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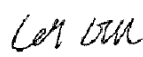
Detailed Site Investigation

1H Hospital Road, Concord West NSW

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EXECUTIVE SUMMARY

EI Australia (EI) was engaged by LIPMAN Pty Ltd ('the client') to conduct a Detailed Site Investigation (DSI) for a portion of the property located at 1H Hospital Road, Concord West NSW ('the site').

The site is located 11 km north-west of the Sydney central business district (CBD), within the local government area (LGA) of City of Canada Bay. The site is located within the property identified as Lot 10 in Deposited Plan (DP) 574013, covering an area of approximately 2,700m² (the entire Lot 10 covers a total area of 19.11 ha). At the time of the investigation, the subject site was located within Concord Hospital and currently occupied by an existing building used for Endocrinology laboratories in its southern portion and an at grade car park in its northern portion, with associated internal driveway, walkways and lawn.

The purpose of this investigation was to determine the environmental conditions (contamination status) of the site, in support of a development application to City of Canada Bay Council. This DSI enables the developer to meet obligations under the *State Environmental Planning Policy (Resilience and Hazards)* (2021), for the assessment and management of contaminated soil and/or groundwater, should these be identified.

Based on the supplied plans and information provided by client, the site redevelopment will involve the demolition of the existing structures (building and external car park), followed by the construction of a three-storey building, with no basements proposed. Soil disturbances are expected to be limited to surface trimming for levelling purposes and locally deeper excavations for footings, crane pads and service trenches.

The primary objectives of this investigation were to:

- Evaluate the potential for site contamination on the basis of historical land uses, anecdotal and documentary evidence;
- Investigate the degree of any soil and groundwater contamination (if present), by means of intrusive sampling and laboratory analysis for the relevant contaminants of concern;
- Provide a conclusion regarding the suitability of the site for its proposed use; and
- Make recommendations for the appropriate management of any impacted soils and/or groundwater, should site contamination be confirmed.

Findings

The key findings of this DSI were as follows:

- At the time of site inspection, the site was occupied by a single-storey fire service building and an open space car park.
- The northern portion of the site (car park) was covered by asphalt pavement, which appeared to be in good condition, with minimal cracking.
- There was no visual evidence of underground storage tanks (UST) or aboveground storage tanks (AST) on site. Evidences of USTs were, however, observed on the neighbouring site to the east (a service station).
- No ash, slag or other foreign materials (including ACM) were observed in samples collected from fill or natural soils.
- No contaminants of concern (primary metals, BTEX compounds, PAHs, OCPs, OPPs and PCBs) were reported in soils at concentrations above the adopted ecological or health-based criteria.
- Contaminant concentrations in groundwater were reported below the adopted criteria, with the exception of the following:
 - Cadmium, copper, nickel and zinc were reported in groundwater at concentrations marginally above the adopted marine water criteria. These concentrations, however, were considered to be consistent with the disturbed urban background conditions, instead of a result of site-specific impacts.

- The following data gaps were identified by the current conceptual site model:
 - The conditions of the soils within the footprint of the existing building are still unknown;
 - The presence and extent of per- and poly-fluoroalkyl substances (PFAS) in groundwater is unknown.

Conclusion

Based on the findings obtained from this DSI, and with consideration of EI's *Statement of Limitations (Section 11)*, EI concludes that the site can be made suitable for the potential future site redevelopment, provided the recommendations detailed below are implemented.

Recommendations

EI provides the following recommendations:

- Before commencement of demolition works, a Hazardous Materials Survey (HMS) shall be completed by a suitably qualified consultant, to identify any hazardous materials present within the existing building fabrics.
- The HMS should guide subsequent building and infrastructure demolition at the site, to prevent release of hazards materials.
- Additional intrusive investigation should be conducted, to close the remaining data gaps at the subject site, including:
 - Soil characterisation within the footprint of the current building (if accessible); and
 - Groundwater investigation targeting additional COPCs.
- Preparation and implementation of a Remediation Action Plan (RAP), if remediation is required based on results obtained from the additional intrusive investigations mentioned above. The RAP should also include:
 - Waste management plan for any surplus materials (including potential virgin excavated natural materials (VENM) excavated and removed from site in accordance with NSW EPA (2014); and
 - A sampling and analysis quality plan (SAQP) for the post-remedial validation assessment, aimed at confirming that site remediation was effective.
- Implementation of the remediation and validation works for the site, as outlined in the RAP.
- Preparation of a validation report by a suitably qualified environmental consultant, confirming site suitability for its proposed land use.

1. INTRODUCTION

1.1 Background and Purpose

EI Australia (EI) was engaged by LIPMAN Pty Ltd ('the client') to conduct a Detailed Site Investigation (DSI) of the land parcel located at 1H Hospital Road, Concord West NSW ('the site').

The site is located 11 km north-west of the Sydney central business district (CBD), within the local government area (LGA) of City of Canada Bay, as shown in **Figure 1, Appendix A**. The site is identified as Lot 10 in Deposited Plan (DP) 574013, and covers a total area of approximately 19.11ha (The investigation area subject to this report is only small portion within the site boundary and estimated area of 2,700m², as depicted in **Figure 2, Appendix A**. At the time of the investigation, the subject site was located within Concord Hospital and currently occupied by an existing building used for Endocrinology laboratories in the southern portion and an at grade car park in the northern portion with associated internal driveway, walkways and lawn.

The purpose of this investigation was to determine the environmental conditions (contamination status) of the site, in support of a development application to City of Canada Bay Council. This DSI enables the developer to meet obligations under the *State Environmental Planning Policy (Resilience and Hazards) (2021)*, for the assessment and management of contaminated soil and/or groundwater, should these be identified.

1.2 Proposed Development

Based on the supplied plans (**Appendix C**) and on information provided by client, the site redevelopment will involve the demolition of the existing structures (building and external car park), followed by the construction of a three-storey building, with no basements proposed.

Soil disturbances are expected to be limited to surface trimming for levelling purposes and locally deeper excavations for footings, crane pads and service trenches.

1.3 Regulatory Framework

The following regulatory framework and guidelines were considered during the preparation of this DSI:

- Contaminated Land Management Act 1997 (the CLM Act 1997);
- Protection of the Environment Operations Act 1997 (the POEO Act 1997);
- Environmental Planning and Assessment Act 1979 (the EP&A Act 1979);
- State Environmental Planning Policy (Resilience and Hazards) 2021;
- NSW EPA (2017) Guidelines for the NSW Site Auditor Scheme;
- NSW EPA (2020) Consultants Reporting on Contaminated Land: Contaminated Land Guidelines; and
- NSW EPA (2022) Sampling Design Guidelines Part 1 – Application; NEPC (2013) Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater and Schedule B(2) Guideline on Site Characterisation, in the National Environmental Protection (Assessment of Site Contamination) Measure 1999, amended in 2013.

1.4 Project Objectives

The objectives of this investigation were to:

- Evaluate the potential for site contamination on the basis of historical land uses, anecdotal and documentary evidence;
- Investigate the degree of any soil and groundwater contamination (if present), by means of intrusive sampling and laboratory analysis for the relevant contaminants of concern;

- Provide a conclusion regarding suitability of the site for the proposed use; and
- Make recommendations for the appropriate management of any impacted soils and/or groundwater, should site contamination be confirmed.

1.5 Scope of Works

To achieve the above objectives, the following scope of works was completed:

Desktop Study

- A review of relevant (hydro)geological and soil landscape maps for the project area;
- A review of the site history, based on land title records, environmental risk and planning documentation, aerial photographs (dating back to 1943) and property files archived by City of Canada Bay Council;
- Searches of public registers maintained by the New South Wales Environment Protection Authority (NSW EPA) for statutory notices and licensing agreements issued under the *Contaminated Land Management Act 1997* and *Protection of the Environment Operations Act 1997*;
- A search of the *List of NSW Contaminated Sites Notified to the EPA*;
- A review of the previous environmental reports issued for the site (if any); and
- A search of NSW WorkCover (SafeWork NSW) records for information relating to possible underground tank approvals and locations.

Fieldwork and Laboratory Analysis

- A review of existing underground services on-site, utilising *Before-You-Dig* plans and electro-magnetic equipment operated by a licensed services locator;
- A detailed site walkover inspection;
- Drilling of boreholes at thirteen (13) locations (BH1M, BH2 to BH11, BH9, BH9M and BH12M), distributed in a generally triangular systematic grid pattern across accessible parts of the site. As per borehole logs presented in **Appendix F**, BH9 and BH9M were drilled as separate boreholes, for soil and groundwater sampling purposes, respectively.
- Multiple level soil sampling within fill and natural layers, at each of the boreholes;
- Construction of three groundwater monitoring bores drilled to a maximum depth of 7.6 metres below ground level (mBGL) (or refusal), at both upgradient and downgradient areas of the site. Groundwater monitoring bores were constructed as per standard environmental protocols to investigate the potential for groundwater contamination, and migration of contaminants offsite;
- Completion of a groundwater monitoring event (GME), including measurement of standing water levels (SWLs) and representative sampling at the newly installed groundwater monitoring wells (BH1M, BH9M, and BH12M); and
- Laboratory analysis of selected soil and groundwater samples for relevant contaminants of potential concern (COPCs), as determined by the desktop study and by field observations.

Data Analysis and Reporting

Data interpretation and preparation of this DSI report, according to NSW EPA (2020) requirements.

2. SITE DESCRIPTION

2.1 Property Identification, Location and Physical Setting

The site identification details and associated information are presented in **Table 2-1**. The site locality and assessment area are illustrated in **Figures 1 and 2, Appendix A**.

Table 2-1 Site Identification

Attribute	Description
Street Address	1H Hospital Road, Concord West NSWNSW
Location Description	The site is located approximately 11.4km north-west of the Sydney CBD, bound by hospital buildings and/or internal access road (north, south, east and west). The site comprises the northeastern portion of the hospital land located at 1H Hospital Road, Concord West, NSW
Site Coordinates	Approximate Northern-eastern corner of site: - Easting: -33.835414 - Northing: 151.096578 (Source: http://maps.six.nsw.gov.au)
Site Area	Approximately 2,700 m ²
Lots and DP	Lot 10 in DP 574013.
State Survey Marks	One state survey marks are situated within close proximity (<250m) to the site: SS166069: at Hospital Road (157m northeast); (Source: http://maps.six.nsw.gov.au)
LGA	City of Canada Bay Council
Parish	Concord
County	Cumberland
Current Zoning	SP2: Hospital/Infrastructure (Canada Bay Local Environmental Plan 2013)

2.2 Local Land Use

The site is situated within a general residential area, as described in **Table 2-2**. The local sensitive receptors within close proximity to the site are also identified in this table.

Table 2-2 Local Land Use

Direction	Land Use Description	Sensitive Receptor (and distance from site)
North	Hospital Buildings Kokoda track memorial walkway Brays Bay	Public User (within site / vicinity of site) Kokoda track memorial walkway (approx. 200m) Brays bay (approx. 280m)
South	Hospital Buildings Landscape/ outdoor grass area Yaralla Bay	Public User (within site / vicinity of site) Landscape/ outdoor grass area - staff and patients (approx. 50-80m) Yaralla bay (approx 180m)
East	Hospital Buildings Landscape/ outdoor grass area Yaralla Bay Rivendell school	Public User (within site / vicinity of site) Landscape/ outdoor grass area - staff and patients (approx. 130m) Yaralla Bay (approx 250m) Rivendell school (approx 350m northeast)

Direction	Land Use Description	Sensitive Receptor (and distance from site)
West	Hospital Buildings Landscape/ outdoor grass area Yaralla Bay Rivendell school	Public User (within site / vicinity of site) Landscape/ outdoor grass area - staff and patients (approx. 320m)

2.3 Regional Setting

The topography, (hydro)geology and soil landscape information for the site are summarised in **Table 2-3**.

Table 2-3 Regional Setting

Attribute	Description
Topography	During the site walkover, the site topography was observed to be generally gentle, with minor west-facing slopes. The surface elevations (including surrounding area) slightly slopes from 8.0 to 10.0 metres Australian Height Datum (mAHD). (Ref. https://www.mecone.com.au/mosaic/)
Site Drainage	Likely to be consistent with the general slope of the site. Stormwater is expected to be collected in stormwater pits and piped to the municipal collection system.
Regional Geology	The Department of Mineral Resources <i>Sydney 1:100,000 Geological Series Sheet 9130</i> (DMR, 1991) indicates the site is underlain by (Rwa), which consists of black to dark-grey shale and laminate.
Soil Landscape	The Soil Conservation Service of NSW Soil Landscapes of the Sydney 1:100,000 Sheet (Bannerman and Hazelton, 1990) indicates that the site overlies a Blacktown (bt) residual landscape. This landscape is characterised by gently undulating rises on Wianamatta Group shales and Hawkesbury shale. Local relief to 30 m, slopes are usually <5%. Broad rounded crests and ridges with gently inclined slopes. Cleared eucalypt woodland and tall open-forest (wet sclerophyll forests).
Acid Sulfate Soil (ASS) Risk	The site is mapped on the <i>Canada Bay Local Environmental Plan 2013</i> (map 001_ Acid Sulfate Soil Maps) as class 5. Acid Sulfate Soils are not typically found in Class 5 areas. Areas classified as Class 5 are located within 500 meters of adjacent class 1, 2, 3 or 4 areas. The <i>Prospect-Parramatta Acid Sulfate Soil Risk Map</i> (1:25,000 scale; Naylor, 1997) indicates the ASS is possibly present on site and that further assessment or management is required. Based on the above, an ASS investigation was conducted as part of this DSI and discussed in the following sections.
Nearest Surface Water Feature	Yaralla Bay (250 m away from the site, to the south-east) Parramatta River (1.1 km away from the site, to the east)
Groundwater Flow Direction	Inferred to be in a south direction, towards Yaralla Bay and ultimately into the Parramatta river.

2.4 Groundwater Bore Records and Local Groundwater Use

An online search for groundwater bores registered with WaterNSW was conducted by EI on 08 June 2023 (Ref. <https://realtime.data.waternsw.com.au/water.stm>). The search revealed no registered bores within a 500m radius of the site. Searched map is attached in **Appendix D**.

The closest groundwater bores are located approximate 900m southwestern of the site, but no further detailed information was available at the time of writing this report.

2.5 Site Walkover Inspection

Observations were recorded during a walkover inspection at the site conducted on 23 and 24 May 2023. These observations are summarised below and photographs taken during the inspection are presented in **Appendix E**. The site inspection was limited to external areas on site. The building was found to be occupied and internal access was not provided.

- At the time of site inspection, the site was occupied by a single-storey fire service building and an open space car park.
- The northern portion of the site (car park) was covered by asphalt pavement, which appeared to be in good condition, with minimal cracking.
- Some internal roads, pedestrian and landscape areas are also part of the subject investigation area.
- No visual evidences of potential asbestos-containing materials (ACM) (or any other hazardous building materials) were observed on the surface of the site, nor were used on external building surfaces of the site structures.
- No visual evidences of chemical handling and/or storage were observed on the site.
- There was no visual evidence of underground storage tanks (USTs) or aboveground storage tanks (ASTs) on site. USTs were observed on the neighbouring service station, to the east.

3. SITE HISTORY AND SEARCHES

3.1 Land Titles Information

A historical land titles search was conducted through InfoTrack Pty Ltd ('InfoTrack'). Copies of relevant documents resulting from this search are presented in **Appendix L**.

Refer to **Figures 3-1** and **Table 3-1** for summarised relevant information.

Figures 3-1 Site Area

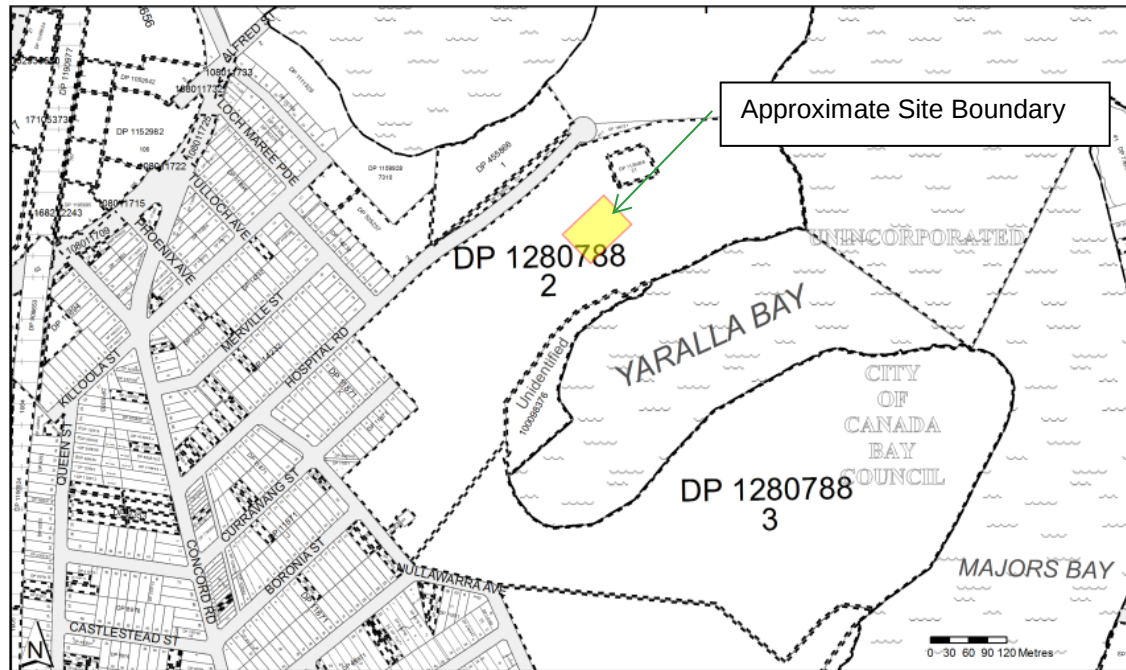


Table 3-1 Summary of Historical Property Ownership

Period of Ownership	Registered Proprietor(s) and Occupations (where documented)
Lot 2 in DP 1280788	1 H Hospital Road, Concord NSW
1933 to 1940	Eadith Campbell Walker
1940	Vested in His Majesty as Crown Lands
1940 - 1992	The Commonwealth of Australia (Acquired for Defence Purposes)
1992 to 1993	Repatriation Commission
1993 to Date	# Health Administration Corporation

denotes current owner

3.2 Historical Aerial Photography Review

The historical aerial photographs reviewed as part of this DSI were obtained from on-line resources, including:

- 1943, 1955, 1965, 1970, 1986, 199 and 2005 provided on-line by <http://sixmaps.com.au>;
- 2011 and 2023, provided on-line by Google Earth.

A summary of the findings is given in **Table 3-2**.

Table 3-2 Summary of Aerial Photograph Observations

Photograph	Site Description	Surroundings Description	Site Land Use
1943	A building is visible at the southern portion of the site. The remaining of the site is vacant (likely used as a car park).	Surrounding areas consist of residential dwellings.	Commercial
1955	The site appeared to be unchanged from the previous image.	The surroundings appeared to be unchanged from the previous image.	Commercial
1965	The site appeared to be unchanged from the previous image.	Some structures located to the northwest were removed. Trees can be observed on the northeast.	Commercial
1970	The site appeared to be unchanged from the previous image.	The surroundings appeared to be unchanged from the previous image.	Commercial
1986	The site appeared to be unchanged from the previous image.	A car park can be observed in the northwest.	Commercial
1994	The site appeared to be unchanged from the previous image.	The surroundings appeared to be unchanged from the previous image.	Commercial
2005	The site appeared to be unchanged from the previous image.	Some buildings located in the north and northeast were demolished and two new buildings were constructed in the north.	Commercial
2011	The site appeared to be unchanged from the previous image.	Previous buildings located in the north, south and east were apparently demolished and replaced by new buildings.	Commercial
2023	The site appeared to be unchanged from the previous image.	Previous buildings located in the north, south and east were upgraded with solar panels on their roofs. Some of the buildings located in the west were likely demolished and replaced by new buildings. A construction site can be observed located to the west.	Commercial

3.3 Council Information

An application to access property files archived by City of Canada Bay Council was requested by EI. Information from City of Canada Bay Council was still pending at the time of writing this report. Should pertinent information be identified upon receipt of council records, an addendum to this DSI will be prepared and issued.

3.4 SafeWork NSW Dangerous Goods Register Records

An application to access SafeWork NSW licensing records relating to possible on-site storage of dangerous goods was lodged during this DSI. At the time of writing this report, no information had been received from SafeWork NSW. If any relevant information is later received by EI, this DSI should be amended.

3.5 NSW EPA Online Records

Searches of public registers maintained by the NSW EPA for statutory notices and licensing agreements issued under the *Contaminated Land Management Act 1997* (CLM Act 1997) and *Protection of the Environment Operations Act 1997* (POEO Act 1997) were conducted by EI for this DSI.

Record of Notices Under Section 58 of CLM Act 1997

An on-line search of the contaminated land public record was conducted on 1 May 2023. The contaminated land public record is a searchable database of:

- Orders made under Part 3 of the CLM Act 1997;

- Notices available to the public under Section 58 of the CLM Act;
- Approved voluntary management proposals under the CLM Act 1997 that have not been fully carried out and where the approval of the NSW EPA has not been revoked;
- Site audit statements provided to the NSW EPA under Section 53B of the CLM Act 1997 that relate to significantly contaminated land;
- Where practicable, copies of anything formerly required to be part of the public record; and
- Actions taken by the NSW EPA under Section 35 or 36 of the *Environmentally Hazardous Chemicals Act 1985* (EHC Act 1985).

The search found that neither the site nor the surrounding lands within a 250m radius were subject to any regulatory notices relevant to the above legislations.

List of NSW Contaminated Sites Notified to EPA

A search through the *List of NSW Contaminated Sites Notified to the EPA* under Section 60 of the CLM Act 1997 was conducted on d. This list is maintained by the NSW EPA and includes properties on which contamination has been identified, but not deemed to be impacted significantly enough to warrant regulation. The site had not been notified as contaminated to the NSW EPA (i.e. was not included in the list), and neither were any properties within 250m of the site.

POEO Public Register

A search of the *Protection of the Environment Operations Act 1997* public register was conducted on 25 June 2023. This public register contains records related to environmental protection licences, applications, notices, audits, pollution studies and reduction programs.

The search confirmed that the surrounding lands within close proximity ($\leq 250\text{m}$) were not subject to any licensing agreements / notices / programs relevant to the above legislation. However, the encompassing hospital land has been notified as contaminated to the NSW EPA, as detailed in Error! Reference source not found. Therefore, the surrounding areas within the hospital land can be considered as potential source of contamination migrating to the site.

Table 3-3 POEO Public Register record

Site Name	Number	Address	Activity Type	Activity Status	Issued Date
Sydney South West Area Health Service	11269	Hospital Road, Concord West	Waste Activities/ Hazardous, Industrial or Group A Waste Generation or Storage, <100 – 500T	No longer in force	25 June 2004
Sydney South West Area Health Service	1038371	Hospital Road, Concord West	s.58 Licence Variation/ Hazardous, Industrial or Group A Waste Generation or Storage	Issued/ No longer in force	25 June 2004

4. CONCEPTUAL SITE MODEL

In accordance with NEPC (2013) *Schedule B2 – Guideline on Site Characterisation*, EI developed a conceptual site model (CSM) that assessed plausible linkages between potential contamination sources, migration pathways and receptors. The CSM also provides a framework for identifying data gaps in the existing site characterisation.

4.1 Summary of Site History

The site history review (**Section 3**) indicated that most existing buildings on the site were constructed before 1943. The local surroundings comprised commercial and residential properties since before 1943.

4.2 Potential Contamination Sources

The potential contamination sources were considered to be the following:

- Former and current on-site commercial activities;
- Imported fill materials of unknown origin and quality;
- Hazardous building materials (including potential ACM) present within the site structures;
- Application of pesticides around building (footing) perimeters (for pest control);
- Leakage from vehicles in the parking areas; and
- Migration of mobile (liquid / vapour) contaminants from neighbouring, upgradient, commercial premises.

4.3 Emerging Contaminants (PFAS Assessment)

Per- and Poly-Fluoroalkyl Substances (PFAS)

NSW EPA (2017) requires that PFAS are considered when investigating land contamination. The probability of PFAS occurrence, which was based on considerations outlined in the *PFAS National Environmental Management Plan* (HEPA, 2020), is reviewed in **Table 4-1**. In this instance, the potential for PFAS to be present on-site ranged from low to high. However, since no groundwater samples were analysed for these compounds, PFAS characterisation remains as a data gap for the full characterisation of the site (**Section 4.7**).

Table 4-1 PFAS Decision Tree

Preliminary Screening	Probability of Occurrence ¹
Has an activity listed in HEPA (2020) ² as being associated with PFAS contamination occurred on-site? If so, list activity:	M-H Fire Service Buildings
Has an activity listed in HEPA (2020) ² as being associated with PFAS contamination occurred up-gradient or adjacent to the site? If so, list activity:	L-H Open space maybe used for fire service training
Did fire training involving the use of suppressants occur on-site between 1970 and 2010?	M-H Fire Service Buildings within site and historically potentially used for fire safety training
Did fire training occur up-gradient or adjacent to the site between 1970 and 2010? ³	L
Have “fuel” fires ever occurred on-site between 1970 and 2010? (e.g. ignition of fuel (solvent, petrol, diesel, kero) tanks?)	L
Have PFAS been used in manufacturing or stored on-site? ⁴	M-H Fire safety training
Could PFAS have been imported to the site in fill materials from a site with an activity listed in HEPA (2020)?	L
Could PFAS-contaminated groundwater or run-off have migrated on to the site?	L-M
Is the site or adjacent sites listed in the NSW EPA PFAS Investigation Program? ⁵	L
If the probability is medium or high in any of the rows, does the site analytical suite need to be optimised to include preliminary sampling and testing for PFAS in soil (including ASLP testing) and waters?	Yes

Note 1 Probability: L – low (all necessary documentation has been reviewed and there is no recorded instance or compelling rationale); M – moderate (all necessary documentation has been reviewed and there is potential evidence of a recorded instance with compelling rationale); H – high (all necessary documentation has been reviewed and there is evidence of a recorded instance with compelling rationale).

Note 2 Activities listed in Appendix B of HEPA (2020).

Note 3 Runoff from up-gradient PFAS use may impact surface water, soil, sediment and groundwater.

Note 4 PFAS is used wide range of industrial processes and consumer products, including in the manufacture of non-stick cookware, specialised garments and textiles, Scotchguard™ and similar products (used to protect fabric, furniture, leather and carpets from oils and stains), metal plating and in some types of fire-fighting foam.

(<https://www.nicnas.gov.au/chemical-information/factsheets/chemical-name/perfluorinated-chemicals-pfas>)

Note 5 Refer to <https://www.epa.nsw.gov.au/your-environment/contaminated-land/pfas-investigation-program>.

Emerging Chemicals

The NSW EPA uses Chemical Control Orders (CCOs) as a primary legislative tool under the *Environmentally Hazardous Chemicals Act 1985*, to control chemicals of concern and limit their potential impact on the environment. Considerations for chemicals controlled by CCOs, and other potential emerging chemicals, are outlined in **Table 4-2**. In this instance, the potential for an emerging chemical of concern to be present on-site was deemed low, with the possible use of pesticides in building footings (near surface soils) and possible pesticides and PCBs present in the imported fill.

Table 4-2 Emerging or Controlled Chemicals

Chemicals of Concern (CCO or emerging)	Decision
Were aluminium smelter wastes used or stored on site (CCO, 1986)?	No
Do dioxin contaminated wastes (CCO, 1986) have the potential to impact the site? ¹	No
Were organotin products (CCO, 1989) used or stored on site? ²	No
Were polychlorinated biphenyls (PCBs) used or PCB wastes (CCO, 1997) stored on-site? ³	Yes Possibility for PCBs to be present in imported fill.
Were scheduled chemical or wastes (CCO, 2004) used or stored? ⁴	Yes Possibility for pesticides applied to footings for pest control and/or present in imported fill.
Are other emerging chemicals suspected? ⁵	No
If Yes to any questions, has site sampling suite been optimised to include sampling for these chemicals of concern?	Yes

Note 1 From burning of certain chemicals, smelting or chemical manufacturing or fire on or near the site.

Note 2 From anti-fouling paints used or+ removed at boat and ship yards and marinas.

Note 3 From older transformer oils and electrical capacitors

Note 4 Twenty-four mostly organochlorine pesticides and industrial by-products

Note 5 Other chemicals considered as emerging (e.g. 1,4 dioxane; associated with some CVOC).

4.4 Potential Contaminants

The primary contaminants of potential concern (COPCs) for the site were considered to be:

- Priority Metals (PM) - arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc;
- Total Recoverable Hydrocarbons (TRH);
- Monocyclic aromatic hydrocarbons Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- Polycyclic Aromatic Hydrocarbons (PAH);
- Per- and Polyfluorinated Substances (PFAS);
- Organochlorine and Organophosphorus Pesticides (OCP / OPP);
- Polychlorinated Biphenyls (PCB);
- Asbestos.

4.5 Risk Assessment

An assessment of the potential contamination risks for the site is outlined in **Table 4-3**.

Table 4-3 Assessment of Potential Contamination Risk

Potential Source	Impacted Medium	COPC	Risk of Contamination
Importation of fill of unknown origin and quality	Shallow soil	PM, TRH, BTEX, PAH, OCP, OPP, PCB and asbestos	Moderate Shallow filling was likely required on the site.
Application of pesticides	Near surface soil (building footing areas)	OCP, OPP	Low If present, pesticides are expected to be limited to shallow, building footprint soils.
Former and current on-site commercial activities	Soil	PM, TRH, BTEX, PAH, and PFAS	High Nearby fire service building.
Leakage from vehicles	Shallow soil	TRH and BTEX	Moderate The surface pavements were noted to be in poor condition, with major cracks and staining. However, impacts (if present) would be likely limited to shallow soils.
Migration from off-site sources	Soil Groundwater	PM, TRH, BTEX and PAH	Low to Moderate Encompassing hospital land has been notified as contaminated to the NSW EPA.
Hazardous building materials	Building fabrics Near surface soil	PM, asbestos	Medium Hazardous materials are expected on site, due to the old and weathered structures identified.

4.6 Receptors

The following potential receptors of site contamination were identified:

- Current and future site users;
- Demolition and construction workers;
- Users of the adjacent land during construction;
- Future intrusive workers; and
- Ecological communities at Yaralla Bay and the Parramatta River.

4.7 Data Gaps

Based on the CSM derived for the site and the qualitative assessment of risks, the following data gaps still require closure before the site can be considered fully characterised:

- The conditions of the soils within the footprint of the existing building are still unknown;
- The presence and extent of per- and poly-fluoroalkyl substances (PFAS) in groundwater is unknown.

Table 4-4 Preliminary Conceptual Site Model

Potential Source	Impacted Media	Contaminants of Concern	Transport Mechanism	Exposure Pathway	Potential Receptor	Potential Risk of Complete Exposure Pathway
Imported fill of unknown origin and quality	Soil	PM, TRH, BTEX, PAH, OCP, OPP, PCB, asbestos, PFAS	Disturbance of surface and subsurface soils during site redevelopment, future site maintenance and future use of the site post redevelopment.	Ingestion Dermal contact Inhalation of particulates Inhalation of vapours	Current and future site users	Low The use of personal protective equipment (PPE) by construction and demolition workers is mandatory by SafeWork NSW.
Application of pesticides					Demolition and construction workers	
Historical use of the site (including fire services)					Future intrusive workers Adjacent site users	
Leakage from parked vehicles			Volatilisation of contamination from soil and diffusion to indoor air spaces.	Inhalation of vapours	Current and future site users	Low No VOC exceedances were reported during this DSI.
Migration onto site					Adjacent site users	
Hazardous building materials						
	Groundwater	Dissolved PM, TRH, VOCs, BTEX, PAH, PFAS	Disturbance of surface and subsurface soils during site redevelopment, future site maintenance and future use of the site post redevelopment.	Inhalation of vapours Ingestion Dermal contact	Current and future site users	Moderate Potential contaminant sources are located upgradient of the site. Data gaps associated with the presence of PFAS in groundwater still remain.
					Demolition and construction workers Future intrusive workers Adjacent site users	
			Migration of dissolved phase impacts in groundwater via diffusion and natural advection.	Biota uptake	Ecological communities at Yaralla Bay and the Parramatta River	Moderate Data gaps associated with the presence of PFAS in groundwater still remain.

5. METHODOLOGY

5.1 Sampling and Analysis Quality Plan

The sampling and analysis quality plan (SAQP) ensures that the data collected during environmental works are representative and provide a robust basis for assessment decisions. The SAQP for this DSI included the following:

- Data quality objectives (DQO), including a summary of the objectives of the DSI;
- Investigation methodology, including the media to be sampled, details of analytes and parameters to be monitored and a description of intended sampling points;
- Sampling procedures (including sample handling, preservation and storage);
- Field screening methods;
- Laboratory analysis methods; and
- Analytical quality assurance / quality control (QA/QC).

5.2 Data Quality Objectives

In accordance with the NEPC (2013) *Schedule B2 Guideline on Site Characterisation*, the USEPA (2006) *Data Quality Assessment* and NSW EPA (2017) *Guidelines for the NSW Site Auditor Scheme*, a seven step process (**Table 5-1**) was developed by the EI investigation team, so that the appropriate levels of data quantity and quality needed for the specific requirements of the project could be achieved.

Table 5-1 Summary of Project Data Quality Objectives

DQO Step	Details
1. State the Problem Summarise the contamination problem that will require new environmental data, and identify the resources available to resolve the problem; develop a conceptual site model.	Proposed site redevelopment area is presented in Figure 2, Appendix A. It will involve the demolition of the existing structures (building and external car park) and the construction of a three-storey building, with no basements proposed (Section 1.2). Soil disturbance is expected to be limited to surface trim for levelling purposes and locally deeper excavations for footings, crane pads and service trenches. The proposed development is equivalent to a generic NEPC (2013) land use setting of commercial (hospital). However, a NEPC (2013) land use setting of HIL-A (low density residential) was used for screening purposes, which is the most conservative. These screening levels were selected as the most appropriate due to the sensitive users involved (patients, children and elderly). This investigation was required to characterise the environmental conditions of the site, and enable the developer to meet their obligations under SEPP 2021 and CLM Act 1997, for the assessment and management of contaminated soil and/or groundwater. The findings of this DSI provide supportive information on the environmental conditions of the site, and allow the environmental consultant (EI) to determine its suitability for the proposed development.
2. Identify the Goal of the Study (Identify the decisions) Identify the decisions that need to be made on the contamination problem and the new environmental data required to make them.	Based on the objectives outlined in Section 1.4, the decisions that need to be made were: ▪ Has the nature, extent and source of any soil and/or groundwater impacts onsite been defined? ▪ What impact do the site specific, geologic and hydrogeological conditions have on the fate and transport of any impacts that may be identified? ▪ Does the level of impact coupled with the fate and transport of identified contaminants represent an unacceptable risk to identified human and/or environmental receptors on or offsite? ▪ Does the collected data provide sufficient information to allow the suitability of the site to be determined, or selection and design of an appropriate remedial strategy, if necessary? ▪ If the data does not provide sufficient information, what data gaps require closure to enable the suitability of the site to be determined, or selection and design of an appropriate remedial strategy?
3. Identify Information Inputs (Identify inputs to decision) Identify the information needed to support any decision and specify which inputs require new environmental measurements.	Inputs to the decision making process included: ▪ The proposed development and land use; ▪ Review of the previous investigation; ▪ National and NSW EPA guidelines made or approved under the <i>CLM Act 1997</i>; ▪ Observations during / from soil and groundwater sampling; and ▪ Laboratory analytical results for the selected soil and groundwater samples. At completion of the DSI, a decision is required regarding the suitability of the site for the proposed redevelopment, or if additional investigation is required to confirm that the site is suitable for that development or if remediation is required to make the site suitable.

DQO Step	Details
4. Define the Boundaries of the Study Specify the spatial and temporal aspects of the environmental media that the data must represent to support decision.	Lateral – The proposed development area, as shown on Figure 2, Appendix A; Vertical – Investigations were advanced to the depth of natural soils or rock, with a maximum intrusive investigation advanced depth of 7.6 metres below ground level (mBGL); Temporal – The results are valid for the day samples were collected and remain so as long as no changes occur in regards to site use, and contamination (if present) does not migrate onto the site from off-site sources.
5. Develop the Analytic Approach (Develop a decision rule) To define the parameter of interest, specify the action level, and integrate previous DQO outputs into a single statement that describes a logical basis for choosing from alternative actions.	The decision rules for the investigation were: ▪ If the concentrations of contaminants in the soil and/or groundwater data exceed the adopted criteria, then assess the need to further investigate the extent of impacts onsite. ▪ Decision criteria for QA/QC measures are defined by the Data Quality Indicators (DQI) in Table 5-2.
6. Specify Performance or Acceptance Criteria (Specify limits on decision errors) Specify the decision-maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data.	Specific limits for this project were in accordance with National and NSW EPA guidance, and appropriate indicators of data quality and standard procedures for field sampling and handling. This included the following points to quantify tolerable limits: ▪ The null hypothesis for the investigation was that the 95% Upper Confidence Limits (UCL) of the average concentration of contaminants of concern at the site exceeds soil land use criteria appropriate to land use of the proposed development. ▪ Acceptance of site suitability was based on the probability that: • The 95% UCL of the average concentration of the data set satisfied the given site criteria (thus, a limit on the decision error was 5% that a conclusive statement may be incorrect); • The standard deviation of the data set was less than 50% of the relevant criteria; and • No single result exceeded the criteria by 250% or more. ▪ Soil and groundwater concentrations for the chemicals of concern that were below investigation criteria made or approved by the NSW EPA were treated as acceptable and indicative of suitability for the proposed land use(s). ▪ If contaminant concentrations exceeded the adopted criteria, further investigation was considered prudent. If no contamination was detected, no further action was required.

DQO Step

**7. Develop the Detailed Plan for Obtaining Data
(Optimise the design for obtaining data)**

Identify the most resource-effective sampling and analysis design for general data that are expected to satisfy the DQOs.

Details

In order to identify the most resource-effective sampling and analysis design and satisfy the DQOs:

- Soil sampling was conducted at 12 locations using a generally systematic grid pattern across accessible parts of the site, in accordance with the minimum number points recommended under NSW EPA 2022 Sampling Design Guidelines.
- An upper soil profile sample was collected at each borehole location and tested for the COPCs (**Section 4.4**) to assess the conditions of the fill layer, and impacts from activities at ground level.
- Further discrete, natural samples were analysed for priority metals, TRH, BTEX and PAH. Samples were selected on field observations (including visual and olfactory evidence), giving consideration to the subsurface stratigraphy.
- A total of 3 groundwater monitoring wells were gauged and sampled to assess groundwater quality at the site.
- A groundwater monitoring event (GME) was completed, with laboratory analysis of representative COPCs.
- A review of the results was undertaken to determine if further sampling was warranted.

5.3 Data Quality Indicators

Investigation data was assessed against the quality indicators outlined in **Table 5-2** for validation purposes. Assessment of data quality is summarised in **Section 6** and further detailed in **Appendix J**.

Table 5-2 Data Quality Indicators

QA/QC Component	Data Quality Indicator(s)
Precision A quantitative measure of the variability (or reproducibility) of data	Data precision was assessed by reviewing the performance of blind field duplicate sample sets, through calculation of relative percentage differences (RPD). Data precision was deemed acceptable if RPDs were found to be less than 30%. RPDs that exceeded this range were considered acceptable where: - Results were less than 10 times the limits of reporting (LOR); - Results were less than 20 times the LOR and the RPD was less than 50%; or - Heterogeneous materials or volatile compounds were encountered.
Accuracy A quantitative measure of the closeness of reported data to the “true” value	Data accuracy was assessed through the analysis of: - Split field duplicate sample sets; - Field and method blanks, for the analytes targeted in the primary samples; - Matrix spike sample sets; and - Laboratory control samples.
Representativeness The confidence (expressed qualitatively) that data are representative of each medium present onsite	To ensure the data produced by the laboratory were representative of conditions encountered in the field, the following measures were taken: - Blank samples run in parallel with field samples, to confirm there were no unacceptable instances of laboratory artefacts; - Review of RPD values for field and laboratory duplicates to provide an indication that the samples were generally homogeneous, with no unacceptable instances of significant sample matrix heterogeneities; and - The appropriateness of collection methodologies, handling, storage, and preservation techniques was assessed to ensure/confirm there was minimal opportunity for sample interference or degradation (i.e. volatile loss during transport due to incorrect preservation / transport methods).
Completeness A measure of the amount of useable data from a data collection activity	Analytical data sets acquired during the DSI were evaluated as complete upon confirmation that: - Standard operating procedures (SOPs) for sampling protocols were adhered to; and - Copies of all chain of custody (COC) documentation were included and found to be properly completed. It could therefore be considered whether the proportion of “useable data” generated in the data collection activities was sufficient for the purposes of the land use assessment.
Comparability The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event	Data sets from separate sampling episodes were required and issues of comparability were reduced through adherence to SOPs and regulator-endorsed or published guidelines and standards on each data gathering activity. In addition, the data were collected by experienced samplers and NATA-accredited laboratory methodologies will be employed.

5.4 Sampling Rationale

With reference to the CSM described in **Section 4**, soil and groundwater sampling was planned in accordance with the following rationale:

- Sampling of fill and natural soils from twelve borehole locations across accessible parts of the site, to characterise *in situ* soils.
- The buildings on the subject site were operational and occupied. No investigation could be undertaken within the building;

- Soil sampling was conducted at 12 locations using a generally systematic grid pattern across accessible parts of the site, in accordance with the minimum number points recommended under NSW EPA (2022) Sampling Design Guidelines.
- A shallow soil profile sample was collected at each borehole location and tested for the COPCs (**Section 4.4**) to assess the conditions of the fill layer, and impacts from activities at ground level.
- Some locations were selected for targeted sampling and site coverage.
- Completion of a GME at three monitoring wells, to characterise local groundwater conditions; and
- Laboratory analysis of representative soil and groundwater samples for the COPCs.

5.5 Assessment Criteria

The assessment criteria adopted for this DSI are outlined in **Table 5-3**. These were selected from available published guidelines that are endorsed by national or state regulatory authorities, with due consideration of the exposure scenarios that are expected for various parts of the site, the likely exposure pathways, and the identified potential receptors.

For the purposes of this DSI, the adopted soil assessment criteria are referred to as the *Soil Investigation Levels* (SILs) and the adopted groundwater assessment criteria are referred to as *Groundwater Investigation Levels* (GILs).

