the site, and consideration being given to Appendix A in DUAP (1998), the following contaminants of potential concern (COPC) have been adopted for sample analysis: TRH, BTEX, PAH, OCP, OPP, PCB, phenol, metals and asbestos ID.

Field and Laboratory Quality Assurance and Control

Experienced Sampling Team Used	Yes
Sampling Plan/Method Followed	Yes
Field Equipment Decontaminated Between Sampling Points	Not applicable. Samples collected using disposable nitrile gloves
Material Description Provided	Yes
Chain of Custody (COC) and Sample Receipt Advice (SRA) Provided	Yes
COC and SRA identifies the Following:	Yes

Sampling Team, Nature of Sample, Date, Analyses to be Performed, Preservation Method and Time	
Rinsate Blank Collected	Not applicable.
Trip Blank and Spike Analysed and Results Acceptable	Yes
Minimum 5% Duplicates Collected	Yes
RPDs Within Acceptable Limits	Yes
Field Instruments Calibrated and Calibration Certificate Provided	Not applicable. Field instrument was not used as part of this project
Holding Times Met	Yes
Analytical Methods Used by the Laboratory Acceptable	Yes
Appropriate LORs Used	Yes
Surrogates and Spike Recovery within Laboratory Acceptable Limits	Yes
Laboratory Duplicates within Laboratory Acceptable Limits	Yes
Laboratory Blank Results within Laboratory Acceptable Limits	Yes

Based on the above, EHO considers that the data collected and reported in this report is complete, comparable, representative, precise and accurate.

Appendix B: Data Summary Tables

JN05778-WCC-RN18702
Waste Classification Assessment
Horwood Place,
Parramatta, NSW 2150

LR01 - Soil Results

				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sample Date:	22/01/2025	22/01/2025	22/01/2025	22/01/2025	22/01/2025	22/01/2025
				Sample ID:	SP01	SP02	SP03	DUP01	Trip Spike	Trip Blank
Analyte grouping/Analyte	**Unit**	**NSW EPA (2014) CT1**	**NSW EPA (2014) SCC1**	**Limit of reporting**						
Total Metals										
Arsenic	mg/kg	100	500	5	<5	**5**	**6**	<5	----	----
Cadmium	mg/kg	20	100	1	<1	<1	<1	<1	----	----
Chromium	mg/kg	100	1900	2	**13**	**16**	**23**	**12**	----	----
Copper	mg/kg	----	----	5	**9**	**11**	**11**	**11**	----	----
Lead	mg/kg	100	1500	5	**31**	**14**	**28**	**27**	----	----
Nickel	mg/kg	40	1050	2	**16**	**8**	**8**	**17**	----	----
Zinc	mg/kg	----	----	5	**51**	**24**	**25**	**44**	----	----
Mercury	mg/kg	4	20	0.1	<0.1	<0.1	<0.1	<0.1	----	----
Polychlorinated Biphenyls (PCB)										
Total Polychlorinated biphenyls	mg/kg	<50	<50	0.1	----	<0.1	----	----	----	----
Organochlorine Pesticides (OC)										
alpha-BHC	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
beta-BHC	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
gamma-BHC - (Lindane)	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
delta-BHC	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Heptachlor	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Aldrin	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Heptachlor epoxide	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Total Chlordane (sum)	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
trans-Chlordane	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
alpha-Endosulfan	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
cis-Chlordane	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Dieldrin	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
4.4`-DDE	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Endrin	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Endosulfan (sum)	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
beta-Endosulfan	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
4.4`-DDD	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Endrin aldehyde	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Endosulfan sulfate	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
4.4`-DDT	mg/kg	----	----	0.2	----	<0.2	----	----	----	----
Endrin ketone	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Methoxychlor	mg/kg	----	----	0.2	----	<0.2	----	----	----	----
Sum of DDD + DDE + DDT	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Sum of Aldrin + Dieldrin	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Total OC VIC EPA	mg/kg	<50	<50							
Organophosphorus Pesticides (OP)										
Dichlorvos	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Demeton-S-methyl	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Monocrotophos	mg/kg	----	----	0.2	----	<0.2	----	----	----	----
Dimethoate	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Diazinon	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Chlorpyrifos-methyl	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Parathion-methyl	mg/kg	----	----	0.2	----	<0.2	----	----	----	----
Malathion	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Fenthion	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Chlorpyrifos	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Parathion	mg/kg	----	----	0.2	----	<0.2	----	----	----	----
Pirimphos-ethyl	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Chlorfenvinphos	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Bromophos-ethyl	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Fenamiphos	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Prothiofos	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Ethion	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Carbophenothion	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Azinphos Methyl	mg/kg	----	----	0.05	----	<0.05	----	----	----	----
Total OP Pesticides	mg/kg	<50	<50							
Phenolic Compounds										
Phenol	mg/kg	288	518	0.5	----	<0.5	----	----	----	----
2-Chlorophenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
2-Methylphenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
3- & 4-Methylphenol	mg/kg	----	----	1	----	<1	----	----	----	----
2-Nitrophenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
2.4-Dimethylphenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
2.4-Dichlorophenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
2.6-Dichlorophenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
4-Chloro-3-methylphenol	mg/kg	----	----	0.5	----	<0.5	----	----	----	----
2.4.6-Trichlorophenol	mg/kg	40	70	0.5	----	<0.5	----	----	----	----
2.4.5-Trichlorophenol	mg/kg	8000	14400	0.5	----	<0.5	----	----	----	----
Pentachlorophenol	mg/kg	----	----	2	----	<2	----	----	----	----
		----	----							
Polynuclear Aromatic Hydrocarbons										
Naphthalene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Acenaphthylene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Acenaphthene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Fluorene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Phenanthrene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Anthracene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Fluoranthene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Pyrene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Chrysene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	mg/kg	0.8	10	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Sum of polycyclic aromatic hydrocarbons	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene TEQ (zero)	mg/kg	----	----	0.5	<0.5	<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene TEQ (half LOR)	mg/kg	----	----	0.5	**0.6**	**0.6**	**0.6**	**0.6**	----	----
Benzo(a)pyrene TEQ (LOR)	mg/kg	----	----	0.5	**1.2**	**1.2**	**1.2**	**1.2**	----	----
Total PAH(18)	mg/kg	200	200							
Total Recoverable Hydrocarbons										
C6 - C10 Fraction	mg/kg			10	----	<10	----	----	----	----
C6 - C10 Fraction minus BTEX (F1)	mg/kg			10	----	<10	----	----	----	----
>C10 - C16 Fraction	mg/kg			50	----	<50	----	----	----	----
>C16 - C34 Fraction	mg/kg			100	----	<100	----	----	----	----
>C34 - C40 Fraction	mg/kg			100	----	<100	----	----	----	----
>C10 - C40 Fraction (sum)	mg/kg			50	----	<50	----	----	----	----
>C10 - C16 Fraction minus Naphthalene (F2)	mg/kg			50	----	<50	----	----	----	----
Total Petroleum Hydrocarbons										
C6 - C9 Fraction	mg/kg	650	650	10	----	<10	----	----	----	----
C10 - C14 Fraction	mg/kg	----	----	50	----	<50	----	----	----	----
C15 - C28 Fraction	mg/kg	----	----	100	----	<100	----	----	----	----
C29 - C36 Fraction	mg/kg	----	----	100	----	<100	----	----	----	----
C10 - C36 Fraction (sum)	mg/kg	10000	10000	50	----	<50	----	----	----	----
BTEXN										
Benzene	mg/kg	10	18	0.2	----	<0.2	----	----	[100%]	<0.2
Toluene	mg/kg	288	518	0.5	----	<0.5	----	----	[77%]	<0.5
Ethylbenzene	mg/kg	600	1080	0.5	----	<0.5	----	----	[85%]	<0.5
meta- & para-Xylene	mg/kg	----	----	0.5	----	<0.5	----	----	[85%]	<0.5
ortho-Xylene	mg/kg	----	----	0.5	----	<0.5	----	----	[85%]	<0.5
Total Xylenes	mg/kg	1000	1800	0.5	----	<0.5	----	----	[86%]	<0.5
Sum of BTEX	mg/kg	----	----	0.2	----	<0.2	----	----	[84%]	<0.2
Naphthalene	mg/kg	----	----	1	----	<1	----	----	[100%]	<1
		----	----							
Asbestos		----	----							
Asbestos ID	Detection	----	----		NAD,OF	NAD,OF	NAD,OF	----	----	----

NAD - No Asbestos Detected
OF - Organic Fibers Detected

JN05778-WCC-RN18702
Waste Classification Assessment
Horwood Place,
Parramatta, NSW 2150

LR02- RPD

		Sample ID	SP01	DUP01	RPD %
		Sample Date	22/01/2025	22/01/2025	
		Matrix	Soil	Soil	
Analyte Name	**Units**	**Reporting Limit**	Result	Result	
PAH					
Naphthalene	mg/kg	0.5	<0.5	<0.5	NC
Acenaphthylene	mg/kg	0.5	<0.5	<0.5	NC
Acenaphthene	mg/kg	0.5	<0.5	<0.5	NC
Fluorene	mg/kg	0.5	<0.5	<0.5	NC
Phenanthrene	mg/kg	0.5	<0.5	<0.5	NC
Anthracene	mg/kg	0.5	<0.5	<0.5	NC
Fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Pyrene	mg/kg	0.5	<0.5	<0.5	NC
Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	NC
Chrysene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene	mg/kg	0.5	<0.5	<0.5	NC
Indeno(1.2.3.cd)pyrene	mg/kg	0.5	<0.5	<0.5	NC
Dibenz(a.h)anthracene	mg/kg	0.5	<0.5	<0.5	NC
Benzo(g.h.i)perylene	mg/kg	0.5	<0.5	<0.5	NC
Sum of polycyclic aromatic hydrocarbons	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene TEQ (zero)	mg/kg	0.5	<0.5	<0.5	NC
Benzo(a)pyrene TEQ (half LOR)	mg/kg	0.5	**0.6**	**0.6**	NC
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	**1.2**	**1.2**	NC
Metals					
Arsenic, As	mg/kg	5	<5	<5	NC
Cadmium, Cd	mg/kg	1	<1	<1	NC
Chromium, Cr	mg/kg	2	**13**	**12**	8%
Copper, Cu	mg/kg	5	**9**	**11**	20%
Lead, Pb	mg/kg	5	**31**	**27**	14%
Nickel, Ni	mg/kg	2	**16**	**17**	6%
Zinc, Zn	mg/kg	5	**51**	**44**	15%
Mercury	mg/kg	0.1	<0.1	<0.1	NC

NC - non computable

Appendix C: Laboratory Documents

EHO Consulting Pty Ltd
16 / 380 Pennant Hills Rd
Pennant Hills, NSW 2120

ABN 49 620 205 192
www.ehoc.com.au
info@ehoc.com.au

Job Number: JN05778
Lab Number: LN10195
Client: RMA Contracting Pty Limited
Contact: Shanelle Zammit - projects@rmagroup.com.au
Client Address: PO BOX 4149 STRATHFIELD SOUTH 2136
Purchase Order (PO):N/A

Requested by: RMA Contracting Pty Limited
Sample Date: Wednesday 22 January 2025
Sampled By: Dattatreya Aladali
Date Received: Wednesday 22 January 2025
Date Analysed: Thursday 23 January 2025

Asbestos Certificate of Analysis
AS4964 (2004) Method for the Qualitative Identification of Asbestos in Bulk Samples

Site address: Horwood Place, Parramatta NSW, Australia 2150

Asbestos samples have been examined at EHO Consulting (EHOC) Sydney Laboratory, 16/380 Pennant Hills Rd, Pennant Hills, NSW 2120. Analysis undertaken is a qualitative identification of asbestos fibres in bulk and soil samples by polarised light microscopy, including dispersion staining, in accordance with AS4964 (2004) Method for the qualitative identification of asbestos in bulk samples and EHOC's Asbestos Bulk Soil ID Standard Operating Procedure (CD38) and NATA Accreditation **No# 20381**, . Trace analysis carried out on all non-homogenous samples. Accredited for compliance with ISO/IEC: 17025-Testing. NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates

LAB ID NUMBER	SAMPLE NUMBER	DESCRIPTION	LOCATION	SAMPLE DIMENSIONS	RESULT	COMMENTS
LIN01	SP01	Soil		32g	NAD, OF	
LIN02	SP02	Soil		25g	NAD, OF	
LIN03	SP03	Soil		20g	NAD, OF	

Key:

NAD - No Asbestos Detected, CH - Chrysotile Asbestos Detected, AM - Amosite Asbestos Detected, CR - Crocidolite Asbestos Detected, UMF - Unknown Mineral Fibres Detected, SMF - Synthetic Mineral Fibres Detected, OF - Organic Fibres Detected, Trace - Trace Asbestos Detected, * - No trace asbestos detected at the reporting limit of 0.1 g/kg

Limitations

The results contained in this report relate only to the sample/s submitted for testing. The laboratory accepts no responsibility for location, sampling date, sample ID, sampler and client details provided. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964 -2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No Asbestos Detected" as specified and recommended by A4964-2004. Loose asbestos fibres/ fibre bundles are detected and reported as handpicked fibres/ fibre bundles, and they do not represent respirable fibres. All non-homogenous samples such as dust and soils are subject to trace analysis, unless impractical to do so due to nature or size of the sample.

^Dust samples taken using a tape as sample collection method (Dust on Tape) are outside of NATA sample requirements and are not accredited under EHO's scope of accreditation.

If no asbestos is detected in vinyl tiles, mastics, sealants, epoxy resins and ore samples then confirmation by another independent analytical technique is advised due to the nature of the samples. EHO Group accepts no responsibility for the initial collection, packaging or transportation of samples submitted by a non EHO consultant / employee. This document may not be reproduced except in full.

Approved Analyst : **Faz Jalali**

Date: 23-01-2025

Approved Signatory: **Faz Jalali**

Date: 23-01-2025

Report disclaimants

This report has been prepared by EHO Consulting Pty Ltd ACN 620 205 192 ("EHOC"), and its contents were provided exclusively for the use of the Client.

Every care has been taken in the preparation of this report and its contents are believed to be accurate at the date of report. However, EHOC, its officers, employees and contractors ("personnel") do not give any representations or warranties as to the reliability, accuracy or completeness of the report. Both EHOC and its personnel are not liable for any loss or damage (whether direct or indirect), howsoever arising (whether in negligence or otherwise), out of or in connection with this report, except where such liability is made non-excludable by legislation.

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1. a supply of goods (or equivalent goods) or services again; or
2. the payment of the cost of having the goods (or equivalent goods) or services supplied again.