Table 5-3 Adopted Investigation Levels for Soil and Groundwater

Medium	Guidelines	Rationale
Soil	NEPC (2013) HILs, HSLs and Management Limits for TRH	Soil Health-based Investigation Levels (HILs) NEPC (2013) <i>HIL-A</i> thresholds for low density residential settings with garden for soil access. Soil Health-based Screening Levels (HSLs) NEPC (2013) HSL-A&B thresholds for vapour intrusion at hospital sites applicable to assess potential human health impacts from residual vapours resulting from petroleum, BTEX and naphthalene (per NEPC (2013) Section 2.4.8 Schedule B1). Fine and/or Coarse grained soil criteria were applied according to relevant soil profiles. Asbestos For asbestos in soil, the following criteria are applicable: ▪ No visible asbestos on soil surface in all areas of the site; and ▪ Asbestos presence/absence in collected soil samples. Ecological Investigation Levels (EILs) / Ecological Screening Levels (ESLs) EILs / ESLs were considered relevant for any retained deep soils zone and/or landscape area on the site. EILs / ESLs only apply to the top 2 m (root zone). The derived EIL criteria presented by EI are based on the addition of site specific Added Contaminant Limit (ACL) criteria and the Ambient Background Concentration (ABC) for a high traffic NSW suburb. The adopted ESL criteria presented by EI are based on coarse grained criteria, as a conservative approach. Note: EILs/ESLs are not applicable to the majority of the site as it will be occupied by a building. Management Limits for Petroleum Hydrocarbons Where the HSLs and ESLs for petroleum hydrocarbons were exceeded, sample results were also assessed against the NEPC (2013) <i>Management Limits</i> for the F1-F4 TRH fractions, to assess propensity for phase-separated hydrocarbons (PSH), fire and explosive hazards and adverse effects on buried infrastructure.

Medium	Guidelines	Rationale
Groundwater	ANZG (2018) GILs for Marine Waters and NEPC (2013) Groundwater HSLs	Groundwater Investigation Levels (GILs) for Marine Waters ANZG (2018) provides GILs for typical, slightly-moderately disturbed aquatic ecosystems, Trigger Values (TVs) for the 95% level of protection of aquatic ecosystems; however, the 99% TVs were applied for the bio-accumulative analyte. Health-based Screening Levels (HSLs) The NEPC (2013) groundwater HSLs for vapour intrusion were used to assess potential human health impacts from residual vapours resulting from petroleum, BTEX and naphthalene impacts. The <i>HSL-D</i> thresholds for commercial and industrial settings were applied (per NEPC (2018) Section 2.4.8 Schedule B1). Coarse Grained soil criteria were applied, being the most conservative of the material types observed at the site.
	HEPA (2020) for PFAS	PFAS National Environmental Management Plan Version 2.0 – January 2020 - National Chemicals Working Group of the Heads of EPAs Australia and New Zealand (HEPA, 2020). The Human Health investigation levels for soil for residential with minimal opportunities for soil access (HIL B) PFAS guideline values were used.
	NHMRC (2022) Drinking Water Guidelines	Recreational Criteria The lowest values provided by the NHMRC (2022) Drinking Water criteria (multiplied by a factor of 10) were used to represent a recreational exposure scenario.

5.6 Soil Sampling

The soil sampling works were conducted at the site according to the methodology described in **Table 5-4**. Sampling locations are illustrated in **Figure 2, Appendix A**.

Table 5-4 Summary of Soil Sampling Methodology

Activity/Item	Details
Fieldwork	Intrusive soil investigations were conducted on 23 and 24 May 2023, and comprised 13 borehole locations in accessible areas of the site. Location rationale is provided in Section 5.3 .
Investigation Method	Test bores were advanced by track-mounted drill rig, fitted with solid flight augers. Borehole details are presented in the detailed logs attached in Appendix F .
Soil Logging	Drilled soils were classified in the field with respect to lithological characteristics and evaluated on a qualitative basis for odour and visual signs of contamination. Soil classifications and descriptions were based on Australian Standard (AS) 1726-2017.
Soil Sampling	Soil samples were collected using a dry grab method (the sampler wearing unused, dedicated nitrile gloves) and placed into laboratory-supplied, acid-washed, solvent-rinsed glass jars, snap-lock, plastic bags or jars with a Teflon free lid. Blind and split field duplicates were separated from the primary samples and placed into dedicated glass jars. At each location, aliquots of soil were placed into separate zip-lock bags for laboratory asbestos analysis.
Decontamination	Nitrile sampling gloves were replaced between each sampling location. Sampling equipment (i.e. auger) was scrubbed and washed with a mixture of Alconox and potable water (1/20) until free of all residual materials, then rinsed with laboratory-supplied, purified water.
Management of Soil Cuttings	Soil cuttings were used to backfill the completed boreholes.
Sample Preservation and	Samples were stored in a chilled chest (with frozen ice packs), whilst on-site and in transit to the

Activity/Item	Details
Transport	contracted laboratories. Soil samples were transported to SGS Australia Pty Ltd (SGS; the primary laboratory) and split (inter-laboratory) soil field duplicates were submitted to Envirolab Services Pty Ltd (Envirolab; the secondary laboratory) under strict chain-of-custody (COC) conditions. Signed COC certificates and sample receipt advice (SRA) were provided by SGS and Envirolab for confirmation purposes (Appendix H).
Laboratory Analysis and Quality Control	Soil samples were analysed by SGS and Envirolab for the COPC. In addition to the split (inter-laboratory) field duplicate (analysed by Envirolab), QC testing comprised one blind (intra-laboratory) field duplicate, an equipment rinsate blank, a laboratory-prepared trip spike soil sample and a laboratory-prepared trip blank soil sample, all analysed by SGS.

5.7 Groundwater Sampling

The groundwater sampling works were conducted at the site as per methodology described in **Table 5-5**. The monitoring well locations are illustrated in **Figure 2, Appendix A**.

Table 5-5 Summary of Groundwater Sampling Methodology

Activity/Item	Details
Fieldwork	Three groundwater monitoring wells (BH1M, BH9M, BH128M) were installed by EI between 22 and 24 May 2023. Water level gauging, well purging, measurement of physiochemical parameters and groundwater sampling was conducted on 1 June 2023.
Well Construction	Well construction details are presented in the detailed logs attached in Appendix F .
Well Development	Well development involved agitation within the full length of the water column using a dedicated, High Density Polyethylene (HDPE), disposable bailer, followed by removal of water and accumulated sediment.
Well Gauging	Monitoring wells were gauged to determine standing water levels (SWLs) prior to groundwater sampling. Gauging was conducted using a water/oil interface probe.
Well Purging and Field Testing	The measurement of water quality parameters was conducted repeatedly during purging and the details were recorded onto field data sheets, until water quality parameters stabilised. Field measurements for Dissolved Oxygen (DO), Electrical Conductivity (EC), temperature, oxidation-reduction potential (ORP) and pH of the purged water were also recorded during well purging. Readings are summarised in Table 7-3 .
Groundwater Sampling	Groundwater samples were collected using a peristaltic low flow pump. Water was continuously measured for five parameters (Temperature, EC, ORP, DO, pH). Once three consecutive field measurements were recorded for purged water to within $\pm 10\%$ for DO, $\pm 3\%$ for EC, ± 0.2 units for pH, $\pm 0.2^\circ$ for temperature and ± 20 mV for ORP, this was considered to indicate that representative groundwater quality had been achieved and final physio-chemical measurements were recorded. Groundwater samples were then collected from the low flow sampling pump discharge point.
Decontamination Procedure	The water level probe was washed in a solution of potable water and <i>Decon 90</i> and then rinsed with potable water.
Sample Preservation	Sample containers were supplied by the laboratory with the following preservatives: - one, 1 litre amber glass, acid-washed and solvent-rinsed bottle; - two, 40ml glass vials, pre-preserved with dilute hydrochloric acid, Teflon-sealed; - one, 250mL, HDPE bottle, pre-preserved with dilute nitric acid (1mL); and Samples for metals analysis were field-filtered using 0.45 μ m pore-size membranes. All containers were filled with sample to the brim then capped and stored in insulated chests (containing ice bricks), until completion of the fieldwork and during sample transit to the laboratory.
Sample Transport	After sampling, the ice brick filled chests were transported to the laboratories using strict COC procedures. SRA was provided by the laboratory to document sample condition upon receipt. Copies of the SRA and COC certificates are presented in Appendix H .
Laboratory Analysis and Quality Control	Groundwater samples were analysed by SGS and Envirolab for the contaminants of concern. In addition to the split (inter-laboratory) field duplicate (analysed by Envirolab), QC testing comprised a

Activity/Item	Details
	blind (intra-laboratory) field duplicate, an equipment rinsate blank, a laboratory-prepared, trip spike water sample and a laboratory-prepared, trip blank water sample, all tested by SGS.

6. DATA QUALITY ASSESSMENT

The assessment of data quality is defined as the scientific and statistical evaluation of environmental results to determine if they meet the objectives of the project (USEPA, 2006). For this DSI, data quality assessment involved an evaluation of the compliance of the field (sampling) and laboratory procedures with established protocols, as well as the accuracy and precision of the associated results from the quality control measures. The findings are summarised in **Table 6-1** and discussed in detail in **Appendix J**.

In summary, the overall quality of the analytical data from this DSI was considered to be of an acceptable standard for interpretive use and preparation of an updated CSM.

Table 6-1 Quality Control Process

Stage	Control	Conformance [Yes, Part, No]	Report Section(s)
Preliminaries	DQO established	Yes	See Sections 5.2 and 5.3
Field Work	Suitable documentation of fieldwork observations including borehole logs, field notes.	Yes	See Appendix F and G
Sampling Plan	Use of relevant and appropriate sampling plan (density, type, and location)	Yes	See Section 5.4
	All media sampled and duplicates collected	Part	See Appendix H - Soil inter-laboratory duplicate was lost during transportation and the testing was not conducted during this project, it considered minor-non conformance
	Use of approved and appropriate sampling methods (soil, groundwater, soil vapour)	Yes	See Sections 5.6 and 5.7
	Preservation and storage of samples upon collection and during transport to the laboratory	Yes	See Sections 5.6 and 5.7
	Appropriate field rinsate and trip blanks taken	Yes	See Appendix H
	Completed field and analytical laboratory sample COC procedures and documentation	Yes	See Appendix H
Laboratory	Sample holding times within acceptable limits	Part	See Appendix I, J, K - In SGS laboratory certificate SE248198, extraction date of a few non-critical items (pH and TRH in rinsate water) noticed, it considered minor-no conformance but has no effect on the primary samples for contamination investigation purpose
	Use of appropriate analytical procedures and NATA-accredited laboratories	Yes	See Appendix I, J, K
	LOR/PQL low enough to meet adopted criteria	Yes	See Appendix I, J, K
	Laboratory blanks	Yes	See Appendix I, J, K
	Laboratory duplicates	Part	See Appendix I, J, K - In SGS laboratory certificate SE248198, three items in laboratory duplicate exceed the criteria and likely due to

Stage	Control	Conformance [Yes, Part, No]	Report Section(s)
			sample heterogeneity
	Matrix spikes	Part	See Appendix I, J, K - In SGS laboratory certificate SE248198, one item in matrix spike exceed the criteria and likely due to sample heterogeneity
	Surrogates (or System Monitoring Compounds)	Yes	See Appendix I, J, K
	Analytical results for replicated samples, including field and laboratory duplicates and inter-laboratory duplicates, expressed as RPD	Part	See Appendix I, J, K - a few items exceed the RPDs with majority within the criteria, so it is considered minor non-conformance
	Checking for the occurrence of apparently unusual or anomalous results (e.g. laboratory results that appear to be inconsistent with field observations or measurements)	Yes	See Appendices B, F, G
Reporting	Report reviewed by senior staff to confirm project meets NSW EPA guidelines and objectives	Yes	See Document Control

7. RESULTS

7.1 Soil Field Results

7.1.1 Sub-Surface Conditions

The general site lithology encountered during the soil investigation was a layer of filling (to the depths of up to 1.6 mBGL), overlying natural clay/silty clay soil. More details are provided in **Table 7-1**. Borehole logs are presented in **Appendix F**.

Table 7-1 Generalised Sub-Surface Profile

Layer	Description	Minimum and Maximum Depth (mBGL)
Hardstand	Concrete/asphalt	0.0 – 0.15
Fill/Topsoil	Silty SAND, Sandy Gravel, Gravelly SAND, SAND, Clayey SAND, Silty CLAY, Sandy CLAY	0.0– 1.2
Natural	CLAY, Silty CLAY, Sandy CLAY	0.5 – 3.0
Bedrock	SHALE , SANDSTONE	0.9-7.24+

Note 1 + Termination depth of deepest borehole.

7.1.2 Field Observations

Soil samples were collected from the test bores at various depths from fill and natural layers. All examined soil samples were evaluated on a qualitative basis for odour and visual signs of contamination (e.g. hydrocarbon odours, oil staining, petrochemical filming, asbestos fragments, ash, charcoal) and the following observations were noted:

- No obvious odour was observed in any of the drilled/examined soils;
- No soil staining was observed in any of the drilled/examined soils;
- No ash or slag was observed in any of the drilled/examined soils;

- No fragments of potential ACM were observed in any of the drilled/examined soils; and
- No groundwater seepage was observed while drilling of boreholes.

7.2 Groundwater Field Results

7.2.1 Monitoring Well Construction

Three groundwater monitoring wells (BH1M, BH9M, BH12M) were installed by EI in 2023. Construction details for the installed well are summarised in **Figure 7-2**.

Figure 7-2 Monitoring Well Construction Details

Well ID	Well Depth (mBGL)	Top of Casing (mBGL) ¹	Screen Interval (mBGL)	Lithology Screened
BH1M	6.0	0.09	3.0-6.0	SANDSTONE
BH9M	6.0	0.08	3.0-6.0	SANDSTONE
BH12M	6.0	0.11	3.0-6.0	SANDSTONE

Footnote:

- 1 All tops of casing were installed below ground level ('stick down').

7.2.2 Field Observations

A GME was conducted on 1 June 2023. Physiochemical parameters were recorded immediately before sampling, as presented in **Table 7-2**. Field data sheets are attached in **Appendix G**. Samples were then evaluated on the basis of odour and visual signs of contamination, with the following observations noted:

- Groundwater was found to be clear;
- No odour was detected in any of the groundwater monitoring wells; and
- Slight sheen was observed while sampling groundwater, at locations BH9M and BH12M.

Table 7-2 Groundwater Physiochemical Parameters

Well	SWL (mBGL)	DO ³ (mg/L)	pH ⁴	EC ⁵ (µS/cm)	Temperature (°C)	Redox ¹ (mV)
BH1M	1.98	- ²	7.24	1,683	19.44	-209.3
BH9M	1.97	- ²	5.41	4,413	19.77	-351.6
BH12M	2.02	- ²	4.91	1,374	20.1	-19.9

Footnotes:

- 1 Redox readings were adjusted to the Standard Hydrogen Electrode (SHE) potential by adding 205mV to the field readings.
2 Instrument malfunction.

Field observations (**Table 7-2**) indicated that the groundwater was brackish (EC ranging from 1,683 to 4,413 µS/cm), slightly acidic to neutral (pH ranging from 4.91 to 7.24) and reductive (Redox < 0).

7.3 Laboratory Analytical Results

7.3.1 Soil Analytical Results

A summary of the soil analytical results is presented in **Table 7-3**. Detailed tabulation is presented in **Table B.1, Appendix B**.

Table 7-3 Summary of Soil Analytical Results

Number of Primary Samples	Analyte	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Samples Exceeding SILs
Priority Metals				
18	Arsenic	2	9	None
18	Cadmium	<0.3	<0.3	None
18	Chromium (Total)	4.4	28	None
18	Copper	4.2	120	None
19	Lead	5	39	None
18	Mercury	<0.05	0.27	None
18	Nickel	<0.5	110	None
18	Zinc	4.6	84	None
PAH				
18	Naphthalene	<0.1	<0.1	None
18	Benzo(a)pyrene	<0.1	0.3	None
18	Carcinogenic PAH (as B(a)P TEQ)	<0.3	0.4	None
18	Total PAH	<0.8	3.5	None
BTEX and TRH				
18	Benzene	<0.1	<0.1	None
18	Toluene	<0.1	<0.1	None
18	Ethyl benzene	<0.1	<0.1	None
18	Xylenes (Total)	<0.3	<0.3	None
18	TRH - F1	<25	<25	None
18	TRH - F2	<25	<25	None
18	TRH - F3	<90	140	None
18	TRH - F4	<120	130	None
Pesticides				
18	OCP	<1	<1	None
18	OPP	<1.7	<1.7	None
PCB				
18	Total PCB	<1	<1	None
PFAS				
4	PFOS+PFHxS	<0.0016	0.0018	None
18	PFOA	<0.0008	<0.0008	None

Number of Primary Samples	Analyte	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Samples Exceeding SILs
Asbestos				
12	Asbestos	Not detected	Not detected	None

7.3.2 Groundwater Analytical Results

A summary of the groundwater analytical results is presented in **Table 7-4**. Detailed tabulation is presented in **Table B.2, Appendix B**.

Table 7-4 Summary of Groundwater Analytical Results

Number of Primary Samples	Analyte	Minimum Concentration (µg/L)	Maximum Concentration (µg/L)	Sample(s) Exceeding GILs
Priority Metals				
3	Arsenic	<1	<1	None
3	Cadmium	<0.1	0.5	<u>ANZG (2018) GILs (0.2 µg/L)</u> BH1M (0.5 µg/L)
3	Chromium (Total)	<1	<1	None
3	Copper	<1	3	<u>ANZG (2018) GILs (1.3 µg/L)</u> BH12M (3 µg/L)
3	Lead	<1	<1	None
3	Mercury	<0.1	<0.1	None
3	Nickel	2	32	<u>ANZG (2018) GILs (150 µg/L)</u> BH12M (3 µg/L) BH12M (3 µg/L)
3	Zinc	<5	13	None
PAH				
3	Naphthalene	<0.1	<0.1	None
3	Benzo(α)pyrene	<0.1	<0.1	None
3	Total PAH	<1	<1	None
BTEX and TRH				
3	Benzene	<0.5	<0.5	None
3	Toluene	<0.5	6.1	None
3	Ethyl benzene	<0.5	<0.5	None
3	o-xylene	<0.5	<0.5	None
3	m + p-xylene	<1	<1	None
3	TRH - F1	<50	73	None
3	TRH - F2	<60	300	None
3	TRH - F3	<500	<500	None
3	TRH - F4	<500	<500	None

8. SITE CHARACTERISATION

8.1 Subsurface Conditions

The general site lithology encountered during the soil investigation was a layer concrete/asphalt in some locations, overlying a fill layer of silty sand, sandy gravel, gravelly sand, sand, clayey sand, silty clay or sandy clay (down to 1.2 mBGL), overlying natural clay, silty clay or sandy clay (down to 3.0 mBGL). Bedrock was identified at depths ranging from 0.9 to 7.24 mBGL.

No obvious odours were observed in any fill or natural soils recovered at borehole locations within the site.

No ash, slag or other foreign materials (including ACM) were observed in any of the recovered fill or natural soil.

Water seepage inflow was not observed in any of the drilled boreholes during the current investigation. However, such visual confirmation is typically hard to be obtained when the drilling method involves the use of drilling fluids. This was the case for the boreholes reaching down to the sandstone layers.

8.2 Soil Impacts

No contaminants of concern (priority metals, BTEX, TRH, PAHs, OCPs, OPPs, PCBs and PFAS) were reported at concentrations above the adopted health-based criteria.

Asbestos was not detected (at a reporting limit of 0.01 %w/w) in any of the fill samples collected from each of the investigated locations.

No contaminants of concern were reported at concentrations above adopted ecological criteria at any of the investigated locations outside the existing building footprint.

8.3 Acid Sulfate Soil Impacts

The main objective of the acid sulfate soil assessment was to evaluate the potential for ASS to be present on the site. Should ASS be identified, a secondary objective was to provide advice for the management of such soils during the proposed excavations.

ASSs are naturally occurring soils (or sediments) containing iron sulphides, deposited in estuarine environments. As ASSs comprise natural materials, their occurrence is not related to site boundaries or anthropogenic contamination; rather, they extend across regions suitable for their formation.

When ASS are exposed to air (e.g. due to bulk excavation or dewatering), oxygen reacts with the iron sulphide, producing sulphuric acid (and iron oxides). The acid may be produced in large quantities causing the leaching of metals from soils and associated adverse groundwater quality impacts. The problem is exacerbated as impacted groundwater discharges to waterways causing severe short and long term socio-economic and environmental impacts, including damage to man-made structures and natural ecosystems.

ASS can be classified as either actual acid sulphate soil (AASS), within which are materials that have already reacted with oxygen to produce acid; or potential acid sulfate soil (PASS), within which are materials that contain iron sulphides, but have not yet been exposed to oxygen (e.g. ASSs below the water table) and therefore have not produced sulphuric acid, though they have the capacity to do so.

As part of this DSI investigation, representative samples (BH4_1.2-1.3, BH4_1.7-1.8 and BH3_0.8-0.9) were assigned for laboratory analysis, in accordance with the guidance prescribed in Section 4.2 of ASSMAC (1998) and Sullivan *et al.* (2018). During the analyses, some samples were also subjected to a suspension peroxide oxidation combined with acidity and/or sulfate (SPOCAS) tests, to confirm the presence or absence of any PASS. The results of these analyses are presented in **Table 8-1**.

Table 8-1 Summary of the Laboratory Analytical Results

Sample ID	Depth (m BGL)	Date	Material	pH _F	pH _{FOX}	Reaction	pH _{Cl} (SPOCAS)	Peroxide pH (SPOCAS)	TAA (moles H ⁺ /tonne)	TPA (moles H ⁺ /tonne)	TSA (moles H ⁺ /tonne)	S _{KCl} (%w/w)	S _p (%w/w)	S _{pos} (%w/w)	S _{Cr} (%w/w)
BH4	1.2-1.3	23/05/2023	Natural	6.3	6.2	X	-	-	-	-	-	-	-	-	-
BH4	1.7-1.8	23/05/2023	Natural	5.3	4.7	X	-	-	-	-	-	-	-	-	-
BH3	0.8-0.9	23/05/2023	Natural	5.0	4.3	X	4.4	5.2	45	55	10	0.019	0.021	<0.005	-
ASSMAC Action Criteria				4	3.5	NC	NC	NC	NC	18	18	NC	NC	0.03	0.1

Notes:

Indicates reported result is over the action criterion

Blank cells have been used where the test was not performed

BGL = below ground level

X = slight reaction; XX = moderate reaction; XXX = strong reaction; XXXX = extreme reaction

Criteria derived from Section 2 of the *Acid Sulfate Soils Manual* (ASSMAC, 1998), specifically the *Action Criteria* that trigger the need to prepare and ASS management plan, where >1000 tonnes fine textured (clay-dominated) soils are to be disturbed

NC = no currently available criterion

The sulfur trails of the SPOCAS suite reported peroxide oxidisable sulfur (SPOS) concentrations below LOR (< 0.005) and titratable sulfidic acidity (TSA) concentrations below their corresponding criterion. Hence, the potential acid generating components in the soils were not entirely sulfur-related.

The main objective of this assessment was to evaluate the potential for ASS to be present on the site. The key findings were as follows:

- Site elevations range from approximately 8 to 10 mAHd.
- The site is underlain by (weathered) Ashfield Shale bedrock, which occurs from 0.9 to 7.24 mBGL.
- ASS planning and risk maps indicated that the subject site lies within a Class 5 area, having no known occurrence (of ASS). Acid Sulfate Soils are not typically found in Class 5 areas. Areas classified as Class 5 are located within 500 meters of adjacent class 1, 2, 3 or 4 areas.
- The site displayed none of the geomorphic features characteristic of ASS.
- The site demonstrated none of the field indicators for actual and/or potential ASS listed in the ASSMAC (1998) *Acid Sulfate Soil Manual*.
- None of the examined soils displayed any of the visual or olfactory indicators of actual and potential acid sulfate soils, such as pale yellow deposits / coatings of jarosite, dark (blue/green) grey muds and hydrogen sulphide (H₂S) odours.

Based on the findings from this assessment and with due consideration of EI's Statement of Limitations (**Section 11**), EI concludes that the presence of ASS on the site is unlikely and the potential for generation of acid sulfate conditions during the proposed development can be regarded as negligible. Hence, the preparation of an ASS management plan for the proposed development was deemed unwarranted.

8.4 Groundwater Impacts

During the GME conducted on 1 June 2023, standing water level varied between 1.98 and 2.02 mBGL.

With reference to **Table B.2, Appendix B**, contaminant concentrations in groundwater were reported below the adopted criteria, with the exception of the following:

Priority Metals

Cadmium concentrations were reported at marginal exceedance of adopted criterion for marine water (0.2 µg/L) in monitoring wells BH1M (0.5 µg/L).

Copper concentrations were reported at marginal exceedance of adopted criterion for marine water (1.3 µg/L) in monitoring wells BH12M (3 µg/L).

Nickel concentrations were reported at marginal exceedance of adopted criterion for marine water (7 µg/L) in monitoring wells BH9M (32 µg/L) and BH12M (9 µg/L).

Zinc concentrations were reported at marginal exceedance of adopted criterion for marine water (15 µg/L) in monitoring wells BH9M (150 µg/L) and BH12M (46 µg/L).

These marginally exceeding concentrations, however, are consistent with the disturbed local urban background conditions, and are unlikely a result of site-specific impacts.

Petroleum Hydrocarbons

Detections of TRH-F1 and TRH-F2 were reported at BH9M and light sheens were observed at BH9M and BH12M. The concentrations of TRH-F1 and TRH-F2 did not exceed the adopted health-based criterion (HSL-A&B).

9. CONCLUSION

The property located at 1H Hospital Road, Concord West NSW was the subject of a DSI, conducted in order to assess the nature and degree of on-site contamination. The key findings of this DSI were as follows:

- At the time of site inspection, the site was occupied by a single-storey fire service building and an open space car park.
- The northern portion of the site (car park) was covered by asphalt pavement, which appeared to be in good condition, with minimal cracking.
- There was no visual evidence of underground storage tanks (UST) or aboveground storage tanks (AST) on site. Evidences of USTs were, however, observed on the neighbouring site to the east (a service station).
- No ash, slag or other foreign materials (including ACM) were observed in samples collected from fill or natural soils.
- No contaminants of concern (primary metals, BTEX compounds, PAHs, OCPs, OPPs and PCBs) were reported in soils at concentrations above the adopted ecological or health-based criteria.
- Contaminant concentrations in groundwater were reported below the adopted criteria, with the exception of the following:
 - Cadmium, copper, nickel and zinc were reported in groundwater at concentrations marginally above the adopted marine water criteria. These concentrations, however, were considered to be consistent with the disturbed urban background conditions, instead of a result of site-specific impacts.
- The following data gaps were identified by the current conceptual site model:
 - The conditions of the soils within the footprint of the existing building are still unknown;
 - The presence and extent of per- and poly-fluoroalkyl substances (PFAS) in groundwater is unknown.

Conclusion

Based on the findings obtained from this DSI, and with consideration of EI's *Statement of Limitations* (**Section 11**), EI concludes that the site can be made suitable for the potential future site redevelopment, provided the recommendations detailed in **Section 10** are implemented.

10. RECOMMENDATIONS

EI provides the following recommendations:

- Before commencement of demolition works, a Hazardous Materials Survey (HMS) shall be completed by a suitably qualified consultant, to identify any hazardous materials present within the existing building fabrics.
- The HMS should guide subsequent building and infrastructure demolition at the site, to prevent release of hazardous materials.
- Additional intrusive investigation should be conducted, to close the remaining data gaps at the subject site, including:
 - Soil characterisation within the footprint of the current building (if accessible); and
 - Groundwater investigation targeting additional COPCs .
- Preparation and implementation of a Remediation Action Plan (RAP), if remediation is required based on results obtained from the additional intrusive investigations mentioned above. The RAP should also include:
 - Waste management plan for any surplus materials (including potential virgin excavated natural materials (VENM) excavated and removed from site in accordance with NSW EPA (2014); and
 - A sampling and analysis quality plan (SAQP) for the post-remedial validation assessment, aimed at confirming that site remediation was effective.
- Implementation of the remediation and validation works for the site, as outlined in the RAP.
- Preparation of a validation report by a suitably qualified environmental consultant, confirming site suitability for its proposed land use.

11. STATEMENT OF LIMITATIONS

This report has been prepared for the exclusive use of LIPMAN Pty Ltd, which is the only intended beneficiary of EI's work. The scope of the investigation carried out for the purpose of this report was limited to that agreed with LIPMAN Pty Ltd.

No other party should rely on this document without the prior written consent of EI, and EI undertakes no duty, or accepts any responsibility or liability, to any third party who purports to rely upon this document without EI's approval.

The findings presented in this report are the result of discrete and specific sampling methodologies used in accordance with best industry practices and standards. Due to the site-specific nature of soil sampling from point locations, it is considered likely that all variations in subsurface conditions across a site cannot be fully defined, no matter how comprehensive the field program.

While normal assessments of data reliability have been made, EI assumes no responsibility or liability for errors in any data obtained from previous assessments conducted on site, regulatory agencies (e.g. Council, NSW EPA), statements from sources outside of EI, or developments resulting from situations outside the scope of works of this project.

Despite all reasonable care and diligence, the ground conditions encountered and concentrations of contaminants measured may not be representative of conditions between the locations sampled and investigated. In addition, site characteristics may change at any time in response to variations in natural conditions, chemical reactions and other events (e.g. groundwater movement and or spillages of contaminating substances). These changes may occur subsequent to EI's investigation.

EI's assessment is necessarily based upon the results of the site investigation and the restricted program of surface and subsurface sampling, screening and chemical testing which was set out in the project proposal. Neither EI, nor any other reputable consultant, can provide unqualified warranties nor does EI assume any liability for site conditions not observed or accessible during the time of the investigations.

This report was prepared for LIPMAN Pty Ltd and no responsibility is accepted for use of any part of this report in any other context or for any other purpose or by other third parties. This report does not purport to provide legal advice.

This report and associated documents remain the property of EI subject to payment of all fees due for this assessment. The report shall not be reproduced except in full and with prior written permission by EI.

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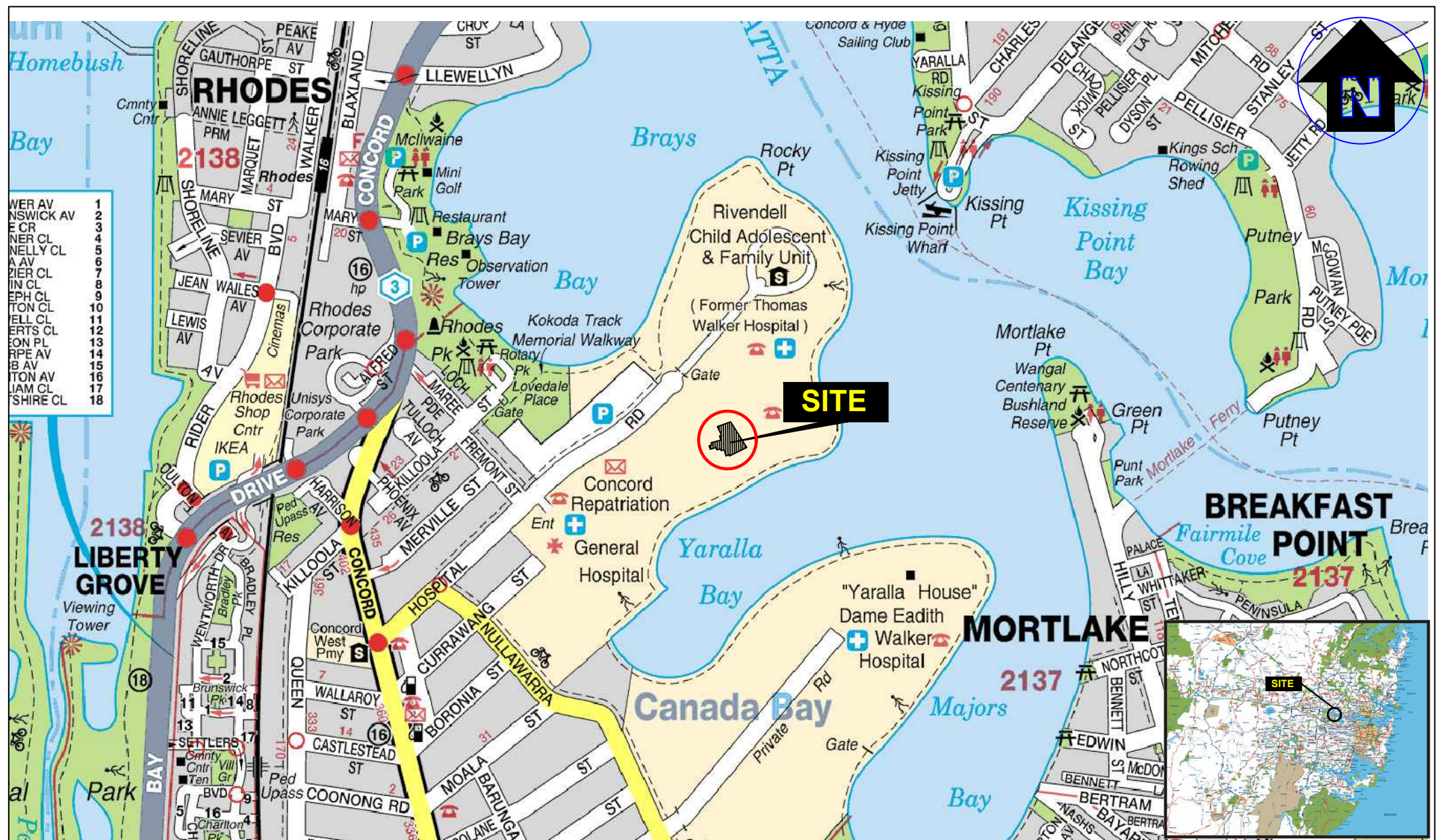
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ABBREVIATIONS

ACM	Asbestos-Containing Materials
AS	Australian Standard
ASS	Acid Sulfate Soils
AST	Above-ground Storage Tank
B(a)P	Benzo(a)Pyrene (a PAH compound)
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CCO	Chemical Control Order
COC	Chain of Custody
CSM	Conceptual Site Model
CVOC	Chlorinated Volatile Organic Compounds (a sub-set of the VOC suite)
DO	Dissolved Oxygen
DP	Deposited Plan
DQO	Data Quality Objectives
DQI	Data Quality Indicators
DSI	Detailed Site Investigation
EC	Electrical Conductivity
EI	EI Australia
EIL	Ecological Investigation Level
Envirolab	Envirolab Services Pty Ltd
NSW EPA	Environment Protection Authority (of New South Wales)
ESL	Ecological Screening Level
F1	C ₆ -C ₁₀ TRH (less the sum of BTEX concentrations)
F2	>C ₁₀ -C ₁₆ TRH (less the concentration of naphthalene)
F3	TRH >C ₁₆ -C ₃₄
F4	TRH >C ₃₄ -C ₄₀
GIL	Groundwater Investigation Level
GME	Groundwater Monitoring Event
HDPE	High Density Polyethylene
HIL	Health-based Investigation Level
HSL	Health-based Screening Level
km	Kilometres
L	Litres
LGA	Local Government Area
LOR	Limit of Reporting (limit of reporting for respective laboratory method)
m	Metres
mAHD	Metres Australian Height Datum
mBGL	Metres Below Ground Level
mBTOC	Metres Below Top of Casing
µg/L	Micrograms per Litre
mg/L	Milligrams per Litre
mV	Millivolts
N/A	Not Applicable
NATA	National Association of Testing Authorities, Australia
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NSW	New South Wales
OCP	Organochlorine Pesticides
OPP	Organophosphate Pesticides
ORP	Oxidation-Reduction Potential
PAH	Polycyclic Aromatic Hydrocarbons

PCB	Polychlorinated Biphenyls
PFAS	Per- and Poly-Fluoroalkyl Substances
pH	Potential Hydrogen (a measure of the acidity or basicity of an aqueous solution)
PID	Photo-Ionisation Detector
POEO	Protection of the Environment Operations
PQL	Practical Quantitation Limit (limit of detection for respective laboratory method)
PSH	Phase-Separated Hydrocarbons
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance / Quality Control
RAP	Remediation Action Plan
RPD	Relative Percentage Differences
SAQP	Sampling and Analysis Quality Plan
SCID	Stored Chemical Information Database
SGA	SGA Environmental
SGS	SGS Australia Pty Ltd
SIL	Soil Investigation Level
SOP	Standard Operating Procedure
SRA	Sample Receipt Advice (document confirming laboratory receipt of samples)
SWL	Standing Water Level
TEQ	Toxicity Equivalent Quotient
TRH	Total Recoverable Hydrocarbons (non-specific analysis of organic compounds)
TV	Trigger Value
UCL	Upper Confidence Limit (of the mean)
UFP	Unexpected Finds Protocol
UPSS	Underground Petroleum Storage System
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VENM	Virgin Excavated Natural Material
VOC	Volatile Organic Compounds (specific organic compounds which are volatile)

Appendix A – Figures



Practical Solutions for Built Environments
Suite 6.01, 55 Miller Street, PYRMONT 2009
Ph (02) 9516 0722 Fax (02) 9518 5088

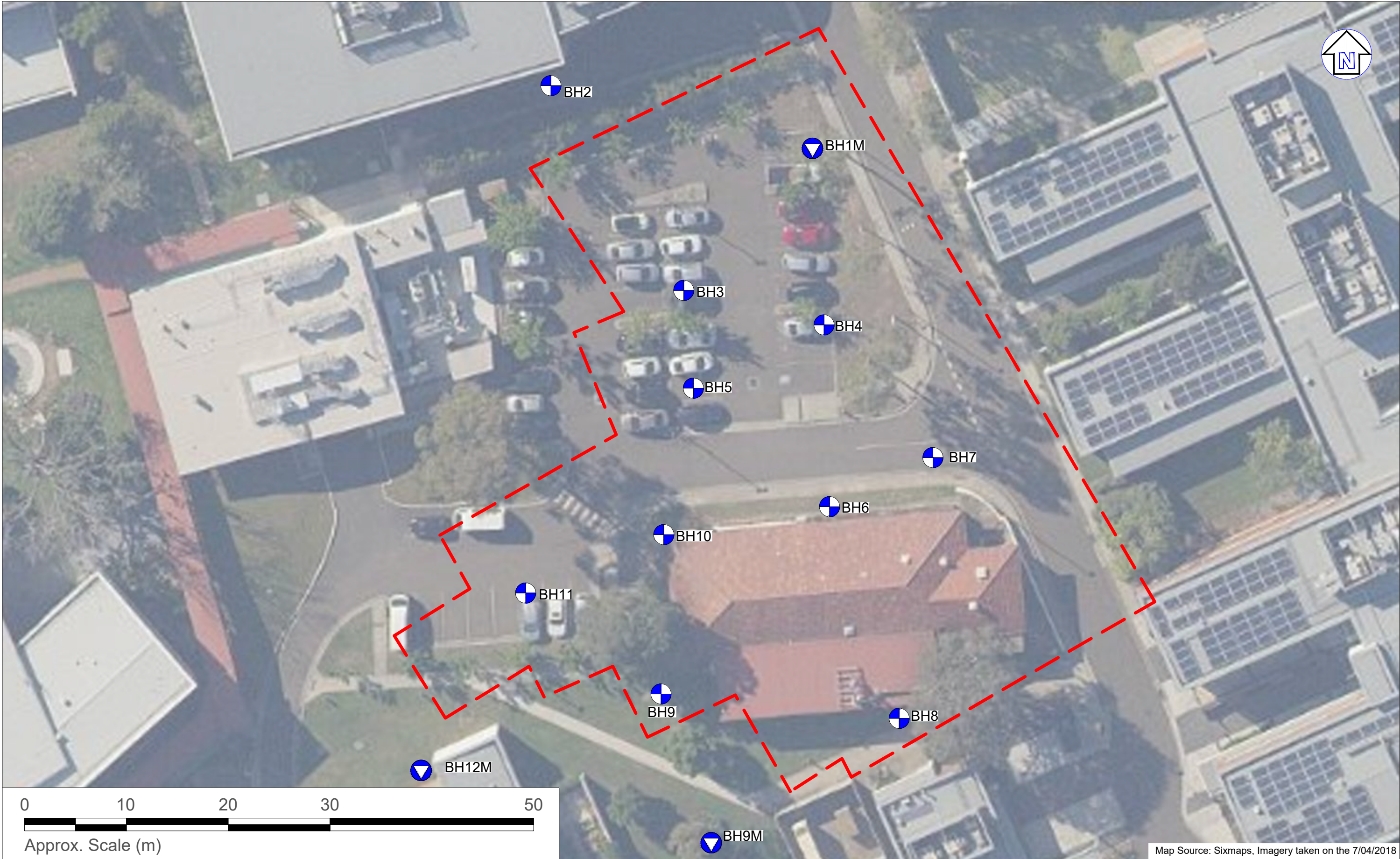
Drawn:	L.S.
Approved:	-
Date:	09-06-23
Scale:	Not To Scale

Lipman Pty Ltd
Detailed Site Investigation
1H Hospital Road, Concord, NSW
Site Locality Plan

Figure:

1

Project: E25996.E02_Rev0



LEGEND (Note: All locations are approximate)

- Site boundary
- Borehole locations
- Groundwater Monitoring Well locations



Suite 6.01, 55 Miller Street, PYRMONT 2009
Ph (02) 9516 0722 Fax (02) 9518 5088

Drawn:	L.S.
Approved:	--
Date:	09-06-23

Lipman Pty Ltd
Detailed Site Investigation
1H Hospital Road, Concord, NSW
Sampling Location Plan

Figure:	2
Project:	E25996.E02

Appendix B – Tables

Table B.1 – Summary of Soil Test Results

Sample ID	Sampling Date	Priority Metals								PAHs				BTEX				TRHs				Total OCPs	Total OPPs	PCBs	PFASs		Asbestos	
		As	Cd	Cr [#]	Cu	Pb	Hg	Ni	Zn	Carcinogenic PAHs (as B(a)P TEQ)	Benzo(c)pyrene	Total PAHs	Naphthalene	Benzene	Toluene	Ethylbenzene	Total Xylenes	F1	F2	F3	F4				PFOS/PFHs	PFOA		
Fill																												
BH1M_0.5-0.6	24.05.2023	3	<0.3	13	120	6	<0.05	14	40	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	No	
BH2_0.1-0.2	24.05.2023	3	<0.3	12	54	25	<0.05	13	43	0.4	0.3	3.5	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	110	130	<1	<1.7	<1	-	-	No	
BH3_0.2-0.3	23.05.2023	2	<0.3	16	99	5	<0.05	20	41	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	120	<120	<1	<1.7	<1	-	-	No	
BH4_0.5-0.6	24.05.2023	2	<0.3	9.7	110	5	<0.05	11	36	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	No	
BH5_0.2 - 0.3	23.05.2023	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
BH5_0.6 - 0.7	23.05.2023	3	<0.3	5.5	34	15	<0.05	2.8	13	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	No	
BH6_0.1-0.2	23.05.2023	5	<0.3	9.4	52	34	<0.05	110	84	<0.3	0.1	1.1	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	<0.0016	<0.0008	No	
BH7_0.5-0.6	23.05.2023	4	<0.3	11	24	13	<0.05	5.2	18	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	No	
BH8_0.2-0.3	23.05.2023	5	<0.3	28	15	27	0.22	14	45	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	<0.0016	<0.0008	No	
BH9_0.1-0.2	23.05.2023	7	<0.3	11	15	39	0.27	6.5	47	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	0.0018	<0.0008	No	
BH10_0.2-0.3	23.05.2023	4	<0.3	13	11	30	0.09	3.1	27	0.4	0.2	1.5	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	140	<120	<1	<1.7	<1	<0.0016	<0.0008	No	
BH11_0.5-0.6	23.05.2023	3	<0.3	22	73	7	<0.05	20	43	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	No	
BH12M_0.3-0.4	23.05.2023	6	<0.3	14	21	33	0.07	4.8	35	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	No	
Statistical Analysis																												
Maximum concentration		7	<0.3	28	120	39	0.27	110	84	0.4	0.3	3.5	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	140.0	130.0	<1	<1.7	<1	0.0018	<0.0008	No	
Natural																												
BH1M_2.0-2.1	24.05.2023	5	<0.3	5.6	94	14	<0.05	1.4	11	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	-	
BH2_1.5-1.6	24.05.2023	8	<0.3	8.4	24	16	<0.05	<0.5	6.7	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	-	
BH4_2.0-2.1	24.05.2023	8	<0.3	4.4	27	12	<0.05	<0.5	5.4	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	-	
BH5_1.3 - 1.4	23.05.2023	9	<0.3	8.1	44	21	<0.05	1	12	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	-	
BH7_1.5-1.6	23.05.2023	3	<0.3	4.6	14	11	<0.05	1.9	6	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	-	
BH8_0.9-1.0	23.05.2023	7	<0.3	20	4.2	17	<0.05	<0.5	4.6	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	-	
Statistical Analysis																												
Maximum concentration		9	<0.3	20	94	21	<0.05	2	12	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	-	-	-	
NEPM (2013) Criteria																												
HIL A - Residential with garden / accessible soil		100	20	100 Cr(VI)	6,000	300	40	400	7,400	3		300									240		1					
HSL A & B - Low to high density residential Soil texture classification – Sand		Source depths (0 m to <1 m. BGL)											3	0.5	160	55	40	45	110									
		Source depths (1 m to <2 m. BGL)											NL	0.5	220	NL	60	70	240									
		Source depths (2 m to <4 m. BGL)											NL	0.5	310	NL	95	110	440									
HSL A & B - Low to high density residential Soil texture classification – Clay		Source depths (0 m to <1 m. BGL)											5	0.7	480	NL	110	50	280									
		Source depths (1 m to <2 m. BGL)											NL	1	NL	NL	310	90	NL									
		Source depths (2 m to <4 m. BGL)											NL	2	NL	NL	NL	150	NL									
EILs / ESLs - Urban residential and public open space - Coarse ^{1 2}		100				1,100					0.7		170	50	85	70	105	180	120	300	2,800	180						
EILs / ESLs - Urban residential and public open space- Fine ^{1 2}		100				1,100					0.7		170	65	105	125	45	180	120	1,300	5,600	180						
Management Limits – Residential, parkland and public open space-Coarse																		700	100	2,500	10,000							
Management Limits – Residential, parkland and public open space-Fine																		800	1,000	3,500	10,000							
HEPA (2020) - NEMP PFAS (Hil B) ³																										2	20	

Notes:

Highlighted values exceeded HIL / HSL

Concentration exceeds highlighted criteria

Results are recorded in mg/kg

HIL B

NEPC 1999 Amendment 2013 'HIL B' - Health based Residential with minimal opportunities for soil access including dwellings with fully and permanenetty paved yard space such as high-rise buildings and apartments.

HSL A & B

NEPC 1999 Amendment 2013 'HSL A & B' Health Based Screening Levels applicable for vapour intrusion values applicable for low-high density residential settings.

EIL

Ecological Investigation Level for urban residential and public open space land use.

ESL

Ecology Screening Level for urban residential and public open space land use.

-

Not Analysed

NC

Not calculated

1

Coarse &/or Fine grained soil assessment criteria values were applied, as a conservative approach.

2

EIL criteria is used from Generic added contaminant limits

3

Value dervied from the National Environmental Management Plan for PFAS - Soil Criteria for Investigation - Human Health Based Guidance Values for Residential with minimal opportunities for soil access(HIL B)

F1

F1 subtract the sum of BTEX concentrations from the C6-C10 fraction.

F2

F2 subtract naphthalene from the >C10-C16 fraction.

F3

(>C16-C34)

F4

(>C34-C40)

Table B.2 - Summary of Groundwater Analytical Results

E25996.E02 - Concord

Sample ID	Date of sampling	Heavy Metals								BTEX						PAHs			TRH			
		As	Cd	Cr (total)	Cu	Pb	Hg	Ni	Zn	Benzene	Toluene	Ethylbenzene	m/p-Xylene	o-Xylene	Total Xylenes	Benzoflpyrene	Total PAHs	Naphthalene	F1	F2	F3	F4
Detailed Site Investigation																						
BH1M	1/6/2023	<1	0.5	<1	1	<1	<0.1	2	14	<0.5	0.9	<0.5	<1	<0.5	<1.5	<0.1	<1	<0.1	<50	<60	<500	<500
BH9M		<1	<0.1	<1	<1	<1	<0.1	32	150	<0.5	6.1	<0.5	<1	<0.5	<1.5	<0.1	<1	<0.1	73	300	<500	<500
BH12M		<1	<0.1	<1	3	<1	<0.1	9	46	<0.5	<0.5	<0.5	<1	<0.5	<1.5	<0.1	<1	<0.1	<50	<60	<500	<500
Statistical Analysis																						
Maximum Concentration		0	0.5	0	3	<1	<0.1	32	150	<0.5	6.1	<0.5	0	0	<1.5	<0.1	<1	<0.1	73	300	<500	<500
GILs																						
NEPC (2013) HSL A&B	Source depths (SAND) from 2m to <4m									800	NL	NL			NL			NL	1000	1000		
NEPC (2013) HSL A&B	Source depths (CLAY) from 2m to <4m									5000	NL	NL			NL			NL	NL	NL		
ANZG (2018) ¹	Marine Water	24 (As III) ⁵ 13 (As V) ⁵	0.2	27 (Cr III) 4.4 (Cr VI)	1.3	4.4	0.1 ²	7 ²	15	700	180	80	75	350 ⁵				70				
NHMRC (2022) ³	Recreational	100	20	500	1000 ⁴	100	10	200	3000 ⁴	10	25 ⁴	3 ⁴	20			0.1						

Notes: All values are in units of µg/L unless stated otherwise.

Highlighted values indicates concentration exceeds the NEPM (2013) human-based Health Screening Levels (HSL) and NMHRC (2008). □

Highlighted values indicates concentration exceeds ANZG (2018) ecological criteria. □

Highlighted values indicates criteria exceeded. □

Indicates no recommended assessment criteria are currently available or applicable.

GILs Groundwater Investigation levels - based on Schedule B1, Table 1A(4) Groundwater HSLs for vapour intrusion (Ref. NEPC, 2013).

HSL D Groundwater HSLs for vapour intrusion for commercial/industrial settings.

NL 'Not Limiting' - The soil vapour limit exceeds the concentration of which the groundwater cannot dissolve any more of the individual VOC.

F1 C6-C10 minus BTEX

F2 >C10-C16 minus naphthalene

F3 (>C16-C34)

F4 (>C34-C40)

1 ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality.

2 The 99% trigger values have been applied for chemicals which have possible bioaccumulation and secondary poisoning effects, Ref. ANZECC & ARM CANZ (2000).

3 Recreational water guidelines are based on current Australian Drinking Water Guidelines multiplied by a factor of 10. Current Drinking Water Guidelines are the NHMRC & NMHRC (2022) Australian Drinking Water Guidelines, version 3.1

Indicated

4 ANZG (2018) Fresh water guideline used when marine criteria is not provided.

Table B3 - Soil RPD Values

E25996.E02 - Concord

Sample identification	Description	Date	TRH				BTEX				Heavy Metals							
			F1	F2	F3	F4	Benzene	Toluene	Ethylbenzene	Xylene (total)	Arsenic	Cadmium	Chromium (Total)	Copper	Lead	Mercury	Nickel	Zinc
PQL			50	60	500	500	0.5	0.5	0.5	0.5	1	0.1	1	1	1	0.1	1	5
Detailed Site Investigation																		
Intra-laboratory Duplicate - Soil Investigation																		
BH5_0.6-0.7	Primary soil sample	23/05/2023	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	3	<0.3	5.5	34	15	<0.05	2.8	13
QD1	BFD of BH11_0.5-0.6		<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	3	<0.3	3.1	13	15	<0.05	0.6	3.7
RPD			NA	NA	NA	NA	NA	NA	NA	NA	0.0%	NA	55.8%	89.4%	0.0%	NA	129.4%	111.4%
Rinsate Blanks																		
QR1	Equipment Rinsate	23/05/2023	<50	<50	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	<0.1	<1	<1	<1	<0.1	<1	<5
Trip Blanks																		
TB1	Soil Trip Blank	Laboratory Prepared	NA	NA	NA	NA	<0.1	<0.1	<0.1	<0.3	NA	NA	NA	NA	NA	NA	NA	NA
Trip Spikes																		
TS1	Soil Trip Spike	Laboratory Prepared	NA	NA	NA	NA	[91%]□	[93%]	[93%]	[93%]	NA	NA	NA	NA	NA	NA	NA	NA

Note:

	Primary value <= 20 x PQL AND RPD > 30%, as per AS4482.1 (2005)
	Primary value > 20 x PQL AND RPD > 50%, as per AS4482.1 (2005)

All results are reported in mg/kg (soil) or µg/L (water)

F1 = TRH C6-C10 less the sum of BTEX
F2 = TRH >C10-C16 less naphthalene
F3 = (>C16-C34)
F4 = (>C34-C40)

Table B4 - Groundwater RPD Values

E25996.E02 - Concord

Sample Identification	Description	Date	TRH				BTEX				Heavy Metals							
			F1	F2	F3	F4	Benzene	Toluene	Ethylbenzene	O-Xylene	Arsenic	Cadmium	Chromium (Total)	Copper	Lead	Mercury	Nickel	Zinc
PQL			50	60	500	500	0.5	0.5	0.5	1.5	1	0.1	1	1	1	0.1	1	5
Detailed Site Investigation																		
Intra-laboratory Duplicate - Groundwater Investigation																		
BH12M	Primary groundwater sample	1/06/2023	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	0.1	<1	3	<1	<0.1	9	46
GW-QD1	BFD of BH12M		<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	0.1	<1	3	<1	<0.1	9	44
RPD			NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0%	NA	0.0%	NA	NA	0.0%	4.4%
Inter-laboratory Duplicate - Groundwater Investigation																		
BH12M	Primary groundwater sample	1/06/2023	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	<0.1	<1	<1	1	<0.1	<1	<5
GW-QT1	BFD of BH12M		65	<50	<100	<100	<1	<1	<1	<1	<1	0.1	<1	3	<1	<0.05	9	48
RPD			46.2%	NA	NA	NA	NA	NA	NA	NA	NA	0.0%	NA	133.3%	0.0%	NA	177.8%	179.2%
Rinsate Blanks																		
GW_QR1	Equipment Rinsate	1/06/2023	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	<0.1	<1	<1	<1	<0.1	<1	<5
Trip Blanks																		
GW_QTB1	Water trip blank	Lab Prepared	-	-	-	-	<0.5	<0.5	<0.5	<1.5	-	-	-	-	-	-	-	-
Trip Spikes																		
GWQTS1	Water trip spike	Lab Prepared	-	-	-	-	[98%]	[99%]	[99%]	[99%]	-	-	-	-	-	-	-	-

Note:

	Primary value <= 20 x PQL AND RPD > 30%, as per AS4482.1 (2005)
	Primary value > 20 x PQL AND RPD > 50%, as per AS4482.1 (2005)

All results are reported in mg/kg (soil) or µg/L (water)

F1 = TRH C6-C10 less the sum of BTEX
F2 = TRH >C10-C16 less naphthalene
F3 = (>C16-C34)
F4 = (>C34-C40)

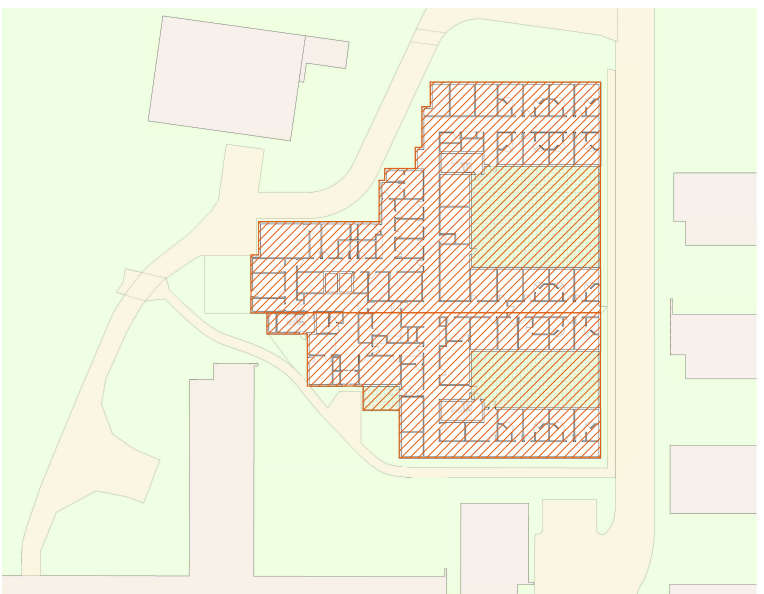
Appendix C – Proposed Development



NBRSt



Concord Repatriation
General Hospital



KEY PLAN

PRELIMINARY

Issue				
No.	Date	Description	Chkd	
1	17/01/23	PRELIM Schematic Design	AO	
2	25/01/23	SCHEMATIC DESIGN	AO	
3	02/02/2023	SCHEMATIC DESIGN	SF	
4	16/02/2023	SCHEMATIC DESIGN ISSUE	AO	



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Nominated Architect:
Andrew Duffin NSW 5602
NBRSt & Partners Pty Ltd VIC 51197
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ABN 16 002 247 565

Project
Concord FMH

at
109 Hospital Rd, Concord, NSW 2139, Australia

for
HINSW

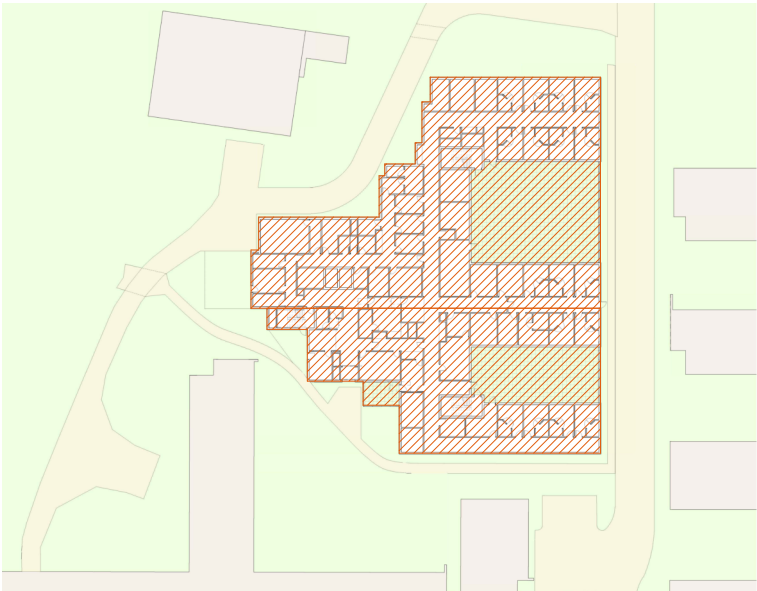
Drawing Title
SITE LAYOUT

Date 16/02/2023 2:25:22 PM
Scale 1 : 200 @ A1

Drawing Reference
22071-A-0200
Revision 4

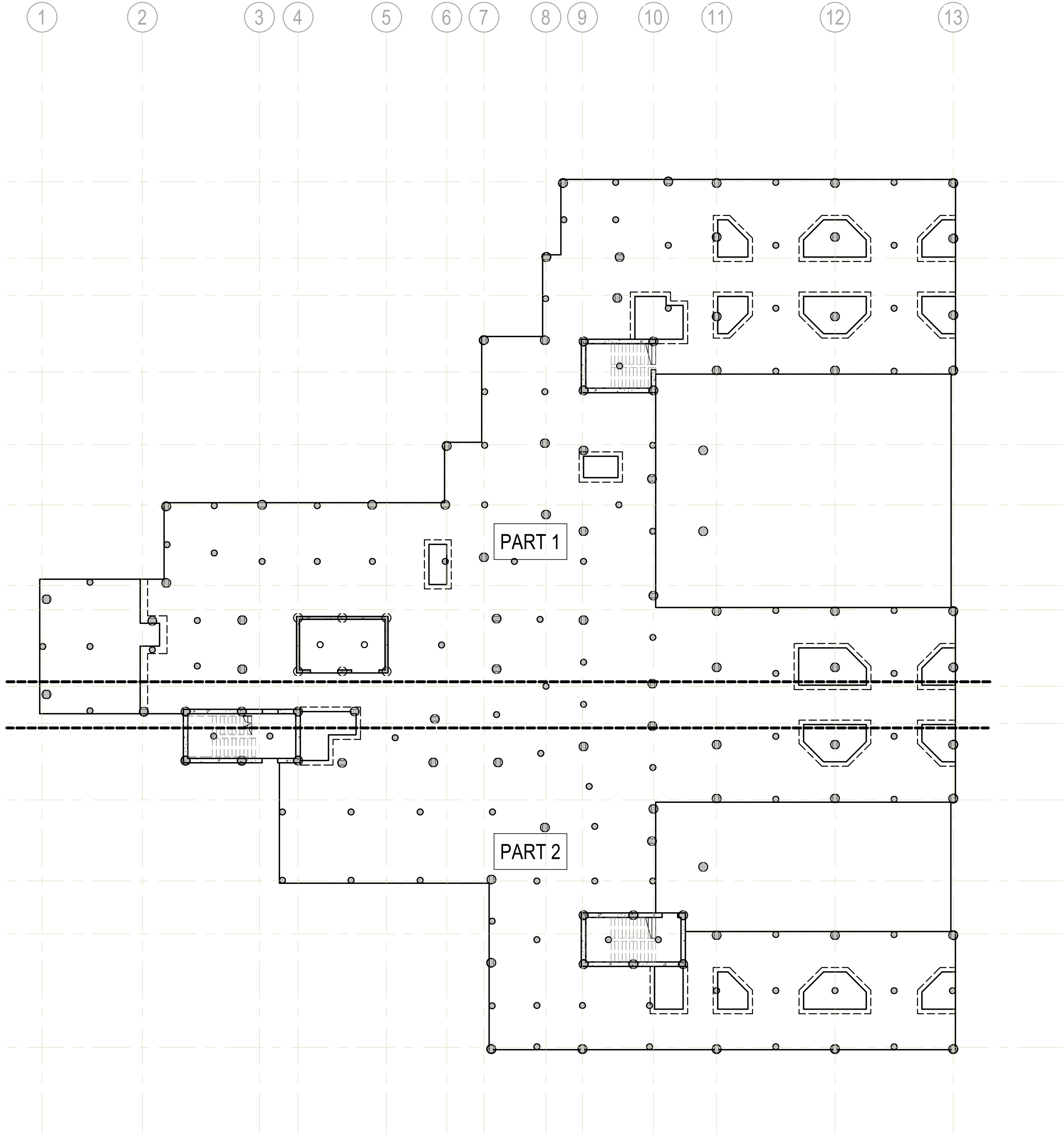
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ISSUE			
No.	Date	Description	Chkd
1	13.02.2023	SCHEMATIC DESIGN	ZP

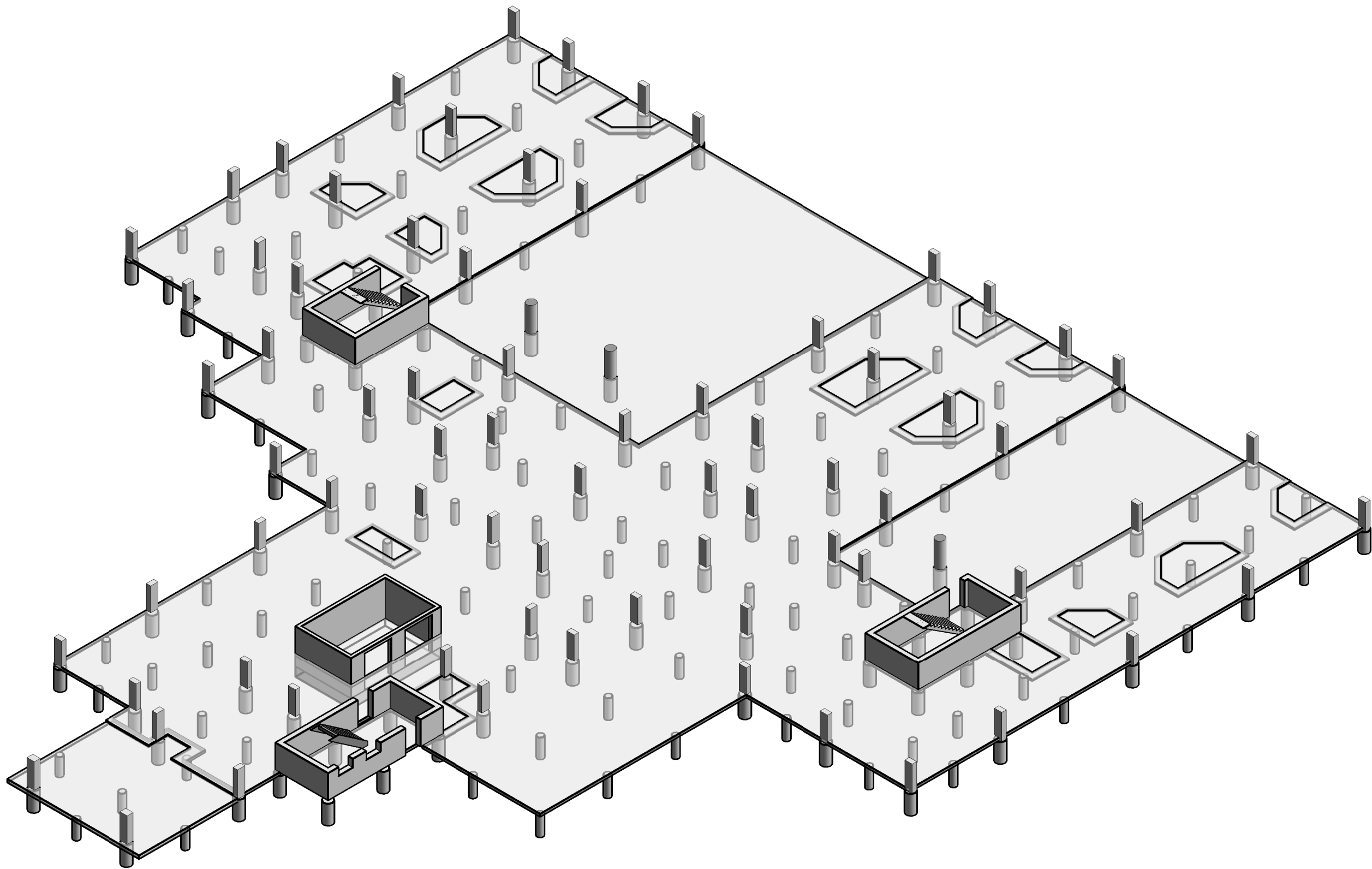


KEY PLAN

THESE DRAWINGS
REPRESENT
SCHEMATIC DESIGN
OPTION ONLY



GROUND FLOOR OVERALL PLAN
SCALE: 1 : 200



AXONOMETRIC VIEW
SCALE:

Appendix D – Groundwater Bore Search

Groundwater Bores

- Groundwater works
- ◆ Telemetered bores
- ▲ Logged bores
- Manual bores

Monitoring Bore Types

Alluvial
Coastal Sands
Fractured Rock
Porous Rock
Great Artesian Basin
Discontinued

There are **no sites** within 500 metres of the selected point.
Zoom in and try again.

Appendix E – Site Photographs



Photograph 1: View of drilling at the car park



Photograph 2: View of pedestrian and stairs



Photograph 3: View of the fire service building



Photograph 4: View of ramp and grass area



Photograph 5: view of the footpath at the other side of the building.



Photograph 6: view of the electricity substation

Appendix F – Borehole Logs

BOREHOLE LOG

BH ID: BH1M

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 1

Started 24 May 2023
Completed 24 May 2023
Logged By JO **Date** 24 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254460.6730 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323863.8164 (MGA 2020 Zone 56)

WATER	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	BACKFILL DETAILS	STANDPIPE DETAILS
GWNE	BH1M_0.50-0.95 SPT 0.50-0.95 8,15,30 N=45	0.00		0.00	ASPHALT: 100mm thick	-	Grout 0.00m - 0.10m	0.0m - 3.0m PVC casing (50mm Ø)
		0.10			FILL: Silty SAND: fine to medium grained, dark brown with sub-angular to sub-rounded gravels	D		
	BH1M_1.50-1.65 SPT 1.50-1.65 18/150 mm HB N=R	0.60			CLAY: low to medium plasticity, pale grey-orange	M < PL	Sand 0.10m - 2.50m	
		1.60			From 1.60m, orange			
		3.00			NO CORE: 1150mm thick		Bentonite 2.50m - 3.00m	
0% Water		4.15			SANDSTONE: fine to medium grained, pale grey-orange		Sand 3.00m - 7.60m	3.0m - 6.0m PVC screen (50mm Ø)
90% Water		7.60			Terminated at 7.60m. Target Depth Reached.			

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH2

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 2

Started 24 May 2023
Completed 24 May 2023
Logged By JO **Date** 24 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254491.6526 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323813.7977 (MGA 2020 Zone 56)

METHOD	GROUNDWATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
AD/T	GWNE	BH2_0.50-0.95 SPT 0.50-0.95 4,6,8 N=14		0.00			ASPHALT: 400mm thick			ASPHALT FILL
		BH2_1.50-1.72 SPT 1.50-1.72 7,8/75 mm HB N=R		0.10			FILL: Silty SAND: fine to medium grained, dark brown with sub-angular to sub-rounded gravels, no odour	D	-	
				0.60			CLAY: low to medium plasticity, brown		St	RESIDUAL SOIL
				1						
				2				M < PL		
				3						
				3.00			Log continued on next page.			
				4						
				5						
				6						
				7						
				8						
				9						
				10						

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH2

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 2 of 2

Started 24 May 2023
Completed 24 May 2023
Logged By JO **Date** 24 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254491.6526 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323813.7977 (MGA 2020 Zone 56)

METHOD	FLUSH RETURN	TCR %	RQD %	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	WEATHERING	ESTIMATED STRENGTH Is(50) ▼ - Axial ▽ - Diametral	DISCONTINUITIES & ADDITIONAL DATA	FRACTURE SPACING
				0			Log continued from previous page.		VL 0-1 L 0-3 M 1 H 3 VH 10 EH		30 100 300 1000 3000
				1							
				2							
				3			SHALE: dark grey-brown	DW		3.15: JT 1° PR SM CN 3.25: JT 5° PR SM CN 3.56: JT 5° PR SM CN 3.84: JT 45° PR SM CN 4.20: JT 10° PR SM CN	
		78	31	4							
				4.24			NO CORE: 360mm thick	-			
				4.60			SHALE: dark grey-brown	DW		4.84: JT 5° CU SM CN 4.91: JT 45° CU SM CN 5.23: JT 5° PR SM CN	
		67	15	5							
				5.50			SANDSTONE: fine to medium grained, pale grey				
				5.58			NO CORE: 530mm thick	-			
				6							
				6.11			SANDSTONE: fine to medium grained, pale grey	SW		6.68: JT 20° PR SM CN 6.72: JT 20° PR SM CN 6.92: JT 45° PR SM CN	
		100	96	7							
				8							
				9							
				10			Terminated at 7.24m. Target Depth Reached.				

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH3M

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 1

Started 23 May 2023
Completed 23 May 2023
Logged By JO **Date** 23 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254391.6565 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323860.6592 (MGA 2020 Zone 56)

WATER	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	BACKFILL DETAILS		STANDPIPE DETAILS	
GWNE	BH9M_0.50-0.95 SPT 0.50-0.95 4,6,8 N=14	0.00			FILL: Clayey SAND: fine to medium grained, dark brown	D	Grout 0.00m - 0.10m			
	BH9M_1.50-1.95 SPT 1.50-1.95 6,7,12 N=19	0.30			CLAY: low to medium plasticity, orange-brown		Sand 0.10m - 2.50m		0.0m - 3.0m PVC casing (50mm Ø)	
90%		1.80			From 1.80m, pale grey-orange					
		2.52			SANDSTONE: fine to medium grained with iron staining and pale grey clay seams		Bentonite 2.50m - 3.00m			
		3.74			SANDSTONE: fine to medium grained, pale grey-brown mottled orange					
		4.54			From 4.54m, pale grey-brown		Sand 3.00m - 6.00m		3.0m - 6.0m PVC screen (50mm Ø)	
		6.00			Terminated at 6.00m. Target Depth Reached.					
		7.00								
		8.00								
		9.00								
		10.00								

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH4

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 2

Started 23 May 2023
Completed 23 May 2023
Logged By JO **Date** 23 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254416.9818 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323885.7601 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
AD/T	GWNE	BH4_0.50-0.95 SPT 0.50-0.95 8,6,12 N=18		0.00			FILL: Silty SAND: fine to medium grained, dark brown trace sub-angular to sub-rounded gravels	D	-	FILL
		BH4_1.50-1.85 SPT 1.50-1.85 14,16,3/50 mm HB N=R		0.70			CLAY: low to medium plasticity, pale grey-orange	VSt		RESIDUAL SOIL
				1				M < PL		
				2					-	
				2.70			Log continued on next page.			
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH4

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 2 of 2

Started 23 May 2023
Completed 23 May 2023
Logged By JO **Date** 23 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254416.9818 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323885.7601 (MGA 2020 Zone 56)

METHOD	FLUSH RETURN	TCR %	RQD %	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	WEATHERING	ESTIMATED STRENGTH Is(50) ▼ - Axial ▽ - Diametral	DISCONTINUITIES & ADDITIONAL DATA	FRACTURE SPACING
				0			Log continued from previous page.		VL 0-1 L 0-3 M 1 H 3 VH 10 EH		30 100 300 1000 3000
				1							
				2							
				3			SANDSTONE: fine to medium grained, pale grey with iron staining and clay seams	XW		2.86: JT 3° PR SM CN 2.91: JT 0° PR SM CN	
				3.40			NO CORE: 900mm thick	DW		3.33: JT 3° PR SM CN	
				4							
				4.30			SANDSTONE: fine to medium grained, pale grey with iron staining and clay seams	DW		4.46: JT 1° PR SM CN 4.74: JT 1° PR SM CN 4.83-4.87: CS PR SM CN	
				5						5.04: JT 1° PR SM CN 5.10: JT 0° PR SM CN 5.23: JT 10° PR SM CN 5.27: JT 1° PR SM CN	
				6			Terminated at 6.00m. Target depth reached.	FR		5.87: JT 10° PR SM CN	
				7							
				8							
				9							
				10							

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

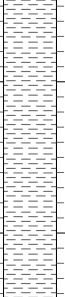
BOREHOLE LOG

BH ID: BH5

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 2

Started 23 May 2023
Completed 23 May 2023
Logged By JO **Date** 23 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254415.7362 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323823.2479 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (m AHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
AD/T	GWNE	BH4_0.50-0.60 BH4_0.50-0.95 SPT 0.50-0.95 4,10,16 N=26		0.00			ASPHALT: 150mm thick	-	-	ASPHALT
				0.15			FILL: Silty SAND: fine to medium grained, brown with sub-angular to sub-rounded gravels	D	-	FILL
		BH4_1.50-1.68 SPT 1.50-1.68 10,3/35 mm HB N=R		0.60			Sandy CLAY: low to medium plasticity, pale grey-orange, sand is fine to medium grained	VSt		RESIDUAL SOIL
		BH4_3.00-3.45 SPT 3.00-3.45 20,16,19 N=35		1.40			CLAY: low to medium plasticity, pale grey-orange			
				2				M < PL		
				3				H		
				3.45			Log continued on next page.			
				4						
				5						
				6						
				7						
				8						
				9						
				10						

This log should be read in conjunction with EI Australia's accompanying explanatory notes.



BOREHOLE LOG

BH ID: BH5

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 2 of 2

Started 23 May 2023
Completed 23 May 2023
Logged By JO **Date** 23 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254415.7362 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323823.2479 (MGA 2020 Zone 56)

METHOD	Flush Return	TCR %	RQD %	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	WEATHERING	ESTIMATED STRENGTH Is(50) ▼ - Axial ▽ - Diametral	DISCONTINUITIES & ADDITIONAL DATA	FRACTURE SPACING
				0			Log continued from previous page.		VL ₀₋₁ L ₀₋₃ M ₁ H ₃ VH ₁₀ EH		30 100 300 1000 3000
				1							
				2							
				3							
				4			SANDSTONE: fine to medium grained, pale grey-orange	DW			
NMLC	90%	100	92	5				SW - FR		4.54: JT 30° PR SM CN 4.69: JT 0° PR SM CN 4.73: JT 5° PR SM CN 4.84: JT 1° PR SM CN 5.15: JT 1° PR SM CN	
				6			Terminated at 6.00m. Target Depth Reached.				
				7							
				8							
				9							
				10							

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

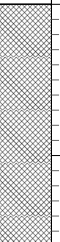
BOREHOLE LOG

BH ID: BH6M

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 2

Started 22 May 2023
Completed 22 May 2023
Logged By JO **Date** 22 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254392.3215 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323853.4352 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
AD/T	GWNE	BH12M_0.50-0.95 SPT 0.50-0.95 4,5,6 N=11		0.00			FILL: Sandy CLAY: low to medium plasticity, brown-orange, with sub-angular to sub-rounded gravels	D	-	FILL
		BH12M_1.50-1.95 SPT 1.50-1.95 3,5,7 N=12		1.60			Silty CLAY: low to medium plasticity, pale grey-orange			
				2.30			Log continued on next page.			
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH6M

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 2 of 2

Started 22 May 2023
Completed 22 May 2023
Logged By JO **Date** 22 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254392.3215 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323853.4352 (MGA 2020 Zone 56)

METHOD	Flush Return	TCR %	RQD %	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	WEATHERING	ESTIMATED STRENGTH Is(50) ▼ - Axial ▽ - Diametral	DISCONTINUITIES & ADDITIONAL DATA	FRACTURE SPACING
				0			Log continued from previous page.		VL 0-1 L 0-3 M 1 H 3 VH 10 EH		30 100 300 1000 3000
				1							
				2							
				2.73			SANDSTONE: fine to medium grained, pale grey	XW			
				3			NO CORE: 1470mm thick				
		46	25	4							
				4.20			SANDSTONE: fine to medium grained, pale grey-orange	DW		4.44: JT 3° PR SM CN 4.74: JT 1° PR SM CN 4.80: JT 3° PR SM CN 5.16: JT 3° PR SM CN 5.40: JT 0° PR SM CN 5.63: JT 1° PR SM CN	
				5							
		100	100	6				SW		6.20: JT 0° PR SM CN 6.62: JT 0° PR SM CN 6.82: 1° PR SM CN 7.08: JT 0° PR SM CN	
				7							
				8			Terminated at 7.20m. Target depth reached.				
				9							
				10							

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

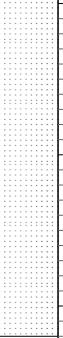
BOREHOLE LOG

BH ID: BH6M

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 1

Started 22 May 2023
Completed 22 May 2023
Logged By JO **Date** 22 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254392.3215 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323853.4352 (MGA 2020 Zone 56)

WATER	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	BACKFILL DETAILS	STANDPIPE DETAILS
GWNE	BH12M_0.50-0.95 SPT 0.50-0.95 4,5,6 N=11	0.00		0.00	FILL: Sandy CLAY: low to medium plasticity, brown-orange, with sub-angular to sub-rounded gravels	D	Grout 0.00m - 0.10m	0.0m - 3.0m PVC casing (50mm Ø)
	BH12M_1.50-1.95 SPT 1.50-1.95 3,5,7 N=12	1.60			Silty CLAY: low to medium plasticity, pale grey-orange	M < PL	Sand 0.10m - 2.50m	
0%		2.30		2.30	SANDSTONE: fine to medium grained, pale grey		Bentonite 2.50m - 3.00m	3.0m - 6.0m PVC screen (50mm Ø)
		2.73			NO CORE: 1470mm thick			
		4.20			SANDSTONE: fine to medium grained, pale grey-orange			
		5		5			Sand 3.00m - 7.20m	
		7						
		8		8				
		9						
		10			Terminated at 7.20m. Target depth reached.			

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH7

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 2

Started 24 May 2023
Completed 24 May 2023
Logged By JO **Date** 24 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254445.9364 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323879.7716 (MGA 2020 Zone 56)

METHOD	GROUNDWATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
AD/T	GWNE	BH7_0.50-0.95 SPT 0.50-0.95 5,5,13 N=18		0.00			ASPHALT: 100mm thick	-	-	ASPHALT FILL
				0.10			FILL: Silty SAND: fine to medium grained, dark brown with sub-angular to sub-rounded gravels	D	-	
		BH7_1.50-1.80 SPT 1.50-1.80 8,21/150 mm HB N=R		0.80			CLAY: low to medium plasticity, brown-orange trace sub-angular to sub-rounded gravels		VSt	RESIDUAL SOIL
				1.60			From 1.60m, pale grey	M < PL	-	
				2.00						
				3.00			Log continued on next page.			
				4.00						
				5.00						
				6.00						
				7.00						
				8.00						
				9.00						
				10.00						

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH7

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 2 of 2

Started 24 May 2023
Completed 24 May 2023
Logged By JO **Date** 24 May 2023
Review By **Date**

Drilling Contractor Geosense Drilling Engineers **Surface RL** - **Northing** 6254445.9364 (MGA 2020 Zone 56)
Plant Comacchio Geo 205 **Inclination** 90° **Easting** 323879.7716 (MGA 2020 Zone 56)

METHOD	Flush Return	TCR %	RQD %	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	WEATHERING	ESTIMATED STRENGTH Is(50) ▼ - Axial ▽ - Diametral	DISCONTINUITIES & ADDITIONAL DATA	FRACTURE SPACING
				0			Log continued from previous page.		VL 0-1 L 0-3 M 1 H 3 VH 10 EH		30 100 300 1000 3000
				1							
				2							
				3							
				3.20			NO CORE: 200mm200mm thick	-			
NMLC	90% Water	93	60	3.20			SANDSTONE: fine to medium grained, pale grey-brown	SW		3.36: JT 45° PR SM CN 3.55: 45° PR SM CN 3.65: JT 5° UN SM CN 3.80: JT 5° PR SM CN 3.94: JT 10° PR SM CN 4.07: JT 10° PR SM Clay Infilled 4.64: JT 10° PR SM CN 4.84: JT 30° PR SM CN 4.95: JT 10° PR SM CN 5.15: JT 15° PR SM CN 5.28: JT 15° PR SM CN 5.40: JT 10° PR SM CN 5.47: JT 1° PR SM CN 5.69: JT 10° PR SM CN 5.80: JT 5° UN SM CN 5.90: JT 30° PR SM CN	
				4							
				5							
				6			Terminated at 6.00m. Target Depth Reached.				
				7							
				8							
				9							
				10							

This log should be read in conjunction with EI Australia's accompanying explanatory notes.



BOREHOLE LOG

BH ID: BH8

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 1

Started 23 May 2023
Completed 23 May 2023
Logged By AS **Date** 23 May 2023
Review By **Date**

Drilling Contractor - **Surface RL** - **Northing** 6254407.2315 (MGA 2020 Zone 56)
Plant Hand auger **Inclination** 90° **Easting** 323876.8218 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
		BH8_0.20-0.30		0.00			FILL: Sandy CLAY: low to medium plasticity, fine to medium grained sand, brown, no odour	D - M		FILL
		BH8_0.50-0.60						M - W		
		BH8_0.90-1.00		0.70			Silty CLAY: medium plasticity, orange, no odour	D		RESIDUAL SOIL
				1			Terminated at 1.00m. Target Depth Reached.			
				2						
				3						
				4						
				5						

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH9

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 1

Started 23 May 2023
Completed 23 May 2023
Logged By AS **Date** 23 May 2023
Review By **Date**

Drilling Contractor Hartgeo **Surface RL** - **Northing** 6254420.9540 (MGA 2020 Zone 56)
Plant Ute-Mounted Rig **Inclination** 90° **Easting** 323870.8096 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
		BH3_0.20-0.30		0.00			ASPHALT: 40mm thick			ASPHALT FILL
				0.04			FILL: Sandy GRAVEL: fine to coarse sub-angular to sub-rounded gravels, fine to medium grained sand, brown, no odour	D - M		
		BH3_0.80-0.90		0.50			Silty CLAY: medium plasticity, with fine sand, orange mottled pale grey, no odour	D		RESIDUAL SOIL
		BH3_0.80-0.90		0.90			SANDSTONE: extremely weathered, orange, no odour			BEDROCK
							Terminated at 1.30m. Target Depth Reached.			
				2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						

This log should be read in conjunction with EI Australia's accompanying explanatory notes.



BOREHOLE LOG

BH ID: BH9 (enviro)

Location	1H Hospital Road, Concord West, NSW	Started	23 May 2023
Client	Lipman Pty Ltd	Completed	23 May 2023
Job No.	E25996.G03	Logged By	AS
Sheets	1 of 1	Review By	Date

Drilling Contractor	-	Surface RL	-	Northing	6254403.6111 (MGA 2020 Zone 56)
Plant	Hand auger	Inclination	90°	Easting	323864.6224 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
		BH9_0.10-0.20		0.00			TOPSOIL: Silty CLAY: medium plasticity, brown with trace rootlets, no odour			TOPSOIL
		BH9_0.60-0.70		0.40			Silty CLAY: medium plasticity, orange, no odour	D - M		RESIDUAL SOIL
				1			Terminated at 0.70m. Target Depth Reached.			
				2						
				3						
				4						
				5						

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH10

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 1

Started 23 May 2023
Completed 23 May 2023
Logged By AS **Date** 23 May 2023
Review By **Date**

Drilling Contractor - **Surface RL** - **Northing** 6254416.3297 (MGA 2020 Zone 56)
Plant Hand Auger **Inclination** 90° **Easting** 323869.7010 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
		BH10_0.20-0.30		0.00			FILL: Sandy CLAY: low to medium plasticity, fine to medium grained sand, brown, no odour			FILL
				0.30			Silty CLAY: medium plasticity, brown with trace rootlets, no odour			RESIDUAL SOIL
		BH10_0.70-0.80		0.50			From 0.50m to 0.80m, orange, no odour			
							Terminated at 0.80m. Target Depth Reached. Terminated at 0.80m. Target Depth Reached.			