Chain of Custody

Job Number: JN05778
Client: RMA Contracting Pty Limited
Contact: Shanelle Zammit - projects@rmagroup.com.au
Client Address: PO BOX 4149 STRATHFIELD SOUTH 2136
Site Address: Horwood Place, Parramatta NSW, Australia 2150
Purchase Order (PO):N/A
Turn around time: Standard (3-5 Days)

Sample Date: Wednesday 22 January 2025
Sampled By: Dattatreya Aladali
Relinquished By: Dattatreya Aladali
Relinquished Date: Wednesday 22 January 2025

Results

LAB ID NUMBER	SAMPLE NUMBER	SAMPLE DESCRIPTION	LOCATION
LIN01	SP01	Soil	
LIN02	SP02	Soil	
LIN03	SP03	Soil	

Mandatory Fields

CHAIN OF CUSTODY

Page _1_ of _1_

CLIENT CODE:	EHOCON	*PROJECT MANAGER:	Abanish Nepal	SAMPLER	Dattatreya Reddy Aladali
*CLIENT:	EHO Consulting Pty Ltd	*PM MOBILE:	0477016316	SAMPLER MOBILE	409653750
OFFICE: (Invoicing Office)	16/380 Pennant Hills Road, Pennant Hills, NSW 2120	ALS QUOTE # (Client Ref. if blank)	ES24EHOCON0001	PURCHASE ORDER NO.	
PROJECT NO./PROJECT:	JN05778- Norwood Place B			SITE:	Parramatta

*INVOICE TO: (client or client email) — CC Invoice to PM

*EMAIL REPORTS TO: (client or client email)

BIOSECURITY

*STORAGE REQUIREMENTS (Please select one)
Standard Storage: Samples stored for 1 month
Extended Storage: Samples stored for 3 months
Specify Disposal Date:
Note: Extended storage incurs a fee and requires a signed agreement.

*TURNAROUND (Please select one)
Please note that turnaround is subject to Lab/Client Service level for some tests/matrices
- 5+ days (no surcharge)
- 3 day (~15%)
- 2 day (~30%)
- 1 day (~50%)

*ANALYSIS REQUIRED
Mark an X in the boxes below analyses to indicate the parameters listed above to be tested on that sam

Comments:

Environmental Division Sydney
Work Order Reference
ES2501838

Telephone : +61-2-8784 8555

ALS Use Only Lab ID	Sample ID	Depth	Date/Time	No. Bottles	MATRIX: Soil/Solid (S), Water (W), Sediment (SD), Dust (D), Tissue (T), Paint (P), Hair (H), Biota (B), Air (A), Leachate (L), Other (O)		EHOS (NEW FORM)	EHOS (LEGACY)								Lab QC (additional bottles req.) Dup	MS	Additional Information (Comments on hazards, i.e. asbestos, known high contamination)
1	SP01		22/01/2025	1	S		X	X								☐	☐	
2	SP02		22/01/2025	1	S	X										☐	☐	
3	SP03		22/01/2025	1	S		X	X								☐	☐	
4	SP04		22/01/2025	1	S		X	X								☐	☐	
5	Trip Spike - 12		20/01/2025	1	S				X							☐	☐	
6	Trip Blank		20/01/2025	1	S				X							☐	☐	Strictly BTEX only. No TRH C6-C9/C10 analysis required
7	TSC-12		20/01/25						X							☐	☐	
																☐	☐	
																☐	☐	
																☐	☐	

Receipt Detail: Delivery Method: Hand / Courier; Ice: Present / Melted; Ice Bricks: Present / Melted; Cooler: None

Sample Temp on Receipt: °C °C °C

Security Seal Intact: Yes / No / N/A(blank)

Cooler Outside: Courier Box / Clean; From Sample #

Cartons (Circle): Blue Ice / Foam Box / Sea Box / Other; Cartons: 1 0 0

Relinquished by: Dattatreya Reddy Aladali — Signature — Date/Time: 22/01/2025 11:15am

Received by: WMP — Signature — Date/Time: 22/1/25 1434

Relinquished by: — Signature — Date/Time:

Received by: — Signature — Date/Time:

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2501838**

Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: ABANISH NEPAL	Contact	: Customer Services ES
Address	: UNIT 16 380 PENNANT HILLS RD PENNANT HILLS 2120	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: anepal@ehoc.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: JN05778 - Horwood Place B	Page	: 1 of 2
Order number	: ----	Quote number	: ES2024EHOCON0001 (ES24EHOCON0001)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: Parramatta		
Sampler	: Dattatreya Reddy Aladeli		

Dates

Date Samples Received	: 22-Jan-2025 14:34	Issue Date	: 23-Jan-2025
Client Requested Due Date	: 29-Jan-2025	Scheduled Reporting Date	: **29-Jan-2025**

Delivery Details

Mode of Delivery	: Client Drop Off	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 10.8'C, 9.2'C - Ice present
Receipt Detail	: Large Hard Esky	No. of samples received / analysed	: 7 / 7

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP075 SIM PAH only SIM - PAH only	SOIL - EP080 BTEXN	SOIL - S-02 8 Metals (incl. Digestion)	SOIL - S-19 TRH/BTEXN/PAH/Ph/OC/OP/PCB/8 metals
ES2501838-001	22-Jan-2025 00:00	SP01	✓	✓		✓	
ES2501838-002	22-Jan-2025 00:00	SP02	✓				✓
ES2501838-003	22-Jan-2025 00:00	SP03	✓	✓		✓	
ES2501838-004	22-Jan-2025 00:00	DUP01	✓	✓		✓	
ES2501838-005	20-Jan-2025 00:00	Trip Spike - 12			✓		
ES2501838-006	20-Jan-2025 00:00	Trip Blank	✓		✓		
ES2501838-007	20-Jan-2025 00:00	TSC - 12			✓		

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ABANISH NEPAL

- *AU Certificate of Analysis - NATA (COA)	Email	anepal@ehoc.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	anepal@ehoc.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	anepal@ehoc.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	anepal@ehoc.com.au
- A4 - AU Tax Invoice (INV)	Email	anepal@ehoc.com.au
- Chain of Custody (CoC) (COC)	Email	anepal@ehoc.com.au
- EDI Format - ENMRG (ENMRG)	Email	anepal@ehoc.com.au
- EDI Format - ESDAT (ESDAT)	Email	anepal@ehoc.com.au
- EDI Format - XTab (XTAB)	Email	anepal@ehoc.com.au

ACCOUNTS

- A4 - AU Tax Invoice (INV)	Email	accounts@ehoc.com.au

D Aladali

- *AU Certificate of Analysis - NATA (COA)	Email	Daladali@ehoc.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	Daladali@ehoc.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	Daladali@ehoc.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	Daladali@ehoc.com.au
- Chain of Custody (CoC) (COC)	Email	Daladali@ehoc.com.au
- EDI Format - ENMRG (ENMRG)	Email	Daladali@ehoc.com.au
- EDI Format - ESDAT (ESDAT)	Email	Daladali@ehoc.com.au
- EDI Format - XTab (XTAB)	Email	Daladali@ehoc.com.au

CERTIFICATE OF ANALYSIS

Work Order	: **ES2501838**	Page	: 1 of 10
Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: ABANISH NEPAL	Contact	: Customer Services ES
Address	: UNIT 16 380 PENNANT HILLS RD PENNANT HILLS 2120	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: JN05778 - Horwood Place B	Date Samples Received	: 22-Jan-2025 14:34
Order number	: ----	Date Analysis Commenced	: 24-Jan-2025
C-O-C number	: ----	Issue Date	: 28-Jan-2025 16:40
Sampler	: Dattatreya Reddy Aladeli		
Site	: Parramatta		
Quote number	: ES24EHOCON0001		
No. of samples received	: 7		
No. of samples analysed	: 7		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

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

General Comments

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

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

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

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

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

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

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

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

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01	SP02	SP03	DUP01	Trip Spike - 12
				Sampling date / time	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	20-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2501838-001	ES2501838-002	ES2501838-003	ES2501838-004	ES2501838-005
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		7.2	11.5	10.4	7.0	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	5	6	<5	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg		13	16	23	12	----
Copper	7440-50-8	5	mg/kg		9	11	11	11	----
Lead	7439-92-1	5	mg/kg		31	14	28	27	----
Nickel	7440-02-0	2	mg/kg		16	8	8	17	----
Zinc	7440-66-6	5	mg/kg		51	24	25	44	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	<0.1	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		----	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		----	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		----	<0.05	----	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		----	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		----	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		----	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg		----	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		----	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		----	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		----	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		----	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		----	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		----	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01	SP02	SP03	DUP01	Trip Spike - 12
				Sampling date / time	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	20-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2501838-001	ES2501838-002	ES2501838-003	ES2501838-004	ES2501838-005
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
4.4`-DDE	72-55-9	0.05	mg/kg		----	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg		----	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		----	<0.05	----	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		----	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		----	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		----	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		----	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		----	<0.2	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		----	<0.05	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		----	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		----	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		----	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		----	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		----	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg		----	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		----	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		----	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg		----	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg		----	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		----	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg		----	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		----	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		----	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SP01	SP02	SP03	DUP01	Trip Spike - 12
			Sampling date / time	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	20-Jan-2025 00:00
Compound	CAS Number	LOR	Unit	ES2501838-001	ES2501838-002	ES2501838-003	ES2501838-004	ES2501838-005
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	----	<2	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01	SP02	SP03	DUP01	Trip Spike - 12
				Sampling date / time	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	20-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2501838-001	ES2501838-002	ES2501838-003	ES2501838-004	ES2501838-005
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg		----	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg		----	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	<100	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		----	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	<10	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		----	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	<100	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		----	<50	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01	SP02	SP03	DUP01	Trip Spike - 12
				Sampling date / time	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	20-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2501838-001	ES2501838-002	ES2501838-003	ES2501838-004	ES2501838-005
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	<50	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	<0.2	----	----	<0.2
Toluene	108-88-3	0.5	mg/kg		----	<0.5	----	----	2.3
Ethylbenzene	100-41-4	0.5	mg/kg		----	<0.5	----	----	3.4
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	<0.5	----	----	3.9
ortho-Xylene	95-47-6	0.5	mg/kg		----	<0.5	----	----	1.7
^ Sum of BTEX	----	0.2	mg/kg		----	<0.2	----	----	11.3
^ Total Xylenes	----	0.5	mg/kg		----	<0.5	----	----	5.6
Naphthalene	91-20-3	1	mg/kg		----	<1	----	----	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	82.9	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	82.9	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	82.5	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		65.7	88.1	81.4	78.8	----
2-Chlorophenol-D4	93951-73-6	0.5	%		66.4	97.2	87.6	83.8	----
2.4.6-Tribromophenol	118-79-6	0.5	%		94.3	95.8	83.6	86.3	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		105	117	108	109	----
Anthracene-d10	1719-06-8	0.5	%		113	112	105	106	----
4-Terphenyl-d14	1718-51-0	0.5	%		104	103	96.4	97.2	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	65.8	----	----	96.0
Toluene-D8	2037-26-5	0.2	%		----	76.8	----	----	100

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01	SP02	SP03	DUP01	Trip Spike - 12
				Sampling date / time	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	22-Jan-2025 00:00	20-Jan-2025 00:00
Compound	CAS Number	LOR	Unit		ES2501838-001	ES2501838-002	ES2501838-003	ES2501838-004	ES2501838-005
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		**----**	**79.6**	**----**	**----**	**123**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	Trip Blank	TSC - 12	----	----	----
				Sampling date / time	20-Jan-2025 00:00	20-Jan-2025 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2501838-006	ES2501838-007	--------	--------	--------
					Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**17.1**	**----**	**----**	**----**	**----**
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	**----**	**----**	**----**
Toluene	108-88-3	0.5	mg/kg		<0.5	**3.0**	**----**	**----**	**----**
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	**4.0**	**----**	**----**	**----**
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	**4.5**	**----**	**----**	**----**
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	**2.0**	**----**	**----**	**----**
^ Sum of BTEX	----	0.2	mg/kg		<0.2	**13.5**	**----**	**----**	**----**
^ Total Xylenes	----	0.5	mg/kg		<0.5	**6.5**	**----**	**----**	**----**
Naphthalene	91-20-3	1	mg/kg		<1	<1	**----**	**----**	**----**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**64.8**	**97.0**	**----**	**----**	**----**
Toluene-D8	2037-26-5	0.2	%		**72.9**	**97.7**	**----**	**----**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%		**89.2**	**119**	**----**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

QUALITY CONTROL REPORT

Work Order	: **ES2501838**	Page	: 1 of 11
Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: ABANISH NEPAL	Contact	: Customer Services ES
Address	: UNIT 16 380 PENNANT HILLS RD PENNANT HILLS 2120	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: JN05778 - Horwood Place B	Date Samples Received	: 22-Jan-2025
Order number	: ----	Date Analysis Commenced	: 24-Jan-2025
C-O-C number	: ----	Issue Date	: 28-Jan-2025
Sampler	: Dattatreya Reddy Aladeli		
Site	: Parramatta		
Quote number	: ES24EHOCON0001		
No. of samples received	: 7		
No. of samples analysed	: 7		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

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

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6332116)									
ES2501838-001	SP01	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	13	13	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	16	17	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	9	26	100	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	31	24	23.5	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	51	40	23.2	0% - 50%
ES2501947-007	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	5	7	30.2	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	2	3	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	6	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	11	16	37.5	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	7	10	31.9	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6332119)									
ES2501838-001	SP01	EA055: Moisture Content	----	0.1 (1.0)*	%	7.2	7.3	1.8	No Limit
ES2501947-005	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	10.4	8.2	23.5	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6332214)									
ES2501838-006	Trip Blank	EA055: Moisture Content	----	0.1	%	17.1	18.6	8.8	0% - 20%
ES2501929-002	Anonymous	EA055: Moisture Content	----	0.1	%	11.1	12.3	10.1	0% - 20%

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6332117)									
ES2501838-001	SP01	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.1	0.0	No Limit
ES2501947-007	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6331643)									
ES2501947-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6331642)									
ES2501947-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6331642)									
ES2501947-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6331642) - continued									
ES2501947-001	Anonymous	EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 6331640)									
ES2501947-007	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES2501947-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6331640)									
ES2501947-007	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6331640) - continued									
ES2501947-007	Anonymous	EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2501947-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6331641)									
ES2501947-007	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2501947-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6332043)									
ES2501947-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2501947-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6331641)									
ES2501947-007	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2501947-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6332043)									
ES2501947-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2501947-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 6332043)									
ES2501947-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2501947-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