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH11

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 1

Started 23 May 2023
Completed 23 May 2023
Logged By AS **Date** 23 May 2023
Review By **Date**

Drilling Contractor Hartgeo **Surface RL** - **Northing** 6254431.2283 (MGA 2020 Zone 56)
Plant Ute-Mounted Rig **Inclination** 90° **Easting** 323857.1033 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
		BH5_0.20-0.30		0.00			ASPHALT: 40mm thick			ASPHALT FILL
		BH5_0.60-0.70		0.04			FILL: Sandy GRAVEL: fine to coarse sub-angular to sub-rounded gravels, fine to medium grained sand, brown, no odour	D - M		
				0.40			FILL: Gravelly CLAY: low to medium plasticity, fine to coarse sub-rounded gravels, with fine to medium sand, pale orange mottled grey, no odour			
		BH5_1.30-1.40		0.90			SANDSTONE: extremely weathered, orange, no odour	D		BEDROCK
							Terminated at 1.40m. Target Depth Reached.			
				2						
				3						
				4						
				5						
				6						
				7						
				8						
				9						
				10						

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

BOREHOLE LOG

BH ID: BH12

Location 1H Hospital Road, Concord West, NSW
Client Lipman Pty Ltd
Job No. E25996.G03
Sheets 1 of 1

Started 23 May 2023
Completed 23 May 2023
Logged By AS **Date** 23 May 2023
Review By **Date**

Drilling Contractor - **Surface RL** - **Northing** 6254421.6620 (MGA 2020 Zone 56)
Plant Hand auger **Inclination** 90° **Easting** 323870.1022 (MGA 2020 Zone 56)

METHOD	GROUNDWATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (mAHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
		BH6_0.10-0.20		0.00			FILL: Gravelly SAND: fine to medium grained sand, fine to coarse sub-angular to sub-rounded gravels, brown, no odour			FILL
				0.20			FILL: SAND: fine to medium sand, no odour			
		BH6_0.50-0.60								
		BH6_0.60-0.70								
				0.80			Silty CLAY: medium plasticity, orange mottled pale grey, no odour			RESIDUAL SOIL
		BH6_0.90-1.00		1			Terminated at 1.00m. Target Depth Reached.			
				2						
				3						
				4						
				5						

This log should be read in conjunction with EI Australia's accompanying explanatory notes.

Appendix G – Field Data Sheets

Daily Inspection / Work Summary Card - Remediation & Validation Form

OP 005a (Rev 2)



EI Australia
 Suite 6.01, 55 Miller Street
 PYRMONT, NSW, 2009
 ABN 42 909 129 957
 E service@eiaustralia.com.au
 W www.eiaustralia.com.au
 T 02 9516 0722

Project Number:	E25916	Engineer Name:	AS	Page:	___ of ___
Date:	1/6/23	Time ON Site:	7:30		
Travel Time:	30+30	Time OFF Site:	12:00		
Site Address/Location: Concord Hospital					
Climatic Conditions: Overcast					
Completed Works:					
CME.					
GW-QR1 ran off dipper					

[illegible]

Signed by:

Asl



CALIBRATION CERTIFICATE FOR PHOTO IONISATION DETECTOR

Instrument: Mini RAE 3000

Serial Number: 592-906667 - ~~EI-PID02~~ ☐ OR 592-901345 - ~~EI-PID03~~ ☐

AS Pnd

Instrument Conditions: Cool

Calibration gas species: Isobutylene.

Calibration gas concentration: _____ppm

Gas bottle number: _____

Bump test passed

This PID has been calibrated to Isobutylene gas with the span concentration displayed as
____ppm at ____ppm span setting (allowable range +/-10ppm from span setting).

The PID is initially zero calibrated in fresh air.

Remaining gas in bottle: ____psi (if reading is <250 psi, notify Equipment Manager to arrange new gas
bottle order)

The above detector was calibrated in accordance with manufacturer's specifications.

Signed: AS

Date: 1/6/23

Time: 8:00 am

WATER SAMPLING FIELD SHEET



Site Address: <u>Concord Hospital</u>					Job Number: <u>E25996</u>				
Client:					Date: <u>11/6/23</u>				
Field Staff:					Sampling Location ID <u>BH1</u>				
Well Location:					Round No: <u>1</u>				
MEDIUM ☒ Groundwater ☐ Surface Water ☐ Stormwater ☐ Other:									
SAMPLING POINT INFO									
Well Installation Date:					Stick up down (m): <u>-0.09</u> (+ above ground - below ground)				
Initial Well Depth (mBTOC):					Screen Interval (mBTOC):				
Previous Sampling Date:					Previous SWL (mBTOC):				
PID READINGS									
PID Headspace (ppm): <u>2.2</u>					PID Background (ppm): <u>0.0</u>				
PID Breathing Space (ppm): <u>0.0</u>									
PRE PURGE									
Total Well Depth (mBTOC): <u>5.40</u>					Well Head Condition: <u>Good</u>				
SWL (mBTOC): <u>1.89</u>					Water Column (m): <u>3.51</u>				
PHASE SEPARATED HYDROCARBONS (PSH)									
Depth to PSH (mBTOC):					PSH Visually Confirmed (Baiter):				
PSH Thickness (mm):									
Field Filtered									
Yes (0.45 µm) ☒					No ☐ (Request lab 0.45 µm filter the sample)				
PURGE AND SAMPLE									
Sampling Method ☐ Bladder ☒ Peristaltic ☐ Submersible ☐ Other:									
Depth of Pump Inlet (mBTOC): <u>4.9</u>					Fill Timer:				
Pump Pressure Regulator (psi):					Discharge Timer:				
Weather Conditions: <u>Overcast</u>					Cycle:				
Pump on time: <u>8:34</u>					Pump off time: <u>9:12</u>				
WATER QUALITY PARAMETERS									
Probe Make and Model: <u>WRM AS</u>					Bump Test Date and Time:				
Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)	
8:36	0.5	2.08	19.81	1792	-31.6	0.00	7.02	Very pale red, high, no	
8:40	1.0	2.20	19.27	1737	-189.9	0.00	7.10	orange, high, no	
8:44	1.5	2.30	19.36	1714	-201.1	0.00	7.15	↓ ↓ ↓ ↓	
8:48	2.0	2.41	19.56	1696	-208.9	0.00	7.21	↓ ↓ ↓ ↓	
8:52	2.5	2.50	19.44	1683	-209.3	0.00	7.24	↓ ↓ ↓ ↓	
Stabilisation range: 3 consecutive readings			±0.2°C	±3%	±20mV	±10%	±0.2		
OTHER COMMENTS/OBSERVATIONS:									
SIGNATURE: <u>[Signature]</u>									

Rev 1 20150604SH
Form QP 017

Rev 1 20150604SH
Form QP 017

Appendix H – Chain of Custody and Sample Receipt Documentation

Sheet 2 of 3					Sample Matrix				Analysis																Comments					
Site: 1 H Hospital Rd, Concord			Project No: E25996		SOIL	WATER	0.45 µm field filtered	OTHER	HM ^a /TRH/BTEX/PAHs OC/OP/PCB/Asbestos	HM ^a /TRH/BTEX/PAHs	HM ^a /TRH/BTEX	BTEX	pH	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM ^a /pH / EC / Foreign Materials)	Dioxins	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM ^b / PAH	HM ^a Arsenic Cadmium Chromium Copper Lead Mercury Nickel Zinc	
Laboratory:	SGS Australia Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015 P: 02 8594 0400 F: 02 8594 0499		Sample ID	Laboratory ID																									Container Type	Sampling Date Time
BH5_0.20-0.30	8	J; ZLB	23/05/2023		X																						X		Dewatering Suite pH & EC	
BH5_0.60-0.70	9	J; ZLB	23/05/2023		X				X						X												X		TDS / TDU Hardness	
BH5_1.30-1.40	10	J; ZLB	23/05/2023		X				X	X			X																Total Cyanide	
BH6_0.10-0.20	11	J; ZLB	23/05/2023		X				X					X								X							Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)	
BH6_0.50-0.60		J; ZLB	23/05/2023		X																								TRH (F1, F2, F3, F4)	
BH6_0.60-0.70	12	J; ZLB	23/05/2023		X													X											BTEX	
BH6_0.90-1.00		J; ZLB	23/05/2023		X																									PAH
BH7_0.5-0.6	13	J; ZLB	23/05/2023		X				X						X															Total Phenol
BH7_1.5-1.6	14	J; ZLB	23/05/2023		X				X	X			X																	LABORATORY TURNAROUND
BH8_0.20-0.30	15	J; ZLB	23/05/2023		X				X					X								X								☒ Standard
BH8_0.50-0.60	16	J; ZLB	23/05/2023		X													X												☐ 24 Hours
BH8_0.90-1.00	17	J; ZLB	23/05/2023		X				X	X			X																	☐ 48 Hours
Container Type: J = solvent washed, acid rinsed, Teflon sealed glass jar S = solvent washed, acid rinsed glass bottle P = natural HDPE plastic bottle VC = glass vial, Teflon Septum ZLB = Zip-Lock Bag BB = Bulk Bag					Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.																Report with EI Waste Classification Table ☒									
 Suite 6.01, 55 Miller Street, PYRMONT NSW 2009 Ph: 9516 0722 lab@eiaustralia.com.au COC June 2021 FORM v.5 - SGS					Sampler's Name (EI): Print Andrew S.										Received by (SGS): Print M. Bous M. Bous										Sampler's Comments:					
					Signature A. Schmitt										Signature															
					Date 25/05/2023										Date 25.5.23 2.45															
					IMPORTANT: Please e-mail laboratory results to: lab@eiaustralia.com.au																									

[illegible]

RE: [EXTERNAL] RE: E25996 COC - Concord

Sergio Raposeira - EIAustralia <sergio.raposeira@eiaustralia.com.au>

Mon 29/05/2023 12:16 PM

To: AU.SampleReceipt.Sydney, AU (Sydney) <AU.SampleReceipt.Sydney@sgs.com>

Cc: Andrew Schmidt - EIAustralia <andrew.schmidt@eiaustralia.com.au>

*** WARNING: this message is from an EXTERNAL SENDER. Please be cautious, particularly with links and attachments. ***

Hi Michael,

Please refer to my comments below in blue

Please see photo attached and confirm which BH3 bag to reassign to BH3_0.20-0.30. – Any sample bag can be used for BH3_0.20-0.30 (same location and same sample)

BH11_1.2-1.3 and BH11_1.7-1.8 (originally BH4, same depths) remain unlisted and not received. – Noted.
Please only test BH11_0.5-0.6 (former BH4_0.5-0.6) for HM /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos (quantification) #20

BH12_0.5-0.95 and BH12_1.50-1.95 remain listed not received. – Noted. Please only test BH12M_0.3-0.4 (HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos (quantification) #25

Best Regards

Sergio Raposeira
BSc (Env), MSc
Environmental Engineer

T 02 9516 0722 M 04 2032 1984
E sergio.raposeira@eiaustralia.com.au

Suite 6.01, 55 Miller Street
Pyrmont, NSW 2009



www.eiaustralia.com.au

Environmental | Geotechnical | Structural | Civil | Hazardous Materials

EI Australia is a proud member of the Australian Contaminated Land Consultants Association and the Australian Geomechanics Society.

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 Please consider the environment before printing this email.

From: AU.SampleReceipt.Sydney, AU (Sydney) [mailto:AU.SampleReceipt.Sydney@sgs.com]

Sent: Monday, 29 May 2023 11:59 AM

To: Sergio Raposeira - EIAustralia

Cc: Andrew Schmidt - EIAustralia; Tahlia Soares - EIAustralia; Mary Nacua - EIAustralia

Subject: Re: [EXTERNAL] RE: E25996 COC - Concord

Hi All,



SAMPLE RECEIPT ADVICE

SE248198

CLIENT DETAILS

Contact **Andrew Schmidt**
Client **EI AUSTRALIA**
Address **SUITE 6.01
55 MILLER STREET
PYRMONT NSW 2009**

Telephone **61 2 95160722**
Facsimile **(Not specified)**
Email **andrew.schmidt@eiaustralia.com.au**

Project **E25996 1H Hospital Rd Concord**
Order Number **E25996**
Samples **25**

LABORATORY DETAILS

Manager **Huong Crawford**
Laboratory **SGS Alexandria Environmental**
Address **Unit 16, 33 Maddox St
Alexandria NSW 2015**

Telephone **+61 2 8594 0400**
Facsimile **+61 2 8594 0499**
Email **au.environmental.sydney@sgs.com**

Samples Received **Thu 25/5/2023**
Report Due **Thu 1/6/2023**
SGS Reference **SE248198**

SUBMISSION DETAILS

This is to confirm that 25 samples were received on Thursday 25/5/2023. Results are expected to be ready by COB Thursday 1/6/2023. Please quote SGS reference SE248198 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	22 Soil, 1 Water	Type of documentation received	COC
Date documentation received	25/5/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	13.5°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

Dioxins reported in SE248198A.
13 Soils and 1 Water samples have been placed on hold as no tests have been assigned for it. These samples will not be processed.
PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

CLIENT DETAILS

Client **EI AUSTRALIA**

Project **E25996 1H Hospital Rd Concord**

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BH1M_0.5-0.6	30	14	26	11	-	10	11	7
002	BH1M_2.0-2.1	30	14	26	11	1	10	11	7
003	BH2_0.1-0.2	30	14	26	11	-	10	11	7
004	BH2_1.5-1.6	30	14	26	11	1	10	11	7
005	BH3_0.20-0.30	30	14	26	11	-	10	11	7
006	BH4_0.5-0.6	30	14	26	11	-	10	11	7
007	BH4_2.0-2.1	30	14	26	11	1	10	11	7
009	BH5_0.60-0.70	30	14	26	11	-	10	11	7
010	BH5_1.30-1.40	30	14	26	11	1	10	11	7
011	BH6_0.10-0.20	30	14	26	11	-	10	11	7
013	BH7_0.5-0.6	30	14	26	11	-	10	11	7
014	BH7_1.5-1.6	30	14	26	11	1	10	11	7
015	BH8_0.20-0.30	30	14	26	11	-	10	11	7
017	BH8_0.90-1.00	30	14	26	11	1	10	11	7
018	BH9_0.10-0.20	30	14	26	11	-	10	11	7
019	BH10_0.20-0.30	30	14	26	11	-	10	11	7
020	BH11_0.50-0.60	30	14	26	11	-	10	11	7
021	QD1	-	-	-	-	-	10	11	7
022	TB1	-	-	-	-	-	-	11	-
023	TS1	-	-	-	-	-	-	11	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



SAMPLE RECEIPT ADVICE

SE248198

CLIENT DETAILS

Client **EI AUSTRALIA**

Project **E25996 1H Hospital Rd Concord**

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	BH12M_0.3-0.4	30	14	26	11	10	11	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

CLIENT DETAILS

Client **EI AUSTRALIA**

Project **E25996 1H Hospital Rd Concord**

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	Per- and Polyfluoroalkyl Substances (PFAS) in	Total Recoverable Elements in Soil/Waste
001	BH1M_0.5-0.6	2	9	1	1	-	7
002	BH1M_2.0-2.1	-	-	1	1	-	7
003	BH2_0.1-0.2	2	9	1	1	-	7
004	BH2_1.5-1.6	-	-	1	1	-	7
005	BH3_0.20-0.30	2	9	1	1	-	7
006	BH4_0.5-0.6	2	9	1	1	-	7
007	BH4_2.0-2.1	-	-	1	1	-	7
008	BH5_0.20-0.30	-	-	-	1	-	1
009	BH5_0.60-0.70	2	9	1	1	-	7
010	BH5_1.30-1.40	-	-	1	1	-	7
011	BH6_0.10-0.20	2	9	1	1	59	7
013	BH7_0.5-0.6	2	9	1	1	-	7
014	BH7_1.5-1.6	-	-	1	1	-	7
015	BH8_0.20-0.30	2	9	1	1	59	7
017	BH8_0.90-1.00	-	-	1	1	-	7
018	BH9_0.10-0.20	2	9	1	1	59	7
019	BH10_0.20-0.30	2	9	1	1	59	7
020	BH11_0.50-0.60	2	9	1	1	-	7
021	QD1	-	-	1	1	-	7
022	TB1	-	-	-	1	-	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



SAMPLE RECEIPT ADVICE

SE248198

CLIENT DETAILS

Client EI AUSTRALIA

Project E25996 1H Hospital Rd Concord

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
025	BH12M_0.3-0.4	2	1	1	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .



SAMPLE RECEIPT ADVICE

SE248198

CLIENT DETAILS

Client EI AUSTRALIA

Project E25996 1H Hospital Rd Concord

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
024	QR1	1	7	9	11	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .

LOC: 2/6/23 1555

[illegible]

SAMPLE RECEIPT ADVICE

Client Details

Client	EI Australia
Attention	Andrew Schmidt

Sample Login Details

Your reference	E25996, Concord Hospital, Concord
Envirolab Reference	324762
Date Sample Received	02/06/2023
Date Instructions Received	02/06/2023
Date Results Expected to be Reported	09/06/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: ahie@envirolab.com.au	Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:

**Envirolab Services Pty Ltd**

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	HM in water - dissolved
GW-QT1	✓	✓	✓

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.

Sheet <u>1</u> of <u>1</u>					Sample Matrix				Analysis																Comments				
Site: <u>Concord Hospital, Concord</u>			Project No: <u>E25996</u>																							HM A Arsenic Cadmium Chromium Copper Lead Mercury Nickel Zinc HM B Arsenic Cadmium Chromium Lead Mercury Nickel			
Laboratory: SGS Australia Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015 P: 02 8594 0400 F: 02 8594 0499																													
Sample ID	Laboratory ID	Container Type	Sampling		SOIL	WATER	0.45 µm field filtered	OTHER	HM A / TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM A / TRH/BTEX/PAHs	HM A / TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM A / pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM B / PAH	
			Date	Time																									
BH1M	1	S, 2xP, 2xVC, PF	1/6/23	am/pm		X	X			X																			Dewatering Suite pH & EC TDS / TDU Hardness Total Cyanide Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn) TRH (F1, F2, F3, F4) BTEX PAH Total Phenol
BH9M	2	↓	↓	↓						↓																			
BH12M	3	↓	↓	↓						↓																			
GW-QD1	4	S, P, 2xVC	↓	↓			↓				X																		
GW-QR1	5	S, P, VC	1/6/23	am/pm							X																		
GW-QRB1		↓	↓	↓																									
GW-QTBI	6	VC	Lab Prepared									X																	
GW-QTS1	7	↓	↓	↓								X																	
Container Type: J = solvent washed, acid rinsed, Teflon sealed glass jar S = solvent washed, acid rinsed glass bottle P = natural HDPE plastic bottle VC = glass vial, Teflon Septum ZLB = Zip-Lock Bag BB = Bulk Bag PF = PFAS					Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.										Report with EI Waste Classification Table ☐														
 Suite 6.01, 55 Miller Street, PYRMONT NSW 2009 Ph: 9516 0722 lab@eiaustralia.com.au COC June 2021 FORM v.5 - SGS					Sampler's Name (EI): Print <u>Andrew Schmidt</u> Signature <u>[Signature]</u> Date <u>1/6/23</u>					Received by (SGS): Print <u>[Signature]</u> Signature <u>[Signature]</u> Date <u>01/06/23 @ 2.25</u>					Sampler's Comments: Please find GW-QT1 to EnviroLab Please cc: Sergio. Raposeira														
					IMPORTANT: Please e-mail laboratory results to: lab@eiaustralia.com.au																								

SGS EHS Sydney COC
SE248514



**LABORATORY
TURNAROUND**

- ☒ Standard
☐ 24 Hours
☐ 48 Hours
☐ 72 Hours
☐ Other _____



SAMPLE RECEIPT ADVICE

SE248514

CLIENT DETAILS

Contact Andrew Schmidt
Client EIA AUSTRALIA
Address SUITE 6.01
55 MILLER STREET
PYRMONT NSW 2009

Telephone 61 2 95160722
Facsimile (Not specified)
Email andrew.schmidt@eiaustralia.com.au

Project **E25996 Concord Hospital, Concord**
Order Number **E25996**
Samples 7

LABORATORY DETAILS

Manager Huong Crawford
Laboratory SGS Alexandria Environmental
Address Unit 16, 33 Maddox St
Alexandria NSW 2015

Telephone +61 2 8594 0400
Facsimile +61 2 8594 0499
Email au.environmental.sydney@sgs.com

Samples Received Thu 1/6/2023
Report Due Thu 8/6/2023
SGS Reference **SE248514**

SUBMISSION DETAILS

This is to confirm that 7 samples were received on Thursday 1/6/2023. Results are expected to be ready by COB Thursday 8/6/2023. Please quote SGS reference SE248514 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	7 Water	Type of documentation received	COC
Date documentation received	1/6/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	10.4°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

1 water sample has been placed on hold as no tests have been assigned for it. This sample will not be processed.

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SAMPLE RECEIPT ADVICE

SE248514

CLIENT DETAILS

Client **EI AUSTRALIA**

Project **E25996 Concord Hospital, Concord**

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	PAH (Polynuclear Aromatic Hydrocarbons) in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
001	BH1M	1	22	7	9	11	7
002	BH9M	1	22	7	9	11	7
003	BH12M	1	22	7	9	11	7
004	GW_QD1	1	-	7	9	11	7
005	GW_QR1	1	-	7	9	11	7
006	GW_QTB1	-	-	-	-	11	-
007	GW_QTS1	-	-	-	-	11	-

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

Appendix I – Laboratory Analytical Reports

CLIENT DETAILS

Contact Andrew Schmidt
Client EI AUSTRALIA
Address SUITE 6.01
55 MILLER STREET
PYRMONT NSW 2009

Telephone 61 2 95160722
Facsimile (Not specified)
Email andrew.schmidt@eiaustralia.com.au
Project **E25996 1H Hospital Rd Concord**
Order Number **E25996**
Samples 25

LABORATORY DETAILS

Manager Huong Crawford
Laboratory SGS Alexandria Environmental
Address Unit 16, 33 Maddox St
Alexandria NSW 2015
Telephone +61 2 8594 0400
Facsimile +61 2 8594 0499
Email au.environmental.sydney@sgs.com
SGS Reference **SE248198 R0**
Date Received 25/5/2023
Date Reported 5/6/2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin

PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420. Report No. ME334472.

SIGNATORIES



Bennet LO
Senior Chemist



Huong CRAWFORD
Production Manager



Kamrul AHSAN
Senior Chemist



Ly Kim HA
Organic Section Head



Shane MCDERMOTT
Inorganic/Metals Chemist



Yusuf KUTHPUDIN
Asbestos Analyst

VOC's in Soil [AN433] Tested: 30/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH1M_2.0-2.1	BH2_0.1-0.2	BH2_1.5-1.6	BH3_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.001	24/5/2023 SE248198.002	24/5/2023 SE248198.003	24/5/2023 SE248198.004	23/5/2023 SE248198.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH4_0.5-0.6	BH4_2.0-2.1	BH5_0.60-0.70	BH5_1.30-1.40	BH6_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.006	24/5/2023 SE248198.007	23/5/2023 SE248198.009	23/5/2023 SE248198.010	23/5/2023 SE248198.011
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH7_0.5-0.6	BH7_1.5-1.6	BH8_0.20-0.30	BH8_0.90-1.00	BH9_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/5/2023 SE248198.013	23/5/2023 SE248198.014	23/5/2023 SE248198.015	23/5/2023 SE248198.017	23/5/2023 SE248198.018
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH10_0.20-0.30	BH11_0.50-0.60	QD1	TB1	TS1
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/5/2023 SE248198.019	23/5/2023 SE248198.020	23/5/2023 SE248198.021	23/5/2023 SE248198.022	23/5/2023 SE248198.023
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[91%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[93%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[93%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	[93%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[93%]
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	-
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	-
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-

VOC's in Soil [AN433] Tested: 30/5/2023 (continued)

			BH12M_0.3-0.4
			SOIL
			-
			23/5/2023
			SE248198.025
PARAMETER	UOM	LOR	
Benzene	mg/kg	0.1	<0.1
Toluene	mg/kg	0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2
o-xylene	mg/kg	0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 30/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH1M_2.0-2.1	BH2_0.1-0.2	BH2_1.5-1.6	BH3_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023 SE248198.001	24/5/2023 SE248198.002	24/5/2023 SE248198.003	24/5/2023 SE248198.004	23/5/2023 SE248198.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH4_0.5-0.6	BH4_2.0-2.1	BH5_0.60-0.70	BH5_1.30-1.40	BH6_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023 SE248198.006	24/5/2023 SE248198.007	23/5/2023 SE248198.009	23/5/2023 SE248198.010	23/5/2023 SE248198.011
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH7_0.5-0.6	BH7_1.5-1.6	BH8_0.20-0.30	BH8_0.90-1.00	BH9_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/5/2023 SE248198.013	23/5/2023 SE248198.014	23/5/2023 SE248198.015	23/5/2023 SE248198.017	23/5/2023 SE248198.018
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH10_0.20-0.30	BH11_0.50-0.60	QD1	BH12M_0.3-0.4
			SOIL	SOIL	SOIL	SOIL
			-	-	-	-
			23/5/2023 SE248198.019	23/5/2023 SE248198.020	23/5/2023 SE248198.021	23/5/2023 SE248198.025
TRH C6-C9	mg/kg	20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 30/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH1M_2.0-2.1	BH2_0.1-0.2	BH2_1.5-1.6	BH3_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.001	24/5/2023 SE248198.002	24/5/2023 SE248198.003	24/5/2023 SE248198.004	23/5/2023 SE248198.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	62	<45	79
TRH C29-C36	mg/kg	45	<45	<45	88	<45	64
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	110	<90	120
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	130	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	150	<110	140
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	230	<210	<210

PARAMETER	UOM	LOR	BH4_0.5-0.6	BH4_2.0-2.1	BH5_0.60-0.70	BH5_1.30-1.40	BH6_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.006	24/5/2023 SE248198.007	23/5/2023 SE248198.009	23/5/2023 SE248198.010	23/5/2023 SE248198.011
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH7_0.5-0.6	BH7_1.5-1.6	BH8_0.20-0.30	BH8_0.90-1.00	BH9_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/5/2023 SE248198.013	23/5/2023 SE248198.014	23/5/2023 SE248198.015	23/5/2023 SE248198.017	23/5/2023 SE248198.018
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 30/5/2023 (continued)

PARAMETER	UOM	LOR	BH10_0.20-0.30	BH11_0.50-0.60	QD1	BH12M_0.3-0.4
			SOIL	SOIL	SOIL	SOIL
			- 23/5/2023 SE248198.019	- 23/5/2023 SE248198.020	- 23/5/2023 SE248198.021	- 23/5/2023 SE248198.025
TRH C10-C14	mg/kg	20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	92	<45	50	<45
TRH C29-C36	mg/kg	45	69	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	140	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	160	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 30/5/2023

			BH1M_0.5-0.6	BH1M_2.0-2.1	BH2_0.1-0.2	BH2_1.5-1.6	BH3_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023	24/5/2023	24/5/2023	24/5/2023	23/5/2023
PARAMETER	UOM	LOR	SE248198.001	SE248198.002	SE248198.003	SE248198.004	SE248198.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	0.5	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	0.6	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	0.7	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	0.3	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	0.4	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	0.4	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	3.5	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	3.5	<0.8	<0.8

			BH4_0.5-0.6	BH4_2.0-2.1	BH5_0.60-0.70	BH5_1.30-1.40	BH6_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023	24/5/2023	23/5/2023	23/5/2023	23/5/2023
PARAMETER	UOM	LOR	SE248198.006	SE248198.007	SE248198.009	SE248198.010	SE248198.011
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.2
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	1.1
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	1.1

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 30/5/2023 (continued)

PARAMETER	UOM	LOR	BH7_0.5-0.6	BH7_1.5-1.6	BH8_0.20-0.30	BH8_0.90-1.00	BH9_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/5/2023 SE248198.013	23/5/2023 SE248198.014	23/5/2023 SE248198.015	23/5/2023 SE248198.017	23/5/2023 SE248198.018
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.1
Pyrene	mg/kg	0.1	<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	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH10_0.20-0.30	BH11_0.50-0.60	BH12M_0.3-0.4
			SOIL	SOIL	SOIL
			23/5/2023 SE248198.019	23/5/2023 SE248198.020	23/5/2023 SE248198.025
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	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	0.2	<0.1	0.1
Pyrene	mg/kg	0.1	0.2	<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)fluoranthene	mg/kg	0.1	0.2	<0.1	0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	0.2	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	0.2	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	0.3	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	0.4	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	0.3	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	1.5	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	1.5	<0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 30/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH1M_2.0-2.1	BH2_0.1-0.2	BH2_1.5-1.6	BH3_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.001	24/5/2023 SE248198.002	24/5/2023 SE248198.003	24/5/2023 SE248198.004	23/5/2023 SE248198.005
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 30/5/2023 (continued)

PARAMETER	UOM	LOR	BH4_0.5-0.6	BH4_2.0-2.1	BH5_0.60-0.70	BH5_1.30-1.40	BH6_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.006	24/5/2023 SE248198.007	23/5/2023 SE248198.009	23/5/2023 SE248198.010	23/5/2023 SE248198.011
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 30/5/2023 (continued)

PARAMETER	UOM	LOR	BH7_0.5-0.6	BH7_1.5-1.6	BH8_0.20-0.30	BH8_0.90-1.00	BH9_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/5/2023 SE248198.013	23/5/2023 SE248198.014	23/5/2023 SE248198.015	23/5/2023 SE248198.017	23/5/2023 SE248198.018
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 30/5/2023 (continued)

PARAMETER	UOM	LOR	BH10_0.20-0.30	BH11_0.50-0.60	BH12M_0.3-0.4
			SOIL - 23/5/2023 SE248198.019	SOIL - 23/5/2023 SE248198.020	SOIL - 23/5/2023 SE248198.025
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1

OP Pesticides in Soil [AN420] Tested: 30/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH1M_2.0-2.1	BH2_0.1-0.2	BH2_1.5-1.6	BH3_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023 SE248198.001	24/5/2023 SE248198.002	24/5/2023 SE248198.003	24/5/2023 SE248198.004	23/5/2023 SE248198.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH4_0.5-0.6	BH4_2.0-2.1	BH5_0.60-0.70	BH5_1.30-1.40	BH6_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023 SE248198.006	24/5/2023 SE248198.007	23/5/2023 SE248198.009	23/5/2023 SE248198.010	23/5/2023 SE248198.011
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH7_0.5-0.6	BH7_1.5-1.6	BH8_0.20-0.30	BH8_0.90-1.00	BH9_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/5/2023 SE248198.013	23/5/2023 SE248198.014	23/5/2023 SE248198.015	23/5/2023 SE248198.017	23/5/2023 SE248198.018
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

OP Pesticides in Soil [AN420] Tested: 30/5/2023 (continued)

PARAMETER	UOM	LOR	BH10_0.20-0.30	BH11_0.50-0.60	BH12M_0.3-0.4
			SOIL	SOIL	SOIL
			-	-	-
			23/5/2023 SE248198.019	23/5/2023 SE248198.020	23/5/2023 SE248198.025
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7

PCBs in Soil [AN420] Tested: 30/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH1M_2.0-2.1	BH2_0.1-0.2	BH2_1.5-1.6	BH3_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.001	24/5/2023 SE248198.002	24/5/2023 SE248198.003	24/5/2023 SE248198.004	23/5/2023 SE248198.005
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BH4_0.5-0.6	BH4_2.0-2.1	BH5_0.60-0.70	BH5_1.30-1.40	BH6_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.006	24/5/2023 SE248198.007	23/5/2023 SE248198.009	23/5/2023 SE248198.010	23/5/2023 SE248198.011
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BH7_0.5-0.6	BH7_1.5-1.6	BH8_0.20-0.30	BH8_0.90-1.00	BH9_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/5/2023 SE248198.013	23/5/2023 SE248198.014	23/5/2023 SE248198.015	23/5/2023 SE248198.017	23/5/2023 SE248198.018
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PCBs in Soil [AN420] Tested: 30/5/2023 (continued)

PARAMETER	UOM	LOR	BH10_0.20-0.30	BH11_0.50-0.60	BH12M_0.3-0.4
			SOIL - 23/5/2023 SE248198.019	SOIL - 23/5/2023 SE248198.020	SOIL - 23/5/2023 SE248198.025
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1



ANALYTICAL RESULTS

SE248198 R0

pH in soil (1:5) [AN101] Tested: 31/5/2023

			BH1M_2.0-2.1	BH2_1.5-1.6	BH4_2.0-2.1	BH5_1.30-1.40	BH7_1.5-1.6
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023	24/5/2023	24/5/2023	23/5/2023	23/5/2023
PARAMETER	UOM	LOR	SE248198.002	SE248198.004	SE248198.007	SE248198.010	SE248198.014
pH	pH Units	0.1	6.9	5.1	5.0	7.2	7.1

			BH8_0.90-1.00
			SOIL
			-
			23/5/2023
PARAMETER	UOM	LOR	SE248198.017
pH	pH Units	0.1	5.0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH1M_2.0-2.1	BH2_0.1-0.2	BH2_1.5-1.6	BH3_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.001	24/5/2023 SE248198.002	24/5/2023 SE248198.003	24/5/2023 SE248198.004	23/5/2023 SE248198.005
Arsenic, As	mg/kg	1	3	5	3	8	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	13	5.6	12	8.4	16
Copper, Cu	mg/kg	0.5	120	97	54	24	99
Lead, Pb	mg/kg	1	6	14	25	16	5
Nickel, Ni	mg/kg	0.5	14	1.4	13	<0.5	20
Zinc, Zn	mg/kg	2	40	11	43	6.7	41

PARAMETER	UOM	LOR	BH4_0.5-0.6	BH4_2.0-2.1	BH5_0.20-0.30	BH5_0.60-0.70	BH5_1.30-1.40
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.006	24/5/2023 SE248198.007	23/5/2023 SE248198.008	23/5/2023 SE248198.009	23/5/2023 SE248198.010
Arsenic, As	mg/kg	1	2	8	-	3	9
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	-	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	9.7	4.4	-	5.5	8.1
Copper, Cu	mg/kg	0.5	110	27	-	34	44
Lead, Pb	mg/kg	1	5	12	5	15	21
Nickel, Ni	mg/kg	0.5	11	<0.5	-	2.8	1.0
Zinc, Zn	mg/kg	2	36	5.4	-	13	12

PARAMETER	UOM	LOR	BH6_0.10-0.20	BH7_0.5-0.6	BH7_1.5-1.6	BH8_0.20-0.30	BH8_0.90-1.00
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/5/2023 SE248198.011	23/5/2023 SE248198.013	23/5/2023 SE248198.014	23/5/2023 SE248198.015	23/5/2023 SE248198.017
Arsenic, As	mg/kg	1	5	4	3	5	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	9.4	11	4.6	28	20
Copper, Cu	mg/kg	0.5	52	24	14	15	4.2
Lead, Pb	mg/kg	1	34	13	11	27	17
Nickel, Ni	mg/kg	0.5	110	5.2	1.9	14	<0.5
Zinc, Zn	mg/kg	2	84	18	6.0	45	4.6

PARAMETER	UOM	LOR	BH9_0.10-0.20	BH10_0.20-0.30	BH11_0.50-0.60	QD1	BH12M_0.3-0.4
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/5/2023 SE248198.018	23/5/2023 SE248198.019	23/5/2023 SE248198.020	23/5/2023 SE248198.021	23/5/2023 SE248198.025
Arsenic, As	mg/kg	1	7	4	3	3	6
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	11	13	22	3.1	14
Copper, Cu	mg/kg	0.5	15	11	73	13	21
Lead, Pb	mg/kg	1	39	30	7	15	33
Nickel, Ni	mg/kg	0.5	6.5	3.1	20	0.6	4.8
Zinc, Zn	mg/kg	2	47	27	43	3.7	35

Mercury in Soil [AN312] Tested: 30/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH1M_2.0-2.1	BH2_0.1-0.2	BH2_1.5-1.6	BH3_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023 SE248198.001	24/5/2023 SE248198.002	24/5/2023 SE248198.003	24/5/2023 SE248198.004	23/5/2023 SE248198.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH4_0.5-0.6	BH4_2.0-2.1	BH5_0.60-0.70	BH5_1.30-1.40	BH6_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023 SE248198.006	24/5/2023 SE248198.007	23/5/2023 SE248198.009	23/5/2023 SE248198.010	23/5/2023 SE248198.011
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH7_0.5-0.6	BH7_1.5-1.6	BH8_0.20-0.30	BH8_0.90-1.00	BH9_0.10-0.20
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/5/2023 SE248198.013	23/5/2023 SE248198.014	23/5/2023 SE248198.015	23/5/2023 SE248198.017	23/5/2023 SE248198.018
Mercury	mg/kg	0.05	<0.05	<0.05	0.22	<0.05	0.27

PARAMETER	UOM	LOR	BH10_0.20-0.30	BH11_0.50-0.60	QD1	BH12M_0.3-0.4
			SOIL	SOIL	SOIL	SOIL
			-	-	-	-
			23/5/2023 SE248198.019	23/5/2023 SE248198.020	23/5/2023 SE248198.021	23/5/2023 SE248198.025
Mercury	mg/kg	0.05	0.09	<0.05	<0.05	0.07

Moisture Content [AN002] Tested: 30/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH1M_2.0-2.1	BH2_0.1-0.2	BH2_1.5-1.6	BH3_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023 SE248198.001	24/5/2023 SE248198.002	24/5/2023 SE248198.003	24/5/2023 SE248198.004	23/5/2023 SE248198.005
% Moisture	%w/w	1	10.1	10.3	9.5	10.7	13.7

PARAMETER	UOM	LOR	BH4_0.5-0.6	BH4_2.0-2.1	BH5_0.20-0.30	BH5_0.60-0.70	BH5_1.30-1.40
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023 SE248198.006	24/5/2023 SE248198.007	23/5/2023 SE248198.008	23/5/2023 SE248198.009	23/5/2023 SE248198.010
% Moisture	%w/w	1	13.0	11.1	11.2	16.2	7.8

PARAMETER	UOM	LOR	BH6_0.10-0.20	BH7_0.5-0.6	BH7_1.5-1.6	BH8_0.20-0.30	BH8_0.90-1.00
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/5/2023 SE248198.011	23/5/2023 SE248198.013	23/5/2023 SE248198.014	23/5/2023 SE248198.015	23/5/2023 SE248198.017
% Moisture	%w/w	1	6.3	13.2	11.9	18.6	22.9

PARAMETER	UOM	LOR	BH9_0.10-0.20	BH10_0.20-0.30	BH11_0.50-0.60	QD1	TB1
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/5/2023 SE248198.018	23/5/2023 SE248198.019	23/5/2023 SE248198.020	23/5/2023 SE248198.021	23/5/2023 SE248198.022
% Moisture	%w/w	1	16.3	10.7	13.8	15.2	<1.0

PARAMETER	UOM	LOR	BH12M_0.3-0.4
			SOIL
			-
			23/5/2023 SE248198.025
% Moisture	%w/w	1	16.1

Fibre Identification in soil [AS4964/AN602] Tested: 31/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH2_0.1-0.2	BH3_0.20-0.30	BH4_0.5-0.6	BH5_0.60-0.70
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023 SE248198.001	24/5/2023 SE248198.003	23/5/2023 SE248198.005	24/5/2023 SE248198.006	23/5/2023 SE248198.009
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH6_0.10-0.20	BH7_0.5-0.6	BH8_0.20-0.30	BH9_0.10-0.20	BH10_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/5/2023 SE248198.011	23/5/2023 SE248198.013	23/5/2023 SE248198.015	23/5/2023 SE248198.018	23/5/2023 SE248198.019
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH11_0.50-0.60	BH12M_0.3-0.4
			SOIL	SOIL
			-	-
			23/5/2023 SE248198.020	23/5/2023 SE248198.025
Asbestos Detected	No unit	-	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 31/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH2_0.1-0.2	BH3_0.20-0.30	BH4_0.5-0.6	BH5_0.60-0.70
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			24/5/2023 SE248198.001	24/5/2023 SE248198.003	23/5/2023 SE248198.005	24/5/2023 SE248198.006	23/5/2023 SE248198.009
Total Sample Weight*	g	1	682	501	653	882	809
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH6_0.10-0.20	BH7_0.5-0.6	BH8_0.20-0.30	BH9_0.10-0.20	BH10_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/5/2023 SE248198.011	23/5/2023 SE248198.013	23/5/2023 SE248198.015	23/5/2023 SE248198.018	23/5/2023 SE248198.019
Total Sample Weight*	g	1	1068	675	748	703	767
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH11_0.50-0.60
			SOIL
			-
			23/5/2023 SE248198.020
Total Sample Weight*	g	1	171
Bonded ACM in >7mm Sample*	g	0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001
Fibre Type*	No unit	-	NAD

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples [MA-1523] Tested: 5/6/2023

PARAMETER	UOM	LOR	BH6_0.10-0.20	BH8_0.20-0.30	BH9_0.10-0.20	BH10_0.20-0.30
			SOIL	SOIL	SOIL	SOIL
			23/5/2023 SE248198.011	23/5/2023 SE248198.015	23/5/2023 SE248198.018	23/5/2023 SE248198.019
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	<0.0008	<0.0008	<0.0008
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	<0.0032	<0.0032	<0.0032	<0.0032
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	<0.0016	0.0018	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016	<0.0016	0.0018	<0.0016
Sum of US EPA PFAS (PFOS+PFOA)	mg/kg	0.0016	<0.0016	<0.0016	0.0018	<0.0016
Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	mg/kg	0.0016	<0.0016	<0.0016	0.0018	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorododecanesulfonic acid (10:2)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016	<0.016	<0.016
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	<0.016	<0.016	<0.016	<0.016
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	<0.008	<0.008	<0.008	<0.008
Total of PFAS (n=30)	mg/kg	0.08	<0.08	<0.08	<0.08	<0.08

VOCs in Water [AN433] Tested: 31/5/2023

			QR1
			WATER
			-
			23/5/2023
			SE248198.024
PARAMETER	UOM	LOR	
Benzene	µg/L	0.5	<0.5
Toluene	µg/L	0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5
m/p-xylene	µg/L	1	<1
o-xylene	µg/L	0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5
Total BTEX	µg/L	3	<3
Naphthalene (VOC)*	µg/L	0.5	<0.5

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 31/5/2023

			QR1
			WATER
			-
			23/5/2023
			SE248198.024
PARAMETER	UOM	LOR	
TRH C6-C9	µg/L	40	<40
Benzene (F0)	µg/L	0.5	<0.5
TRH C6-C10	µg/L	50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 31/5/2023

			QR1
			WATER
			-
			23/5/2023
			SE248198.024
PARAMETER	UOM	LOR	
TRH C10-C14	µg/L	50	<50
TRH C15-C28	µg/L	200	<200
TRH C29-C36	µg/L	200	<200
TRH C37-C40	µg/L	200	<200
TRH >C10-C16	µg/L	60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60
TRH >C16-C34 (F3)	µg/L	500	<500
TRH >C34-C40 (F4)	µg/L	500	<500
TRH C10-C40	µg/L	320	<320

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 31/5/2023

			QR1
			WATER
			-
			23/5/2023
			SE248198.024
PARAMETER	UOM	LOR	
Arsenic	µg/L	1	<1
Cadmium	µg/L	0.1	<0.1
Chromium	µg/L	1	<1
Copper	µg/L	1	<1
Lead	µg/L	1	<1
Nickel	µg/L	1	<1
Zinc	µg/L	5	<5



ANALYTICAL RESULTS

SE248198 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 31/5/2023

			QR1
			WATER
			-
			23/5/2023
			SE248198.024
PARAMETER	UOM	LOR	
Mercury	mg/L	0.0001	<0.0001

METHOD

METHODOLOGY SUMMARY

AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by AAS or ICP as per USEPA Method 200.8.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl ₂) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.

AN602/AS4964

AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

AN602/AS4964

The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-

- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres):
- (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and
- (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

AN605

This technique gravimetrically determines the mass of Bonded Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight. Any fibrous asbestos (FA) found in this fraction will be added to the 2-7mm fraction and its mass recorded there.

AN605

This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free/respirable fibres which are only observed by standard trace analysis as per AN602.

AN605

Bonded asbestos containing material (Bonded ACM) comprises asbestos-containing-material which is sound in condition.
Fibrous asbestos (FA) comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material.
Asbestos fines (AF) includes free fibres, small fibre bundles and also small fragments of bonded ACM that passes through a 7mm sieve - which implies that the bonded ACM fragments have a substantial degree of damage which increases the potential for fibre release.

AN-605

Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009 and NEPM 1999 (2013) schedule B1 section 4..

MA-1523

This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts, determined as the total of linear and branched isomers. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- 1 Bq is equivalent to 27 pCi
- 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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SGS Reference **SE248198 R0**
Date Received 25 May 2023
Date Reported 05 Jun 2023

COMMENTS

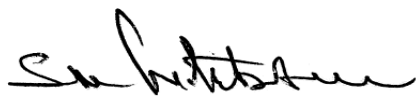
Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifier Yusuf Kuthpudin

PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420. Report No. ME334472.

SIGNATORIES



Yusuf KUTHPUDIN
Asbestos Analyst

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE248198.001	BH1M_0.5-0.6	Soil	682g Clay,Sand,Rocks,Bitumen	24 May 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE248198.003	BH2_0.1-0.2	Soil	501g Clay,Sand,Rocks,Bitumen,Concrete	24 May 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE248198.005	BH3_0.20-0.30	Soil	653g Clay,Sand,Rocks	23 May 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE248198.006	BH4_0.5-0.6	Soil	882g Sand,Rocks,Bitumen,Concrete	24 May 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE248198.009	BH5_0.60-0.70	Soil	809g Clay,Sand,Soil,Rocks,Concrete	23 May 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE248198.011	BH6_0.10-0.20	Soil	1068g Clay,Sand,Soil,Rocks	23 May 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE248198.013	BH7_0.5-0.6	Soil	675g Clay,Sand,Rocks	23 May 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE248198.015	BH8_0.20-0.30	Soil	748g Clay,Sand,Soil,Rocks	23 May 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE248198.018	BH9_0.10-0.20	Soil	703g Clay,Sand,Soil,Rocks	23 May 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE248198.019	BH10_0.20-0.30	Soil	767g Clay,Sand,Soil,Rocks	23 May 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE248198.020	BH11_0.50-0.60	Soil	171g Sand,Rocks,Cement Mixture	23 May 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE248198.025	BH12M_0.3-0.4	Soil	151g Clay,Sand,Rocks	23 May 2023	No Asbestos Found at RL of 0.1g/kg	<0.01

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 31/5/2023

PARAMETER	UOM	LOR	BH1M_0.5-0.6	BH2_0.1-0.2	BH3_0.20-0.30	BH4_0.5-0.6	BH5_0.60-0.70
			SOIL	SOIL	SOIL	SOIL	SOIL
			24/5/2023 SE248198.001	24/5/2023 SE248198.003	23/5/2023 SE248198.005	24/5/2023 SE248198.006	23/5/2023 SE248198.009
Total Sample Weight*	g	1	682	501	653	882	809
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH6_0.10-0.20	BH7_0.5-0.6	BH8_0.20-0.30	BH9_0.10-0.20	BH10_0.20-0.30
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/5/2023 SE248198.011	23/5/2023 SE248198.013	23/5/2023 SE248198.015	23/5/2023 SE248198.018	23/5/2023 SE248198.019
Total Sample Weight*	g	1	1068	675	748	703	767
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH11_0.50-0.60
			SOIL
			23/5/2023 SE248198.020
Total Sample Weight*	g	1	171
Bonded ACM in >7mm Sample*	g	0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001
Fibre Type*	No unit	-	NAD

METHOD

METHODOLOGY SUMMARY

AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602/AS4964	The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres); (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.
AN605	This technique gravimetrically determines the mass of Bonded Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight. Any fibrous asbestos (FA) found in this fraction will be added to the 2-7mm fraction and its mass recorded there.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free/respirable fibres which are only observed by standard trace analysis as per AN602.
AN605	Bonded asbestos containing material (Bonded ACM) comprises asbestos-containing-material which is sound in condition. Fibrous asbestos (FA) comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. Asbestos fines (AF) includes free fibres, small fibre bundles and also small fragments of bonded ACM that passes through a 7mm sieve - which implies that the bonded ACM fragments have a substantial degree of damage which increases the potential for fibre release.
AN-605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009 and NEPM 1999 (2013) schedule B1 section 4..

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service.
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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Project **E25996 1H Hospital Rd Concord**
 Order Number **SE248198**
 Samples **25**

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SGS Reference **ME334472 R0**
 Date Received **31 May 2023**
 Date Reported **05 Jun 2023**

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562 (14420/22793/24472).

SIGNATORIES



Susan WAN
 Senior Chemist

Parameter	Units	LOR	Sample Number	ME334472.001	ME334472.002	ME334472.003	ME334472.004
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	24 May 2023	24 May 2023	24 May 2023	24 May 2023
			Sample Name	SE248198.001	SE248198.002	SE248198.003	SE248198.004

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 Tested: 5/6/2023

Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	-	-	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0008	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	-	-
Perfluorotridecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	-	-
Sum of US EPA PFAS (PFOS+PFOA)	mg/kg	0.0016	-	-	-	-
Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	mg/kg	0.0016	-	-	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	-	-
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	-	-
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	-	-	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	-	-
Total of PFAS (n=30)	mg/kg	0.08	-	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C7-PFUDa) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-



ANALYTICAL REPORT

ME334472 R0

Parameter	Sample Number	ME334472.001	ME334472.002	ME334472.003	ME334472.004
	Sample Matrix	Soil	Soil	Soil	Soil
	Sample Date	24 May 2023	24 May 2023	24 May 2023	24 May 2023
	Sample Name	SE248198.001	SE248198.002	SE248198.003	SE248198.004
Units		LOR			

Moisture Content Method: AN002 Tested: 5/6/2023

% Moisture	%w/w	1	-	-	-	-
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Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	ME334472.005 Soil 23 May 2023 SE248198.005	ME334472.006 Soil 24 May 2023 SE248198.006	ME334472.007 Soil 24 May 2023 SE248198.007	ME334472.008 Soil 23 May 2023 SE248198.008
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Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 Tested: 5/6/2023

Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	-	-	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0008	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	-	-
Perfluorotridecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	-	-
Sum of US EPA PFAS (PFOS+PFOA)	mg/kg	0.0016	-	-	-	-
Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	mg/kg	0.0016	-	-	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	-	-
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	-	-
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	-	-	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	-	-
Total of PFAS (n=30)	mg/kg	0.08	-	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C7-PFUDa) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-



ANALYTICAL REPORT

ME334472 R0

			Sample Number	ME334472.005	ME334472.006	ME334472.007	ME334472.008
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	23 May 2023	24 May 2023	24 May 2023	23 May 2023
			Sample Name	SE248198.005	SE248198.006	SE248198.007	SE248198.008
Parameter	Units	LOR					

Moisture Content Method: AN002 Tested: 5/6/2023

% Moisture	%w/w	1	-	-	-	-
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Parameter	Units	LOR	Sample Number	ME334472.009	ME334472.010	ME334472.011	ME334472.012
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	23 May 2023	23 May 2023	23 May 2023	23 May 2023
			Sample Name	SE248198.009	SE248198.010	SE248198.011	SE248198.012

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 Tested: 5/6/2023

Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0008	-	-	<0.0008	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorotridecanoic acid (PFTriDA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	<0.0032	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	<0.0016	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	<0.0016	-
Sum of US EPA PFAS (PFOS+PFOA)	mg/kg	0.0016	-	-	<0.0016	-
Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	<0.0016	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	<0.0016	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	<0.0016	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	<0.0016	-
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	<0.008	-
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	-	<0.008	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	<0.016	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	<0.016	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	<0.008	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	<0.008	-
Total of PFAS (n=30)	mg/kg	0.08	-	-	<0.08	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	101	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	103	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	101	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	107	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	110	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	97	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	100	-
(13C7-PFUDa) Isotopically Labelled Internal Recovery	%	-	-	-	90	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	77	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	33	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	-	13	-
(13C3-PFBs) Isotopically Labelled Internal Recovery	%	-	-	-	103	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	-	113	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	-	119	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	85	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	84	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	85	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	94	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	50	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	39	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	64	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	58	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	66	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	58	-



ANALYTICAL REPORT

ME334472 R0

Parameter	Sample Number	ME334472.009	ME334472.010	ME334472.011	ME334472.012
	Sample Matrix	Soil	Soil	Soil	Soil
	Sample Date	23 May 2023	23 May 2023	23 May 2023	23 May 2023
	Sample Name	SE248198.009	SE248198.010	SE248198.011	SE248198.012
Units		LOR			

Moisture Content Method: AN002 Tested: 5/6/2023

% Moisture	%w/w	1	-	-	5.1	-
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Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	ME334472.013 Soil 23 May 2023 SE248198.013	ME334472.014 Soil 23 May 2023 SE248198.014	ME334472.015 Soil 23 May 2023 SE248198.015	ME334472.016 Soil 23 May 2023 SE248198.016
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Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 Tested: 5/6/2023

Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0008	-	-	<0.0008	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorotridecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	<0.0032	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	<0.0016	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	<0.0016	-
Sum of US EPA PFAS (PFOS+PFOA)	mg/kg	0.0016	-	-	<0.0016	-
Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	<0.0016	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	<0.0016	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	<0.0016	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	-	<0.0016	-
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	<0.0016	-
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	<0.008	-
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	-	<0.008	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	<0.016	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	<0.016	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	<0.008	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	<0.008	-
Total of PFAS (n=30)	mg/kg	0.08	-	-	<0.08	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	103	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	102	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	132	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	120	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	93	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	116	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	93	-
(13C7-PFUDa) Isotopically Labelled Internal Recovery	%	-	-	-	69	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	66	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	65	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	-	83	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	-	135	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	-	105	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	-	93	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	121	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	104	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	79	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	79	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	59	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	51	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	90	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	67	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	60	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	68	-



ANALYTICAL REPORT

ME334472 R0

Parameter	Sample Number	ME334472.013	ME334472.014	ME334472.015	ME334472.016
	Sample Matrix	Soil	Soil	Soil	Soil
	Sample Date	23 May 2023	23 May 2023	23 May 2023	23 May 2023
	Sample Name	SE248198.013	SE248198.014	SE248198.015	SE248198.016
Units		LOR			

Moisture Content Method: AN002 Tested: 5/6/2023

% Moisture	%w/w	1	-	-	16.6	-
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Parameter	Units	LOR	Sample Number	ME334472.017	ME334472.018	ME334472.019	ME334472.020
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	23 May 2023	23 May 2023	23 May 2023	23 May 2023
			Sample Name	SE248198.017	SE248198.018	SE248198.019	SE248198.020

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 Tested: 5/6/2023

Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0008	-	<0.0008	<0.0008	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorotridecanoic acid (PFTriDA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	<0.0032	<0.0032	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	0.0018	<0.0016	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	0.0018	<0.0016	-
Sum of US EPA PFAS (PFOS+PFOA)	mg/kg	0.0016	-	0.0018	<0.0016	-
Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	mg/kg	0.0016	-	0.0018	<0.0016	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	<0.0016	<0.0016	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	<0.0016	<0.0016	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	<0.0016	<0.0016	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	<0.0016	<0.0016	-
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0016	-	<0.0016	<0.0016	-
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	<0.008	<0.008	-
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	<0.008	<0.008	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	<0.016	<0.016	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	<0.016	<0.016	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	<0.008	<0.008	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	<0.008	<0.008	-
Total of PFAS (n=30)	mg/kg	0.08	-	<0.08	<0.08	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	102	99	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	104	100	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	96	150	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	95	141	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	83	93	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	117	96	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	111	85	-
(13C7-PFUDa) Isotopically Labelled Internal Recovery	%	-	-	86	80	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	73	81	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	43	82	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	26	132	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	99	149	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	103	90	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	84	81	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	85	132	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	81	104	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	77	76	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	71	61	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	52	41	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	43	38	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	55	62	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	63	62	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	55	50	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	53	56	-



ANALYTICAL REPORT

ME334472 R0

			Sample Number	ME334472.017	ME334472.018	ME334472.019	ME334472.020
			Sample Matrix	Soil	Soil	Soil	Soil
			Sample Date	23 May 2023	23 May 2023	23 May 2023	23 May 2023
			Sample Name	SE248198.017	SE248198.018	SE248198.019	SE248198.020
Parameter	Units	LOR					

Moisture Content Method: AN002 Tested: 5/6/2023

% Moisture	%w/w	1	-	15.1	15.0	-
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	Sample Number	ME334472.021	ME334472.022	ME334472.023	ME334472.024
	Sample Matrix	Soil	Soil	Soil	Water
	Sample Date	23 May 2023	23 May 2023	23 May 2023	23 May 2023
	Sample Name	SE248198.021	SE248198.022	SE248198.023	SE248198.024
Parameter	Units	LOR			

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 Tested: 5/6/2023

Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	-	-	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	-	-	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	-	-	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	-	-	-
Perfluorooctanoic acid (PFOA)	mg/kg	0.0008	-	-	-	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-	-	-	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-	-	-	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-	-	-	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-	-	-	-
Perfluorotridecanoic acid (PFTriDA)	mg/kg	0.0016	-	-	-	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-	-	-	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-	-	-	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	-	-	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	-	-	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	-	-	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	-	-	-
Sum PFOS and PFHXS	mg/kg	0.0016	-	-	-	-
Sum of US EPA PFAS (PFOS+PFOA)	mg/kg	0.0016	-	-	-	-
Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	mg/kg	0.0016	-	-	-	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	-	-	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-	-	-	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	-	-	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	-	-	-
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0016	-	-	-	-
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-	-	-	-
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-	-	-	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-	-	-	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-	-	-	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-	-	-	-
Total of PFAS (n=30)	mg/kg	0.08	-	-	-	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C7-PFUDa) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-	-	-	-



ANALYTICAL REPORT

ME334472 R0

Parameter	Sample Number	ME334472.021	ME334472.022	ME334472.023	ME334472.024
	Sample Matrix	Soil	Soil	Soil	Water
	Sample Date	23 May 2023	23 May 2023	23 May 2023	23 May 2023
	Sample Name	SE248198.021	SE248198.022	SE248198.023	SE248198.024
Units		LOR			

Moisture Content Method: AN002 Tested: 5/6/2023

% Moisture	%w/w	1	-	-	-	-
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Sample Number ME334472.025
Sample Matrix Soil
Sample Date 23 May 2023
Sample Name SE248198.025

Parameter Units LOR

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 Tested: 5/6/2023

Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-
Perfluorononanoic acid (PFNA)	mg/kg	0.0016	-
Perfluorodecanoic acid (PFDA)	mg/kg	0.0016	-
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.0016	-
Perfluorododecanoic acid (PFDoA)	mg/kg	0.0016	-
Perfluorotridecanoic acid (PFTriDA)	mg/kg	0.0016	-
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0016	-
Perfluorohexadecanoic acid (PFHxDA)	mg/kg	0.0032	-
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-
Sum PFOS and PFHXS	mg/kg	0.0016	-
Sum of US EPA PFAS (PFOS+PFOA)	mg/kg	0.0016	-
Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	mg/kg	0.0016	-
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-
Perfluorodecane sulfonate (PFDS)	mg/kg	0.0016	-
Perfluorododecane sulfonate (PFDoS)	mg/kg	0.0016	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-
Perfluorooctane sulfonamide (PFOSA)	mg/kg	0.0016	-
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	mg/kg	0.008	-
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	mg/kg	0.008	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	mg/kg	0.016	-
N-Methylperfluorooctanesulfonamidoacetic acid	mg/kg	0.008	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	mg/kg	0.008	-
Total of PFAS (n=30)	mg/kg	0.08	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	-
(13C7-PFUDa) Isotopically Labelled Internal Recovery	%	-	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	-
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	-



ANALYTICAL REPORT

ME334472 R0

			Sample Number	ME334472.025
			Sample Matrix	Soil
			Sample Date	23 May 2023
			Sample Name	SE248198.025
Parameter	Units	LOR		

Moisture Content Method: AN002 Tested: 5/6/2023

% Moisture	%w/w	1	-
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MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Perfluorobutanoic acid (PFBA)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
Perfluoropentanoic acid (PFPeA)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexanoic acid (PFHxA)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
Perfluoroheptanoic acid (PFHpA)	LB062407	mg/kg	0.0016	<0.0016	0%	121%
Perfluorooctanoic Acid (PFOA)	LB062407	mg/kg	0.0008	<0.0008	0%	127%
Perfluorononanoic acid (PFNA)	LB062407	mg/kg	0.0016	<0.0016		150%
Perfluorodecanoic acid (PFDA)	LB062407	mg/kg	0.0016	<0.0016		104%
Perfluoroundecanoic acid (PFUnA)	LB062407	mg/kg	0.0016	<0.0016		117%
Perfluorododecanoic acid (PFDoA)	LB062407	mg/kg	0.0016	<0.0016		147%
Perfluorotridecanoic acid (PFTriDA)	LB062407	mg/kg	0.0016	<0.0016		105%
Perfluorotetradecanoic acid (PFTeDA)	LB062407	mg/kg	0.0016	<0.0016		NA
Perfluorohexadecanoic acid (PFHxDA)	LB062407	mg/kg	0.0032	<0.0032		NA
Perfluorobutane sulfonate (PFBS)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
Perfluoropentane sulfonate (PFPeS)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexane sulfonate (PFHxS)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
Perfluoroheptane sulfonate (PFHpS)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
Perfluorooctane sulfonate (PFOS)	LB062407	mg/kg	0.0016	<0.0016	26%	150%
Sum PFOS and PFHxS	LB062407	mg/kg	0.0016	<0.0016	26%	NA
Sum of US EPA PFAS (PFOS+PFOA)	LB062407	mg/kg	0.0016	<0.0016		NA
Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	LB062407	mg/kg	0.0016	<0.0016		NA
Perfluorononane sulfonate (PFNS)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
Perfluorodecane sulfonate (PFDS)	LB062407	mg/kg	0.0016	<0.0016		NA
Perfluorododecane sulfonate (PFDoS)	LB062407	mg/kg	0.0016	<0.0016		NA
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	LB062407	mg/kg	0.0016	<0.0016	0%	NA
Perfluorooctane sulfonamide (PFOSA)	LB062407	mg/kg	0.0016	<0.0016		70%
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	LB062407	mg/kg	0.008	<0.008		NA
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	LB062407	mg/kg	0.008	<0.008		NA
2-(N-Methylperfluorooctane sulfonamido)-ethanol (N-MeFOSE)	LB062407	mg/kg	0.016	<0.016		NA
2-(N-Ethylperfluorooctane sulfonamido)-ethanol (N-EtFOSE)	LB062407	mg/kg	0.016	<0.016		NA
N-Methylperfluorooctanesulfonamidoacetic acid (N_MeFOSAA)	LB062407	mg/kg	0.008	<0.008		NA
N-Ethylperfluorooctanesulfonamidoacetic Acid (N-EtFOSAA)	LB062407	mg/kg	0.008	<0.008		NA
Total of PFAS (n=30)	LB062407	mg/kg	0.08	<0.08		NA
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	102%	0%	99%
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	100%	1%	97%
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	95%	7%	112%
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	96%	4%	105%
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	95%	2%	97%
(13C9-PFNA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	97%		106%
(13C6-PFDA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	130%		127%
(13C7-PFUDa) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	100%		99%
(13C2-PFDoA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	98%		91%
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	75%		70%
(13C2-PFHxDA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	31%		39%
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	111%		107%
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	119%		103%
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	85%		119%
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	107%		108%
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	109%		95%
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	105%		83%
(13C8-PFOSA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	102%		132%
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	73%		25%
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	55%		20%
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	101%		129%
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	99%		88%

MB blank results are compared to the Limit of Reporting

LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.

DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 (continued)

				MB	DUP %RPD	LCS %Recovery
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	87%		113%
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	LB062407	%	-	78%		95%

METHOD

METHODOLOGY SUMMARY

AN002

The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.

MA-1523

This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts, determined as the total of linear and branched isomers. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification.

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
**	Indicative data, theoretical holding time exceeded.	QFL	QC result is below the lower tolerance
***	Indicates that both * and ** apply.	-	The sample was not analysed for this analyte
		NVL	Not Validated

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- 1 Bq is equivalent to 27 pCi
- 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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CERTIFICATE OF ANALYSIS 324762

Client Details

Client	El Australia
Attention	Andrew Schmidt
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details

Your Reference	<u>E25996, Concord Hospital, Concord</u>
Number of Samples	1 Water
Date samples received	02/06/2023
Date completed instructions received	02/06/2023

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	09/06/2023
Date of Issue	08/06/2023
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Liam Timmins, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Water		
Our Reference		324762-1
Your Reference	UNITS	GW-QT1
Date Sampled		01/06/2023
Type of sample		Water
Date extracted	-	05/06/2023
Date analysed	-	06/06/2023
TRH C ₆ - C ₉	µg/L	47
TRH C ₆ - C ₁₀	µg/L	65
TRH C ₆ - C ₁₀ less BTEX (F1)	µg/L	65
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	100
Surrogate toluene-d8	%	93
Surrogate 4-BFB	%	96

svTRH (C10-C40) in Water		
Our Reference		324762-1
Your Reference	UNITS	GW-QT1
Date Sampled		01/06/2023
Type of sample		Water
Date extracted	-	05/06/2023
Date analysed	-	06/06/2023
TRH C ₁₀ - C ₁₄	µg/L	<50
TRH C ₁₅ - C ₂₈	µg/L	<100
TRH C ₂₉ - C ₃₆	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	<50
TRH >C ₁₀ - C ₁₆	µg/L	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	µg/L	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	<50
Surrogate o-Terphenyl	%	85

HM in water - dissolved		
Our Reference		324762-1
Your Reference	UNITS	GW-QT1
Date Sampled		01/06/2023
Type of sample		Water
Date prepared	-	07/06/2023
Date analysed	-	07/06/2023
Arsenic-Dissolved	µg/L	<1
Cadmium-Dissolved	µg/L	0.1
Chromium-Dissolved	µg/L	<1
Copper-Dissolved	µg/L	3
Lead-Dissolved	µg/L	<1
Mercury-Dissolved	µg/L	<0.05
Nickel-Dissolved	µg/L	9
Zinc-Dissolved	µg/L	48

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
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-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			05/06/2023	[NT]	[NT]	[NT]	[NT]	05/06/2023	[NT]
Date analysed	-			06/06/2023	[NT]	[NT]	[NT]	[NT]	06/06/2023	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	97	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	102	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	90	[NT]	[NT]	[NT]	[NT]	89	[NT]
Surrogate toluene-d8	%		Org-023	91	[NT]	[NT]	[NT]	[NT]	91	[NT]
Surrogate 4-BFB	%		Org-023	95	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			05/06/2023	[NT]	[NT]	[NT]	[NT]	05/06/2023	[NT]
Date analysed	-			06/06/2023	[NT]	[NT]	[NT]	[NT]	06/06/2023	[NT]
TRH C ₁₀ - C ₁₄	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	101	[NT]
TRH C ₁₅ - C ₂₈	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	101	[NT]
TRH C ₂₉ - C ₃₆	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	[NT]
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	101	[NT]
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	101	[NT]
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	[NT]
Surrogate o-Terphenyl	%		Org-020	71	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: HM in water - dissolved					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			07/06/2023	[NT]	[NT]	[NT]	[NT]	07/06/2023	[NT]
Date analysed	-			07/06/2023	[NT]	[NT]	[NT]	[NT]	07/06/2023	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	99	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[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.

CLIENT DETAILS

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Order Number **E25996**
Samples 7

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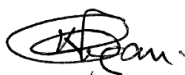
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Date Reported 8/6/2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

SIGNATORIES



Kamrul AHSAN
 Senior Chemist



Ly Kim HA
 Organic Section Head

VOCs in Water [AN433] Tested: 6/6/2023

PARAMETER	UOM	LOR	BH1M	BH9M	BH12M	GW_QD1	GW_QR1
			WATER	WATER	WATER	WATER	WATER
			-	-	-	-	-
			1/6/2023 SE248514.001	1/6/2023 SE248514.002	1/6/2023 SE248514.003	1/6/2023 SE248514.004	1/6/2023 SE248514.005
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	0.5	0.9	6.1	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m/p-xylene	µg/L	1	<1	<1	<1	<1	<1
o-xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX	µg/L	3	<3	6	<3	<3	<3
Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

PARAMETER	UOM	LOR	GW_QTB1	GW_QTS1
			WATER	WATER
			-	-
			1/6/2023 SE248514.006	1/6/2023 SE248514.007
Benzene	µg/L	0.5	<0.5	[98%]
Toluene	µg/L	0.5	<0.5	[99%]
Ethylbenzene	µg/L	0.5	<0.5	[99%]
m/p-xylene	µg/L	1	<1	[99%]
o-xylene	µg/L	0.5	<0.5	[99%]
Total Xylenes	µg/L	1.5	<1.5	-
Total BTEX	µg/L	3	<3	-
Naphthalene (VOC)*	µg/L	0.5	<0.5	[100%]

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 6/6/2023

PARAMETER	UOM	LOR	BH1M	BH9M	BH12M	GW_QD1	GW_QR1
			WATER	WATER	WATER	WATER	WATER
			-	-	-	-	-
			1/6/2023	1/6/2023	1/6/2023	1/6/2023	1/6/2023
			SE248514.001	SE248514.002	SE248514.003	SE248514.004	SE248514.005
TRH C6-C9	µg/L	40	<40	56	43	42	<40
Benzene (F0)	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TRH C6-C10	µg/L	50	<50	79	<50	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	73	<50	<50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 5/6/2023

PARAMETER	UOM	LOR	BH1M	BH9M	BH12M	GW_QD1	GW_QR1
			WATER	WATER	WATER	WATER	WATER
			1/6/2023 SE248514.001	1/6/2023 SE248514.002	1/6/2023 SE248514.003	1/6/2023 SE248514.004	1/6/2023 SE248514.005
TRH C10-C14	µg/L	50	<50	300	<50	<50	<50
TRH C15-C28	µg/L	200	<200	270	<200	<200	<200
TRH C29-C36	µg/L	200	<200	<200	<200	<200	<200
TRH C37-C40	µg/L	200	<200	<200	<200	<200	<200
TRH >C10-C16	µg/L	60	<60	300	<60	<60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	300	<60	<60	<60
TRH >C16-C34 (F3)	µg/L	500	<500	<500	<500	<500	<500
TRH >C34-C40 (F4)	µg/L	500	<500	<500	<500	<500	<500
TRH C10-C40	µg/L	320	<320	710	<320	<320	<320

PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 5/6/2023

PARAMETER	UOM	LOR	BH1M	BH9M	BH12M
			WATER - 1/6/2023 SE248514.001	WATER - 1/6/2023 SE248514.002	WATER - 1/6/2023 SE248514.003
Naphthalene	µg/L	0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1	<0.1
Total PAH (18)	µg/L	1	<1	<1	<1

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 2/6/2023

PARAMETER	UOM	LOR	BH1M	BH9M	BH12M	GW_QD1	GW_QR1
			WATER	WATER	WATER	WATER	WATER
			-	-	-	-	-
			1/6/2023 SE248514.001	1/6/2023 SE248514.002	1/6/2023 SE248514.003	1/6/2023 SE248514.004	1/6/2023 SE248514.005
Arsenic	µg/L	1	<1	<1	<1	<1	<1
Cadmium	µg/L	0.1	0.5	<0.1	0.1	0.1	<0.1
Chromium	µg/L	1	<1	<1	<1	<1	<1
Copper	µg/L	1	1	<1	3	3	<1
Lead	µg/L	1	<1	<1	<1	<1	<1
Nickel	µg/L	1	2	32	9	9	<1
Zinc	µg/L	5	14	150	46	44	<5



ANALYTICAL RESULTS

SE248514 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 2/6/2023

			BH1M	BH9M	BH12M	GW_QD1	GW_QR1
			WATER	WATER	WATER	WATER	WATER
			-	-	-	-	-
			1/6/2023	1/6/2023	1/6/2023	1/6/2023	1/6/2023
PARAMETER	UOM	LOR	SE248514.001	SE248514.002	SE248514.003	SE248514.004	SE248514.005
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

METHOD

METHODOLOGY SUMMARY

AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). Where F2 is corrected for Naphthalene, the VOC data for Naphthalene is used.
AN403	Additionally, the volatile C6-C9/C6-C10 fractions may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Silica) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC's are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- 1 Bq is equivalent to 27 pCi
- 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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Appendix J – QA/QC Assessment

J1.1 Quality Assurance / Quality Control Program

Quality assurance comprises an assessment of the reliability of the field procedures and laboratory results against standard industry practices and the SAQP. A summary of the project QA/QC measures incorporated into this DSI is presented in **Table J-1**.

Table J-1 Project QC Measures

Task	Description	Project
Field QA/QC		
General	Work was to be undertaken following standard field procedures which are based on industry accepted standard practice.	Soil samples were collected directly from the augers. Soil samples were placed in 250 ml glass jars, which were filled to minimise headspace, and sealed using Teflon-coated lids. Groundwater samples were obtained using sample bottles/vials provided by the laboratory.
	All fieldwork was supervised by a suitably qualified and experienced scientist or engineer.	Yes
Equipment Decontamination	Sampling equipment to be decontaminated after the collection of each soil sample by washing with phosphate-free detergent (such as Decon 90 or Alconox) and potable water, followed by a final distilled water rinse. One rinsate blank would be collected and analysed for the primary contaminants. All results should be non-detect.	Yes Two rinsate samples were collected in total. One was collected during the soil investigation and the other was collected during the groundwater monitoring event. All results were reported as below the detection limits.
Transport	Samples were stored in a chilled (with ice) cooler box and transported to the laboratories. To ensure the integrity of the samples from collection to receipt by the analytical laboratory, samples were sent by courier to the laboratories under 'chain of custody' describing sample preservation and transport duration.	Yes
Trip Blanks	Trip Blank (TB) samples were to be prepared and analysed by the primary laboratory for BTEX. Analytical results for this sample were below the laboratory LOR, indicating that ideal sample transport and handling conditions were achieved.	Two trip blank samples prepared by the primary laboratory, were analysed for BTEX during soil and groundwater testing. The results were reported below the laboratory LOR, indicating that sample transport acceptable.
Trip Spikes	Trip spike (TS) samples were to be submitted to the primary laboratory for BTEX analysis, the results for which were reported within the RPD acceptance levels for trip spike recovery. It was therefore concluded that satisfactory sample transport and handling conditions were achieved.	Two trip spike samples were submitted to the primary laboratory for BTEX analysis, the results of which were reported within the RPD acceptance levels for trip spike recovery. It was therefore concluded that satisfactory sample transport and handling conditions were achieved.

Task	Description	Project
Duplicates	Field duplicate samples were analysed as follows: ▪ intra-laboratory duplicate samples at a rate of 1 in 20 primary samples (as per NEPM); and ▪ inter-laboratory duplicate samples at a rate of 1 in 20 primary samples (as per NEPM). Field and laboratory acceptable limits between 30-50% RPD as stated by AS4482.1–2005. RPDs that exceed this range may be considered acceptable where: ▪ Results are less than 10 times the limits of reporting (LOR); ▪ Results are less than 20 times the LOR and the RPD is less than 50%; or ▪ Heterogeneous materials or volatile compounds are encountered. Non-compliance is to be documented in the report and the sample re-analysed or a higher level conservatively adopted.	The required sampling density of 1 per 20 duplicated primary samples was achieved and sufficient for the investigation with the exception of the soil inter-laboratory duplicate sample since the secondary laboratory was not able to locate the sample (lost). Laboratory duplicates prepared and analysed. Minor non-conformance, with negligible effects on data use for interpretative purposes. Field QC samples and calculated RPD values are presented in Table J-5. Copies of laboratory reports are included in Appendix I.
Laboratory QA/QC		
Laboratory Analysis	The laboratories selected are NATA accredited for the analytes selected and perform their own internal QA/QC programs.	Yes SGS - primary laboratory EnviroLab - secondary laboratory Laboratory QA/QC analyses are included in Appendix L.
	Appropriate detection limits were used for the analyses to be undertaken.	Practical Quantitation Limits for all tested parameters during the DSI are presented in summary tables in Appendix J.
Holding Times	Holding times are the maximum permissible elapsed time in days from the collection of the sample to its extraction and/or analysis. All extraction and analyses should be completed within standard guidelines.	Assessment of holding times has been undertaken by the laboratory. In SGS laboratory certificate SE248198, extraction date of a few non-critical items (pH and TRH in rinsate water) noticed, it considered minor-no conformance but has no effect on the primary samples for contamination investigation purpose Minor non-conformance, with negligible effects on data use for interpretative purposes.
Method Blanks	The method blank sample is laboratory prepared, containing the reagents used to prepare the sample for final analysis. The purpose of this procedure is to identify contamination in the reagent materials and assess potential bias in the sample analysis due to contaminated reagents. The QC criterion aims to find no detectable contamination in the reagents. Each analysis procedure should be subject to a method blank analysis. The results of each should indicate that contaminants were not detected.	Assessment of method blanks has been undertaken by the laboratory.

Task	Description	Project
Laboratory Duplicates	Laboratory duplicates are field samples that are split in the laboratory and subsequently analysed a number of times in the same batch. These sub-samples are selected by the laboratory to assess the accuracy and precision of the analytical method. The selected laboratories should undertake QA/QC procedures such as calibration standards, laboratory control samples, surrogates, reference materials, sample duplicates and matrix spikes. Intra-laboratory duplicates should be performed at a frequency of 1 per 10 samples.	Assessment of laboratory duplicates has been undertaken by the laboratory. Duplicate RPD outside of acceptable range for a few metals in soil samples noticed and likely due to sample heterogeneity. Minor non-conformance, with negligible effects on data use for interpretative purposes.
Laboratory Control Standard	A laboratory control standard is a standard reference material used in preparing primary standards. The concentration should be equivalent to a mid-range standard to confirm the primary calibration. Laboratory control samples should be performed on a frequency of 1 per 20 samples or at least one per analytical run.	Assessment of laboratory control standards has been undertaken by the laboratory.
Matrix Spikes	Matrix spikes are field samples to which a predetermined stock solution of known concentration has been added. The samples are then analysed for recovery of the known addition. Recoveries should be within the stated laboratory control limits of 70 to 130% and duplicates should have RPDs of less than 50%.	Assessment of matrix spikes has been undertaken by the laboratory. In SGS laboratory certificate SE248198, one item in matrix spike exceed the criteria and likely due to sample heterogeneity Minor non-conformance, with negligible effects on data use for interpretative purposes.
Surrogate Spikes	Surrogate spikes provide a means of checking, for every analysis that no gross errors have occurred at any stage of the procedure leading to significant analyte loss. Recoveries should be within the stated laboratory control limits of 70 to 130%.	Assessment of surrogate spikes has been undertaken by the laboratory.
Conclusion	The QA/QC indicators should either all comply with the required standards or showed no variations that would have no significant effect on the quality of the data.	Assessment of the investigation QA/QC is presented in the following sections.

J1.2 Calculation of Relative Percentage Difference

The RPD values were calculated using the following equation:

$$RPD = \frac{|C_O - C_R|}{[(C_O + C_R)/2]} \times 100$$

Where:

C_O = Concentration obtained for the primary sample; and

C_R = Concentration obtained for the blind replicate or split duplicate sample.

J2.1 Field QA/QC

The field (intra- / inter- laboratory) duplicate samples collected during the works are summarised in **Table J-2**. Inter-lab duplicates were analysed by the secondary laboratory, Envirolab.

Table J-2 Field QC Sampling Program

Matrix	Primary QA Sample	Duplicate (Primary Lab)	Triplicate (Secondary Lab)	Total Duplicates
Soil	BH5_0.6-0.7	QD1	-	1
Groundwater	BH12M	GW-QD1	GW-QT1	2

J2.2 Field Data Quality Indicators

A discussion of the field data quality indicators is presented in **Table J-3** below.

Table J-3 Field Data Quality Indicators

DQI	Item	Conformance
Precision Measure of the variability (or reproducibility) of data.	SOPs appropriate and complied with	Yes
Accuracy Quantitative measure of the closeness of reported data to the true values.	SOPs appropriate and complied with	Yes
	Calibration of instruments against known standards	Yes
Representativeness Confidence the data are representative of each media present on the site.	Appropriate media sampled according to SAQP	Yes
	Each media identified in SAQP sampled	Yes
Completeness Percentage of useable data from sampling episode (set).	Each critical location sampled	Yes
	SAQP appropriate and complied with	Yes
	Appropriate number of field duplicate samples taken	Yes
	Experienced sampler	Yes
	Field documentation correct	Yes
Comparability Confidence [expressed qualitatively] that data may be considered to be equivalent for each sampling and analytical event.	Same sampling method used on each occasion/location	Yes
	Experienced sampler	Yes
	Same type of samples collected (filtered, size, fractions)	Yes

J2.3 Conclusion for the Field QA/QC

All field work, including equipment decontamination and sample preservation and transport, was conducted in accordance with the SAQP and SOPs, which were devised with reference to industry-approved guidelines. Appropriate QC measures were integrated into each sampling event and the DQI were met, or if not, the minor non-conformances had negligible effects on the data use for interpretative purposes.

All samples, including field QC samples, were transported to the primary and secondary laboratories under chilled conditions, using strict COC procedures. Relevant documents (COC forms) were presented with the samples at the times of delivery. All supporting documents (COCs and SRAs) were completed in full and signed, where appropriate. Copies of these were included in **Appendix H**. EI considered the field QA/QC program carried out during the DSI to be appropriate.

J2.4 Laboratory QA/QC

Primary and intra-laboratory duplicate samples were analysed by SGS (located in Alexandria NSW), with inter-laboratory duplicate samples analysed by Envirolab (located in Chatswood NSW). All laboratories are accredited by NATA for the analyses undertaken. A discussion of the laboratory DQIs is presented below.

Table J-4 Laboratory Data Quality Indicators

DQI	Item	Conformance
Completeness A measure of the amount of useable data (expressed as %) from a data collection activity	All critical samples analysed according to SAQP and proposal	Yes
	All analytes analysed according to SAQP in proposal	Yes
	Appropriate methods and PQLs	Yes
	Sample documentation complete	Yes
	Sample holding times complied with	Yes
Comparability The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event	Sample analytical methods used (including clean-up)	Yes
	Sample PQLs (justify/ quantify if different)	Yes
	Same laboratories (justify/ quantify if different)	Yes
	Same units (justify/ quantify if different)	Yes
Representativeness Confidence that data are representative of each media	All key samples analysed according to SAQP in the proposal	Yes
Precision A quantitative measure of the variability (or reproducibility) of data	Analysis of laboratory duplicates	Yes
	Analysis of field duplicates	Yes
	Analysis of laboratory-prepared volatile trip spikes	Yes
Accuracy A quantitative measure of the closeness of reported data to the true value	Analysis of field blanks	Yes
	Analysis of rinsate blanks	Yes
	Analysis of method blanks	Yes
	Analysis of matrix spikes (MS)	Yes
	Analysis of surrogate spikes	Yes
	Analysis of reference materials	Not applicable
	Analysis of laboratory control samples	Yes

J2.5 Conclusions for the Laboratory QA/QC

All contracted laboratories (SGS and Envirolab) were accredited by NATA for the analyses undertaken. All analytical procedures used were industry recognised and endorsed standard methods. Appropriate QC measures were integrated into each testing batch and the DQI were met, or if not, the variability was suitably justified. All final reports were submitted in full and included all requested analyses, as per the signed COC forms. EI considered the laboratory QA/QC programs carried out during the DSI to be appropriate.

J2.6 Summary of Project QA/QC

The project DQOs specified in **Section 5, Table 5-1** were considered to have been achieved. The adopted QA/QC program ensured that the data collated during the DSI were accurate, precise and representative of the (final) site conditions. It was therefore considered that the data were reliable and that the results could be used for DSI interpretative purposes.