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

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

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6332116)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	108	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	95.4	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	126	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	104	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	115	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	115	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	102	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6332117)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	108	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6331643)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	98.5	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 6331642)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	88.8	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	80.3	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	85.4	67.0	119
EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.0	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.1	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	75.9	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	72.3	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	74.4	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	88.9	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	88.1	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	114	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.7	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	79.2	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	101	62.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 6331642) - continued								
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	108	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	112	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6331642)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	108	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	66.6	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	86.9	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	82.6	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.8	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	83.4	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	74.3	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	73.0	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	73.9	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	78.1	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	86.4	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.6	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	79.2	41.0	123
EP075(SIM)A: Phenolic Compounds (QCLot: 6331640)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	90.5	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	108	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	113	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	80.2	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	108	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	100	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	108	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	91.8	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	95.4	54.0	114

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)A: Phenolic Compounds (QCLot: 6331640) - continued								
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	102	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	54.6	10.0	80.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6331640)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	114	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	110	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	110	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	117	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	113	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	115	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	111	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	116	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	92.6	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	103	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	82.7	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	104	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	103	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	93.0	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	95.5	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	92.9	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6331641)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	102	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	93.7	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	94.2	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6332043)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	78.8	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6331641)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	101	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	92.3	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	94.2	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6332043)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	79.3	72.4	133
EP080: BTEXN (QCLot: 6332043)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	84.7	76.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080: BTEXN (QCLot: 6332043) - continued								
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	98.7	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	99.1	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	104	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	99.9	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	85.7	78.8	122

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6332116)							
ES2501838-001	SP01	EG005T: Arsenic	7440-38-2	50 mg/kg	91.8	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	114	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	91.4	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	89.3	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	104	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	95.6	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	97.7	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6332117)							
ES2501838-001	SP01	EG035T: Mercury	7439-97-6	5 mg/kg	100	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6331643)							
ES2501947-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	98.9	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 6331642)							
ES2501947-001	Anonymous	EP068: gamma-BHC - (Lindane)	58-89-9	0.5 mg/kg	85.1	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	81.8	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	83.2	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	88.2	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	90.3	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	113	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6331642)							
ES2501947-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	108	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	105	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	70.8	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6331642) - continued							
ES2501947-001	Anonymous	EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	73.5	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	71.8	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 6331640)							
ES2501947-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	94.8	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	89.2	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	71.9	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	97.6	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	74.6	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6331640)							
ES2501947-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	119	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	126	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6331641)							
ES2501947-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	128	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	120	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	119	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6332043)							
ES2501947-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	76.4	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6331641)							
ES2501947-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	111	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	122	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	114	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6332043)							
ES2501947-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	74.6	61.1	142
EP080: BTEXN (QCLot: 6332043)							
ES2501947-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	75.6	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	83.0	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	82.4	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	84.0	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	84.3	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	72.9	61.1	115

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2501838**	Page	: 1 of 5
Client	: **EHO CONSULTING**	Laboratory	: Environmental Division Sydney
Contact	: ABANISH NEPAL	Telephone	: +61-2-8784 8555
Project	: JN05778 - Horwood Place B	Date Samples Received	: 22-Jan-2025
Site	: Parramatta	Issue Date	: 28-Jan-2025
Sampler	: Dattatreya Reddy Aladeli	No. of samples received	: 7
Order number	: ----	No. of samples analysed	: 7

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

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

Summary of Outliers

Outliers : Quality Control Samples

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

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

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
Trip Blank	**20-Jan-2025**	**----**	----	----	**24-Jan-2025**	03-Feb-2025	✓
Soil Glass Jar - Unpreserved (EA055)							
SP01, SP02, SP03, DUP01	**22-Jan-2025**	**----**	----	----	**24-Jan-2025**	05-Feb-2025	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
SP01, SP02, SP03, DUP01	**22-Jan-2025**	**24-Jan-2025**	21-Jul-2025	✓	**28-Jan-2025**	21-Jul-2025	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
SP01, SP02, SP03, DUP01	**22-Jan-2025**	**24-Jan-2025**	19-Feb-2025	✓	**28-Jan-2025**	19-Feb-2025	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
SP02	**22-Jan-2025**	**24-Jan-2025**	05-Feb-2025	✓	**25-Jan-2025**	05-Mar-2025	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
SP02	**22-Jan-2025**	**24-Jan-2025**	05-Feb-2025	✓	**25-Jan-2025**	05-Mar-2025	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
SP02	**22-Jan-2025**	**24-Jan-2025**	05-Feb-2025	✓	**25-Jan-2025**	05-Mar-2025	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP02	**22-Jan-2025**	**24-Jan-2025**	05-Feb-2025	✓	**24-Jan-2025**	05-Mar-2025	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP01, SP02, SP03, DUP01	**22-Jan-2025**	**24-Jan-2025**	05-Feb-2025	✓	**24-Jan-2025**	05-Mar-2025	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) SP02	**22-Jan-2025**	**24-Jan-2025**	05-Feb-2025	✓	**25-Jan-2025**	05-Feb-2025	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) SP02	**22-Jan-2025**	**24-Jan-2025**	05-Feb-2025	✓	**25-Jan-2025**	05-Feb-2025	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) Trip Blank	**20-Jan-2025**	**24-Jan-2025**	03-Feb-2025	✓	**25-Jan-2025**	03-Feb-2025	✓
Soil Glass Jar - Unpreserved (EP080) Trip Spike - 12, TSC - 12	**20-Jan-2025**	**24-Jan-2025**	03-Feb-2025	✓	**28-Jan-2025**	03-Feb-2025	✓
Soil Glass Jar - Unpreserved (EP080) SP02	**22-Jan-2025**	**24-Jan-2025**	05-Feb-2025	✓	**25-Jan-2025**	05-Feb-2025	✓

Quality Control Parameter Frequency Compliance

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

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	4	30	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

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

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

Appendix E

Appendix E – Lotsearch Aerials

Date: 15 Aug 2023

Reference: LS046930 EA

Address: Horwood Place, Parramatta, NSW 2150

Aerial Imagery 2023

Horwood Place, Parramatta, NSW 2150

Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 15 August 2023
0 25 50 75 100 Meters	© Aerometrex Pty Ltd	GDA 1994 MGA Zone 56	

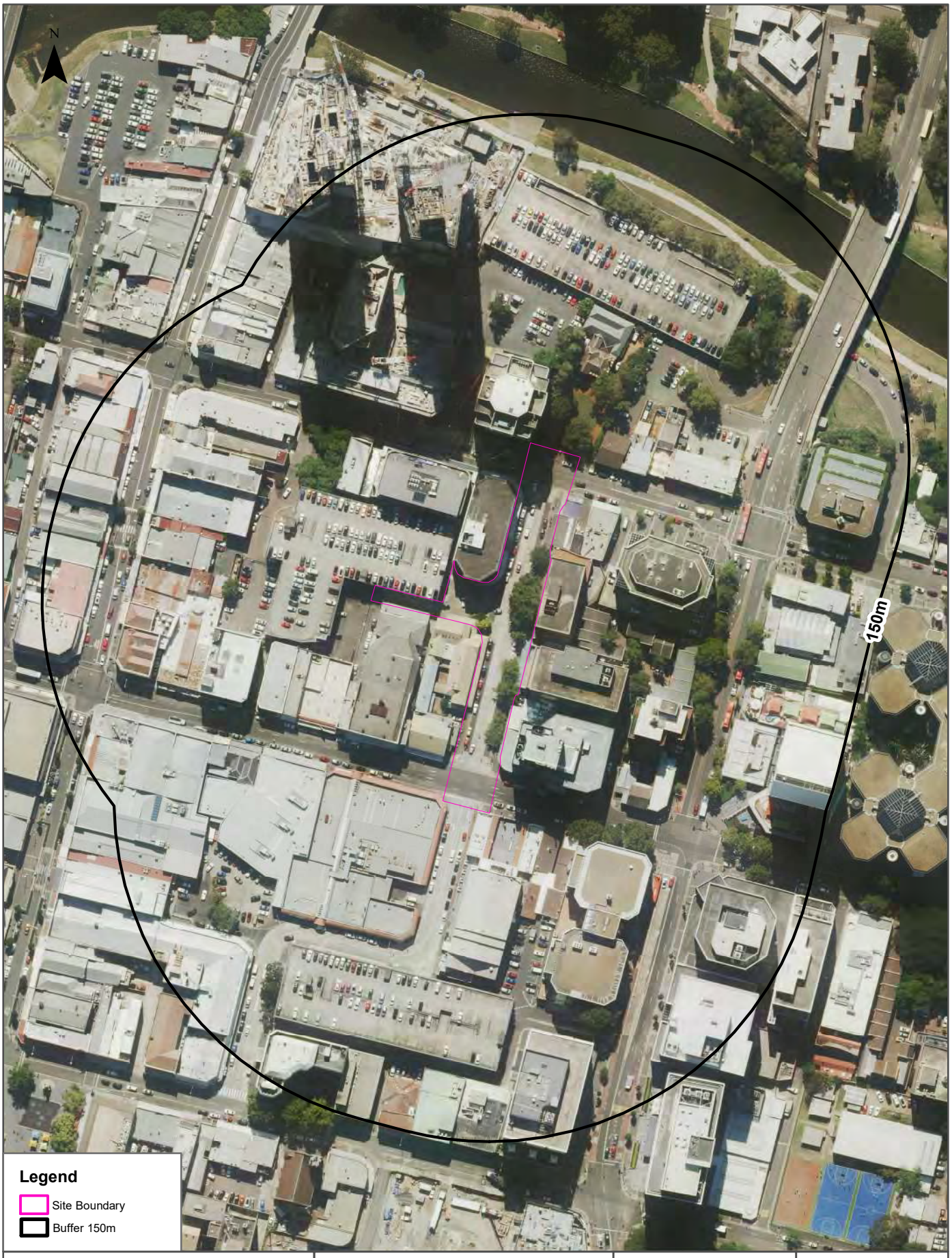
Aerial Imagery 2020

Horwood Place, Parramatta, NSW 2150

Data Source Aerial Imagery: © Aerometrex Pty Ltd	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