Appendix K – Laboratory QA/QC and DQOs



STATEMENT OF QA/QC PERFORMANCE

SE248198 R0

CLIENT DETAILS

Contact Andrew Schmidt
Client EI AUSTRALIA
Address SUITE 6.01
55 MILLER STREET
PYRMONT NSW 2009

Telephone 61 2 95160722
Facsimile (Not specified)
Email andrew.schmidt@eiaustralia.com.au

Project **E25996 1H Hospital Rd Concord**
Order Number **E25996**
Samples 25

LABORATORY DETAILS

Manager Huong Crawford
Laboratory SGS Alexandria Environmental
Address Unit 16, 33 Maddox St
Alexandria NSW 2015

Telephone +61 2 8594 0400
Facsimile +61 2 8594 0499
Email au.environmental.sydney@sgs.com

SGS Reference **SE248198 R0**
Date Received 25 May 2023
Date Reported 05 Jun 2023

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Extraction Date	pH in soil (1:5)	3 items
	TRH (Total Recoverable Hydrocarbons) in Water	1 item
Duplicate	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	2 items
	VOCs in Water	1 item
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

Sample counts by matrix	22 Soil, 1 Water	Type of documentation received	COC
Date documentation received	25/5/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	13.5°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Fibre Identification in soil**Method: ME-(AU)-[ENV]AS4964/AN602**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB281069	24 May 2023	25 May 2023	23 May 2024	31 May 2023	23 May 2024	02 Jun 2023
BH2_0.1-0.2	SE248198.003	LB281069	24 May 2023	25 May 2023	23 May 2024	31 May 2023	23 May 2024	02 Jun 2023
BH3_0.20-0.30	SE248198.005	LB281069	23 May 2023	25 May 2023	22 May 2024	31 May 2023	22 May 2024	02 Jun 2023
BH4_0.5-0.6	SE248198.006	LB281069	24 May 2023	25 May 2023	23 May 2024	31 May 2023	23 May 2024	02 Jun 2023
BH5_0.60-0.70	SE248198.009	LB281069	23 May 2023	25 May 2023	22 May 2024	31 May 2023	22 May 2024	02 Jun 2023
BH6_0.10-0.20	SE248198.011	LB281069	23 May 2023	25 May 2023	22 May 2024	31 May 2023	22 May 2024	02 Jun 2023
BH7_0.5-0.6	SE248198.013	LB281069	23 May 2023	25 May 2023	22 May 2024	31 May 2023	22 May 2024	02 Jun 2023
BH8_0.20-0.30	SE248198.015	LB281069	23 May 2023	25 May 2023	22 May 2024	31 May 2023	22 May 2024	02 Jun 2023
BH9_0.10-0.20	SE248198.018	LB281069	23 May 2023	25 May 2023	22 May 2024	31 May 2023	22 May 2024	02 Jun 2023
BH10_0.20-0.30	SE248198.019	LB281069	23 May 2023	25 May 2023	22 May 2024	31 May 2023	22 May 2024	02 Jun 2023
BH11_0.50-0.60	SE248198.020	LB281069	23 May 2023	25 May 2023	22 May 2024	31 May 2023	22 May 2024	02 Jun 2023
BH12M_0.3-0.4	SE248198.025	LB281069	23 May 2023	25 May 2023	22 May 2024	31 May 2023	22 May 2024	02 Jun 2023

Gravimetric Determination of Asbestos in Soil**Method: ME-(AU)-[ENV]AN605**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB281069	24 May 2023	25 May 2023	20 Nov 2023	31 May 2023	20 Nov 2023	02 Jun 2023
BH2_0.1-0.2	SE248198.003	LB281069	24 May 2023	25 May 2023	20 Nov 2023	31 May 2023	20 Nov 2023	02 Jun 2023
BH3_0.20-0.30	SE248198.005	LB281069	23 May 2023	25 May 2023	19 Nov 2023	31 May 2023	19 Nov 2023	02 Jun 2023
BH4_0.5-0.6	SE248198.006	LB281069	24 May 2023	25 May 2023	20 Nov 2023	31 May 2023	20 Nov 2023	02 Jun 2023
BH5_0.60-0.70	SE248198.009	LB281069	23 May 2023	25 May 2023	19 Nov 2023	31 May 2023	19 Nov 2023	02 Jun 2023
BH6_0.10-0.20	SE248198.011	LB281069	23 May 2023	25 May 2023	19 Nov 2023	31 May 2023	19 Nov 2023	02 Jun 2023
BH7_0.5-0.6	SE248198.013	LB281069	23 May 2023	25 May 2023	19 Nov 2023	31 May 2023	19 Nov 2023	02 Jun 2023
BH8_0.20-0.30	SE248198.015	LB281069	23 May 2023	25 May 2023	19 Nov 2023	31 May 2023	19 Nov 2023	02 Jun 2023
BH9_0.10-0.20	SE248198.018	LB281069	23 May 2023	25 May 2023	19 Nov 2023	31 May 2023	19 Nov 2023	02 Jun 2023
BH10_0.20-0.30	SE248198.019	LB281069	23 May 2023	25 May 2023	19 Nov 2023	31 May 2023	19 Nov 2023	02 Jun 2023
BH11_0.50-0.60	SE248198.020	LB281069	23 May 2023	25 May 2023	19 Nov 2023	31 May 2023	19 Nov 2023	02 Jun 2023

Mercury (dissolved) in Water**Method: ME-(AU)-[ENV]AN311(Perth)/AN312**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR1	SE248198.024	LB281022	23 May 2023	25 May 2023	20 Jun 2023	31 May 2023	20 Jun 2023	31 May 2023

Mercury in Soil**Method: ME-(AU)-[ENV]AN312**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB280939	24 May 2023	25 May 2023	21 Jun 2023	30 May 2023	21 Jun 2023	31 May 2023
BH1M_2.0-2.1	SE248198.002	LB280939	24 May 2023	25 May 2023	21 Jun 2023	30 May 2023	21 Jun 2023	31 May 2023
BH2_0.1-0.2	SE248198.003	LB280939	24 May 2023	25 May 2023	21 Jun 2023	30 May 2023	21 Jun 2023	31 May 2023
BH2_1.5-1.6	SE248198.004	LB280939	24 May 2023	25 May 2023	21 Jun 2023	30 May 2023	21 Jun 2023	31 May 2023
BH3_0.20-0.30	SE248198.005	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH4_0.5-0.6	SE248198.006	LB280939	24 May 2023	25 May 2023	21 Jun 2023	30 May 2023	21 Jun 2023	31 May 2023
BH4_2.0-2.1	SE248198.007	LB280939	24 May 2023	25 May 2023	21 Jun 2023	30 May 2023	21 Jun 2023	31 May 2023
BH5_0.60-0.70	SE248198.009	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH5_1.30-1.40	SE248198.010	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH6_0.10-0.20	SE248198.011	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH7_0.5-0.6	SE248198.013	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH7_1.5-1.6	SE248198.014	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH8_0.20-0.30	SE248198.015	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH8_0.90-1.00	SE248198.017	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH9_0.10-0.20	SE248198.018	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH10_0.20-0.30	SE248198.019	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH11_0.50-0.60	SE248198.020	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
QD1	SE248198.021	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023
BH12M_0.3-0.4	SE248198.025	LB280939	23 May 2023	25 May 2023	20 Jun 2023	30 May 2023	20 Jun 2023	31 May 2023

Moisture Content**Method: ME-(AU)-[ENV]AN002**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB280940	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH1M_2.0-2.1	SE248198.002	LB280940	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH2_0.1-0.2	SE248198.003	LB280940	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH2_1.5-1.6	SE248198.004	LB280940	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH3_0.20-0.30	SE248198.005	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH4_0.5-0.6	SE248198.006	LB280940	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Moisture Content (continued)

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH4_2.0-2.1	SE248198.007	LB280940	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH5_0.20-0.30	SE248198.008	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH5_0.60-0.70	SE248198.009	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH5_1.30-1.40	SE248198.010	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH6_0.10-0.20	SE248198.011	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH7_0.5-0.6	SE248198.013	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH7_1.5-1.6	SE248198.014	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH8_0.20-0.30	SE248198.015	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH8_0.90-1.00	SE248198.017	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH9_0.10-0.20	SE248198.018	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH10_0.20-0.30	SE248198.019	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH11_0.50-0.60	SE248198.020	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
QD1	SE248198.021	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
TB1	SE248198.022	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023
BH12M_0.3-0.4	SE248198.025	LB280940	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	04 Jun 2023	31 May 2023

OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH1M_2.0-2.1	SE248198.002	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH2_0.1-0.2	SE248198.003	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH2_1.5-1.6	SE248198.004	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH3_0.20-0.30	SE248198.005	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH4_0.5-0.6	SE248198.006	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH4_2.0-2.1	SE248198.007	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH5_0.60-0.70	SE248198.009	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH5_1.30-1.40	SE248198.010	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH6_0.10-0.20	SE248198.011	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH7_0.5-0.6	SE248198.013	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH7_1.5-1.6	SE248198.014	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH8_0.20-0.30	SE248198.015	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH8_0.90-1.00	SE248198.017	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH9_0.10-0.20	SE248198.018	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH10_0.20-0.30	SE248198.019	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH11_0.50-0.60	SE248198.020	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
QD1	SE248198.021	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH12M_0.3-0.4	SE248198.025	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023

OP Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH1M_2.0-2.1	SE248198.002	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH2_0.1-0.2	SE248198.003	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH2_1.5-1.6	SE248198.004	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH3_0.20-0.30	SE248198.005	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH4_0.5-0.6	SE248198.006	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH4_2.0-2.1	SE248198.007	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH5_0.60-0.70	SE248198.009	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH5_1.30-1.40	SE248198.010	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH6_0.10-0.20	SE248198.011	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH7_0.5-0.6	SE248198.013	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH7_1.5-1.6	SE248198.014	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH8_0.20-0.30	SE248198.015	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH8_0.90-1.00	SE248198.017	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH9_0.10-0.20	SE248198.018	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH10_0.20-0.30	SE248198.019	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH11_0.50-0.60	SE248198.020	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
QD1	SE248198.021	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH12M_0.3-0.4	SE248198.025	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH1M_2.0-2.1	SE248198.002	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH2_0.1-0.2	SE248198.003	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH2_1.5-1.6	SE248198.004	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH3_0.20-0.30	SE248198.005	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH4_0.5-0.6	SE248198.006	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH4_2.0-2.1	SE248198.007	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH5_0.60-0.70	SE248198.009	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH5_1.30-1.40	SE248198.010	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH6_0.10-0.20	SE248198.011	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH7_0.5-0.6	SE248198.013	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH7_1.5-1.6	SE248198.014	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH8_0.20-0.30	SE248198.015	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH8_0.90-1.00	SE248198.017	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH9_0.10-0.20	SE248198.018	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH10_0.20-0.30	SE248198.019	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH11_0.50-0.60	SE248198.020	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
QD1	SE248198.021	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023
BH12M_0.3-0.4	SE248198.025	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	31 May 2023

PCBs in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH1M_2.0-2.1	SE248198.002	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH2_0.1-0.2	SE248198.003	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH2_1.5-1.6	SE248198.004	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH3_0.20-0.30	SE248198.005	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH4_0.5-0.6	SE248198.006	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH4_2.0-2.1	SE248198.007	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH5_0.60-0.70	SE248198.009	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH5_1.30-1.40	SE248198.010	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH6_0.10-0.20	SE248198.011	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH7_0.5-0.6	SE248198.013	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH7_1.5-1.6	SE248198.014	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH8_0.20-0.30	SE248198.015	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH8_0.90-1.00	SE248198.017	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH9_0.10-0.20	SE248198.018	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH10_0.20-0.30	SE248198.019	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH11_0.50-0.60	SE248198.020	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
QD1	SE248198.021	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH12M_0.3-0.4	SE248198.025	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023

pH in soil (1:5)

Method: ME-(AU)-ENVJAN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_2.0-2.1	SE248198.002	LB281025	24 May 2023	25 May 2023	31 May 2023	31 May 2023	01 Jun 2023	31 May 2023
BH2_1.5-1.6	SE248198.004	LB281025	24 May 2023	25 May 2023	31 May 2023	31 May 2023	01 Jun 2023	31 May 2023
BH4_2.0-2.1	SE248198.007	LB281025	24 May 2023	25 May 2023	31 May 2023	31 May 2023	01 Jun 2023	31 May 2023
BH5_1.30-1.40	SE248198.010	LB281025	23 May 2023	25 May 2023	30 May 2023	31 May 2023†	01 Jun 2023	31 May 2023
BH7_1.5-1.6	SE248198.014	LB281025	23 May 2023	25 May 2023	30 May 2023	31 May 2023†	01 Jun 2023	31 May 2023
BH8_0.90-1.00	SE248198.017	LB281025	23 May 2023	25 May 2023	30 May 2023	31 May 2023†	01 Jun 2023	31 May 2023

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-ENVJAN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB280938	24 May 2023	25 May 2023	20 Nov 2023	30 May 2023	20 Nov 2023	31 May 2023
BH1M_2.0-2.1	SE248198.002	LB280938	24 May 2023	25 May 2023	20 Nov 2023	30 May 2023	20 Nov 2023	31 May 2023
BH2_0.1-0.2	SE248198.003	LB280938	24 May 2023	25 May 2023	20 Nov 2023	30 May 2023	20 Nov 2023	31 May 2023
BH2_1.5-1.6	SE248198.004	LB280938	24 May 2023	25 May 2023	20 Nov 2023	30 May 2023	20 Nov 2023	31 May 2023
BH3_0.20-0.30	SE248198.005	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH4_0.5-0.6	SE248198.006	LB280938	24 May 2023	25 May 2023	20 Nov 2023	30 May 2023	20 Nov 2023	31 May 2023
BH4_2.0-2.1	SE248198.007	LB280938	24 May 2023	25 May 2023	20 Nov 2023	30 May 2023	20 Nov 2023	31 May 2023
BH5_0.20-0.30	SE248198.008	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)**Method: ME-(AU)-[ENV]AN040/AN320**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH5_0.60-0.70	SE248198.009	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH5_1.30-1.40	SE248198.010	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH6_0.10-0.20	SE248198.011	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH7_0.5-0.6	SE248198.013	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH7_1.5-1.6	SE248198.014	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH8_0.20-0.30	SE248198.015	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH8_0.90-1.00	SE248198.017	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH9_0.10-0.20	SE248198.018	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH10_0.20-0.30	SE248198.019	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH11_0.50-0.60	SE248198.020	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
QD1	SE248198.021	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023
BH12M_0.3-0.4	SE248198.025	LB280938	23 May 2023	25 May 2023	19 Nov 2023	30 May 2023	19 Nov 2023	31 May 2023

Trace Metals (Dissolved) in Water by ICPMS**Method: ME-(AU)-[ENV]AN318**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR1	SE248198.024	LB281017	23 May 2023	25 May 2023	19 Nov 2023	31 May 2023	19 Nov 2023	31 May 2023

TRH (Total Recoverable Hydrocarbons) in Soil**Method: ME-(AU)-[ENV]AN403**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH1M_2.0-2.1	SE248198.002	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH2_0.1-0.2	SE248198.003	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH2_1.5-1.6	SE248198.004	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH3_0.20-0.30	SE248198.005	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH4_0.5-0.6	SE248198.006	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH4_2.0-2.1	SE248198.007	LB280936	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH5_0.60-0.70	SE248198.009	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH5_1.30-1.40	SE248198.010	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH6_0.10-0.20	SE248198.011	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH7_0.5-0.6	SE248198.013	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH7_1.5-1.6	SE248198.014	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH8_0.20-0.30	SE248198.015	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH8_0.90-1.00	SE248198.017	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH9_0.10-0.20	SE248198.018	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH10_0.20-0.30	SE248198.019	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH11_0.50-0.60	SE248198.020	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
QD1	SE248198.021	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023
BH12M_0.3-0.4	SE248198.025	LB280936	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	09 Jul 2023	01 Jun 2023

TRH (Total Recoverable Hydrocarbons) in Water**Method: ME-(AU)-[ENV]AN403**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR1	SE248198.024	LB281023	23 May 2023	25 May 2023	30 May 2023	31 May 2023†	10 Jul 2023	31 May 2023

VOC's in Soil**Method: ME-(AU)-[ENV]AN433**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH1M_2.0-2.1	SE248198.002	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH2_0.1-0.2	SE248198.003	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH2_1.5-1.6	SE248198.004	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH3_0.20-0.30	SE248198.005	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH4_0.5-0.6	SE248198.006	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH4_2.0-2.1	SE248198.007	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH5_0.60-0.70	SE248198.009	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH5_1.30-1.40	SE248198.010	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH6_0.10-0.20	SE248198.011	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH7_0.5-0.6	SE248198.013	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH7_1.5-1.6	SE248198.014	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH8_0.20-0.30	SE248198.015	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH8_0.90-1.00	SE248198.017	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH9_0.10-0.20	SE248198.018	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

VOC's in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH10_0.20-0.30	SE248198.019	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH11_0.50-0.60	SE248198.020	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
QD1	SE248198.021	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
TB1	SE248198.022	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
TS1	SE248198.023	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH12M_0.3-0.4	SE248198.025	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023

VOCs in Water

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR1	SE248198.024	LB281035	23 May 2023	25 May 2023	06 Jun 2023	31 May 2023	06 Jun 2023	01 Jun 2023

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M_0.5-0.6	SE248198.001	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH1M_2.0-2.1	SE248198.002	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH2_0.1-0.2	SE248198.003	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH2_1.5-1.6	SE248198.004	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH3_0.20-0.30	SE248198.005	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH4_0.5-0.6	SE248198.006	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH4_2.0-2.1	SE248198.007	LB280937	24 May 2023	25 May 2023	07 Jun 2023	30 May 2023	07 Jun 2023	31 May 2023
BH5_0.60-0.70	SE248198.009	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH5_1.30-1.40	SE248198.010	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH6_0.10-0.20	SE248198.011	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH7_0.5-0.6	SE248198.013	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH7_1.5-1.6	SE248198.014	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH8_0.20-0.30	SE248198.015	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH8_0.90-1.00	SE248198.017	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH9_0.10-0.20	SE248198.018	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH10_0.20-0.30	SE248198.019	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH11_0.50-0.60	SE248198.020	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
QD1	SE248198.021	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
TB1	SE248198.022	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
TS1	SE248198.023	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023
BH12M_0.3-0.4	SE248198.025	LB280937	23 May 2023	25 May 2023	06 Jun 2023	30 May 2023	06 Jun 2023	31 May 2023

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR1	SE248198.024	LB281035	23 May 2023	25 May 2023	06 Jun 2023	31 May 2023	06 Jun 2023	01 Jun 2023

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	90
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	99
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	108
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	104
	BH3_0.20-0.30	SE248198.005	%	60 - 130%	104
	BH4_0.5-0.6	SE248198.006	%	60 - 130%	106
	BH4_2.0-2.1	SE248198.007	%	60 - 130%	108
	BH5_0.60-0.70	SE248198.009	%	60 - 130%	104
	BH5_1.30-1.40	SE248198.010	%	60 - 130%	101
	BH6_0.10-0.20	SE248198.011	%	60 - 130%	103
	BH7_0.5-0.6	SE248198.013	%	60 - 130%	104
	BH7_1.5-1.6	SE248198.014	%	60 - 130%	105
	BH8_0.20-0.30	SE248198.015	%	60 - 130%	98
	BH8_0.90-1.00	SE248198.017	%	60 - 130%	101
	BH9_0.10-0.20	SE248198.018	%	60 - 130%	100
	BH10_0.20-0.30	SE248198.019	%	60 - 130%	100
	BH11_0.50-0.60	SE248198.020	%	60 - 130%	100
	BH12M_0.3-0.4	SE248198.025	%	60 - 130%	103

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	83
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	91
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	85
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	88
	BH3_0.20-0.30	SE248198.005	%	60 - 130%	80
	BH4_0.5-0.6	SE248198.006	%	60 - 130%	83
	BH4_2.0-2.1	SE248198.007	%	60 - 130%	94
	BH5_0.60-0.70	SE248198.009	%	60 - 130%	86
	BH5_1.30-1.40	SE248198.010	%	60 - 130%	89
	BH6_0.10-0.20	SE248198.011	%	60 - 130%	86
	BH7_0.5-0.6	SE248198.013	%	60 - 130%	83
	BH7_1.5-1.6	SE248198.014	%	60 - 130%	83
	BH8_0.20-0.30	SE248198.015	%	60 - 130%	84
	BH8_0.90-1.00	SE248198.017	%	60 - 130%	84
	BH9_0.10-0.20	SE248198.018	%	60 - 130%	80
	BH10_0.20-0.30	SE248198.019	%	60 - 130%	87
	BH11_0.50-0.60	SE248198.020	%	60 - 130%	90
	BH12M_0.3-0.4	SE248198.025	%	60 - 130%	80
d14-p-terphenyl (Surrogate)	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	92
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	98
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	91
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	97
	BH3_0.20-0.30	SE248198.005	%	60 - 130%	89
	BH4_0.5-0.6	SE248198.006	%	60 - 130%	91
	BH4_2.0-2.1	SE248198.007	%	60 - 130%	104
	BH5_0.60-0.70	SE248198.009	%	60 - 130%	95
	BH5_1.30-1.40	SE248198.010	%	60 - 130%	98
	BH6_0.10-0.20	SE248198.011	%	60 - 130%	94
	BH7_0.5-0.6	SE248198.013	%	60 - 130%	92
	BH7_1.5-1.6	SE248198.014	%	60 - 130%	93
	BH8_0.20-0.30	SE248198.015	%	60 - 130%	93
	BH8_0.90-1.00	SE248198.017	%	60 - 130%	94
	BH9_0.10-0.20	SE248198.018	%	60 - 130%	89
	BH10_0.20-0.30	SE248198.019	%	60 - 130%	95
	BH11_0.50-0.60	SE248198.020	%	60 - 130%	94
	BH12M_0.3-0.4	SE248198.025	%	60 - 130%	86

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units
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Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1M_0.5-0.6	SE248198.001	%	70 - 130%	83
	BH1M_2.0-2.1	SE248198.002	%	70 - 130%	91
	BH2_0.1-0.2	SE248198.003	%	70 - 130%	85
	BH2_1.5-1.6	SE248198.004	%	70 - 130%	88
	BH3_0.20-0.30	SE248198.005	%	70 - 130%	80
	BH4_0.5-0.6	SE248198.006	%	70 - 130%	83
	BH4_2.0-2.1	SE248198.007	%	70 - 130%	94
	BH5_0.60-0.70	SE248198.009	%	70 - 130%	86
	BH5_1.30-1.40	SE248198.010	%	70 - 130%	89
	BH6_0.10-0.20	SE248198.011	%	70 - 130%	86
	BH7_0.5-0.6	SE248198.013	%	70 - 130%	83
	BH7_1.5-1.6	SE248198.014	%	70 - 130%	83
	BH8_0.20-0.30	SE248198.015	%	70 - 130%	84
	BH8_0.90-1.00	SE248198.017	%	70 - 130%	84
	BH9_0.10-0.20	SE248198.018	%	70 - 130%	80
	BH10_0.20-0.30	SE248198.019	%	70 - 130%	87
d14-p-terphenyl (Surrogate)	BH11_0.50-0.60	SE248198.020	%	70 - 130%	90
	BH12M_0.3-0.4	SE248198.025	%	70 - 130%	80
	BH1M_0.5-0.6	SE248198.001	%	70 - 130%	92
	BH1M_2.0-2.1	SE248198.002	%	70 - 130%	98
	BH2_0.1-0.2	SE248198.003	%	70 - 130%	91
	BH2_1.5-1.6	SE248198.004	%	70 - 130%	97
	BH3_0.20-0.30	SE248198.005	%	70 - 130%	89
	BH4_0.5-0.6	SE248198.006	%	70 - 130%	91
	BH4_2.0-2.1	SE248198.007	%	70 - 130%	104
	BH5_0.60-0.70	SE248198.009	%	70 - 130%	95
	BH5_1.30-1.40	SE248198.010	%	70 - 130%	98
	BH6_0.10-0.20	SE248198.011	%	70 - 130%	94
	BH7_0.5-0.6	SE248198.013	%	70 - 130%	92
	BH7_1.5-1.6	SE248198.014	%	70 - 130%	93
	BH8_0.20-0.30	SE248198.015	%	70 - 130%	93
	BH8_0.90-1.00	SE248198.017	%	70 - 130%	94
d5-nitrobenzene (Surrogate)	BH9_0.10-0.20	SE248198.018	%	70 - 130%	89
	BH10_0.20-0.30	SE248198.019	%	70 - 130%	95
	BH11_0.50-0.60	SE248198.020	%	70 - 130%	94
	BH12M_0.3-0.4	SE248198.025	%	70 - 130%	86
	BH1M_0.5-0.6	SE248198.001	%	70 - 130%	88
	BH1M_2.0-2.1	SE248198.002	%	70 - 130%	95
	BH2_0.1-0.2	SE248198.003	%	70 - 130%	88
	BH2_1.5-1.6	SE248198.004	%	70 - 130%	94
	BH3_0.20-0.30	SE248198.005	%	70 - 130%	86
	BH4_0.5-0.6	SE248198.006	%	70 - 130%	88
	BH4_2.0-2.1	SE248198.007	%	70 - 130%	100
	BH5_0.60-0.70	SE248198.009	%	70 - 130%	91
	BH5_1.30-1.40	SE248198.010	%	70 - 130%	93
	BH6_0.10-0.20	SE248198.011	%	70 - 130%	90
	BH7_0.5-0.6	SE248198.013	%	70 - 130%	87
	BH7_1.5-1.6	SE248198.014	%	70 - 130%	87
PCBs in Soil	BH8_0.20-0.30	SE248198.015	%	70 - 130%	88
	BH8_0.90-1.00	SE248198.017	%	70 - 130%	88
	BH9_0.10-0.20	SE248198.018	%	70 - 130%	83
	BH10_0.20-0.30	SE248198.019	%	70 - 130%	91
	BH11_0.50-0.60	SE248198.020	%	70 - 130%	94
	BH12M_0.3-0.4	SE248198.025	%	70 - 130%	83
	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	88
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	97
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	106
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	101

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	88
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	97
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	106
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	101

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH3_0.20-0.30	SE248198.005	%	60 - 130%	101
	BH4_0.5-0.6	SE248198.006	%	60 - 130%	104
	BH4_2.0-2.1	SE248198.007	%	60 - 130%	105
	BH5_0.60-0.70	SE248198.009	%	60 - 130%	101
	BH5_1.30-1.40	SE248198.010	%	60 - 130%	99
	BH6_0.10-0.20	SE248198.011	%	60 - 130%	100
	BH7_0.5-0.6	SE248198.013	%	60 - 130%	101
	BH7_1.5-1.6	SE248198.014	%	60 - 130%	102
	BH8_0.20-0.30	SE248198.015	%	60 - 130%	96
	BH8_0.90-1.00	SE248198.017	%	60 - 130%	98
	BH9_0.10-0.20	SE248198.018	%	60 - 130%	97
	BH10_0.20-0.30	SE248198.019	%	60 - 130%	97
	BH11_0.50-0.60	SE248198.020	%	60 - 130%	97
	BH12M_0.3-0.4	SE248198.025	%	60 - 130%	101

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples

Method: MA-1523

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 130%	33
	BH8_0.20-0.30	SE248198.015	%	0 - 130%	65
	BH9_0.10-0.20	SE248198.018	%	0 - 130%	43
	BH10_0.20-0.30	SE248198.019	%	0 - 130%	82
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	85
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	121
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	85
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	132
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	84
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	104
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	81
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	104
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	85
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	79
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	77
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	76
(13C2-PFDoA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	77
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	66
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	73
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	81
(13C2-PFHxDA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	13
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	83
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	26
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	132
(13C3-PFBs) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	103
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	135
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	99
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	149
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	113
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	105
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	103
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	90
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	110
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	93
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	83
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	93
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	101
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	103
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	102
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	99
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	107
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	120
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	95
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	141

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples (continued)

Method: MA-1523

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	101
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	132
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	96
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	150
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	103
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	102
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	104
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	100
(13C6-PFDA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	100
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	93
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	111
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	85
(13C7-PFUDa) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	90
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	69
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	86
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	80
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	119
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	93
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	84
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	81
(13C8-PFOSA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	94
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	79
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	71
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	61
(13C9-PFNA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	97
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	116
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	117
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	96
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	50
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	59
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	52
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	41
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	66
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	60
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	55
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	50
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	39
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	51
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	43
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	38
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	58
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	68
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	53
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	56
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	64
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	90
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	55
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	62
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	BH6_0.10-0.20	SE248198.011	%	0 - 150%	58
	BH8_0.20-0.30	SE248198.015	%	0 - 150%	67
	BH9_0.10-0.20	SE248198.018	%	0 - 150%	63
	BH10_0.20-0.30	SE248198.019	%	0 - 150%	62

VOC's in Soil

Method: ME-(AU)-[ENV]JAN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	92
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	89
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	96
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	94
	BH3_0.20-0.30	SE248198.005	%	60 - 130%	89
	BH4_0.5-0.6	SE248198.006	%	60 - 130%	86

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH4_2.0-2.1	SE248198.007	%	60 - 130%	92
	BH5_0.60-0.70	SE248198.009	%	60 - 130%	89
	BH5_1.30-1.40	SE248198.010	%	60 - 130%	92
	BH6_0.10-0.20	SE248198.011	%	60 - 130%	96
	BH7_0.5-0.6	SE248198.013	%	60 - 130%	88
	BH7_1.5-1.6	SE248198.014	%	60 - 130%	91
	BH8_0.20-0.30	SE248198.015	%	60 - 130%	92
	BH8_0.90-1.00	SE248198.017	%	60 - 130%	87
	BH9_0.10-0.20	SE248198.018	%	60 - 130%	89
	BH10_0.20-0.30	SE248198.019	%	60 - 130%	91
	BH11_0.50-0.60	SE248198.020	%	60 - 130%	93
	QD1	SE248198.021	%	60 - 130%	94
	TB1	SE248198.022	%	60 - 130%	100
	TS1	SE248198.023	%	60 - 130%	87
	BH12M_0.3-0.4	SE248198.025	%	60 - 130%	93
d4-1,2-dichloroethane (Surrogate)	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	82
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	80
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	86
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	84
	BH3_0.20-0.30	SE248198.005	%	60 - 130%	80
	BH4_0.5-0.6	SE248198.006	%	60 - 130%	78
	BH4_2.0-2.1	SE248198.007	%	60 - 130%	82
	BH5_0.60-0.70	SE248198.009	%	60 - 130%	78
	BH5_1.30-1.40	SE248198.010	%	60 - 130%	84
	BH6_0.10-0.20	SE248198.011	%	60 - 130%	87
	BH7_0.5-0.6	SE248198.013	%	60 - 130%	79
	BH7_1.5-1.6	SE248198.014	%	60 - 130%	83
	BH8_0.20-0.30	SE248198.015	%	60 - 130%	83
	BH8_0.90-1.00	SE248198.017	%	60 - 130%	77
	BH9_0.10-0.20	SE248198.018	%	60 - 130%	80
	BH10_0.20-0.30	SE248198.019	%	60 - 130%	83
	BH11_0.50-0.60	SE248198.020	%	60 - 130%	84
	QD1	SE248198.021	%	60 - 130%	85
	TB1	SE248198.022	%	60 - 130%	92
	TS1	SE248198.023	%	60 - 130%	86
d8-toluene (Surrogate)	BH12M_0.3-0.4	SE248198.025	%	60 - 130%	84
	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	86
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	84
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	92
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	88
	BH3_0.20-0.30	SE248198.005	%	60 - 130%	83
	BH4_0.5-0.6	SE248198.006	%	60 - 130%	82
	BH4_2.0-2.1	SE248198.007	%	60 - 130%	87
	BH5_0.60-0.70	SE248198.009	%	60 - 130%	83
	BH5_1.30-1.40	SE248198.010	%	60 - 130%	88
	BH6_0.10-0.20	SE248198.011	%	60 - 130%	92
	BH7_0.5-0.6	SE248198.013	%	60 - 130%	82
	BH7_1.5-1.6	SE248198.014	%	60 - 130%	87
	BH8_0.20-0.30	SE248198.015	%	60 - 130%	86
	BH8_0.90-1.00	SE248198.017	%	60 - 130%	80
	BH9_0.10-0.20	SE248198.018	%	60 - 130%	83
	BH10_0.20-0.30	SE248198.019	%	60 - 130%	87
	BH11_0.50-0.60	SE248198.020	%	60 - 130%	87
	QD1	SE248198.021	%	60 - 130%	89
	TB1	SE248198.022	%	60 - 130%	96
	TS1	SE248198.023	%	60 - 130%	88
	BH12M_0.3-0.4	SE248198.025	%	60 - 130%	88

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units
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Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOCs in Water (continued)

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QR1	SE248198.024	%	40 - 130%	85
d4-1,2-dichloroethane (Surrogate)	QR1	SE248198.024	%	40 - 130%	94
d8-toluene (Surrogate)	QR1	SE248198.024	%	40 - 130%	103

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	92
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	89
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	96
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	94
	BH3_0.20-0.30	SE248198.005	%	60 - 130%	89
	BH4_0.5-0.6	SE248198.006	%	60 - 130%	86
	BH4_2.0-2.1	SE248198.007	%	60 - 130%	92
	BH5_0.60-0.70	SE248198.009	%	60 - 130%	89
	BH5_1.30-1.40	SE248198.010	%	60 - 130%	92
	BH6_0.10-0.20	SE248198.011	%	60 - 130%	96
	BH7_0.5-0.6	SE248198.013	%	60 - 130%	88
	BH7_1.5-1.6	SE248198.014	%	60 - 130%	91
	BH8_0.20-0.30	SE248198.015	%	60 - 130%	92
	BH8_0.90-1.00	SE248198.017	%	60 - 130%	87
	BH9_0.10-0.20	SE248198.018	%	60 - 130%	89
	BH10_0.20-0.30	SE248198.019	%	60 - 130%	91
	BH11_0.50-0.60	SE248198.020	%	60 - 130%	93
	QD1	SE248198.021	%	60 - 130%	94
	BH12M_0.3-0.4	SE248198.025	%	60 - 130%	93
d4-1,2-dichloroethane (Surrogate)	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	82
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	80
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	86
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	84
	BH3_0.20-0.30	SE248198.005	%	60 - 130%	80
	BH4_0.5-0.6	SE248198.006	%	60 - 130%	78
	BH4_2.0-2.1	SE248198.007	%	60 - 130%	82
	BH5_0.60-0.70	SE248198.009	%	60 - 130%	78
	BH5_1.30-1.40	SE248198.010	%	60 - 130%	84
	BH6_0.10-0.20	SE248198.011	%	60 - 130%	87
	BH7_0.5-0.6	SE248198.013	%	60 - 130%	79
	BH7_1.5-1.6	SE248198.014	%	60 - 130%	83
	BH8_0.20-0.30	SE248198.015	%	60 - 130%	83
	BH8_0.90-1.00	SE248198.017	%	60 - 130%	77
	BH9_0.10-0.20	SE248198.018	%	60 - 130%	80
	BH10_0.20-0.30	SE248198.019	%	60 - 130%	83
	BH11_0.50-0.60	SE248198.020	%	60 - 130%	84
	QD1	SE248198.021	%	60 - 130%	85
	BH12M_0.3-0.4	SE248198.025	%	60 - 130%	84
d8-toluene (Surrogate)	BH1M_0.5-0.6	SE248198.001	%	60 - 130%	86
	BH1M_2.0-2.1	SE248198.002	%	60 - 130%	84
	BH2_0.1-0.2	SE248198.003	%	60 - 130%	92
	BH2_1.5-1.6	SE248198.004	%	60 - 130%	88
	BH3_0.20-0.30	SE248198.005	%	60 - 130%	83
	BH4_0.5-0.6	SE248198.006	%	60 - 130%	82
	BH4_2.0-2.1	SE248198.007	%	60 - 130%	87
	BH5_0.60-0.70	SE248198.009	%	60 - 130%	83
	BH5_1.30-1.40	SE248198.010	%	60 - 130%	88
	BH6_0.10-0.20	SE248198.011	%	60 - 130%	92
	BH7_0.5-0.6	SE248198.013	%	60 - 130%	82
	BH7_1.5-1.6	SE248198.014	%	60 - 130%	87
	BH8_0.20-0.30	SE248198.015	%	60 - 130%	86
	BH8_0.90-1.00	SE248198.017	%	60 - 130%	80
	BH9_0.10-0.20	SE248198.018	%	60 - 130%	83
	BH10_0.20-0.30	SE248198.019	%	60 - 130%	87
	BH11_0.50-0.60	SE248198.020	%	60 - 130%	87

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued)**Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	QD1	SE248198.021	%	60 - 130%	89
	BH12M_0.3-0.4	SE248198.025	%	60 - 130%	88

Volatile Petroleum Hydrocarbons in Water**Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QR1	SE248198.024	%	40 - 130%	85
d4-1,2-dichloroethane (Surrogate)	QR1	SE248198.024	%	60 - 130%	94
d8-toluene (Surrogate)	QR1	SE248198.024	%	40 - 130%	103

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB281022.001	Mercury	mg/L	0.0001	<0.0001

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB280939.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB280936.001	Alpha BHC	mg/kg	0.1	<0.1
	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Lindane (gamma BHC)	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.2	<0.2
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	Endrin aldehyde	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endrin ketone	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	79

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB280936.001	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2	<0.2
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
	Diazinon (Dimpylate)	mg/kg	0.5	<0.5
	Dichlorvos	mg/kg	0.5	<0.5
	Dimethoate	mg/kg	0.5	<0.5
	Ethion	mg/kg	0.2	<0.2
	Fenitrothion	mg/kg	0.2	<0.2
	Malathion	mg/kg	0.2	<0.2
	Methidathion	mg/kg	0.5	<0.5
	Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	2-fluorobiphenyl (Surrogate)	%	-	86
	d14-p-terphenyl (Surrogate)	%	-	94
Surrogates				

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB280936.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB280936.001	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
	Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	<0.1
	Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates			
	d5-nitrobenzene (Surrogate)	%	-	91
	2-fluorobiphenyl (Surrogate)	%	-	86
	d14-p-terphenyl (Surrogate)	%	-	94

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB280936.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochors)	mg/kg	1	<1
	Surrogates			
	TCMX (Surrogate)	%	-	77

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB280938.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB281017.001	Arsenic	µg/L	1	<1
	Cadmium	µg/L	0.1	<0.1
	Chromium	µg/L	1	<1
	Copper	µg/L	1	<1
	Lead	µg/L	1	<1
	Nickel	µg/L	1	<1
	Zinc	µg/L	5	<5

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB280936.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB281023.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR
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Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB280937.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	93
		d8-toluene (Surrogate)	%	-	99
		Bromofluorobenzene (Surrogate)	%	-	103
	Totals	Total BTEX*	mg/kg	0.6	<0.6

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB281035.001	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	<0.5
		Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		o-xylene	µg/L	0.5	<0.5
	Polycyclic VOCs	Naphthalene (VOC)*	µg/L	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	97
		d8-toluene (Surrogate)	%	-	75
		Bromofluorobenzene (Surrogate)	%	-	90

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB280937.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	93

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB281035.001		TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	97
		d8-toluene (Surrogate)	%	-	75
		Bromofluorobenzene (Surrogate)	%	-	90

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may give a different calculated RPD.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248280.001	LB281022.014	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	0
SE248336.003	LB281022.022	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	0

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.011	LB280939.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE248198.025	LB280939.024	Mercury	mg/kg	0.05	0.07	0.09	93	32

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.010	LB280940.011	% Moisture	%w/w	1	7.8	10.7	41	32
SE248198.022	LB280940.022	% Moisture	%w/w	1	<1.0	<1.0	200	0
SE248198.025	LB280940.024	% Moisture	%w/w	1	16.1	15.3	36	5

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.011	LB280936.014	Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Total OC VIC EPA	mg/kg	1	<1	<1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	30	5
SE248198.025	LB280936.024	Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may give a different calculated RPD.

OC Pesticides in Soil (continued)

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.025	LB280936.024	p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Total OC VIC EPA	mg/kg	1	<1	<1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	30	2

OP Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.011	LB280936.014	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
		Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
		Ethion	mg/kg	0.2	<0.2	<0.2	200	0
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
		Malathion	mg/kg	0.2	<0.2	<0.2	200	0
		Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
		Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	1
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
SE248198.025	LB280936.024	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
		Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
		Ethion	mg/kg	0.2	<0.2	<0.2	200	0
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
		Malathion	mg/kg	0.2	<0.2	<0.2	200	0
		Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
		Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	13
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	14

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.011	LB280936.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	0.2	<0.1	146	43
		Pyrene	mg/kg	0.1	0.2	<0.1	134	53
		Benzo(a)anthracene	mg/kg	0.1	0.1	<0.1	191	8

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may give a different calculated RPD.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.011	LB280936.014	Chrysene	mg/kg	0.1	0.1	<0.1	200	6
		Benzo(b&j)fluoranthene	mg/kg	0.1	0.2	<0.1	142	47
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	0.1	<0.1	159	33
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.1	<0.1	194	8
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	0.1	<0.1	184	13
		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	0.2	<0.2	122	17
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	123	0
		Total PAH (18)	mg/kg	0.8	1.1	<0.8	48	168 @
		Surrogates						
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.4	30	0
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	1
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
SE248198.025	LB280936.024	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	0.1	141	21
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	0.1	0.3	80	72
		Pyrene	mg/kg	0.1	0.1	0.3	74	73
		Benzo(a)anthracene	mg/kg	0.1	<0.1	0.2	112	47
		Chrysene	mg/kg	0.1	<0.1	0.1	122	34
		Benzo(b&j)fluoranthene	mg/kg	0.1	0.1	0.2	95	63
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	184	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	0.2	104	56
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	0.1	133	23
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	0.1	124	30
		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	0.2	178	18
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	0.3	108	36
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	0.3	113	12
		Total PAH (18)	mg/kg	0.8	<0.8	1.7	40	146 @
		Surrogates						
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	30	14
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	13
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	14

PCBs in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.011	LB280936.014	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates						
SE248198.025	LB280936.024	TCMX (Surrogate)	mg/kg	-	0	0	30	5
		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may give a different calculated RPD.

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.025	LB280936.024	Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	-	0	0	30	2

pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.017	LB281025.018	pH	pH Units	0.1	5.0	5.0	32	1
SE248261.005	LB281025.019	pH	pH Units	0.1	9.9548	10.1446	31	2

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.010	LB280938.014	Arsenic, As	mg/kg	1	9	9	41	3
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	8.1	6.6	37	21
		Copper, Cu	mg/kg	0.5	44	34	31	26
		Nickel, Ni	mg/kg	0.5	1.0	<0.5	100	63
		Lead, Pb	mg/kg	1	21	20	35	2
		Zinc, Zn	mg/kg	2	12	8.9	49	30

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248280.001	LB281017.014	Arsenic	µg/L	1	<1	<1	200	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	200	0
		Copper	µg/L	1	440	450	15	2
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	1	1	99	16
		Zinc	µg/L	5	47	50	25	6
SE248336.003	LB281017.021	Arsenic	µg/L	1	<1	<1	200	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	200	0
		Copper	µg/L	1	<1	<1	200	0
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	<1	<1	200	0
		Zinc	µg/L	5	<5	<5	200	0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.011	LB280936.014	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	171	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands						
		TRH >C10-C16	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE248198.025	LB280936.024	TRH C10-C14	mg/kg	20	<20	22	184	9
		TRH C15-C28	mg/kg	45	<45	65	143	37
		TRH C29-C36	mg/kg	45	<45	<45	161	0
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands						
		TRH >C10-C16	mg/kg	25	<25	27	188	9
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	27	200	9
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	184	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR
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Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may give a different calculated RPD.

TRH (Total Recoverable Hydrocarbons) in Water (continued)

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248172.013	LB281023.025	TRH C10-C14	µg/L	50	<50	<50	200	0
		TRH C15-C28	µg/L	200	<200	<200	200	0
		TRH C29-C36	µg/L	200	<200	<200	200	0
		TRH C37-C40	µg/L	200	<200	<200	200	0
		TRH C10-C40	µg/L	320	<320	<320	200	0
		TRH F Bands	µg/L	60	<60	<60	200	0
		TRH >C10-C16	µg/L	60	<60	<60	200	0
		TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	200	0
		TRH >C16-C34 (F3)	µg/L	500	<500	<500	200	0
		TRH >C34-C40 (F4)	µg/L	500	<500	<500	200	0

VOC's in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.011	LB280937.015	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	194	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	174	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.7	9.0	50	4
			d8-toluene (Surrogate)	mg/kg	-	9.2	9.5	50	4
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	9.9	50	3
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	187	0
SE248198.025	LB280937.032	Monocyclic	Benzene	mg/kg	0.1	<0.1	0	200	0
			Aromatic	Toluene	mg/kg	0.1	<0.1	0.0047773276	200
			Ethylbenzene	mg/kg	0.1	<0.1	0.0033527154	200	0
			m/p-xylene	mg/kg	0.2	<0.2	0.0158276015	200	0
			o-xylene	mg/kg	0.1	<0.1	0.0040674648	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	0.0045210206	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.4	8.6712893044	50	3
			d8-toluene (Surrogate)	mg/kg	-	8.8	9.0782999541	50	3
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	9.7594588773	50	5
		Totals	Total BTEX*	mg/kg	0.6	<0.6	0	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	0.0198950663	200	0

VOCs in Water

Method: ME-(AU)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248035.001	LB281035.028	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
			Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200
			Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.8821643547	9.9	30	0
			d8-toluene (Surrogate)	µg/L	-	7.1135291973	9.7	30	30 Ⓢ
			Bromofluorobenzene (Surrogate)	µg/L	-	8.8890744734	9.9	30	11
		Totals	Total BTEX	µg/L	3	<3	<3	200	0
SE248217.001	LB281035.027	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
			Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200
			Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.5	9.6	30	1
			d8-toluene (Surrogate)	µg/L	-	10.5	10.0	30	5
			Bromofluorobenzene (Surrogate)	µg/L	-	8.1	7.7	30	5
		Totals	Total BTEX	µg/L	3	<3	<3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR
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Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$
The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$
Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may give a different calculated RPD.

Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248198.011	LB280937.015	TRH C6-C10	mg/kg	25	<25	<25	200	0
		TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.7	9.0	50	4
		d8-toluene (Surrogate)	mg/kg	-	9.2	9.5	50	4
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	9.9	50	3
		VPH F Bands						
		Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
		TRH C6-C10	mg/kg	25	<25	0	200	0
SE248198.025	LB280937.032	TRH C6-C9	mg/kg	20	<20	0	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.4	8.6712893044	50	3
		d8-toluene (Surrogate)	mg/kg	-	8.8	9.0782999541	50	3
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	9.7594588773	50	5
		VPH F Bands						
		Benzene (F0)	mg/kg	0.1	<0.1	0	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	0	200	0

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248217.001	LB281035.027	TRH C6-C10	µg/L	50	<50	<50	200	0
		TRH C6-C9	µg/L	40	<40	<40	200	0
		Surrogates						
		d4-1,2-dichloroethane (Surrogate)	µg/L	-	0.0	0.0	30	1
		d8-toluene (Surrogate)	µg/L	-	0.0	0.0	30	5
		Bromofluorobenzene (Surrogate)	µg/L	-	0.0	0.0	30	5
		VPH F Bands						
		Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
		TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB280939.002	Mercury	mg/kg	0.05	0.21	0.2	80 - 120	107

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB280936.002	Delta BHC	mg/kg	0.1	0.1	0.2	60 - 140	66
	Heptachlor	mg/kg	0.1	0.1	0.2	60 - 140	72
	Aldrin	mg/kg	0.1	0.1	0.2	60 - 140	70
	Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	75
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	80
	p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	74
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.15	40 - 130	79

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB280936.002	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.7	2	60 - 140	83
	Diazinon (Dimpylate)	mg/kg	0.5	1.7	2	60 - 140	83
	Dichlorvos	mg/kg	0.5	1.4	2	60 - 140	69
	Ethion	mg/kg	0.2	1.6	2	60 - 140	80
	Surrogates						
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	90
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB280936.002	Naphthalene	mg/kg	0.1	3.6	4	60 - 140	91
	Acenaphthylene	mg/kg	0.1	3.7	4	60 - 140	93
	Acenaphthene	mg/kg	0.1	3.8	4	60 - 140	95
	Phenanthrene	mg/kg	0.1	3.8	4	60 - 140	95
	Anthracene	mg/kg	0.1	3.8	4	60 - 140	94
	Fluoranthene	mg/kg	0.1	3.7	4	60 - 140	92
	Pyrene	mg/kg	0.1	3.8	4	60 - 140	95
	Benzo(a)pyrene	mg/kg	0.1	3.7	4	60 - 140	93
	Surrogates						
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	89
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	90
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB280936.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	91

pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB281025.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB280938.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	108
	Cadmium, Cd	mg/kg	0.3	4.0	4.81	70 - 130	83
	Chromium, Cr	mg/kg	0.5	42	38.31	80 - 120	108
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	109
	Nickel, Ni	mg/kg	0.5	200	187	80 - 120	105
	Lead, Pb	mg/kg	1	96	89.9	80 - 120	106
	Zinc, Zn	mg/kg	2	290	273	80 - 120	106

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB281017.002	Arsenic	µg/L	1	20	20	80 - 120	101
	Cadmium	µg/L	0.1	20	20	80 - 120	100
	Chromium	µg/L	1	19	20	80 - 120	97

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Trace Metals (Dissolved) in Water by ICPMS (continued)

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB281017.002	Copper	µg/L	1	20	20	80 - 120	99
	Lead	µg/L	1	21	20	80 - 120	104
	Nickel	µg/L	1	21	20	80 - 120	103
	Zinc	µg/L	5	20	20	80 - 120	100

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB280936.002	TRH C10-C14	mg/kg	20	49	40	60 - 140	122	
	TRH C15-C28	mg/kg	45	45	40	60 - 140	113	
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	95	
	TRH F Bands	TRH >C10-C16	mg/kg	25	49	40	60 - 140	121
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	107	
	TRH >C34-C40 (F4)	mg/ka	120	<120	20	60 - 140	104	

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB281023.002	TRH C10-C14	µg/L	50	930	1200	60 - 140	77	
	TRH C15-C28	µg/L	200	1300	1200	60 - 140	105	
	TRH C29-C36	µg/L	200	1200	1200	60 - 140	101	
	TRH F Bands	TRH >C10-C16	µg/L	60	1100	1200	60 - 140	89
	TRH >C16-C34 (F3)	µg/L	500	1300	1200	60 - 140	108	
	TRH >C34-C40 (F4)	µg/L	500	610	600	60 - 140	102	

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB280937.002	Monocyclic	Benzene	mg/kg	0.1	4.5	5	60 - 140	89
	Aromatic	Toluene	mg/kg	0.1	4.3	5	60 - 140	85
		Ethylbenzene	mg/kg	0.1	4.3	5	60 - 140	86
		m/p-xylene	mg/kg	0.2	8.7	10	60 - 140	87
		o-xylene	mg/kg	0.1	4.4	5	60 - 140	88
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.9	10	70 - 130	99
		d8-toluene (Surrogate)	mg/kg	-	10.1	10	70 - 130	101
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.9	10	70 - 130	99

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB281035.002	Monocyclic	Benzene	µg/L	0.5	53	45.45	60 - 140	117
		Aromatic	Toluene	µg/L	0.5	53	45.45	60 - 140
		Ethylbenzene	µg/L	0.5	53	45.45	60 - 140	117
		m/p-xylene	µg/L	1	110	90.9	60 - 140	116
		o-xylene	µg/L	0.5	53	45.45	60 - 140	116
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.9	10	60 - 140
	d8-toluene (Surrogate)		µg/L	-	9.6	10	70 - 130	96
	Bromofluorobenzene (Surrogate)		µg/L	-	10.9	10	70 - 130	109

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB280937.002	TRH C6-C10	mg/kg	25	83	92.5	60 - 140	89	
	TRH C6-C9	mg/kg	20	74	80	60 - 140	92	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.9	10	70 - 130	99
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.9	10	70 - 130	99
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/ka	25	56	62.5	60 - 140	90

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB281035.002	TRH C6-C10	µg/L	50	890	946.63	60 - 140	94	
	TRH C6-C9	µg/L	40	760	818.71	60 - 140	92	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.9	10	60 - 140	109
		d8-toluene (Surrogate)	µg/L	-	9.6	10	70 - 130	96
		Bromofluorobenzene (Surrogate)	µg/L	-	10.9	10	70 - 130	109
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	570	639.67	60 - 140	90

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248198.024	LB281022.004	Mercury	mg/L	0.0001	0.0021	<0.0001	0.008	102

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248198.001	LB280939.004	Mercury	mg/kg	0.05	0.22	<0.05	0.2	102

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248198.001	LB280936.004	Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	85
		Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	88
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	84
		Isodrin	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	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	86
		Endrin	mg/kg	0.2	<0.2	<0.2	0.2	93
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	82
		Endrin ketone	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	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
		Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
		Total OC VIC EPA	mg/kg	1	1	<1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.14	-	99

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248198.001	LB280936.004	Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.5	<0.2	2	76
		Diazinon (Dimpylate)	mg/kg	0.5	1.5	<0.5	2	77
		Dichlorvos	mg/kg	0.5	1.3	<0.5	2	63
		Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
		Ethion	mg/kg	0.2	1.5	<0.2	2	74
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
		Malathion	mg/kg	0.2	<0.2	<0.2	-	-
		Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
		Total OP Pesticides*	mg/kg	1.7	5.8	<1.7	-	-
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	85
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	82

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR
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Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]JAN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248198.001	LB280936.004	Naphthalene	mg/kg	0.1	3.6	<0.1	4	89
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	3.6	<0.1	4	90
		Acenaphthene	mg/kg	0.1	3.8	<0.1	4	94
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	3.7	<0.1	4	92
		Anthracene	mg/kg	0.1	3.7	<0.1	4	91
		Fluoranthene	mg/kg	0.1	3.6	<0.1	4	89
		Pyrene	mg/kg	0.1	3.7	<0.1	4	92
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	3.6	<0.1	4	89
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	3.6	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	3.7	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	3.7	<0.3	-	-
		Total PAH (18)	mg/kg	0.8	29	<0.8	-	-
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	-	84
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	85
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	82

PCBs in Soil

Method: ME-(AU)-[ENV]JAN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248198.001	LB280936.004	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1260	mg/kg	0.2	0.4	<0.2	0.4	98
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
		Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
	Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	-	96

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]JAN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248198.001	LB280938.004	Arsenic, As	mg/kg	1	49	3	50	92
		Cadmium, Cd	mg/kg	0.3	38	<0.3	50	76
		Chromium, Cr	mg/kg	0.5	56	13	50	87
		Copper, Cu	mg/kg	0.5	140	120	50	49 @
		Nickel, Ni	mg/kg	0.5	59	14	50	89
		Lead, Pb	mg/kg	1	47	6	50	82
		Zinc, Zn	mg/kg	2	77	40	50	75

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]JAN318

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248172.013	LB281017.004	Arsenic	µg/L	1	20	-0.018	20	100
		Cadmium	µg/L	0.1	20	0.003	20	99
		Chromium	µg/L	1	20	0.079	20	98
		Copper	µg/L	1	19	0.062	20	97
		Lead	µg/L	1	21	-0.002	20	104
		Nickel	µg/L	1	20	-0.002	20	101
		Zinc	µg/L	5	20	0.661	20	99

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]JAN403

QC Sample	Sample Number	Parameter	Units	LOR
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Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248198.001	LB280936.004	TRH C10-C14	mg/kg	20	54	<20	40	127
		TRH C15-C28	mg/kg	45	83	<45	40	120
		TRH C29-C36	mg/kg	45	62	<45	40	77
		TRH C37-C40	mg/kg	100	<100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	200	<110	-	-
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F	mg/kg	25	54	<25	40	125
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	54	<25	-	-
		TRH >C16-C34 (F3)	mg/kg	90	95	<90	40	100
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248198.001	LB280937.004	Monocyclic	Benzene	mg/kg	0.1	4.6	<0.1	5	91
			Aromatic	Toluene	mg/kg	0.1	4.4	<0.1	5
		Ethylbenzene		mg/kg	0.1	4.5	<0.1	5	89
		m/p-xylene		mg/kg	0.2	9.0	<0.2	10	90
		o-xylene		mg/kg	0.1	4.6	<0.1	5	91
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	8.2	10	92
			d8-toluene (Surrogate)	mg/kg	-	9.4	8.6	10	94
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	9.2	10	93
		Totals	Total BTEX*	mg/kg	0.6	27	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	14	<0.3	-	-

VOCs in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248035.006	LB281035.029	Monocyclic	Benzene	µg/L	0.5	54	<0.5	45.45	119
			Aromatic	Toluene	µg/L	0.5	55	<0.5	45.45
			Ethylbenzene	µg/L	0.5	45	<0.5	45.45	100
			m/p-xylene	µg/L	1	88	<1	90.9	97
			o-xylene	µg/L	0.5	45	<0.5	45.45	99
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	52	<0.5	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.1	10.10428165703	-	111
			d8-toluene (Surrogate)	µg/L	-	10.9	7.13219717576	-	109
			Bromofluorobenzene (Surrogate)	µg/L	-	8.5	9.02207396695	-	85
		Totals	Total BTEX	µg/L	3	290	<3	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE248198.001	LB280937.004	TRH C6-C10	mg/kg	25	79	<25	92.5	85	
		TRH C6-C9	mg/kg	20	70	<20	80	87	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	8.2	10	92
			d8-toluene (Surrogate)	mg/kg	-	9.4	8.6	10	94
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	9.2	-	93
			VPH F	Benzene (F0)	mg/kg	0.1	4.6	<0.1	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	52	<25	62.5	83

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: $RPD = |OriginalResult - ReplicateResult| \times 100 / Mean$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times SDL / Mean + LR$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

QC Sample	Sample Number	Parameter	Units	LOR
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Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022_QA_QC_Plan.pdf

- * NATA accreditation does not cover the performance of this service .
- ** Indicative data, theoretical holding time exceeded.
- *** Indicates that both * and ** apply.
- Sample not analysed for this analyte.
- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.
- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
- ④ Recovery failed acceptance criteria due to matrix interference.
- ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- ⑥ LOR was raised due to sample matrix interference.
- ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
- ⑩ LOR was raised due to high conductivity of the sample (required dilution).
- † Refer to relevant report comments for further information.

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STATEMENT OF QA/QC PERFORMANCE

SE248514 R0

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Order Number **E25996**
Samples 7

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SGS Reference **SE248514 R0**
Date Received 01 Jun 2023
Date Reported 08 Jun 2023

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.

This QA/QC Statement must be read in conjunction with the referenced Analytical Report.

The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Sample counts by matrix	7 Water	Type of documentation received	COC
Date documentation received	1/6/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	10.4°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M	SE248514.001	LB281263	01 Jun 2023	01 Jun 2023	29 Jun 2023	02 Jun 2023	29 Jun 2023	02 Jun 2023
BH9M	SE248514.002	LB281263	01 Jun 2023	01 Jun 2023	29 Jun 2023	02 Jun 2023	29 Jun 2023	02 Jun 2023
BH12M	SE248514.003	LB281263	01 Jun 2023	01 Jun 2023	29 Jun 2023	02 Jun 2023	29 Jun 2023	02 Jun 2023
GW_QD1	SE248514.004	LB281263	01 Jun 2023	01 Jun 2023	29 Jun 2023	02 Jun 2023	29 Jun 2023	02 Jun 2023
GW_QR1	SE248514.005	LB281263	01 Jun 2023	01 Jun 2023	29 Jun 2023	02 Jun 2023	29 Jun 2023	02 Jun 2023

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M	SE248514.001	LB281428	01 Jun 2023	01 Jun 2023	08 Jun 2023	05 Jun 2023	15 Jul 2023	08 Jun 2023
BH9M	SE248514.002	LB281428	01 Jun 2023	01 Jun 2023	08 Jun 2023	05 Jun 2023	15 Jul 2023	08 Jun 2023
BH12M	SE248514.003	LB281428	01 Jun 2023	01 Jun 2023	08 Jun 2023	05 Jun 2023	15 Jul 2023	08 Jun 2023
GW_QD1	SE248514.004	LB281428	01 Jun 2023	01 Jun 2023	08 Jun 2023	05 Jun 2023	15 Jul 2023	08 Jun 2023
GW_QR1	SE248514.005	LB281428	01 Jun 2023	01 Jun 2023	08 Jun 2023	05 Jun 2023	15 Jul 2023	08 Jun 2023

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M	SE248514.001	LB281319	01 Jun 2023	01 Jun 2023	28 Nov 2023	02 Jun 2023	28 Nov 2023	05 Jun 2023
BH9M	SE248514.002	LB281319	01 Jun 2023	01 Jun 2023	28 Nov 2023	02 Jun 2023	28 Nov 2023	05 Jun 2023
BH12M	SE248514.003	LB281319	01 Jun 2023	01 Jun 2023	28 Nov 2023	02 Jun 2023	28 Nov 2023	05 Jun 2023
GW_QD1	SE248514.004	LB281319	01 Jun 2023	01 Jun 2023	28 Nov 2023	02 Jun 2023	28 Nov 2023	05 Jun 2023
GW_QR1	SE248514.005	LB281319	01 Jun 2023	01 Jun 2023	28 Nov 2023	02 Jun 2023	28 Nov 2023	05 Jun 2023

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M	SE248514.001	LB281428	01 Jun 2023	01 Jun 2023	08 Jun 2023	05 Jun 2023	15 Jul 2023	08 Jun 2023
BH9M	SE248514.002	LB281428	01 Jun 2023	01 Jun 2023	08 Jun 2023	05 Jun 2023	15 Jul 2023	08 Jun 2023
BH12M	SE248514.003	LB281428	01 Jun 2023	01 Jun 2023	08 Jun 2023	05 Jun 2023	15 Jul 2023	08 Jun 2023
GW_QD1	SE248514.004	LB281428	01 Jun 2023	01 Jun 2023	08 Jun 2023	05 Jun 2023	15 Jul 2023	08 Jun 2023
GW_QR1	SE248514.005	LB281428	01 Jun 2023	01 Jun 2023	08 Jun 2023	05 Jun 2023	15 Jul 2023	08 Jun 2023

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M	SE248514.001	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
BH9M	SE248514.002	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
BH12M	SE248514.003	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
GW_QD1	SE248514.004	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
GW_QR1	SE248514.005	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
GW_QTB1	SE248514.006	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
GW_QTS1	SE248514.007	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1M	SE248514.001	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
BH9M	SE248514.002	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
BH12M	SE248514.003	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
GW_QD1	SE248514.004	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
GW_QR1	SE248514.005	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
GW_QTB1	SE248514.006	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023
GW_QTS1	SE248514.007	LB281645	01 Jun 2023	01 Jun 2023	15 Jun 2023	06 Jun 2023	15 Jun 2023	07 Jun 2023

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1M	SE248514.001	%	40 - 130%	45
	BH9M	SE248514.002	%	40 - 130%	68
	BH12M	SE248514.003	%	40 - 130%	59
d14-p-terphenyl (Surrogate)	BH1M	SE248514.001	%	40 - 130%	67
	BH9M	SE248514.002	%	40 - 130%	92
	BH12M	SE248514.003	%	40 - 130%	80
d5-nitrobenzene (Surrogate)	BH1M	SE248514.001	%	40 - 130%	41
	BH9M	SE248514.002	%	40 - 130%	58
	BH12M	SE248514.003	%	40 - 130%	53

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1M	SE248514.001	%	40 - 130%	109
	BH9M	SE248514.002	%	40 - 130%	107
	BH12M	SE248514.003	%	40 - 130%	104
	GW_QD1	SE248514.004	%	40 - 130%	103
	GW_QR1	SE248514.005	%	40 - 130%	105
	GW_QTB1	SE248514.006	%	40 - 130%	110
	GW_QTS1	SE248514.007	%	40 - 130%	105
d4-1,2-dichloroethane (Surrogate)	BH1M	SE248514.001	%	40 - 130%	107
	BH9M	SE248514.002	%	40 - 130%	105
	BH12M	SE248514.003	%	40 - 130%	109
	GW_QD1	SE248514.004	%	40 - 130%	109
	GW_QR1	SE248514.005	%	40 - 130%	103
	GW_QTB1	SE248514.006	%	40 - 130%	105
	GW_QTS1	SE248514.007	%	40 - 130%	102
d8-toluene (Surrogate)	BH1M	SE248514.001	%	40 - 130%	99
	BH9M	SE248514.002	%	40 - 130%	98
	BH12M	SE248514.003	%	40 - 130%	97
	GW_QD1	SE248514.004	%	40 - 130%	97
	GW_QR1	SE248514.005	%	40 - 130%	98
	GW_QTB1	SE248514.006	%	40 - 130%	99
	GW_QTS1	SE248514.007	%	40 - 130%	103

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1M	SE248514.001	%	40 - 130%	109
	BH9M	SE248514.002	%	40 - 130%	107
	BH12M	SE248514.003	%	40 - 130%	104
	GW_QD1	SE248514.004	%	40 - 130%	103
	GW_QR1	SE248514.005	%	40 - 130%	105
d4-1,2-dichloroethane (Surrogate)	BH1M	SE248514.001	%	60 - 130%	107
	BH9M	SE248514.002	%	60 - 130%	105
	BH12M	SE248514.003	%	60 - 130%	109
	GW_QD1	SE248514.004	%	60 - 130%	109
	GW_QR1	SE248514.005	%	60 - 130%	103
d8-toluene (Surrogate)	BH1M	SE248514.001	%	40 - 130%	99
	BH9M	SE248514.002	%	40 - 130%	98
	BH12M	SE248514.003	%	40 - 130%	97
	GW_QD1	SE248514.004	%	40 - 130%	97
	GW_QR1	SE248514.005	%	40 - 130%	98

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB281263.001	Mercury	mg/L	0.0001	<0.0001

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB281428.001	Naphthalene	µg/L	0.1	<0.1
	2-methylnaphthalene	µg/L	0.1	<0.1
	1-methylnaphthalene	µg/L	0.1	<0.1
	Acenaphthylene	µg/L	0.1	<0.1
	Acenaphthene	µg/L	0.1	<0.1
	Fluorene	µg/L	0.1	<0.1
	Phenanthrene	µg/L	0.1	<0.1
	Anthracene	µg/L	0.1	<0.1
	Fluoranthene	µg/L	0.1	<0.1
	Pyrene	µg/L	0.1	<0.1
	Benzo(a)anthracene	µg/L	0.1	<0.1
	Chrysene	µg/L	0.1	<0.1
	Benzo(a)pyrene	µg/L	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
	Dibenzo(ah)anthracene	µg/L	0.1	<0.1
	Benzo(ghi)perylene	µg/L	0.1	<0.1
Surrogates	d5-nitrobenzene (Surrogate)	%	-	43
	2-fluorobiphenyl (Surrogate)	%	-	50
	d14-p-terphenyl (Surrogate)	%	-	74

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB281319.001	Arsenic	µg/L	1	<1
	Cadmium	µg/L	0.1	<0.1
	Chromium	µg/L	1	<1
	Copper	µg/L	1	<1
	Lead	µg/L	1	<1
	Nickel	µg/L	1	<1
	Zinc	µg/L	5	<5

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB281428.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB281645.001	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	<0.5
		Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		o-xylene	µg/L	0.5	<0.5
	Polycyclic VOCs	Naphthalene (VOC)*	µg/L	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	102
		d8-toluene (Surrogate)	%	-	96
		Bromofluorobenzene (Surrogate)	%	-	105

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	
LB281645.001	TRH C6-C9	µg/L	40	<40	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	102
		d8-toluene (Surrogate)	%	-	96
		Bromofluorobenzene (Surrogate)	%	-	105

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may give a different calculated RPD.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248519.002	LB281263.014	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	195
SE248520.008	LB281263.018	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	0

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248519.003	LB281319.014	Arsenic	µg/L	1	1	1	87	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	1	1	101	3
		Copper	µg/L	1	<1	<1	169	0
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	7	7	28	0
		Zinc	µg/L	5	14	14	51	2
SE248562.001	LB281319.018	Arsenic	µg/L	1	<1	<1	165	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	1	1	100	2
		Copper	µg/L	1	2	2	81	2
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	1	1	84	0
		Zinc	µg/L	5	<5	<5	200	0

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248514.005	LB281428.028	TRH C10-C14	µg/L	50	<50	<50	200	0
		TRH C15-C28	µg/L	200	<200	<200	200	0
		TRH C29-C36	µg/L	200	<200	<200	200	0
		TRH C37-C40	µg/L	200	<200	<200	200	0
		TRH C10-C40	µg/L	320	<320	<320	200	0
		TRH >C10-C16	µg/L	60	<60	<60	200	0
		TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	200	0
		TRH >C16-C34 (F3)	µg/L	500	<500	<500	200	0
		TRH >C34-C40 (F4)	µg/L	500	<500	<500	200	0

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248514.001	LB281645.026	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
			Aromatic	Toluene	µg/L	0.5	0.9	1.0	83
			Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.7	9.6	30	11
			d8-toluene (Surrogate)	µg/L	-	9.9	9.5	30	4
			Bromofluorobenzene (Surrogate)	µg/L	-	10.9	10.3	30	6
		Totals	Total BTEX	µg/L	3	<3	<3	200	0
SE248514.002	LB281645.027	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
			Aromatic	Toluene	µg/L	0.5	6.1	6.1	38
			Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.5	9.7	30	8
			d8-toluene (Surrogate)	µg/L	-	9.8	9.6	30	2
			Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10.5	30	2
		Totals	Total BTEX	µg/L	3	6	6	79	0

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE248514.001	LB281645.026	TRH C6-C10	µg/L	50	<50	<50	189	0	
		TRH C6-C9	µg/L	40	<40	<40	200	0	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.7	9.6	30	11
		d8-toluene (Surrogate)	µg/L	-	9.9	9.5	30	4	

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$
The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$
Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may give a different calculated RPD.

Volatile Petroleum Hydrocarbons in Water (continued)

Method: ME-(AU)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE248514.001	LB281645.026	Surrogates	Bromofluorobenzene (Surrogate)	µg/L	-	10.9	10.3	30	6
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	194	0
SE248514.002	LB281645.027		TRH C6-C10	µg/L	50	79	130	79	46
			TRH C6-C9	µg/L	40	56	86	86	42
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.5	9.7	30	8
			d8-toluene (Surrogate)	µg/L	-	9.8	9.6	30	2
			Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10.5	30	2
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	73	120	82	49

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB281428.002	Naphthalene	µg/L	0.1	38	40	60 - 140	95
	Acenaphthylene	µg/L	0.1	48	40	60 - 140	121
	Acenaphthene	µg/L	0.1	47	40	60 - 140	118
	Phenanthrene	µg/L	0.1	50	40	60 - 140	125
	Anthracene	µg/L	0.1	53	40	60 - 140	133
	Fluoranthene	µg/L	0.1	55	40	60 - 140	138
	Pyrene	µg/L	0.1	56	40	60 - 140	139
	Benzo(a)pyrene	µg/L	0.1	52	40	60 - 140	131
	Surrogates						
	d5-nitrobenzene (Surrogate)	µg/L	-	0.2	0.5	40 - 130	49
	2-fluorobiphenyl (Surrogate)	µg/L	-	0.3	0.5	40 - 130	58
	d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	87

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB281319.002	Arsenic	µg/L	1	22	20	80 - 120	109
	Cadmium	µg/L	0.1	21	20	80 - 120	106
	Chromium	µg/L	1	22	20	80 - 120	108
	Copper	µg/L	1	21	20	80 - 120	105
	Lead	µg/L	1	20	20	80 - 120	100
	Nickel	µg/L	1	22	20	80 - 120	110
	Zinc	µg/L	5	21	20	80 - 120	105

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB281428.002	TRH C10-C14	µg/L	50	1000	1200	60 - 140	87
	TRH C15-C28	µg/L	200	1200	1200	60 - 140	104
	TRH C29-C36	µg/L	200	1300	1200	60 - 140	105
	TRH F Bands						
	TRH >C10-C16	µg/L	60	1100	1200	60 - 140	93
	TRH >C16-C34 (F3)	µg/L	500	1300	1200	60 - 140	107
	TRH >C34-C40 (F4)	µg/L	500	650	600	60 - 140	108

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB281645.002	Monocyclic						
	Benzene	µg/L	0.5	45	45.45	60 - 140	99
	Aromatic						
	Toluene	µg/L	0.5	46	45.45	60 - 140	101
	Ethylbenzene	µg/L	0.5	46	45.45	60 - 140	102
	m/p-xylene	µg/L	1	94	90.9	60 - 140	103
	o-xylene	µg/L	0.5	47	45.45	60 - 140	103
	Surrogates						
	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.0	10	60 - 140	100
	d8-toluene (Surrogate)	µg/L	-	11.1	10	70 - 130	111
	Bromofluorobenzene (Surrogate)	µg/L	-	10.0	10	70 - 130	100

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB281645.002	TRH C6-C10	µg/L	50	800	946.63	60 - 140	85
	TRH C6-C9	µg/L	40	700	818.71	60 - 140	85
	Surrogates						
	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.0	10	60 - 140	100
	d8-toluene (Surrogate)	µg/L	-	11.1	10	70 - 130	111
	Bromofluorobenzene (Surrogate)	µg/L	-	10.0	10	70 - 130	100
	VPH F Bands						
	TRH C6-C10 minus BTEX (F1)	µg/L	50	530	639.67	60 - 140	82

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248497.027	LB281263.004	Mercury	mg/L	0.0001	0.0018	<0.0001	0.008	90

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE248497.027	LB281319.004	Arsenic	µg/L	1	22	<1	20	109
		Cadmium	µg/L	0.1	21	<0.1	20	106
		Chromium	µg/L	1	22	<1	20	108
		Copper	µg/L	1	21	<1	20	105
		Lead	µg/L	1	20	<1	20	101
		Nickel	µg/L	1	21	<1	20	107
		Zinc	µg/L	5	23	<5	20	96

VOCs in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE248508.001	LB281645.028	Monocyclic	Benzene	µg/L	0.5	0	45.45	101
		Aromatic	Toluene	µg/L	0.5	0.00255782834	45.45	100
			Ethylbenzene	µg/L	0.5	0.00245693472	45.45	104
			m/p-xylene	µg/L	1	0.00629256885	90.9	102
			o-xylene	µg/L	0.5	0.00828518845	45.45	102
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	0.01167884979	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.75113387771	-	93
			d8-toluene (Surrogate)	µg/L	-	9.75816417905	-	110
			Bromofluorobenzene (Surrogate)	µg/L	-	11.15965161397	-	95
		Totals	Total BTEX	µg/L	3	0	-	-

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%	
SE248508.001	LB281645.028	TRH C6-C10	µg/L	50	0	946.63	105	
		TRH C6-C9	µg/L	40	0	818.71	105	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.75113387771	-	93
			d8-toluene (Surrogate)	µg/L	-	9.75816417905	-	110
			Bromofluorobenzene (Surrogate)	µg/L	-	11.15965161397	-	95
		VPH F	Benzene (F0)	µg/L	0.5	0	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	0	639.67	112

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022_QA_QC_Plan.pdf

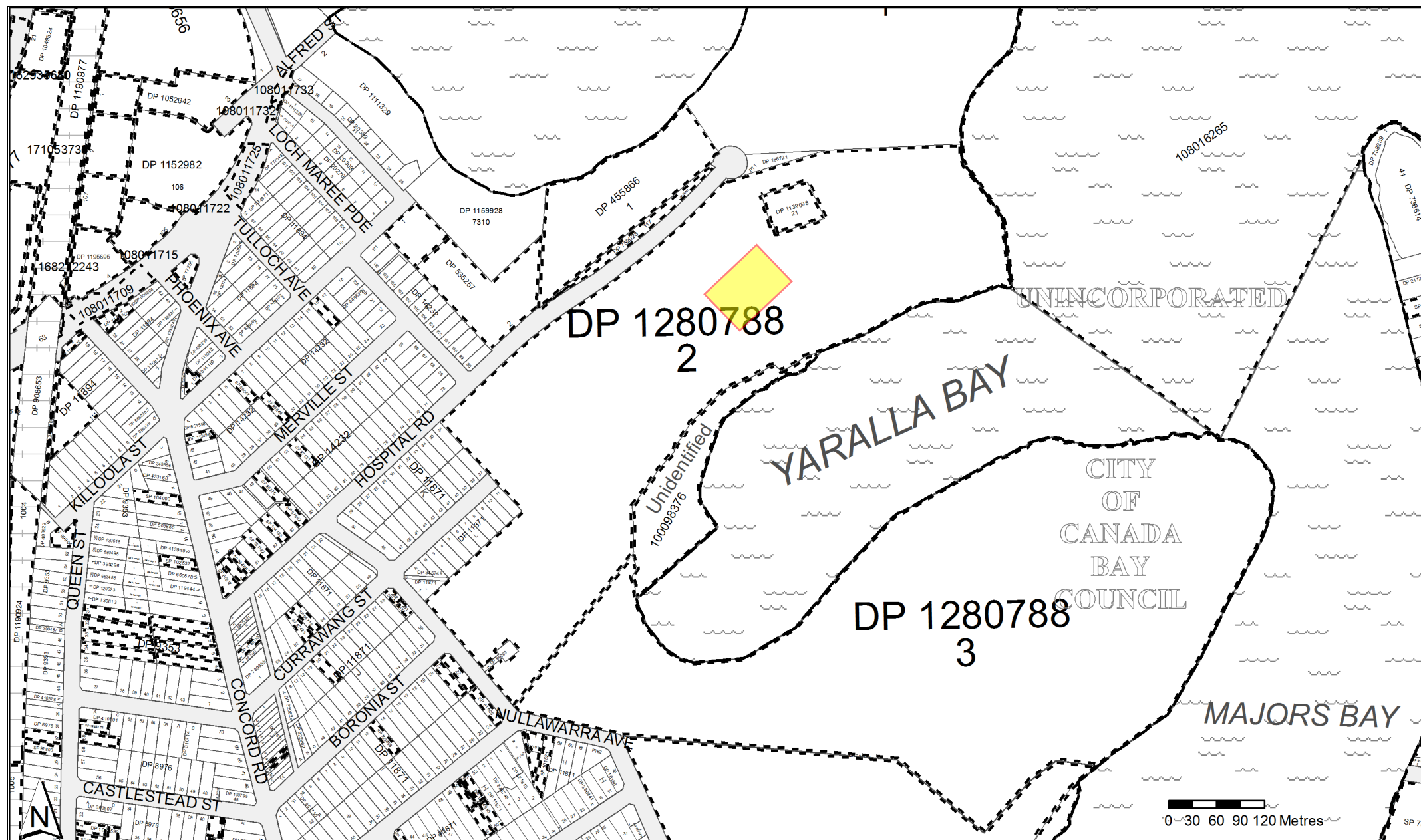
- * NATA accreditation does not cover the performance of this service.
- ** Indicative data, theoretical holding time exceeded.
- *** Indicates that both * and ** apply.
- Sample not analysed for this analyte.
- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.
- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
- ④ Recovery failed acceptance criteria due to matrix interference.
- ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- ⑥ LOR was raised due to sample matrix interference.
- ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
- ⑩ LOR was raised due to high conductivity of the sample (required dilution).
- † Refer to relevant report comments for further information.

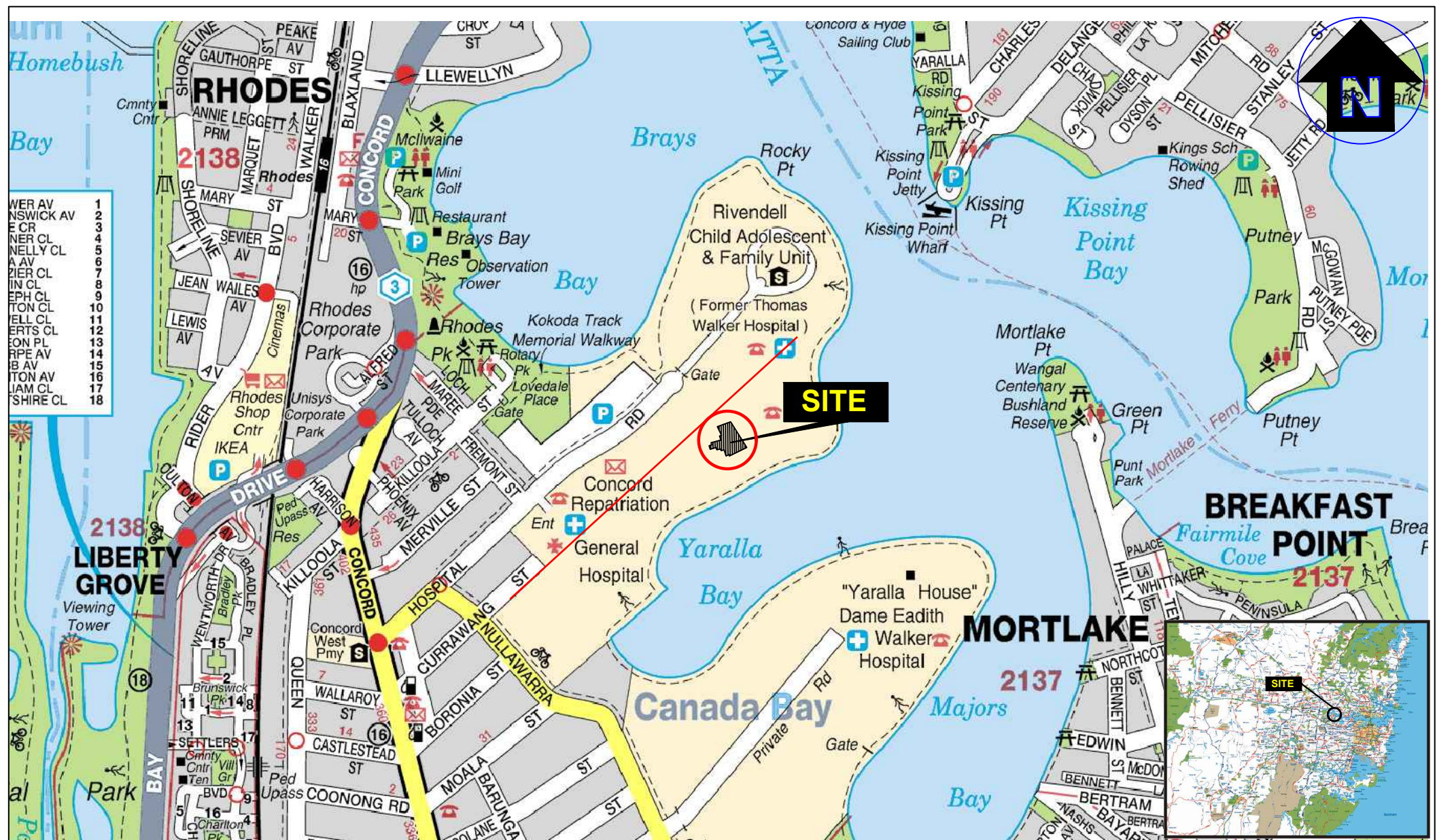
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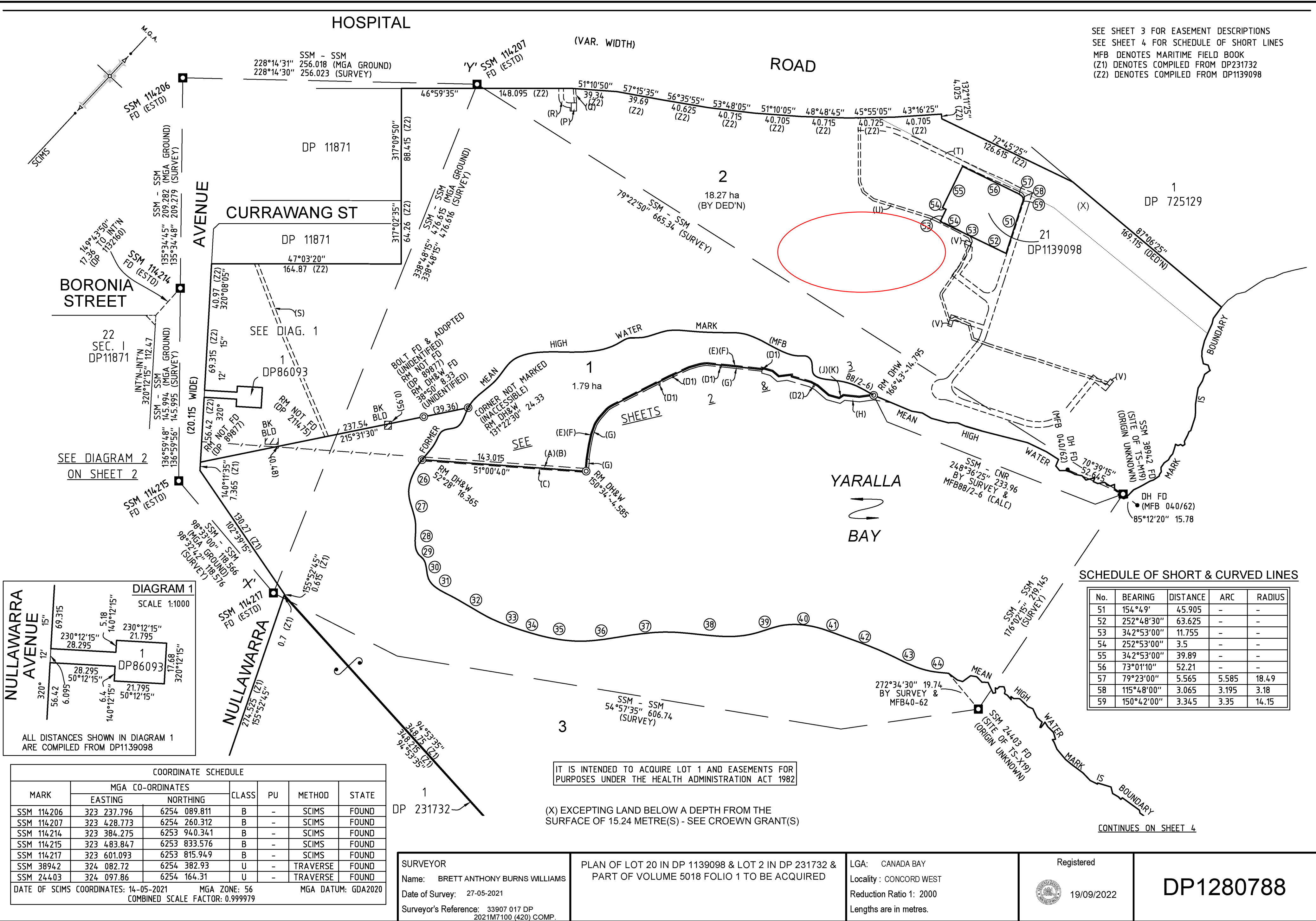
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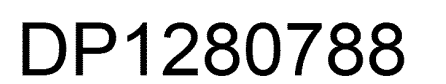
Appendix L – Title Search Documents