Aerial Imagery 2016

Horwood Place, Parramatta, NSW 2150



Aerial Imagery 2011

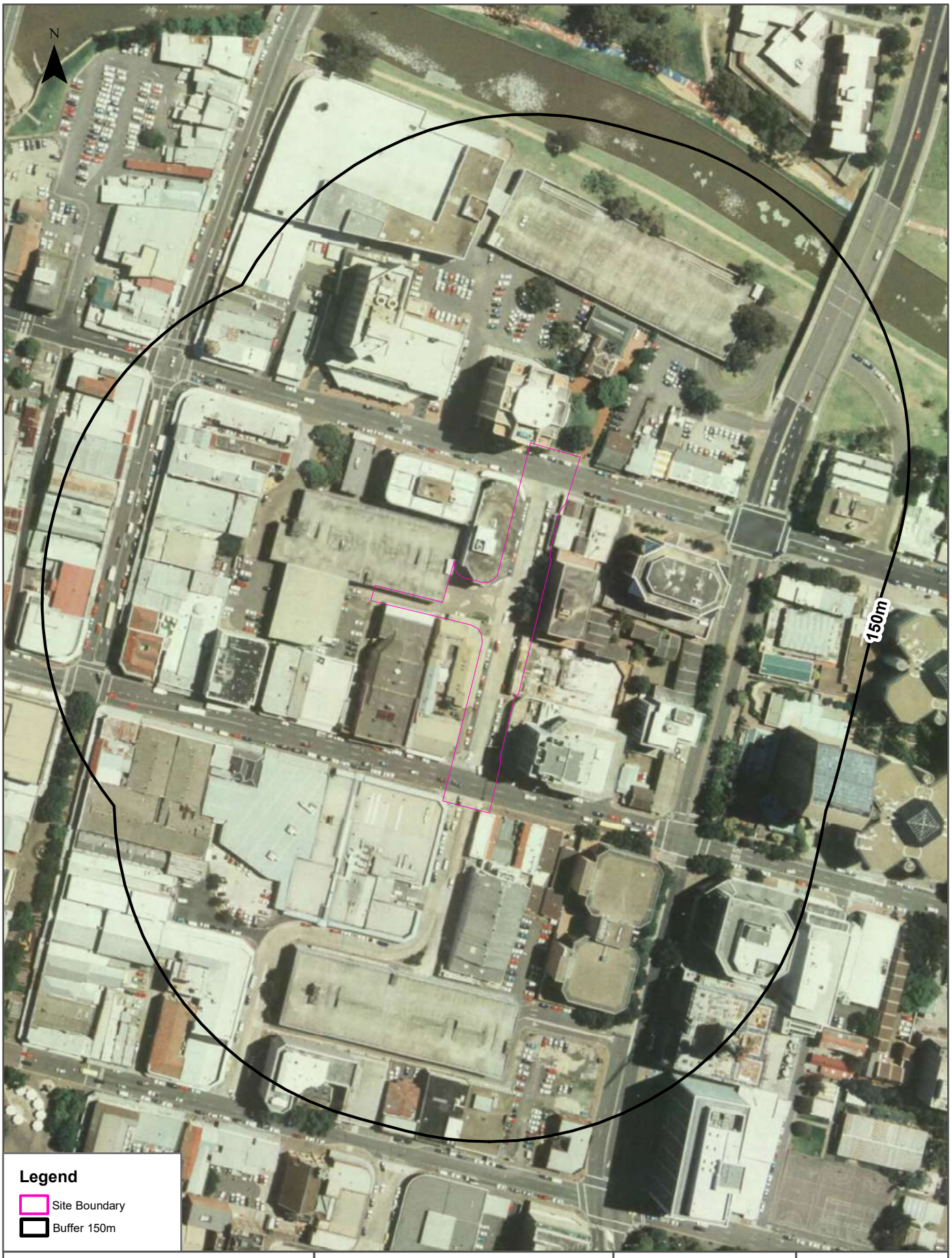
Horwood Place, Parramatta, NSW 2150

Aerial Imagery 2007

Horwood Place, Parramatta, NSW 2150

Aerial Imagery 2000

Horwood Place, Parramatta, NSW 2150



Aerial Imagery 1994

Horwood Place, Parramatta, NSW 2150

Scale: 0 25 50 75 100 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

Aerial Imagery 1991

Horwood Place, Parramatta, NSW 2150

Aerial Imagery 1986

Horwood Place, Parramatta, NSW 2150

Scale: 0 25 50 75 100 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

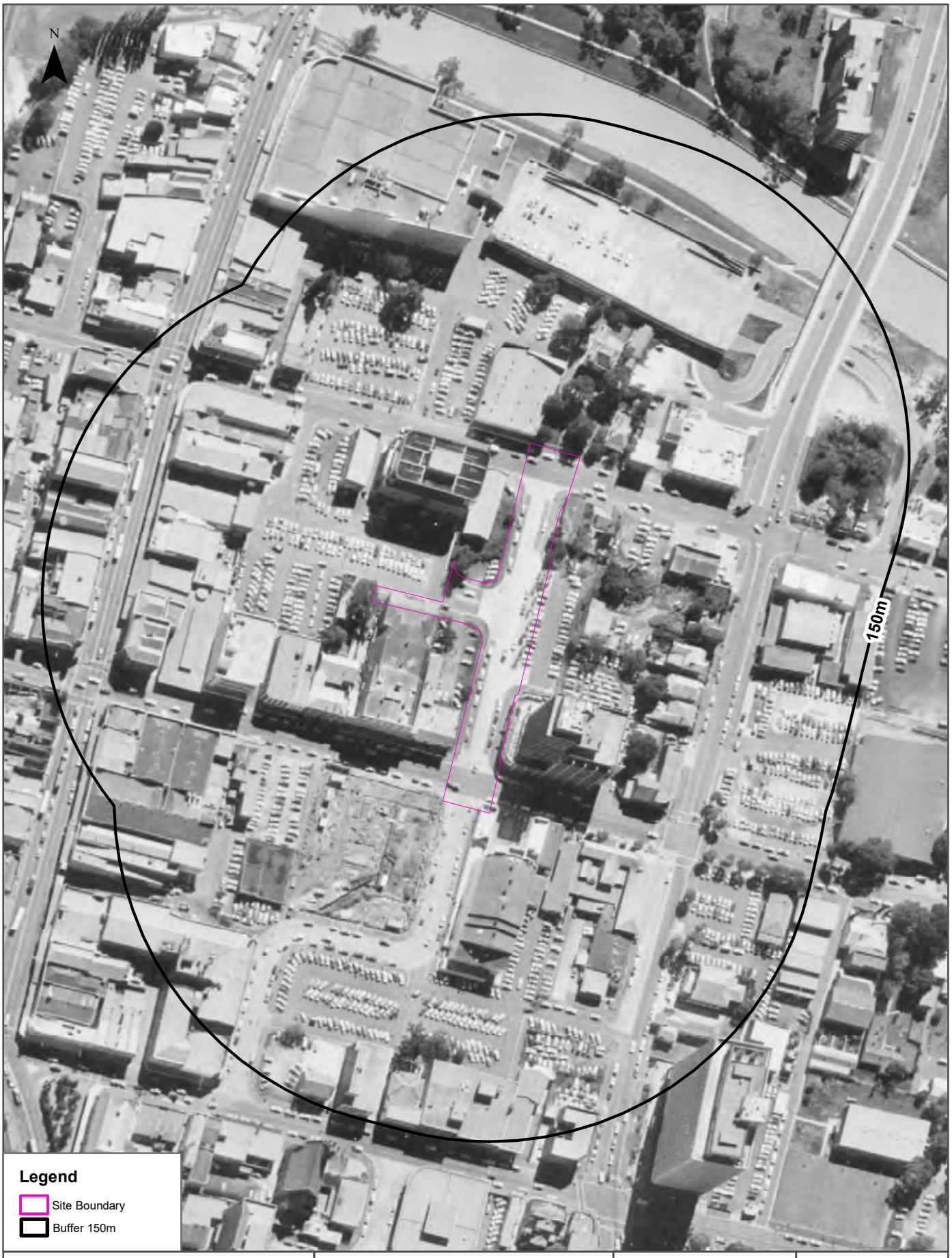
Aerial Imagery 1982

Horwood Place, Parramatta, NSW 2150

Scale: 0 25 50 75 100 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

Aerial Imagery 1978

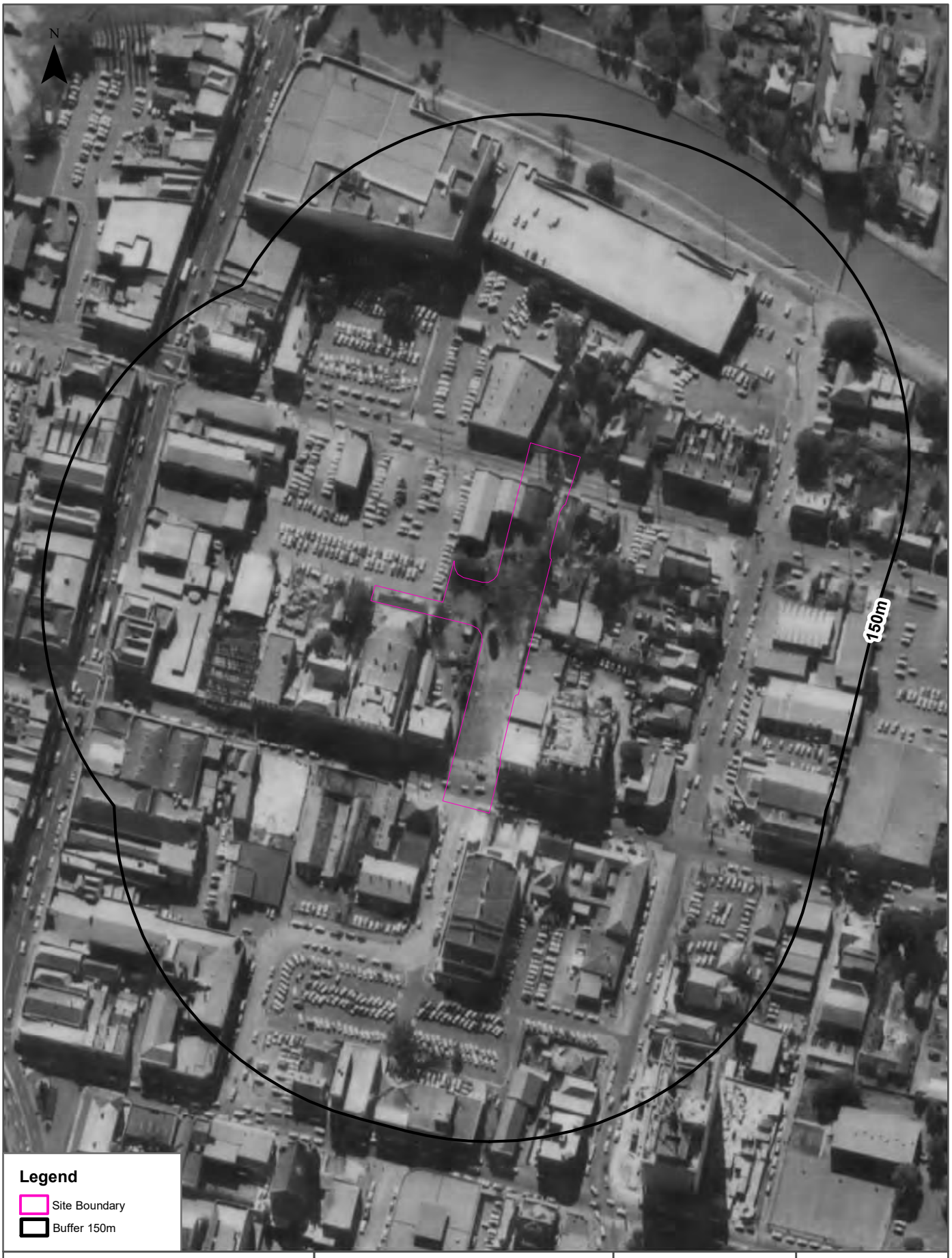
Horwood Place, Parramatta, NSW 2150



Scale: 0 25 50 75 100 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

Aerial Imagery 1970

Horwood Place, Parramatta, NSW 2150



Scale: 0 25 50 75 100 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

Aerial Imagery 1965

Horwood Place, Parramatta, NSW 2150

Scale: 0 25 50 75 100 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

Aerial Imagery 1961

Horwood Place, Parramatta, NSW 2150

Scale: 0 25 50 75 100 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

Aerial Imagery 1955, 1956

Horwood Place, Parramatta, NSW 2150

Scale: 0 25 50 75 100 Meters	Data Sources: Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

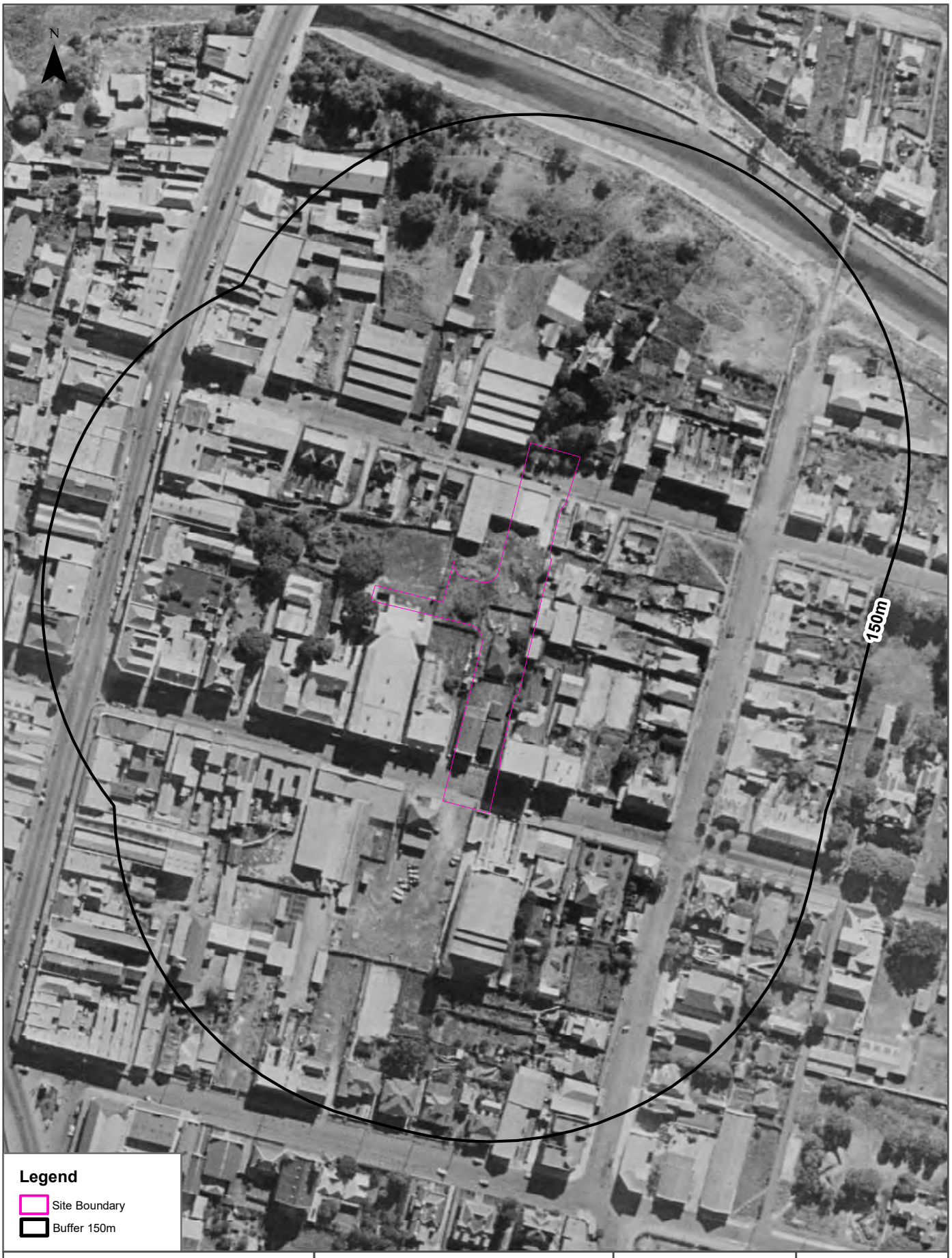
Aerial Imagery 1949

Horwood Place, Parramatta, NSW 2150

Scale:	Data Source Aerial Imagery: ©2023 Geoscience Australia	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

Aerial Imagery 1943

Horwood Place, Parramatta, NSW 2150



Scale: 0 25 50 75 100 Meters	Data Source Aerial Imagery: © Aerometrex Pty Ltd	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

Aerial Imagery 1930

Horwood Place, Parramatta, NSW 2150

Scale: 0 25 50 75 100 Meters	Data Sources: Aerial Imagery: © Geoscience Australia	Coordinate System: GDA 1994 MGA Zone 56	Date: 15 August 2023

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Appendix F

Appendix F – NSW EPA CLM Act Register

Background

A strategy to systematically prioritise, assess and respond to notifications under Section 60 of the Contaminated Land Management Act 1997 (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under Government Information (Public Access) Act 2009.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The Protection of the Environment Operations Act 1997 (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an incident management process to manage significant incidents (https://www.epa.nsw.gov.au/reporting-and-incidents/incident-management).

In many cases, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any significant risks for the community or environment. Such sites may still need to be cleaned up, but this can be done in conjunction with any subsequent building or redevelopment of the land. These sites do not require intervention under the CLM Act, and are dealt with through the planning and development consent process. In these cases, the EPA informs the local council or other planning authority, so that the information can be recorded and considered at the appropriate time (https://www.epa.nsw.gov.au/your-environment/contaminated-land/managing-contaminated-land/role-of-planning-authorities).

Where indications are that the contamination could cause actual harm to the environment or an unacceptable offsite impact (i.e. the land is 'significantly contaminated'), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site. If the reported contamination could present an immediate or long-term threat to human health NSW Health will be consulted. SafeWork NSW and Water NSW can also be consulted if there appear to be occupational health and safety risks or an impact on groundwater quality.

As such, the sites notified to the EPA and presented in the list of contaminated sites notified to the EPA are at various stages of the assessment and remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The list provides an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the person who notified the site.

The following questions and answers may assist those interested in this issue.

Frequently asked questions

Why does my land appear on the list of notified sites?

Your land may appear on the list because:

• the site owner and/or the polluter has notified the EPA under section 60 of the CLM Act
• the EPA has been notified via other means and is satisfied that the site is or was contaminated.

If a site is on the list, it does not necessarily mean the contamination is significant enough to regulate under the CLM Act.

Does the list contain all contaminated sites in NSW?

No. The list only contains contaminated sites that EPA is aware of. If a site is not on the list, it does not necessarily mean the site is not contaminated.

The EPA relies on responsible parties and the public to notify contaminated sites.

How are notified contaminated sites managed by the EPA?

There are different ways the EPA can manage notified contaminated sites. Options include:

• regulation under the CLM Act, POEO Act, or both
• notifying the relevant planning authority for management under the planning and development process
• managing the site under the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.

There are specific cases where contamination is managed under a tailored program operated by another agency (for example, the Resources & Geoscience's Legacy Mines Program).

What should I do if I am a potential buyer of a site that appears on the list?

You should seek advice from the seller to understand the contamination issue. You may need to seek independent contamination or legal advice.

The information provided in the list is indicative only and a starting point for your own assessment. Land contamination from past site uses is common, mainly in urban environments. If the site is properly remediated or managed, it may not affect the intended future use of the site.

Who can I contact if I need more information about a site?

You can contact the Environment Line at any time by calling 131 555 or by emailing info@environment.nsw.gov.au.

List of NSW Contaminated Sites Notified to the EPA

Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	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*.
Under Preliminary Investigation Order	The EPA has issued a Preliminary Investigation Order under s10 of the *Contaminated Land Management Act 1997*, to obtain additional information needed to complete the assessment.
Regulation under 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.

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.
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.
Contamination currently regulated under POEO Act	Contamination is currently regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA as the appropriate regulatory authority reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register.
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 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.

NSW EPA Records of Notified Contaminated Sites - Parramatta

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
PARRAMATTA	BP Service Station	435 Church STREET	Service Station	Regulation under CLM Act not required	-33.80498714	151.0056151
PARRAMATTA	Coleman Oval Embankment	Cnr of Pitt STREET and Maquarie STREET	Unclassified	Regulation under CLM Act not required	-33.80441625	150.9954841
PARRAMATTA	7-Eleven (former Mobil) Service Station	81 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.80919769	151.0142894
PARRAMATTA	Parramatta Park Toilet Block Demolition	The Cresent Toilet Block Parramatta PARK	Unclassified	Regulation under CLM Act not required	-33.81054034	150.9961968

Appendix G

Appendix G – NSW EPA POEO Act Register

POEO Search Results

Number	Name	Location
1563521	EQ CONSTRUCTIONS PTY LTD	331A-339 Church Street, PARRAMATTA, NSW 2123
3173541737	FUHUA JIANG	12 DARCY STREET, PARRAMATTA, NEW SOUTH WALES 2150
3173541030	JAVA GOLDEN ARC AUSTRALIA PTY LTD	312 CHURCH STREET, PARRAMATTA, NEW SOUTH WALES 2150
1513867	R.P HUANG & G.T HU	Shop 11b, Mayfield Plaza, 26 George Street, PARRAMATTA, NSW 2123
3173540839	Super Demolition Pty Ltd	10 DARCY STREET, PARRAMATTA, NEW SOUTH WALES 2150

POEO Search Results

Type	Status	Issued date	LastInspectionDate
s.91 Clean Up Notice	Issued	11-Apr-18	
Penalty Notice	Issued	18-Mar-25	
Penalty Notice	Issued	16-Feb-24	
s.91 Clean Up Notice	Issued	3-May-13	
Penalty Notice	Issued	1-May-24	

POEO Search Results

InspectionDueDate	ERADueDate	IssueDate	OrganisationFlag	OrganisationType

Section 91 Protection of the Environment Operations Act 1997

Clean-Up Notice

R.P HUANG & G.T HU

Trading as DRY CLEANERS ON GEORGE

ABN 65 920 194 196

Shop 11B Mayfair Plaza, 26 George Street

PARRAMATTA NSW 2123

Attention: Geoff Hu

Notice Number	1513867
File Number	FIL12/2097
Date	03-May-2013

NOTICE OF CLEAN-UP ACTION

BACKGROUND

The Accountable Party R.P Huang and G.T Hu trading as "The Dry Cleaners on George" conducts dry cleaning operations at Shop 11b, Mayfair Plaza, 26 George Street, PARRAMATTA NSW 2150 ("the premises").

On 30 April 2013, Mr Luke Formosa and Mr Roger De Keyzer conducted a site inspection of the premises. An excessive quantity of Perchloroethylene (PERC) contaminated dry cleaning waste were being stored inside the shop. There were about 8 (20L) containers stored on the premises, these were stacked on top of each other in a disorderly and inappropriate manner (see Addendum attachment).

This is a large stockpile of PERC waste and must be removed for legal disposal at an appropriately licensed waste facility.

DIRECTION TO TAKE CLEAN-UP ACTION

1. The Environment Protection Authority (EPA) directs R.P HUANG & G.T HU to take the following clean-up action:

- To engage the services of a licensed waste removalist company to remove all PERC waste at the premises. All PERC waste must be taken off "the premises" to an appropriately licensed waste facility by no later than **Friday 6 September 2013**.
- The EPA must be notified immediately after PERC waste is removed from "the premises". All PERC waste removed must be tracked using the EPA's online waste tracking system.

Clean-Up Notice

.....

Andrew Hawkins

Manager Chemicals Regulation Unit

Hazardous Materials, Chemicals & Radiation

(by Delegation)

INFORMATION ABOUT THIS CLEAN-UP NOTICE

- This notice is issued under section 91 of the Protection of the Environment Operations Act 1997.
- It is an offence against the Act not to comply with a clean-up notice unless you have a reasonable excuse.

Penalty for not complying with this notice

- The maximum penalty for a corporation is $1,000,000 and a further $120,000 for each day the offence continues. The maximum penalty for an individual is $250,000 and a further $60,000 for each day the offence continues.

Cost recovery from the person who caused the incident

- If you comply with this clean-up notice but you are not the person who caused the pollution incident to which the notice relates, you have a right to go to court to recover your costs of complying with the notice from the person who caused the incident.Other costs
- The Protection of the Environment Operations Act allows the EPA to recover from you reasonable costs and expenses it incurs in monitoring action taken under this notice, ensuring the notice is complied with and associated matters. (If you are going to be required to pay these costs and expenses you will later be sent a separate notice called a “Notice Requiring Payment of Reasonable Costs and Expenses”).

Continuing obligation

- Under section 319A of the Act, your obligation to comply with the requirements of this notice continues until the notice is complied with, even if the due date for compliance has passed.

Variation of this notice

- This notice may only be varied by subsequent notices issued by the EPA.

Section 91 Protection of the Environment Operations Act 1997

Clean-Up Notice

EQ CONSTRUCTIONS PTY LTD
ABN 47 608 789 162 ACN 608 789 162
43 Bridge Street
HURSTVILLE NSW 2220

Attention: Mr Bill Farrell

Notice Number	1563521
File Number	SF18/24201
Date	11-Apr-2018

NOTICE OF CLEAN-UP ACTION

BACKGROUND

1. The Environment Protection Authority ("EPA") has responsibility for the administration and enforcement of environment protection legislation including the *Protection of the Environment Operations Act 1997* ("POEO Act").
2. EQ Constructions PTY LTD is the occupier of 12-14 Phillip Street and 331A-339 Church Street, Parramatta, which comprises Lot 1 DP791693, Lot 2 DP791693, Lot 3 DP825045 and Lot A DP333263, also known as the Riverside Parramatta Development or "The Lennox" ("The Premises").
3. The Premises is located on land owned by Parramatta City Council which is being developed into a mixed use building including retail tenancies, Parramatta City Council civic buildings and a 38 storey residential tower ("the Development").
4. The Development is being carried out by PCC DevCo1 PTY LTD which is a joint venture between Parramatta City Council and LIDIS Group PTY LTD ("the Developer"). EQ Constructions has been engaged by the Developer to construct the Development under DA/171/2014 issued by Parramatta City Council on 21 May 2015.
5. Under the POEO Act the EPA is the Appropriate Regulatory Authority ("ARA") for works carried out by or on behalf or a local government authority.
6. On 14 March 2018, the EPA received a report from Parramatta City Council that dirty grey coloured water was being discharged from the Premises into the Parramatta River via a hose leading from an excavation on the premises ("the discharge incident").
7. Enquiries conducted by the EPA into the discharge incident revealed that the NSW Office of Water issued approval no 10BL065812 under Part V of the *Water Act 1912* to allow groundwater at the premises to be pumped or extracted for the purposes of dewatering the excavation at the premises. (the "Dewatering Approval").
8. The Dewatering Approval was issued on 2 March 2017 and was valid until 1 March 2018. An email dated 8 March 2018 from WaterNSW (formerly NSW Office of Water) acknowledges that the

dewatering approval expired on 1 March 2018 and permits dewatering to continue under the dewatering approval conditions until such time as a new dewatering approval is issued by the Department of Primary Industries.

9. Condition 2 of the Dewatering Approval requires that dewatering activities at the premises be conducted in accordance with the document entitled Riverside Development, Dewatering Management Plan, 12-14 Phillip Street Parramatta NSW by ADG Consulting Report ADG730.16 dated February 2017 ("the Dewatering Management Plan").
10. The Dewatering Management Plan requires that extracted groundwater be passed through a groundwater treatment system ("the treatment system"). When water from the treatment system meets the discharge criteria specified in the Dewatering Management Plan it is discharged directly to the Parramatta River.
11. On 29 March 2018, the EPA received an Incident Investigation Report into the discharge incident ("the Investigation Report") which provided details that sediment laden water had been discharged from the premises into the Parramatta River. The Investigation Report concluded that the root cause of the incident was due to the submersible pumps within the excavation being lowered into sediment laden water while the flow rate of the pumps was not sufficiently restricted to allow for settlement time within the treatment system clarifier.
12. On 3 April 2018, the EPA received further reports through its Environment Line from concerned passers-by regarding discharges to the Parramatta River from the premises. As a result the EPA required that all discharges to the Parramatta River from the premises cease regardless of treatment level. On the afternoon of 5 April 2018, EQ Constructions PTY LTD sought and received approval from Parramatta City Council to allow the dewatering discharge to be directed to council's stormwater system.
13. At an inspection conducted on the morning of 6 April 2018, EPA Authorised Officers observed a significant amount of grey coloured sediment ("sandstone fines") accumulated behind a silt curtain within the Parramatta River adjacent to the Premises. EPA Authorised Officers also observed that a significant amount of this same sandstone fines had breached the silt curtain and made its way into the body of the Parramatta River. The sandstone fines deposited in the river are consistent with the sandstone being excavated from the Development site.
14. Due to admissions by representatives of EQ Constructions, the observations of Authorised Officers and information contained in the Investigation Report, as well as photos and videos collected by witnesses, the EPA is satisfied that a "pollution incident", as defined in of the POEO Act has occurred.
15. Where a pollution incident has occurred, s. 91 of the POEO Act provides that the appropriate regulatory authority may, by notice in writing, do either or both of the following:

    (a) direct an owner or occupier of premises at or from which the authority reasonably suspects that a pollution incident has occurred or is occurring,
    (b) direct a person who is reasonably suspected by the authority of causing or having caused a pollution incident,

    to take such clean-up action as is specified in the notice and within such period as is specified in the notice.

DIRECTION TO TAKE CLEAN-UP ACTION

Clean-Up Notice

The Environment Protection Authority (EPA) directs EQ CONSTRUCTIONS PTY LTD to take the following clean-up action:

- By 5pm Friday 13 April 2018 submit a clean-up action plan that satisfies, but is not limited to, the following criteria:
    1. Engage the services of a suitably qualified and experienced provider to develop and carry out a clean-up plan to remove the sandstone fines pollution from the Parramatta River;
    2. Provide details of the proposed method of removal of the sandstone fines;
    3. Provide details of the proposed method of disposal of the sandstone fines;
    4. Provide details of the proposed access points to the Parramatta River that will be used to carry out the clean-up and how this defined access point will be adhered to during the clean-up action.

All proposed clean-up actions should ensure that any further damage to the aquatic and foreshore environments of the Parramatta River is prevented.

Once the EPA is satisfied that the clean-up action plan will achieve clean-up of the sandstone fines in the river with minimal disturbance to the surrounding aquatic and foreshore environment this notice will be amended to include specific actions and time frames by which those actions must be carried out.

The clean-up action plan is to be submitted by email to: **sydney.industry@epa.nsw.gov.au** and copied to **jane.burgett@epa.nsw.gov.au**

FEE TO BE PAID

- You are required by law to pay a fee of $535 for the administrative costs of issuing this notice. An invoice for the fee has been attached to this notice.
- It is an offence not to pay this fee. However you can apply for an extension of time to pay the fee or for the fee to be waived. At the end of this notice there is information about how and when to pay the fee and how to apply for an extension or a waiver of the fee.

.....

Mark Carey

Acting Unit Head

Metropolitan - Sydney Industry

(by Delegation)

Clean-Up Notice

INFORMATION ABOUT THIS CLEAN-UP NOTICE

- This notice is issued under section 91 of the Protection of the Environment Operations Act 1997.
- It is an offence against the Act not to comply with a clean-up notice unless you have a reasonable excuse.

Penalty for not complying with this notice

- The maximum penalty for a corporation is $1,000,000 and a further $120,000 for each day the offence continues. The maximum penalty for an individual is $250,000 and a further $60,000 for each day the offence continues.

Cost recovery from the person who caused the incident

- If you comply with this clean-up notice but you are not the person who caused the pollution incident to which the notice relates, you have a right to go to court to recover your costs of complying with the notice from the person who caused the incident.

Deadline for paying the fee

- The fee must be paid by **no later than 30 days after the date of this notice**, unless the EPA extends the time to pay the fee, or waives the fee.

How to pay the fee

- Possible methods of payment are listed on the last page of the attached invoice/statement.
- Please include the payment slip from the attached invoice/statement with your payment.

How to apply for an extension of time to pay/waive the fee

- Any application for and extension of time to pay the fee or for the fee to be waived should be made in writing to the EPA. The application should set out clearly why you think your application should be granted.

Other costs

- The Protection of the Environment Operations Act allows the EPA to recover from you reasonable costs and expenses it incurs in monitoring action taken under this notice, ensuring the notice is complied with and associated matters. (If you are going to be required to pay these costs and expenses you will later be sent a separate notice called a “Notice Requiring Payment of Reasonable Costs and Expenses”).

Continuing obligation

- Under section 319A of the Act, your obligation to comply with the requirements of this notice continues until the notice is complied with, even if the due date for compliance has passed.

Variation of this notice

- This notice may only be varied by subsequent notices issued by the EPA.

Appendix H

Appendix H – DP (2025b) DSI, QA/QC Assessment

Appendix H

Field Procedures QA/QC

The quality and appropriateness of field procedures were assessed by the following QA/QC measures as summarised in *Table H-1*.

Table H-1 Field QA/QC Assessment

Measure	Outcome	Comment
Experienced Sampling Team	Pass	The Appendix K, Table 2 of the DP (2025b) *DSI* report indicates experienced sampler used.
Media Sampled	Pass	Fill and natural soils sampled
Intrusive sampling method appropriate	Pass	Arcadis understands the test pits TL01 to TL06, and TL09 to TL11, samples were collected directly from the following the completion of archaeological testing. For test locations TL07, TL08, TL12 and TL13, samples were collected via manual hand auger. Deeper natural soil samples were collected from the three boreholes (TL01-d, TL05-d and TL06-d) via mechanical drill rig.
Critical Locations Sampled	Pass	Combination of systematic grid and judgemental sample locations, targeting proposed deeper disturbance works, indicates representative samples from across the Site and meets the minimum requirements for Site characterisation (NSW EPA, 2022).
Calibration of Field Equipment	Non-compliance	Appendix F of the DP (2025b) *DSI* indicates the PID was calibrated prior to use on site. Arcadis notes, the calibration certificates were not provided the report to verify.
Completed field logs attached	Pass	Field logs completed in general accordance with AS 1726:2017 and attached to Appendix J of the DP (2025b) *DSI* report.
Duplicate Replicate Frequency	Non-compliance	Intra laboratory duplicates were collected and analysed at the minimum required rate of 1/20 or 5%, indicating acceptable rates of replicate frequency. These additional samples were analysed to validate the accuracy and precision of the data. However, the duplicate sample analysis was limited to metals (8) and PAH, providing representative analysis or inorganics and organics, however, omitted PFAS duplicates, which is requirement of the HEPA (2025).
Triplicate Replicate Frequency	Non-compliance	Inter laboratory duplicates were not collected or analysed, which is a non-compliance with the NSW EPA (2022) and the HEPA (2025).
Decontamination / Cross Contamination	Non-compliance	Appendix F of the DP (2025b) *DSI* indicates dedicated nitrile gloves were worn for each sample location to prevent cross contamination between sample locations. However, rinsate samples were not collected to verify.
Sample Handling and Preservation	Pass	Samples were immediately placed into sample containers provided by the laboratory and immediately stored on ice upon collection. Glass jars were used to test for the whole suite of COPCs for soil, plastic containers for PFAS and plastic zip lock bags for asbestos. Chemical/PFAS Samples were kept chilled and transported to the laboratory under CoC documentation.

Appendix H

Measure	Outcome	Comment
		Details of the sample transportation and handling can be found on the CoC and Sample Receipt Notification (SRN) documentation (*Appendix A)*.
Chain of Custody (CoC)	Pass	Samples were transported to the laboratory under a completed CoC. Information on the CoC included: staff details, sample identifier, sample matrix, collection date, analyses to be performed, sample release date and sample received date. CoCs are provided in Appendix I of the DP (2025b) *DSI* report in *Appendix A*.
Field Blank	Non-compliance	A field blank was not collected or analysed for PFAS. Hence, the potential for cross contamination during sampling of PFAS cannot be verified.
Rinsate	Non-compliance	A rinsate sample was not collected. Hence, the potential for cross contamination cannot be verified.
Trip Blank	Pass	A soil trip blank was used on each day of soil sampling (TB1-TB3) and was submitted to the primary laboratory for analysis. These samples were analysed to assess if the samples were exposed to external contamination during transit from the Site to the laboratory. All analytes in the trip blanks were reported as non-detect by the primary laboratory confirming that volatile compounds were not subject to cross contamination (*Table 4)*.
Trip Spike	Pass	A soil trip blank was used on each day of soil sampling and was submitted to the primary laboratory for analysis. Trip spikes (TS1-TS3) reported recovery of volatiles within an acceptable range indicating samples were stored and transported appropriately to minimise release of any volatiles. The results for the trip spikes are shown in *Table 5.*

Laboratory QA/QC

The following table presents a review of relevant laboratory QA/QC procedures and measures, to enable an assessment of overall data quality. The detailed QA/QC reports from the primary and secondary laboratories are provided in *Table H-2.*

Table H-2 Laboratory QA/QC Assessment

Measure	Outcome	Comment
NATA Accreditation	Pass	Primary Laboratory: Envirolab – NATA Accreditation number is 2901. The site number for this accreditation is 2894. Accredited for compliance with ISO/IEC 17025. Secondary Laboratory: Not used
Critical samples Analysed	Pass	Samples submitted for analysis received intact and analysed by the primary laboratory.
Analysis addresses COPC	Pass	Samples analysed were appropriate considering the CoPC. Arcadis notes, PFAS was not analysed at TL09. However, samples from adjacent test pits did not indicate unacceptable PFAS concentrations.

Appendix H

Measure	Outcome	Comment
Holding Time	Pass	Samples were analysed and extracted within the recommended holding times.
Limits of Reporting	Pass	Laboratory LoRs were all below the respective criteria and considered suitable for the purposes of the DSI.
Intra-laboratory Duplicate	Pass	The following intra-laboratory blind duplicate soil samples were submitted to the primary laboratory for analysis: • BD1/20250129 – duplicate for TL06/0.8-1.0 • BD2/20250205 - duplicate for TL03/0.1-0.2 • BD01/20250217 – duplicate for TL08/0.3-0.5 RPDs reported for the intra-laboratory soil sample were generally consistent with the primary sample results except for copper, Benzo(a)pyrene, Fluoranthene, Phenanthrene, Pyrene and PAHs (Sum of positives). The results for copper were within one order of magnitude, and other exceedances due to non-detects above the laboratory LoR. However, the highest result should be considered when comparing against the Site assessment criteria. All primary and duplicate results were below the Site Assessment Criteria, therefore acceptable. Intra-laboratory duplicate results for soil are presented in *Table 3*.
Inter-laboratory Duplicate	Non-compliance	Representative triplicate samples were not collected or analysed. The duplicate RPD results, and laboratory Triplicate results (TL1 – Triplicate and TL11 – Triplicate) generally indicate consistent results, therefore comparability of the samples collected and analysed are considered generally acceptable.
Laboratory Method Blank	Pass	Laboratory method blanks indicated that key contaminants of interest were not detectable at levels above the relevant standard primary quantitation limits (PQL)/LoR.
Laboratory Duplicate	Pass	The reported laboratory RPDs were within acceptable ranges, indicating acceptable precision.
Percent Recoveries of Spikes and Surrogates	Pass	The reported laboratory spikes and surrogate results were within acceptable ranges. Duplicate analyses and spatial distribution of results indicate data set appear to be as expected.

Data Quality Summary

A key objective of the data quality assessment is to provide a consistent approach to evaluation of whether the DQO of the project have been achieved. The following table summarises the outcomes of the DQOs and associated data quality assessment outcomes.

Table H-3 Data Quality Assessment Summary

DQO	Evaluation
Documentation Completeness	CoC forms, logs were complete and appropriate. However, calibration certificates were not provided. However, the DP (2025b) *DSI* report confirms the PID was calibrated on each day of sampling.
Data Completeness	All samples were received by the laboratory and analytical results were fully reported, including laboratory QA/QC.

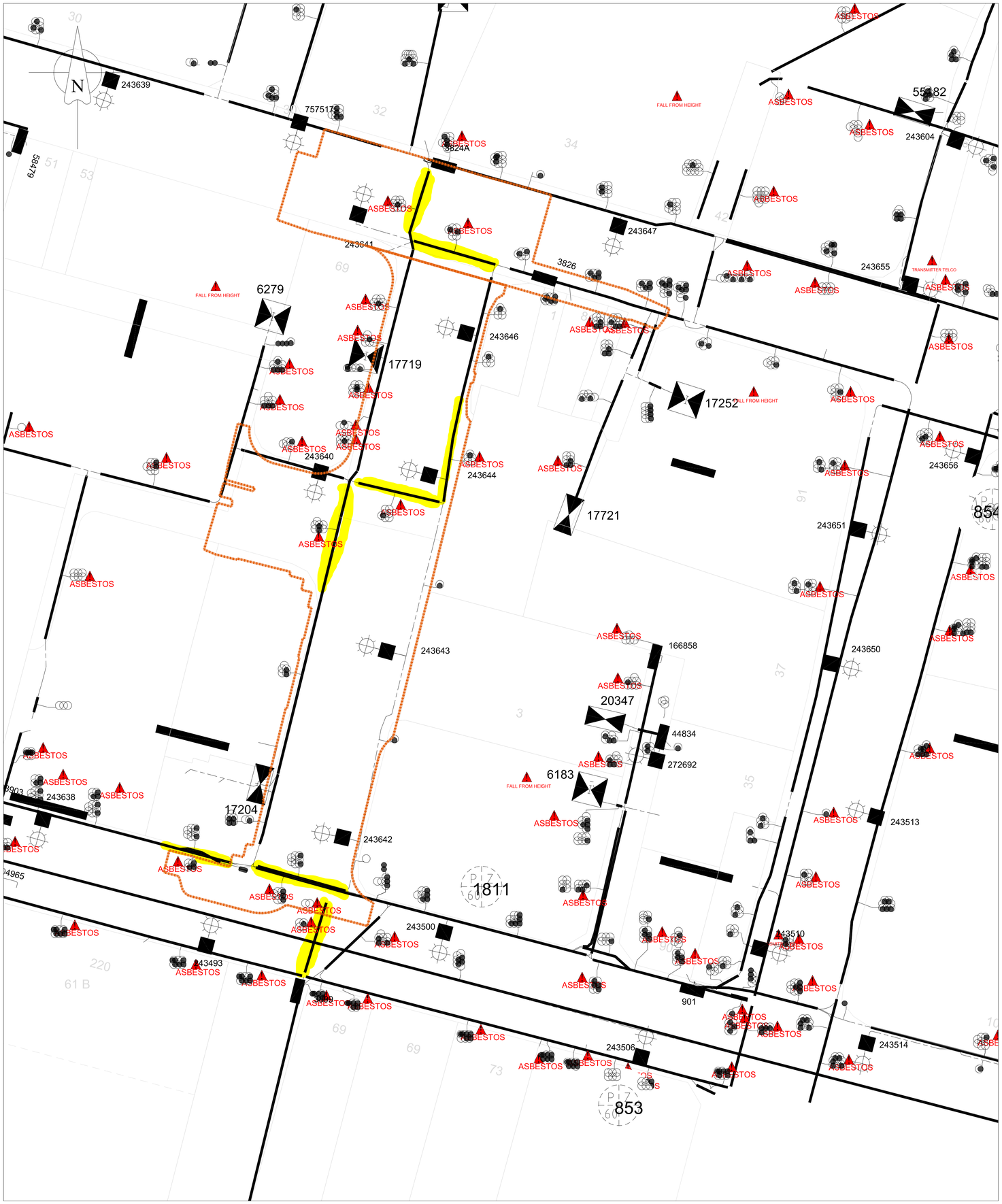
Appendix H

DQO	Evaluation
Data Comparability	DP standard operating procedures, Australian Standards, and industry best practice were generally followed during sampling. Arcadis notes, duplicate samples for PFAS and representative triplicate samples were not collected or analysed. The duplicate RPD results, and laboratory Triplicate results (TL1 – Triplicate and TL11 – Triplicate) generally indicate consistent results, therefore comparability of the samples collected and analysed are considered generally acceptable. Consistent field conditions and similarly trained staff were used during sampling. Consistent use of primary laboratory for the current analytical assessment.
Data Representativeness	Samples in sampling plan collected and analysed and the trip blank were reported as non-detect by the primary laboratory. The frequency of laboratory blanks was acceptable, and the results were within specified ranges.
Precision	No unexpected anomalies were observed, and duplicate data was generally within acceptable ranges.

In summary, the QA/QC measures generally conformed with relevant procedures, methodologies, and acceptance criteria. The data was considered to be representative of site conditions and chemical concentrations in the environmental media sampled and are therefore suitable for use for site characterisation in the DP (2025b) *DSI*.

Appendix I

Appendix I – Utility Survey and Asbestos Conduits/Ducts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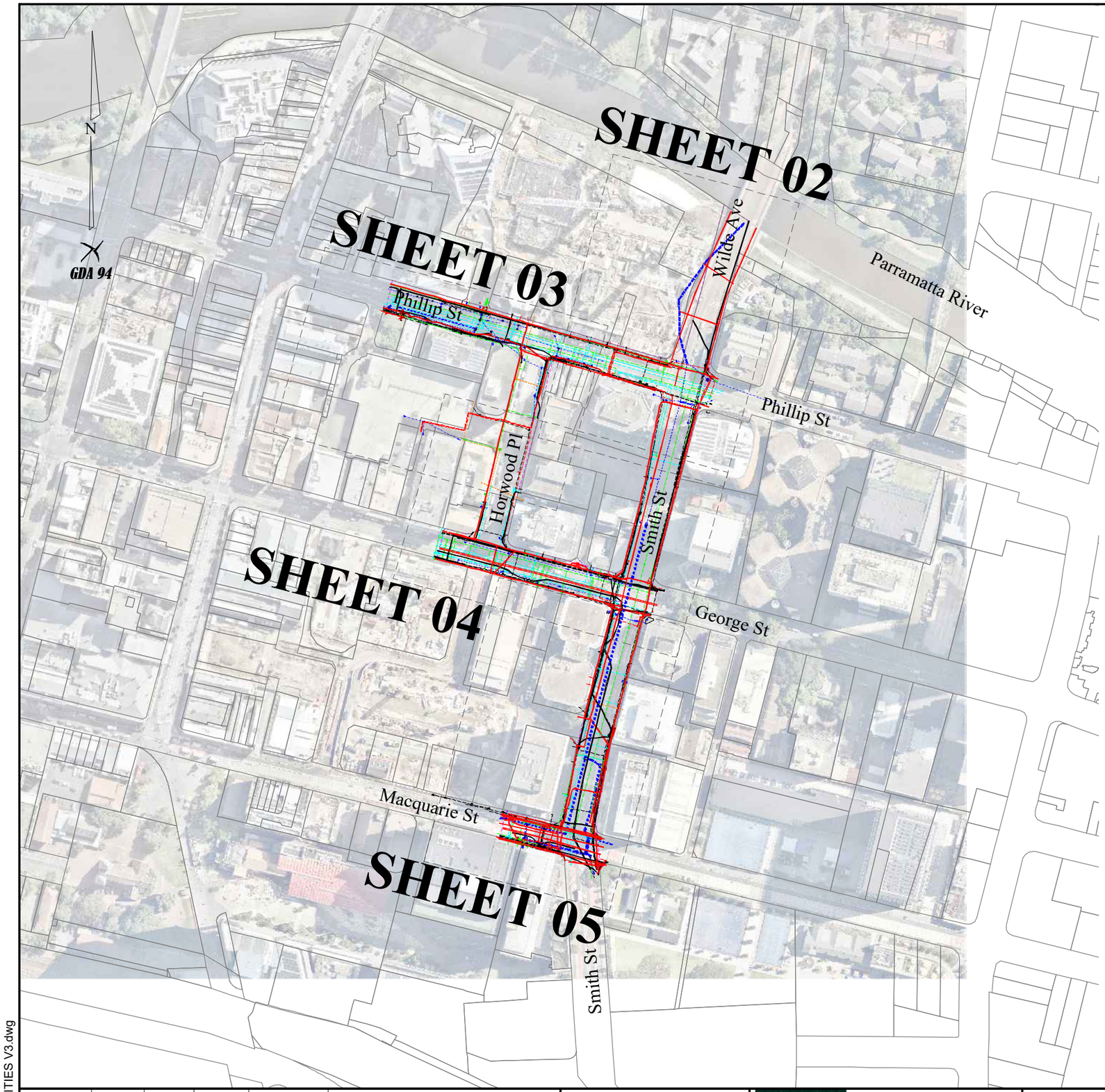
FALL FROM HEIGHT
TRANSMITTER TELCO
ASBESTOS

SITE PLAN



Electronic Subsurface Utility Information (SUI) detection techniques such as EM & GPR are influenced by Sub-Surface Utility (SSU) type & ground conditions. Best practice detection rates are 80-90% and depth accuracy ranges between +/- 300mm for 90% of readings with significant outliers for the remainder.

Quality levels (as per AS-5488-2019) are mentioned for each point. Please note that Quality Levels may vary for different points of a string. Please see the definitions of the Quality Levels for more information.

Telstra depths are indicative and to be used for design purposes only.
Telstra Guidelines regarding potholing must be followed prior to any construction works.
Telstra pipes, conduits and banks may contain optical fibres from other asset owners (e.g. Optus).

Electricity cables are not necessarily enclosed in conduits and are not necessarily covered with markers, tape or other indicators of their presence.

In some cases, depth and location of some pipe inside large chambers could not be measured accurately due to the shape of the chambers. In these cases, those specific points are marked as QL-B.

Storm Water assets are QL-A at SW Pits unless the pipes have not been accessible (pits full of dirt, rusted gatic lids, etc.) and QL-C between pits. Storm Water pipes have been shown where the judgment could be made based on the location of the SW surface features. In some areas, it's impossible to work out the alignments as the SW pipes bend and change directions. If the exact route of the SW pipes is needed for design purposes, a comprehensive drainage survey using CCTV techniques is required to confirm the alignments and connectivity.

"Measurements of all drainage and sewer pipes are to Invert Level, unless otherwise stated".
Not all of kerb outlets are shown in this drawing.

All diameters are in millimetres(mm) unless otherwise specified.
Potholing is recommended to confirm the depth & position of all utilities located.

DURKIN Utility location use BEFORE YOU DIG AUSTRALIA as one source if information only when locating utilities.

It remains the responsibility of the company and or individual conducting physical works to ensure an up to date version of BEFORE YOU DIG AUSTRALIA plans is consulted and available on site. Physical works may include, but not limited to, excavating, boring (horizontal or vertical) and drilling.

This plan shows a representation of a 3d utility model: UTIL D22868 UTILITIES V2 that should be viewed in a CADD Environment to interpret the 3d information.

This utility map has been generated for design purposes only. It needs to be printed in colour and at the specific page size noted in table on bottom of the page. Failure to do this will void all information indicated for this job.

Some utilities are shown outside of scope and these are shown as reference only. Other utilities may exist outside of scope and are not shown on this plan.

UTIL D22868 UTILITIES V3.dwg

DRAWING NUMBER	STATUS	VERSION	DATE	SPATIAL DATA PROCESSOR	AMENDMENT
D22868-UT-01	*FOR REVIEW*	V1	2023/07/13	CC	-
D22868-UT-01	*FOR REVIEW*	V2	2023/10/10	CC	add utility data - Auctioneer Ln

NOT TO SCALE

CO-ORDINATE SYSTEM: GDA 1994 (MGA Zone 56)
HEIGHT DATUM: AHD 71
FILE NAME: UTIL D22868 UTILITIES V2
DBYD ENQUIRY: BYDA DATE: 29-MAY-23
APPROVED: CR DATE: 13-JUL-23

DURKIN
DURKIN Construction Pty Ltd
3/50-52 Derby Street
Silverwater NSW 2128
Ph (02) 9712 0308
Fax (02) 9712 0308
www.durkinconstruction.com.au

UTILITIES:	MR/BS	DATE: 08-OCT-23
SURVEYED:	AF/MP/DH/MP	DATE: 08-OCT-23
COMPILED:	CC	DATE: 10-OCT-23
REVIEWED:	CR	DATE: 10-OCT-23

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City of Parramatta Council

Civil Link Block 3, Parramatta, NSW 2150

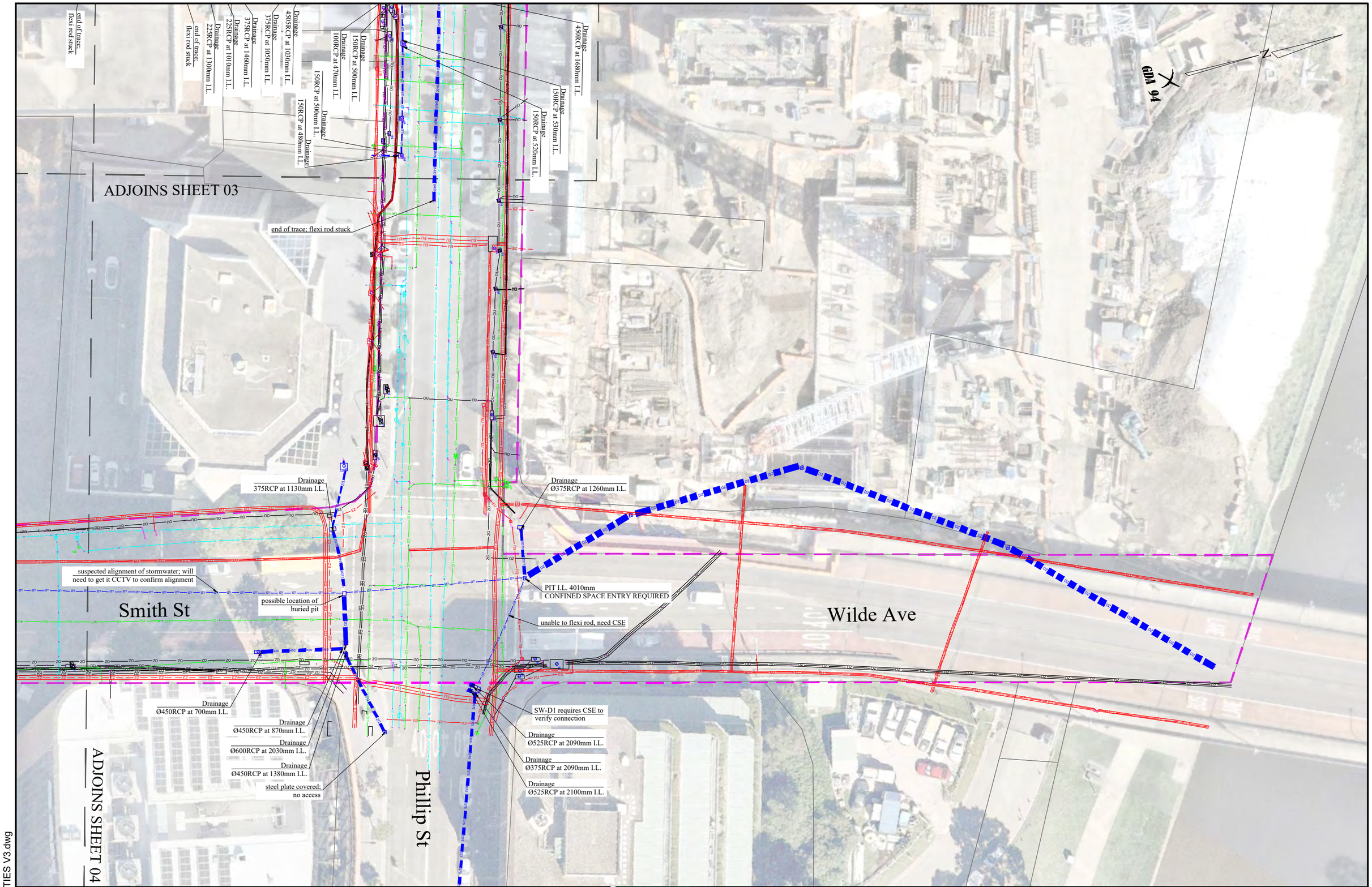
UTILITY PLAN

DRAWING NUMBER: **D22868-UT-01**

DRAWING STATUS: **FOR REVIEW** VERSION: V2

No. of SHEETS: 05

SHEET No.: 01



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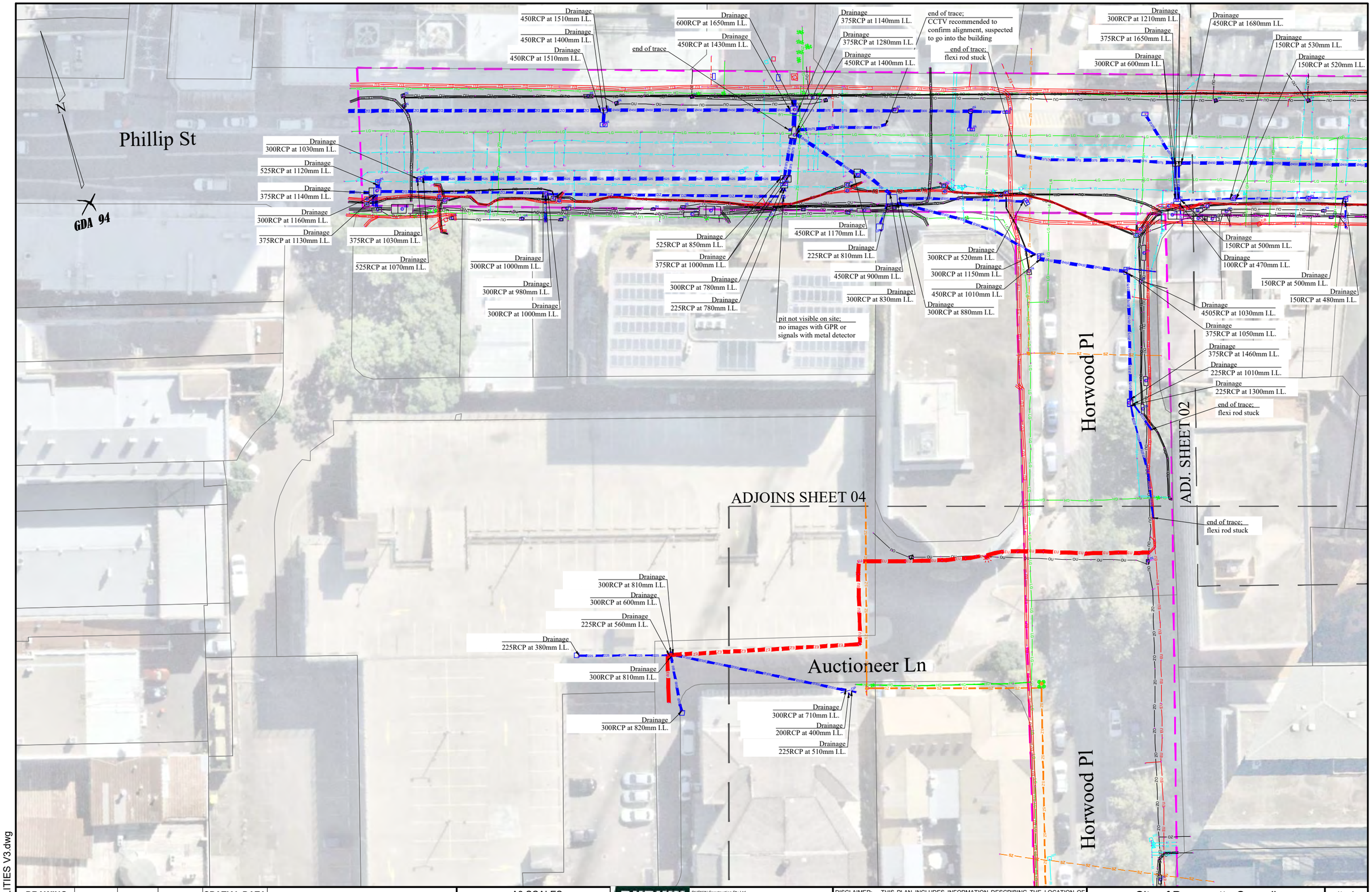

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No. of SHEETS 05

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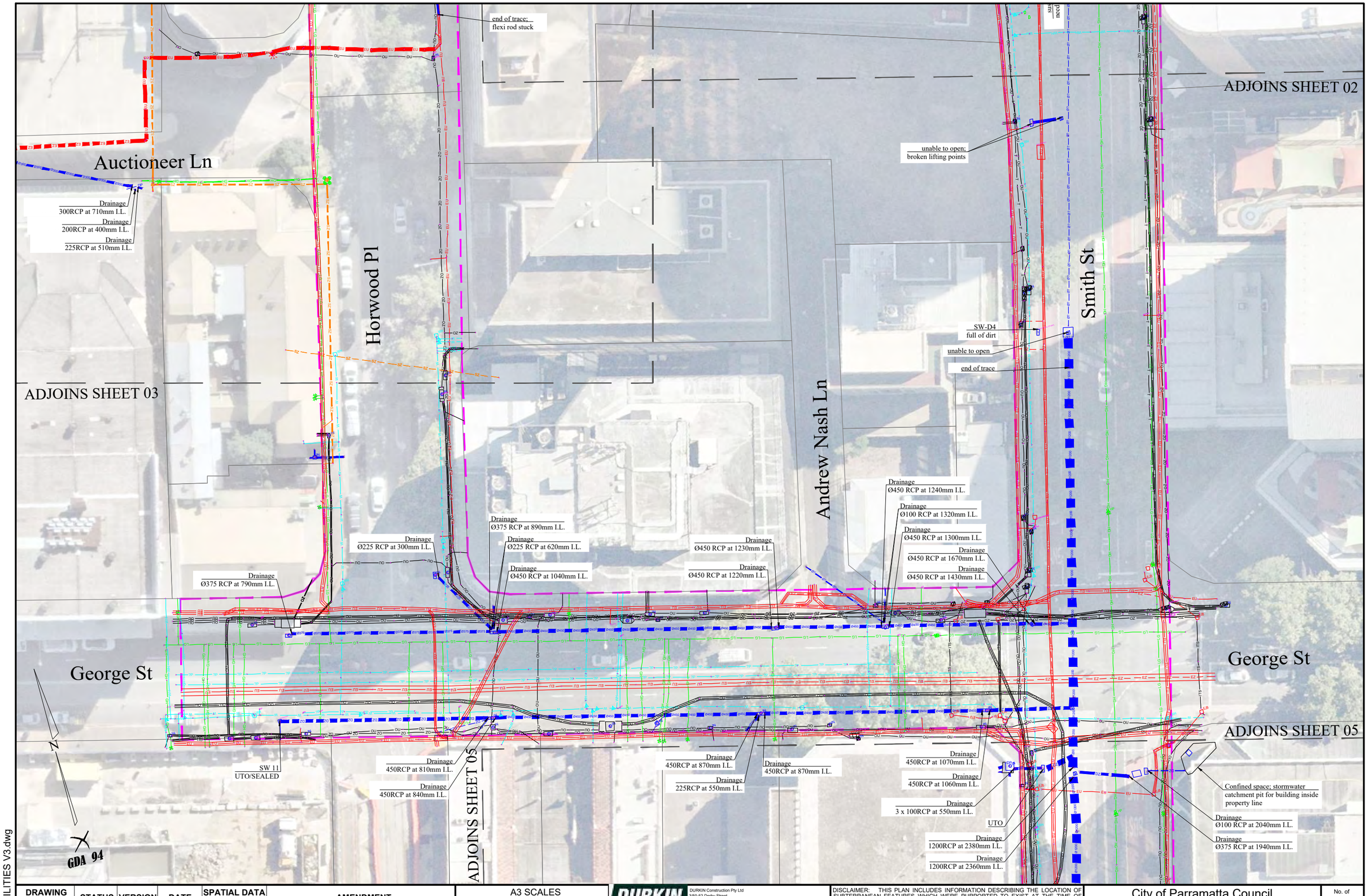

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NOT FOR CONSTRUCTION

City of Parramatta Council

Civil Link Block 3, Parramatta, NSW 2150

UTILITY PLAN

DRAWING NUMBER: **D22868-UT-01**

DRAWING STATUS: **FOR REVIEW** VERSION: V2

No. of SHEETS: 05

SHEET No.: 04

GDA 94

Macquarie St

Smith St

ADJOINS SHEET 04

Drainage
Ø225RCP at 1170mm I.L.

Drainage
Ø450RCP at 2270mm I.L.

Drainage
Ø225RCP at 1150mm I.L.

Drainage
Ø1200RCP at 3250mm I.L.

Drainage
Ø225RCP at 1250mm I.L.

Drainage
Ø375RCP at 2050mm I.L.

Drainage
Ø450RCP at 2270mm I.L.

Drainage
Ø525RCP at 2300mm I.L.

Drainage
Ø900RCP at 2320mm I.L.

Drainage
Ø525RCP at 2320mm I.L.

Drainage
Ø900RCP at 2350mm I.L.

CSE required; CCTV recommended; unable to trace

Drainage
Ø900RCP at 2950mm I.L.

Drainage
Ø225RCP at 1350mm I.L.

Drainage
Ø1200RCP at 3130mm I.L.

PIT FOD; no visible pipes

end of trace

Drainage
Ø1050RCP at 3250mm I.L.

Confined space entry required; unable to push flexi rod, gets stuck straight away; CCTV recommended

Drainage
Ø750RCP at 2640mm I.L.

Drainage
Ø600RCP at 2600mm I.L.

Drainage
Ø600RCP at 2420mm I.L.

Drainage
Ø600RCP at 2420mm I.L.

CSE required; CCTV recommended

Drainage
Ø600RCP at 2500mm I.L.

Drainage Culvert
1800W x 600H at 3400mm I.L.

Drainage
Ø1200RCP at 3300mm I.L.

Drainage
Ø1200RCP at 2590mm I.L.

Drainage
Ø100RCP at 810mm I.L.

Drainage
Ø1200RCP at 2480mm I.L.

Drainage
Ø900RCP at 2470mm I.L.

Drainage
Ø1200RCP at 2500mm I.L.

Drainage
Ø1200RCP at 2340mm I.L.

Drainage
Ø825RCP at 1390mm I.L.

Drainage
Ø225RCP at 2360mm I.L.

Drainage
Ø825RCP at 1630mm I.L.

Drainage
Ø255RCP at 2620mm I.L.

Drainage
450RCP at 870mm I.L.

Drainage
225RCP at 550mm I.L.

Drainage
450RCP at 870mm I.L.

3 x 100RCP at 550mm I.L.

Drainage
1200RCP at 2360mm I.L.

Drainage
1200RCP at 2380mm I.L.

Drainage
450RCP at 1066mm I.L.

Drainage
450RCP at 1070mm I.L.

Drainage
Ø375 RCP at 1940mm I.L.

Drainage
Ø100 RCP at 2040mm I.L.

Confined space: stormwater catchment pit for building inside property line

UTIL D22868 UTILITIES V3.dwg

DRAWING NUMBER	STATUS	VERSION	DATE	SPATIAL DATA PROCESSOR	AMENDMENT
D22868-UT-01	*FOR REVIEW*	V1	2023/07/13	CC	-
D22868-UT-01	*FOR REVIEW*	V2	2023/10/10	CC	add utility data - Auctioneer Ln

A3 SCALES
0 5 10 15 20
SCALE 1:500m

CO-ORDINATE SYSTEM: GDA 1994 (MGA Zone 56)
HEIGHT DATUM: AHD 71
FILE NAME: UTIL D22868 UTILITIES V2
DBYD ENQUIRY: BYDA DATE: 29-MAY-23
APPROVED: CR DATE: 13-JUL-23

DURKIN
DURKIN Construction Pty Ltd
3/50-52 Derby Street
Silverwater NSW 2128
Ph (02) 9712 0308
Fax (02) 9712 0308
www.durkinconstruction.com.au

UTILITIES:	MR/BS	DATE: 08-OCT-23
SURVEYED:	AF/MP/DH/MP	DATE: 08-OCT-23
COMPILED:	CC	DATE: 10-OCT-23
REVIEWED:	CR	DATE: 10-OCT-23

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UTILITY PLAN

DRAWING NUMBER: **D22868-UT-01**

DRAWING STATUS: **FOR REVIEW** VERSION: V2

No. of SHEETS: 05

SHEET No.: 05

Durkin Legend

COMMUNICATIONS

- ITS — ITS Cable (IT)
- OU — Optic Fibre (OU)
- OZ — Optic Fibre - Digitised (OZ)
- TH — Telephone Line - House Connection (TY)
- T — Telephone Line (TN)
- TZ — Telephone Line - Digitised (TZ)
- Telephone Sump (TS)
- Telstra Single Concrete Pit (PTSP)
- Telstra Twin Concrete Pit (PTTP)
- Telstra Triple Concrete Pit (PT3P)
- TDP — Telstra Distribution Pillar (PTDP)
- OFP — Optic Fibre Pit (POFP)

ELECTRICITY

- EH — Electric House Connection (EY)
- EU — Electric Line Underground (EU)
- EZ — Electric Line Underground - Digitised (EZ)
- Electric Main Sump (EN)
- EMH — Electricity Cable Manhole (PEMH)
- Street Light Pole (PLPL)
- Power & Street Light Pole (PPLP)
- EJB — Electrical Junction Box (PEJB)
- Transformer Cabinet Centre (PETC)
- EP — Electric Power Pole (PPPL)
- EC — Electric Cable Marker (PECM)
- Power Service Pillar - Underground (PEUP)
- Electric Light with Outreach (LI)
- Electric Transformer Cabinet (EC)
- EFP — Electric Distribution Fuse Point (PEFP)

TCS

- Traffic Control Signal (PSGL)
- TSC — Traffic Signal Controller (PSCL)
- Traffic Signal Junction Box (PSJX)
- TSD — Traffic Signal Detector (PSDR)
- Traffic Light with Outreach (TO)

SEWER

- SH — Sewer House Connection (SY)
- S — Sewer Main (SM)
- SZ — Sewer Main - Digitised (SZ)
- Sewer Manhole Cover (PSMH)
- SLH — Sewer Lamphole (PSLH)
- SVP — Sewer Vent Pipe (PSVP)

GAS

- GH — Gas House Connection (DG)
- GZ — Gas Main Digitised (ZG)
- HG — Gas Main High Pressure Pipeline (HG)
- LG — Gas Main Low Pressure Pipeline (LG)
- GMH — Gas Manhole Cover (PGHL)
- Gas Valve Box (PGAS)
- HP — High Pressure Gas Marker (PGHM)
- GP — Gas Marker (PGPM)
- Gas Meter (PGMR)

WATER

- W — Water Main (WM)
- WH — Water House Connection (WY)
- WR — Water Main - Recycled (RM)
- WZ — Water Main - Digitised (WZ)
- Water Stop Valve (PWSV)
- Water Fire Hydrant (PWFB)
- WH — Water Hydrant (PWHY)
- Water Tap (PWTP)
- Water Meter (PWMR)

DRAINAGE

- ?H — Box Culvert - Unspecified High (UB)
- 150H — Box Culvert - 150 High (B0)
- 225H — Box Culvert - 225 High (B1)
- Headwall Top (HW)
- Ø? — Drainage Pipe - ØUnspecified (UU)
- DZ — Drainage - Digitised (DZ)
- Ø225 — Drainage Pipe - Ø225 (U1)
- Ø300 — Drainage Pipe - Ø300 (U2)
- Ø375 — Drainage Pipe - Ø375 (U3)
- Ø450 — Drainage Pipe - Ø450 (U4)
- Ø525 — Drainage Pipe - Ø525 (U5)
- Ø600 — Drainage Pipe - Ø600 (U6)
- Ø750 — Drainage Pipe - Ø750 (U7)
- Ø900 — Drainage Pipe - Ø900 (U9)
- Ø1050 — Drainage Pipe - Ø1050 (V1)
- Ø1200 — Drainage Pipe - Ø1200 (V2)
- Ø1350 — Drainage Pipe - Ø1350 (V3)
- Ø1500 — Drainage Pipe - Ø1500 (V5)
- Ø1650 — Drainage Pipe - Ø1650 (V6)
- Ø1800 — Drainage Pipe - Ø1800 (V8)
- Drainage Pit (DP)
- Gully Pit (IP)
- Gully Pit Point (PGUL)
- Kerb Inlet (KI)

MISC

- BH — Bore Hole (PBHX)
- GAT — Gatic Cover Lid
- HO — High Pressure Oil Pipeline (HO)
- HPO — High Pressure Oil Pipeline Mark (POHM)
- ? — Unknown Surface Feature (PUSR)
- ?P — Unidentified Pipeline (UP)
- Miscellaneous Structure (OM)

DURKIN Definition & Abbreviation

B 600	Quality Level (as per AS-5488-2019) & Depth
UTT	Unable To Trace
UTL	Unable To Locate
UTO	Unable to Open
FOD / FOW	Full of Dirt/ Full of Water
EOT	End Of Trace
NGMV	No Gas Meter Visible at Locating Time
NWMV	No Water Meter Visible at Locating Time
PN	Property Number
DBYD	Dial Before You Dig
	Flow Direction
	Extent of Potholing Trench
	Approx. Extent of Utility Investigation

PIPE MATERIAL

CICL	Cast Iron Cement Lined
PVC	Polyvinylchloride
SGW	Salt Glazed Ware
VC	Vitrified Clay
DICL	Ductile Iron Cement (mortar) Lined
SCL	Steel Cement (mortar) Lined
oPVC	Polyvinylchloride - Oriented
uPVC	Polyvinylchloride - Unplasticised
EW	Earthenware
AC	Asbestos Cement
RCP	Reinforced Concrete Pipe
GI	Galvanised Iron
SCL IBL	Steel Cement Lined Internal Bitumen Lined
NB GI	Nominal Bore Galvanised Iron
PE	Polyethylene
HD PVC	High Density Polyvinylchloride
FC	Ferro Cement
NY	Nylon
ST	Steel
GRP	Glass Reinforced Plastics
DB	Direct Buried
A	Asbestos
CE	Concrete Encased
C	Concrete

Quality Levels of Sub-Surface Utility Investigation (SUI) AS 5488-2019

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This Standard provides a framework for the classification of subsurface utility location and attributes information in terms of specified quality levels. The objective of this Standard is to provide utility owners, operators and locators with a framework for the consistent classification of information concerning subsurface utilities. Project risks related to underground utilities can then be properly managed.

A quality level describes the amount and accuracy of information that is collected or held on a subsurface utility.

There are four quality levels D, C, B and A.

Quality Level D (QL-D) is the lowest of the four quality levels. The attribute information and metadata of a subsurface utility can be compiled from any, or a combination of, the following:

(a) Existing records.

(b) Cursory site inspection.

(c) Anecdotal evidence.

Quality Level-X (QL-X) Electronically located with Ground Penetrating Radar or other electronic locating techniques not compliant with AS5488. Estimated positional tolerance is +/-300mm in plan, +/-500mm in depth (high confidence level).

Quality Level Y(QL-Y) Electronically located but with reduced confidence in plan position/depth (medium confidence level).

Quality Level Z (QL-Z) Electronically located with low confidence level in plan position/depth (low confidence level).

Quality Level C (QL-C) is described as a surface feature correlation or an interpretation of the approximate location and attributes of a subsurface utility asset using a combination of existing records (and/or anecdotal evidence) and a site survey of visible evidence, and/or methods to indicate the existence of an undefined entity. The minimum requirement for quality level C is relative spatial position. Information is collected by correlating the survey of visible utility surface features such as marker plates or water hydrants and acquired dial-before-you-dig plans to “draw”a string which shows the approximate position of services.

Horizontal Tolerance of Surface Features: -/+ 300 mm

Quality Level B (QL-B) provides relative subsurface feature location in three dimensions. The minimum requirement for quality level B is relative spatial position. Information is collected by designating the horizontal and vertical location of underground utilities by using electromagnetic pipe and cable locators, sondes or flexi-trace, ground penetrating radar and acoustic pulse equipment.

Horizontal Tolerance: -/+ 300 mm

Vertical Tolerance: -/+ 500 mm

Quality Level A (QL-A) is the highest quality level and consists of the positive identification of the attribute and location of a subsurface utility at a point to an absolute spatial position in three dimensions. It is the only quality level that defines a subsurface utility as ‘validated’. Where the whole line segment cannot be verified by line of sight, quality level A shall not be attributed to the line segment between validated points. The vertical information for this locating method is to the top or shallowest part of the located service.

Horizontal and Vertical Tolerance: -/+ 50mm

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SHEET No.: -

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