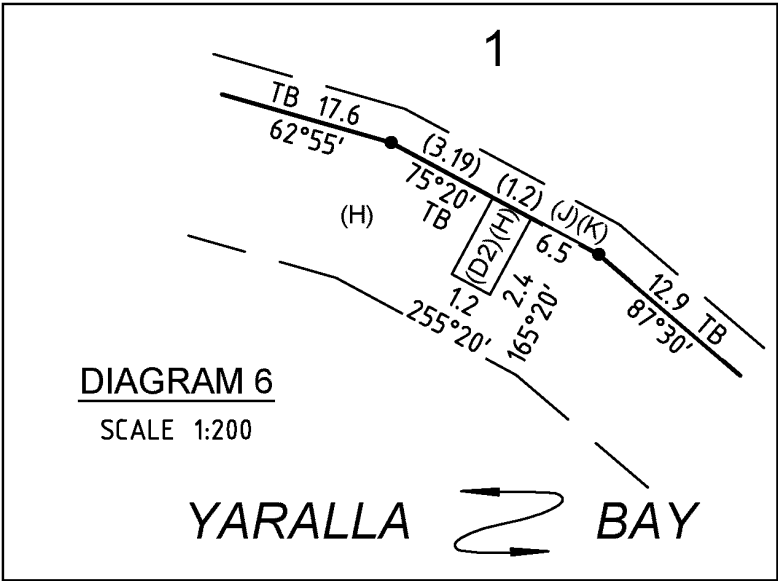
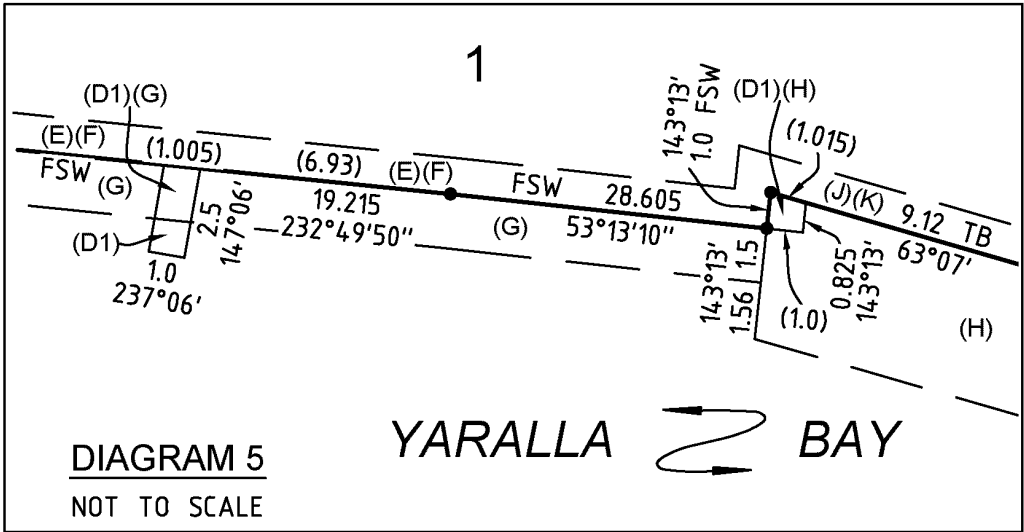
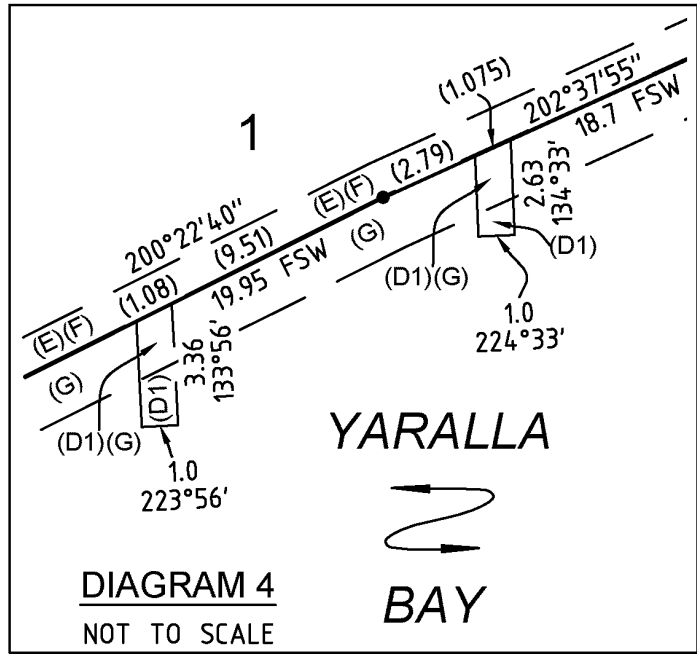
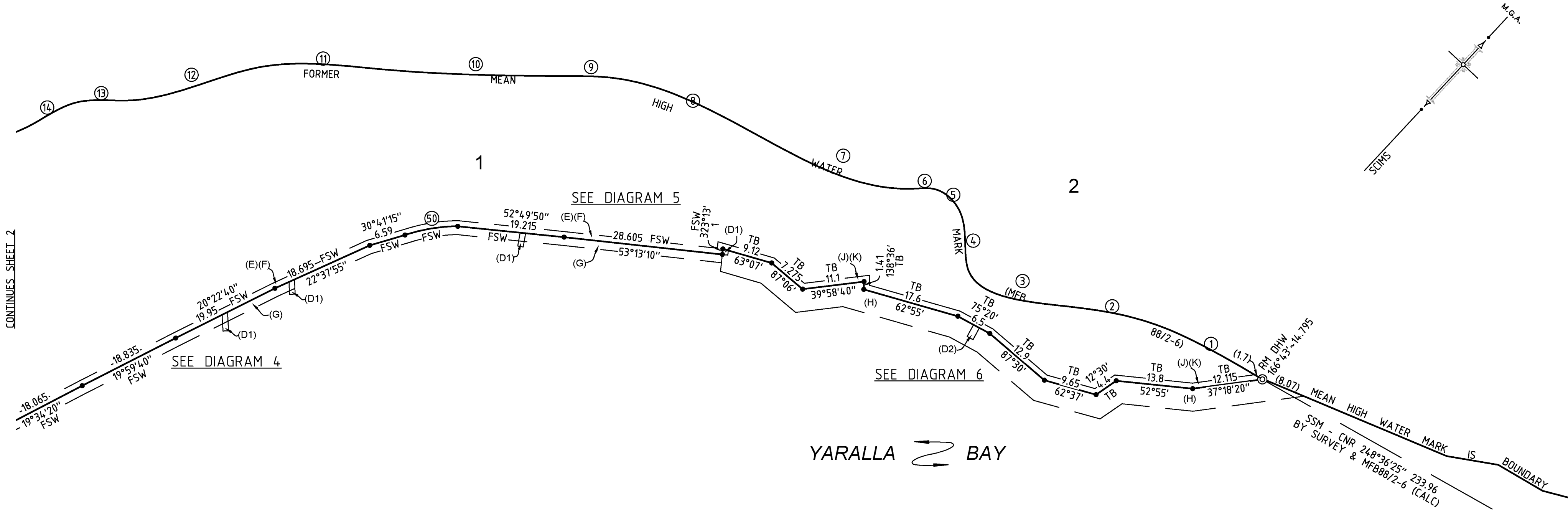






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FORESHORE BOUNDARY SCHEDULE			
No.	BEARING	DISTANCE	STATUS
1	253°48'45"	21.39	FMHWM
2	238°25'00"	15.54	FMHWM
3	247°03'05"	19.075	FMHWM
4	308°55'15"	10.49	FMHWM
5	268°29'40"	6.285	FMHWM
6	227°53'40"	3.41	FMHWM
7	244°59'50"	27.81	FMHWM
8	248°44'55"	30.63	FMHWM
9	229°01'10"	7.465	FMHWM
10	229°04'45"	33.615	FMHWM
11	228°11'25"	21.37	FMHWM
12	212°55'25"	24.93	FMHWM
13	224°55'10"	9.145	FMHWM
14	200°33'40"	9.88	FMHWM

TB TOP OF BATTER

FSW UPPER SEAWARD FACE OF IRREGULAR STONE SEAWALL ON & OFF BOUNDARY

MFB DENOTES MARITIME FIELD BOOK

FMHWM DENOTES FORMER MEAN HIGH WATER MARK BY MFB88/2-6 IS BOUNDARY

- PROPOSED EASEMENTS**

(A) PROPOSED EASEMENT FOR BOX CULVERT PROTECTING THE HARBOUR 2.4 WIDE

(B) PROPOSED RESTRICTION ON THE USE OF LAND (BOX CULVERT) 2.4 WIDE

(C) PROPOSED EASEMENT FOR BOX CULVERT 1 WIDE

(D1) PROPOSED EASEMENT FOR DRAINAGE 1 WIDE

(D2) PROPOSED EASEMENT FOR DRAINAGE 1.2 WIDE

(E) PROPOSED RESTRICTION ON THE USE OF LAND (SEAWALL) 1 WIDE

(F) PROPOSED EASEMENT FOR SEAWALL PROTECTING THE HARBOUR 1 WIDE

(G) PROPOSED EASEMENT FOR SEAWALL 1.5 WIDE AND VARIABLE WIDTH

(H) PROPOSED EASEMENT FOR HARBOUR BATTER 4 WIDE

(J) PROPOSED EASEMENT FOR BATTER PROTECTING THE HARBOUR 1 WIDE

(K) PROPOSED RESTRICTION ON THE USE OF LAND (BATTER) 1 WIDE
- EXISTING EASEMENTS**

(P) SUBSTATION PREMISES No. 5417 "HOSPITAL ROAD GROUND FLOOR LEVEL"(AD14438)

(Q) EASEMENT FOR ELECTRICITY WORKS (AD14438)

(R) RIGHT OF WAY (AD14438)

(S) EASEMENT FOR DRAINAGE 3.05 WIDE (J408062)

(T) RIGHT OF CARRIAGEWAY VARIABLE WIDTH (DP1158616)

(U) EASEMENT FOR ELECTRICITY AND OTHER PURPOSES 2 WIDE & VARIABLE WIDTH (DP1158616)

(V) EASEMENT FOR ELECTRICITY AND OTHER PURPOSES 3.3 WIDE (DP1158616)

SEE SHEET 2 FOR CURVED LINES

SURVEYOR Name: BRETT ANTHONY BURNS WILLIAMS Date of Survey: 27-05-2021 Surveyor's Reference: 33907 017 DP 2021M7100 (420) COMP.	PLAN OF LOT 20 IN DP 1139098 & LOT 2 IN DP 231732 & PART OF VOLUME 5018 FOLIO 1 TO BE ACQUIRED	LGA: CANADA BAY Locality: CONCORD WEST Reduction Ratio 1: 500 Lengths are in metres.	Registered  19/09/2022	DP1280788
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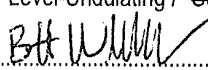


PLAN FORM 6 (2020)

WARNING: Creasing or folding will lead to rejection

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 4 sheet(s)

Registered:  19/09/2022 Title System: TORRENS	Office Use Only DP1280788												
PLAN OF LOT 20 IN DP 1139098 & LOT 2 IN DP 231732 & PART OF VOLUME 5018 FOLIO 1 TO BE ACQUIRED	LGA: CANADA BAY Locality: CONCORD WEST Parish: CONCORD County: CUMBERLAND												
Survey Certificate I, BRETT ANTHONY BURNS WILLIAMS of LTS LOCKLEY PO Box 564 St Leonards NSW 1590 a surveyor registered under the <i>Surveying and Spatial Information Act 2002</i>, certify that: *(a) The land shown in the plan was surveyed in accordance with the Surveying and Spatial Information Regulation 2017, is accurate and the survey was completed on 27-05-21, or *(b) The part of the land shown in the plan (excluding boundary lines noted (Z1) & (Z2) on the plan attached) was surveyed in accordance with the <i>Surveying and Spatial Information Regulation 2017</i>, the part surveyed is accurate and the survey was completed on 27-05-21, the part not surveyed was compiled in accordance with that Regulation, or *(c) The land shown in this plan was compiled in accordance with the Surveying and Spatial Information Regulation 2017. Datum Line: 'X' - 'Y' Type: *Urban/*Rural The terrain is *Level-Undulating / *Steep-Mountainous. Signature:  Dated: 24/6/22 Surveyor Identification No: 6795 Surveyor registered under the <i>Surveying and Spatial Information Act 2002</i> *Strike out inappropriate words. **Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.	Crown Lands NSW/Western Lands Office Approval I, (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given. Signature: Date: File Number: Office: Subdivision Certificate I, *Authorised Person/*General Manager/*Registered Certifier, certify that the provisions of s.6.15 of the <i>Environmental Planning and Assessment Act 1979</i> have been satisfied in relation to the proposed subdivision, new road or reserve set out herein. Signature: Registration number: Consent Authority: Date of endorsement: Subdivision Certificate number: File number: *Strike through if inapplicable.												
Plans used in the preparation of survey/compilation: <table border="0"> <tr> <td>DP89877</td> <td>MFB 088/2-6</td> </tr> <tr> <td>DP211475</td> <td>MFB 161/100-115</td> </tr> <tr> <td>DP231732</td> <td>MFB 40/61-62</td> </tr> <tr> <td>DP448301</td> <td>DP909052</td> </tr> <tr> <td>DP1139098</td> <td></td> </tr> <tr> <td>DP1248857</td> <td></td> </tr> </table>	DP89877	MFB 088/2-6	DP211475	MFB 161/100-115	DP231732	MFB 40/61-62	DP448301	DP909052	DP1139098		DP1248857		Statements of intention to dedicate public roads create public reserves and drainage reserves, acquire/resume land. IT IS INTENDED TO ACQUIRE LOT 1 AND EASEMENTS FOR PURPOSES UNDER THE HEALTH ADMINISTRATION ACT 1982
DP89877	MFB 088/2-6												
DP211475	MFB 161/100-115												
DP231732	MFB 40/61-62												
DP448301	DP909052												
DP1139098													
DP1248857													
Surveyor's Reference: 33907 017DP [2021 M7100 (420) COMP]	Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A												

PLAN FORM 6A (2019)

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 2 of 4 sheet(s)



Office Use Only

Office Use Only

Registered:

19/09/2022

DP1280788

PLAN OF LOT 20 IN DP 1139098 & LOT 2 IN
DP 231732 & PART OF VOLUME 5018 FOLIO 1
TO BE ACQUIRED

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2017*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

Subdivision Certificate number:

Date of Endorsement:

LOT	STREET NUMBER	STREET NAME	STREET TYPE	LOCALITY
1	NO STREET ADDRESS AVAILABLE			
2	1H	HOSPITAL	ROAD	CONCORD WEST
3	11D	NULLAWARRA	AVENUE	CONCORD WEST

Transport for NSW in accordance with Part 2 Division 5
of the Surveying and Spatial Information Regulation 2017
approves the determination of the FMHWM/MHWM
as shown hereon.

File: SF2021/160747

Date: 7/07/2022

Electronic signature of me,
Ryan George Fifield, affixed
by me on 7 July 2022

.....
Ryan Fifield – Maritime Survey Manager

If space is insufficient use additional annexure sheet

Surveyor's Reference: 33907 017DP

[2021 M 7100 (420) comp]

PLAN FORM 6A (2019)

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 3 of 4 sheet(s)



19/09/2022

Office Use Only

Office Use Only

Registered:

PLAN OF LOT 20 IN DP 1139098 & LOT 2 IN
DP 231732 & PART OF VOLUME 5018 FOLIO 1
TO BE ACQUIRED

DP1280788

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2017*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

Subdivision Certificate number:

Date of Endorsement:

EXECUTION BY HEALTH ADMINISTRATION CORPORATION:

Executed by the Health Administration Corporation ABN 45 100 538 161
through its authorised delegate:

Electronic signature of me, Rebecca
Wark affixed by me, or at my direction,
on 10 Dec 2021

(Signature of Delegate)

Rebecca Wark

(Name of Delegate)

I certify that I am an eligible witness and that the delegate signed in my presence.

This document was signed and witnessed
over audio visual link in accordance with
section 14G of the Electronic Transactions
Act 2000

(Signature of Witness)

Emily Keep

(Name of Witness)

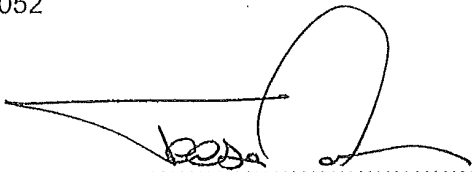
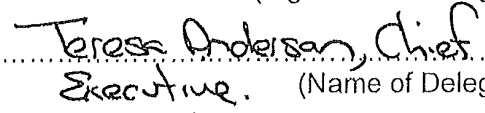
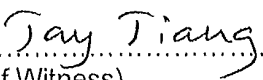
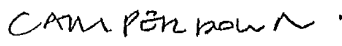
608/26B Lord Sheffield Circuit

Penrith NSW 2750

(Address of Witness)

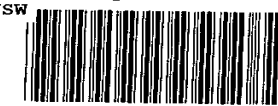
If space is insufficient use additional annexure sheet

Surveyor's Reference: 33907 017DP [2021 M7100 (420) COMP]

PLAN FORM 6A (2019) DEPOSITED PLAN ADMINISTRATION SHEET		Sheet 4 of 4 sheet(s)
 Registered: 19/09/2022 Office Use Only PLAN OF LOT 20 IN DP 1139098 & LOT 2 IN DP 231732 & PART OF VOLUME 5018 FOLIO 1 TO BE ACQUIRED Subdivision Certificate number: Date of Endorsement:	DP1280788 This sheet is for the provision of the following information as required: - A schedule of lots and addresses - See 60(c) <i>SSI Regulation 2017</i> - Statements of intention to create and release affecting interests in accordance with section 88B <i>Conveyancing Act 1919</i> - Signatures and seals- see 195D <i>Conveyancing Act 1919</i> - Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.	
EXECUTION BY THE PRINCE ALFRED HOSPITAL: Executed by Sydney Local Health District ABN: 17 520 269 052 through its authorised delegate:  (Signature of Delegate)  (Name of Delegate) 17.6.22 I certify that I am an eligible witness and that the delegate signed in my presence.  (Signature of Witness)  (Name of Witness)  (Address of Witness) If space is insufficient use additional annexure sheet		
Surveyor's Reference: 33907 017DP [2021 M7100 (420) COMP]		

CERTIFICATE OF TITLE
REAL PROPERTY ACT, 1900, as amended.

NEW SOUTH WALES



11281183

Applications Nos. 7372.39877 and 46826
(as to parts)

For Crown Grants see Schedule

Prior Title Volume 7856 Folio 216



EH

Vol. 11281 Fol. 183

Edition issued 24-3-1970

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

Witness *Barnes*

James Llewellyn
Registrar General.



SEE AUTO FOLIO

ESTATE AND LAND REFERRED TO

Estate in Fee Simple in the land set out in the Schedule of Grants hereunder in the Municipality of Concord Parish of Concord and County of Cumberland shown in the plan hereon. EXCEPTING THEREOUT the land below a depth of 50 feet from the surface excepted by the Grant of 1 acre 2 roods 16 perches.

SCHEDULE OF GRANTS.

Lot and Plan	Number of Portion	Name of Grantee	Date of Grant	Grant Reference	
				Volume	Folio
Lot 2 in D.P.535257	Pt.177	William Miller	9-12-1794	has issued	
	land adjoining	being land for which no Crown Grant			
	Pt.178	Edward Riley	9-12-1794		
	Pt.179	Thomas Day	9-12-1794		
	Pt.180	James Williamson	15-5-1798		
	113			1651	49
	1ac.2rd.16per.Gt.			5141	47
	117,Pt.178,Pt.179	Lands for which no Crown Grants have issued.			
	Pt.180,Pt.182 and land adjoining				

FIRST SCHEDULE

~~THE COMMONWEALTH OF AUSTRALIA.~~

Lawatson
Registrar General.

SECOND SCHEDULE

- X 1. Caveat No. C259090 as regards the land designated (A) shown in the plan hereon. Entered 23-1-1955. E416216
- L 2. Lease No. H996615 of the part of the land above described designated (A) in the plan hereon to the Sydney County Council. Entered 13-3-1962. E416216
3. Lease No. J265642 of part of the premises erected on the land above described to the Sydney County Council. Entered 25-2-1963. W26845
4. Easement for Drainage created by Transfer No. J408062 affecting the part of the land above described shown as "10 ft. wide" in the plan hereon. Entered 16-10-1963.

Lawatson
Registrar General.

WARNING: THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE.

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR	INSTRUMENT			ENTERED	Signature of Registrar General
	NATURE	NUMBER	DATE		
Repatriation Commission by Transfer 146216 Registered 6-5-1992 Health Administration Corporation by Transfer 1463300 Registered 8/7/1993.					
CANCELLED SEE AUTO FOLIO					

W268452
 705432 L.R.
 E416216 T R
 I463300 T R
 0675572 L.S.
 .73 L.S.
 .74 L.S.
 0903464 L.S.
 .65 L.S.
 .66 L.S.
 0955609 L.R.

SECOND SCHEDULE (continued)

NATURE	INSTRUMENT		PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION	
	NUMBER	DATE					
W26845	Lease		to the Sydney County Council of Substation premises No 5417 as shown in DP 453692 together with a right of way and easement for electricity purposes over another part of the land above described. Expires 24.6.2006. Registered 4.12.1985.				
Y705432	Lease		to David Cimon of premises being Newsagency, building No. 67 within the grounds of Concord Repatriation General Hospital. Expires 11-10-1993. Registered 13-11-1989			0675572	14.2.1996
0675572	Lease		to Parkinson's Syndrome Society of New South Wales Incorporated being part of building 64 Concord Repatriation General Hospital Hospital Road, Concord, comprising an area of approximately 82.4 square metres as shown in plan with 0675572. Expires 30-1-1998. Option of renewal 2yrs. Registered 14-2-1996				
0675573	Lease		to Motor Neurone Disease Association of NSW Incorporated being part of building 64, Concord Repatriation General Hospital, Hospital Road Concord comprising of an area approximately 66.92 square metres as shown on the plan with 0675573. Expires 30-6-1998. Option of renewal 2yrs. Registered 14-2-1996				
0675574	Lease		to Davis Partin and White Pty Limited, of Suite 105, level 1, Medical Centre, Concord, Repatriation General Hospital, Hospital Road Concord. Expires 29-10-1996. Option of renewal 2yrs. Registered 14.2.1996			2458537	12-11-1996
0903464	Lease		to Lyncamore Pty Limited of Suite 103, level 1, Medical Centre, Concord, Repatriation General Hospital, Hospital Road Concord, Expires 11-12-1996. Option of renewal 2yrs. Registered 14-2-1996				

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

11281 183

SECOND SCHEDULE (continued)

INSTRUMENT	NATURE	NUMBER	DATE	PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION		
0903465	Lease to	Frances	Booth of Suite 106, level 1, Medical Centre, Concord	Repatriation General Hospital, Hospital Road, Concord. Expires 29.10.1998. Option of Renewal 2yrs. Registered 14.2.1996					
0903466	Lease to	Robert	Breck, of Suite 601, level 6, Medical Centre	Concord Repatriation General Hospital, Hospital Road Concord					
	Expires	29.10.1998.	Option of renewal 2yrs. Registered 14.2.1996.						
0955609	Lease to	Elizabeth George, Peter Maher, Joanna Maher and Khadra Mulligan Pty Limited	of Suite 101, level 1, Medical Centre, Concord Repatriation General Hospital, Hospital Rd Concord. Expires 1.1.1999. Option of Renewal 2yrs. Registered 7.3.1996.						
2077010	Lease to	Vodafone Pty Limited	of the area shown hatched in the plan with 2077010. Expires 11-9-2005. Option of renewal 5 year with a further Option of 5yrs. Registered 19-4-1996.						
2107849	Lease to	Pierre Henri Chapuis, Tony Evers Pty Limited, E.L & K Bokey Pty Limited, S.G. Koorey Pty Limited & Cadoboard Pty Limited	of Suite 209, Level 2 Medical Centre, Concord Repatriation General Hospital, Hospital Road Concord. Expires 11.2.1999. Option of renewal 2yrs. Registered 30-4-1996						
2107850	Lease to	Peter Stewart.	of Suite 211, level 2, Medical Centre Concord Repatriation General Hospital, Hospital Road Concord. Expires 18-1-1999. Option of renewal 2yrs. Registered 30-4-1996.						
2510211	Lease to	Pfram Pty Limited	of ground floor Pharmacy, Medical Centre, Concord Repatriation General Hospital, Hospital Road, Concord. Expires 31-10-1999. Option of renewal 2 yrs. Registered 12-11-1996.						
2584102	Lease to	Suite 100 Medical Centre Pty. Limited	of Suite 100 Ground floor, Medical Centre, Concord, Repatriation General Hospital, Hospital Road, Concord. Expires 31-3-1999. Option of renewal 2 yrs. Registered 12-11-1996.						
2760369	LEASE TO	SPEECH PATHOLOGY ASSOCIATION OF AUSTRALIA	OF SUITE 516, LEVEL 5, MEDICAL CENTRE, CONCORD REPATRIATION GENERAL HOSPITAL, HOSPITAL ROAD, CONCORD. EXPIRES 29-10-1998						
	OPTION OF RENEWAL	2 YEARS.	REGISTERED 31-1-1997						
2773831	LEASE TO	DR DAVID R. EISINGER PTY LIMITED	OF SUITE 201, LEVEL 2, MEDICAL CENTRE, CONCORD REPATRIATION GENERAL HOSPITAL, HOSPITAL ROAD, CONCORD. EXPIRES 19-5-1997. OPTION OF RENEWAL 2 YEARS. REGISTERED 31-1-1997.						

2077010
 2107849L
 2107850L
 2458537L
 2510211L
 2584102L
 2760369L
 2773831L
 2794835L
 2798236L
 2893134L
 35L
 2904062L
 3060745

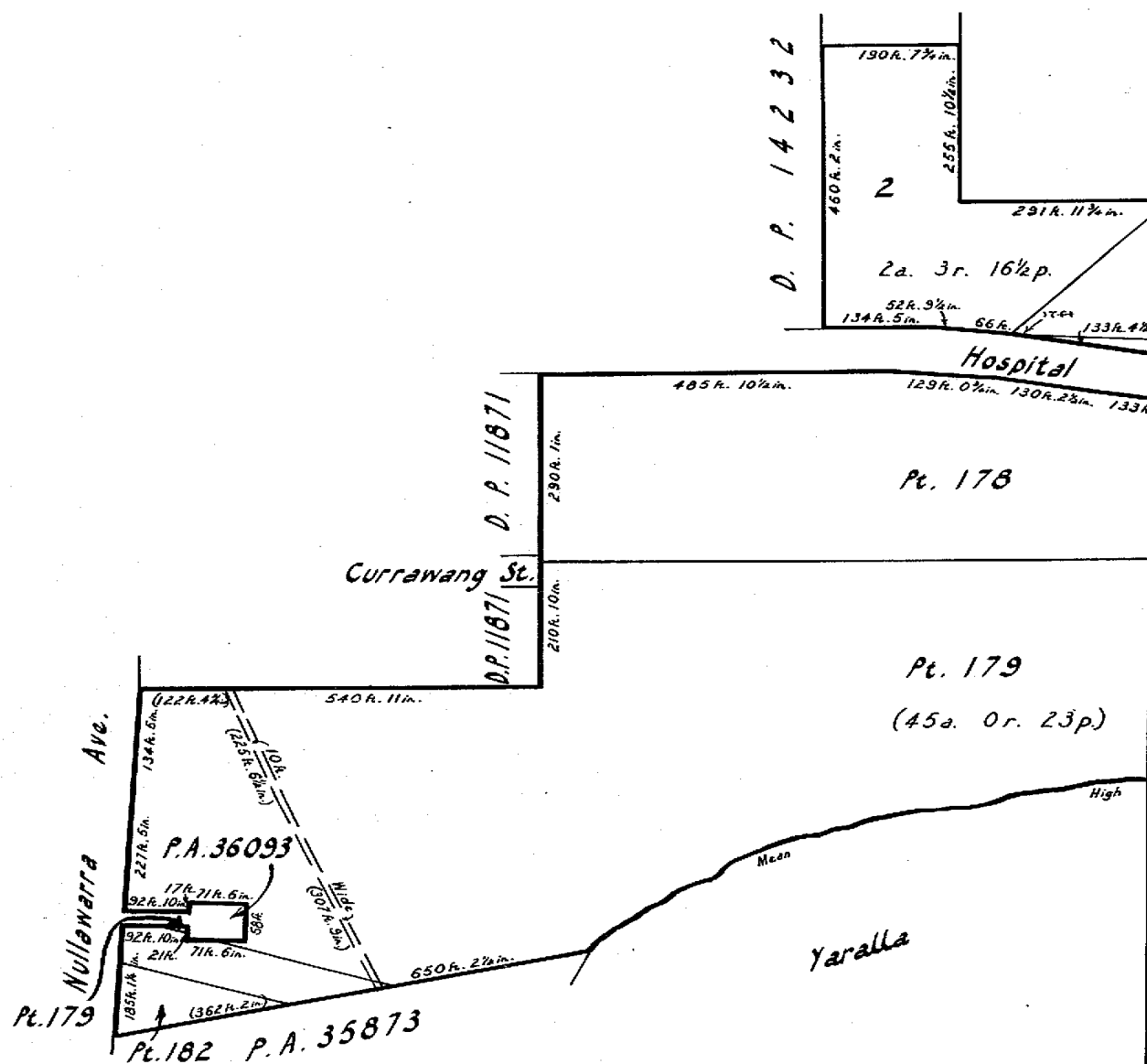
SECOND SCHEDULE (continued)

SECOND SCHEDULE (continued)						
INSTRUMENT			PARTICULARS	ENTERED	Signature of Registrar General	CANCELLATION
NATURE	NUMBER	DATE				
2794855	LEASE TO REPATRIATION 5 YEARS.	JUAN RIVERA GENERAL REGISTERED	AND IVANKA RIVERA OF COFFEE SHOP, GROUND FLOOR, MEDICAL CENTRE, HOSPITAL, HOSPITAL ROAD, CONCORD. EXPIRES 31-1-2002. OPTION OF 31-1-1997.	CONCORD RENEWAL		
2893584	Lease to Richard Thornton and Patricia Thornton of Shop 1,	General Hospital, Hospital Road Concord West. Expires 30-9-1999. Option of Renewal 2 years. Registered 18-3-1997.	Shop 1, part building 71 Concord Repatriation General Hospital, Hospital Road Concord West. Expires 30-9-1999. Option of Renewal 2 years. Registered 18-3-1997.	Concord Repatriation		
2893535	Lease to Norma Carpenter of Shop 1, part building 67 Concord Repatriation General Hospital, Hospital Road Concord West. Expires 30-9-1999. Option of Renewal 2 years. Registered 18-3-1997.					
2798236	Lease to Meng Ngu, Peter Katekaris, James Cowlishaw, Grace Chapman, Gavin Barr, Philip Barnes, Brian Jones and Charles McDonald of Suite 210, Level 2, Medical Centre, Concord Repatriation General Hospital, Hospital Road, Concord. Expires 29-10-1998. Option of renewal 2 years. Registered 23-5-1997.					
3060745	Lease to John Szasz of Suite 108, Level 1, Medical Centre, Concord Repatriation General Hospital, Hospital Road, Concord. Expires 31-3-2002. Option of renewal 2 years. Registered 23-5-1997.					
2904062	Lease to Adik Pimen of Shop 2, part building 67 Concord Repatriation General Hospital, Hospital Rd., Concord, with one car parking space. Expires 30-9-1999. Option of Renewal 2 years. Registered 29-5-1997. 29-7-1997					
			CANCELLED			
			SEE ABOVE FOR			

2904062i R

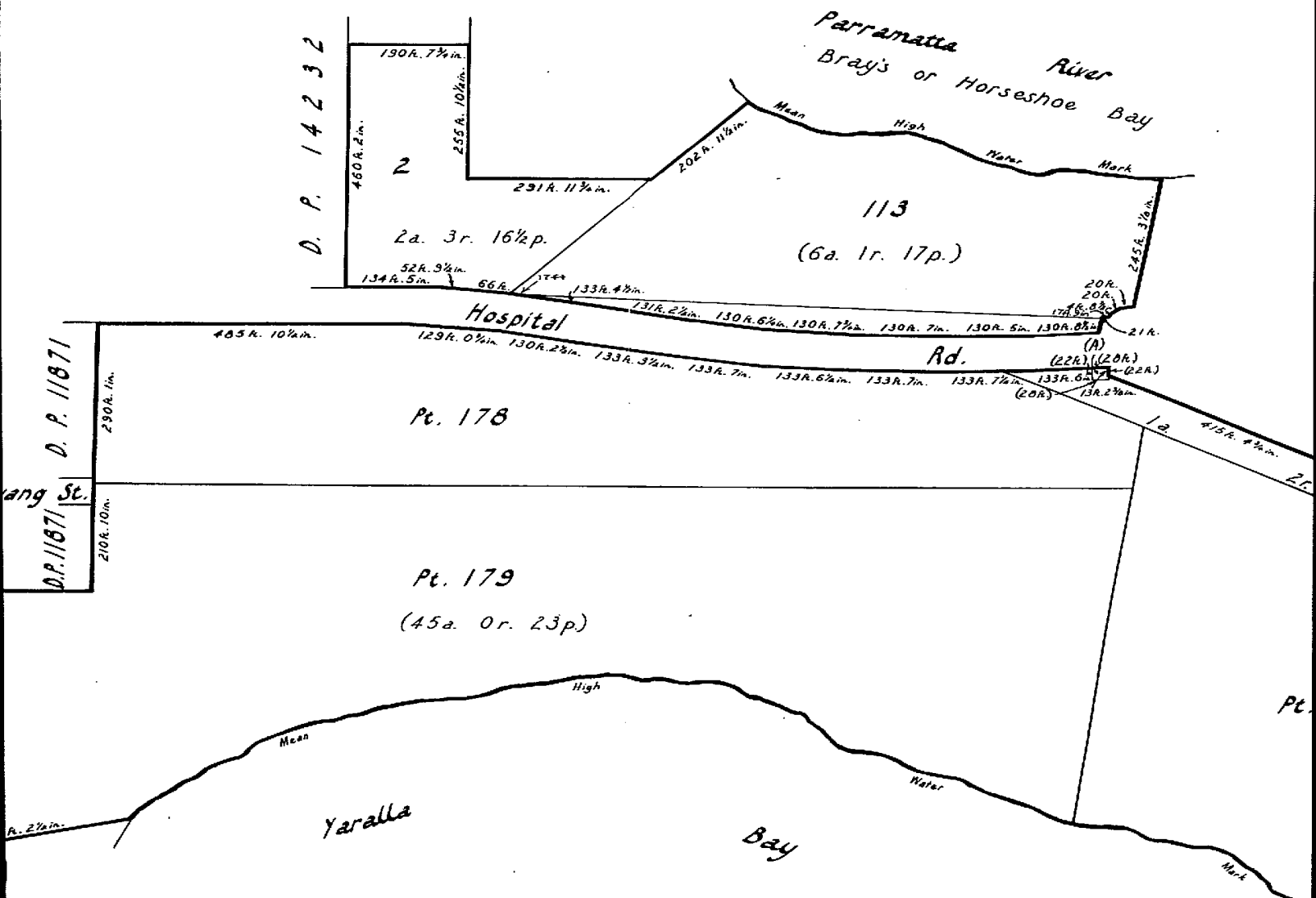
NOTE: ENTRIES RULED THROUGH AND AUTHENTICATED BY SEAL OF THE REGISTRAR GENERAL ARE CANCELLED

PLAN SHOWING



PA. 46826.

PLAN SHOWING LOCATION OF LAND



POR 113 Land adjacent to
 4 Lacey Road (Lot 1)
 WITHIN DESCRIBED IS
 Lot 8 DP 455866, POR 117

1-7-1997
 GP

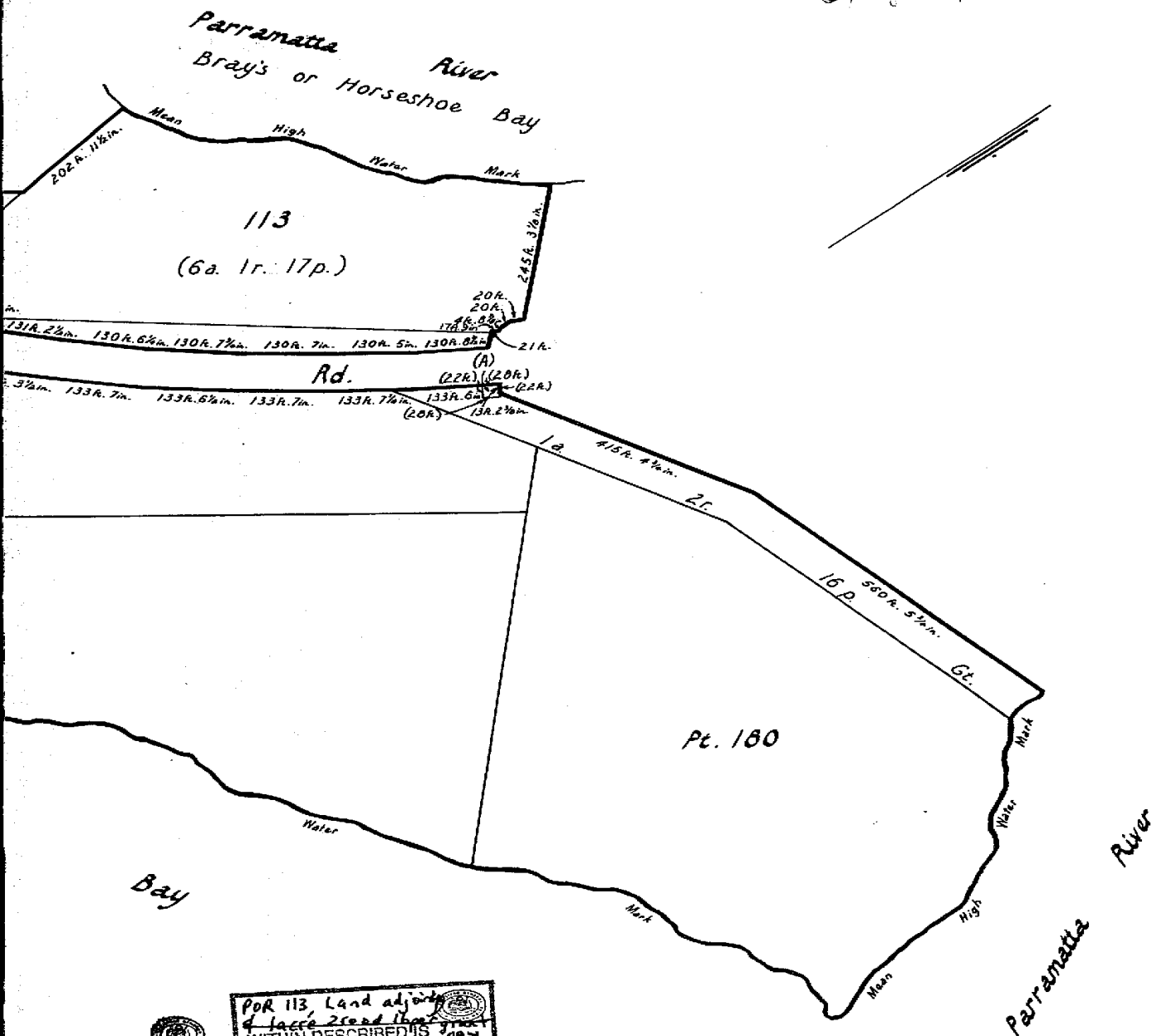
residue of land
 below Hospital Rd.
 WITHIN DESCRIBED IS
 Lot 2 DP 8

Area:

Scale: 200 ft

WD 1000
 PD 11-55866
 2/535 057
 2/89877

LOCATION OF LAND



1962 M 7500



Reg. Gen.
 19-6-1970

17.1997
 GP

POR 113 Land adjoint
 of Lacre 2 road 1100 ft
 WITHIN DESCRIBED IS NOW
 LOT 8 DP 455866 POR 1179

residue of land
 below Hospital Rd
 WITHIN DESCRIBED IS NOW
 LOT 2 DP 89877

Area: 54a. 1r. 14 1/2 p.

Scale: 200 feet to one inch



SEARCH DATE

22/5/2023 12:00PM

FOLIO: 2/89877

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 11281 FOL 183

Recorded	Number	Type of Instrument	C.T. Issue
4/7/1997	DP89877	DEPOSITED PLAN	LOT RECORDED FOLIO NOT CREATED
7/7/1997		AMENDMENT: PARISH-COUNTY	
31/7/1997		CONVERTED TO AUTO CONSOL 11281-183	CONSOL CREATED CT NOT ISSUED
27/3/2001	7408114	DEPARTMENTAL DEALING	
2/12/2010	AF915577	EXCISED FROM AUTO CONSOL 11281-183	
2/12/2010	DP1139098	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***



SEARCH DATE

22/5/2023 12:00PM

FOLIO: 20/1139098

First Title(s): OLD SYSTEM VOL 1782 FOL 109
VOL 5141 FOL 47

Prior Title(s): 2/89877

Recorded	Number	Type of Instrument	C.T. Issue
2/12/2010	DP1139098	DEPOSITED PLAN	FOLIO CREATED EDITION 1
18/3/2015	AJ340193	DEPARTMENTAL DEALING	
23/3/2015	AJ71566	CHANGE OF NAME	
29/2/2016	AJ592039	LEASE	EDITION 2
28/2/2017	AK971351	LEASE	
28/2/2017	AK971352	SUB-LEASE	
28/2/2017	AK971502	MORTGAGE OF LEASE	
28/2/2017	AK971571	CHANGE OF NAME	
28/2/2017	AM6164	DEPARTMENTAL DEALING	
19/9/2022	DP1280788	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***



SEARCH DATE

22/5/2023 12:00PM

FOLIO: 2/1280788

First Title(s): VOL 1782 FOL 109 VOL 5141 FOL 47
OLD SYSTEM

Prior Title(s): 20/1139098

Recorded	Number	Type of Instrument	C.T. Issue
19/9/2022	DP1280788	DEPOSITED PLAN	FOLIO CREATED EDITION 1

*** END OF SEARCH ***



FOLIO: 2/1280788

SEARCH DATE	TIME	EDITION NO	DATE
22/5/2023	11:13 AM	1	19/9/2022

LAND

LOT 2 IN DEPOSITED PLAN 1280788
AT CONCORD WEST
LOCAL GOVERNMENT AREA CANADA BAY
PARISH OF CONCORD COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1280788

FIRST SCHEDULE

HEALTH ADMINISTRATION CORPORATION

SECOND SCHEDULE (10 NOTIFICATIONS)

- 1 EXCEPTING THE LAND BELOW A DEPTH FROM THE SURFACE OF 15.24 METRES BY THE CROWN GRANT WITHIN THE PART(S) SHOWN SO INDICATED IN THE TITLE DIAGRAM
- 2 J408062 EASEMENT FOR DRAINAGE 3.05 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 3 AA407705 LEASE TO ANZAC HEALTH & MEDICAL RESEARCH FOUNDATION OF BUILDING 2, KNOWN AS THE ANZAC FOUNDATION BUILDING. EXPIRES: 1/12/2027.
- 4 AC172175 LEASE TO HUTCHISON 3G AUSTRALIA PTY LIMITED OF PART OF THE ROOFTOP, CONCORD REPATRIATION HOSPITAL, 75 HOSPITAL ROAD, CONCORD WEST SHOWN HATCHED IN PLAN WITH AC172175. COMMENCES: 3/2/2020. EXPIRES: 2/2/2025.
AC381275 LEASE OF LEASE AC172175 TO H3GA PROPERTIES (NO.3) PTY LIMITED COMMENCES 3/2/2020. EXPIRES: 1/2/2025.
- 5 AD14438 LEASE TO AUSGRID (SEE AJ71566) OF SUBSTATION NO. 5417 SHOWN DESIGNATED (P) TOGETHER WITH RIGHT OF WAY & EASEMENT FOR ELECTRICITY WORKS AFFECTING THE PARTS SHOWN DESIGNATED (R) & (E) IN DP1104757. EXPIRES: 30/11/2031. OPTION OF RENEWAL: 25 YEARS.
AK971351 LEASE OF LEASE AD14438 TO BLUE ASSET PARTNER PTY LTD, ERIC ALPHA ASSET CORPORATION 1 PTY LTD, ERIC ALPHA ASSET CORPORATION 2 PTY LTD, ERIC ALPHA ASSET CORPORATION 3 PTY LTD & ERIC ALPHA ASSET CORPORATION 4 PTY LTD EXPIRES: SEE DEALING. CLAUSE 2.3 (b) (ii).
AK971352 LEASE OF LEASE AK971351 TO BLUE OP PARTNER PTY LTD, ERIC ALPHA OPERATOR CORPORATION 1 PTY LTD, ERIC ALPHA OPERATOR CORPORATION 2 PTY LTD, ERIC

END OF PAGE 1 - CONTINUED OVER

FOLIO: 2/1280788

PAGE 2

SECOND SCHEDULE (10 NOTIFICATIONS) (CONTINUED)

- ALPHA OPERATOR CORPORATION 3 PTY LTD & ERIC ALPHA
OPERATOR CORPORATION 4 PTY LTD EXPIRES: SEE
DEALING. CLAUSE 12.1
- AK971502 MORTGAGE OF LEASE AK971351 TO ANZ FIDUCIARY
SERVICES PTY LTD
- AK971571 CHANGE OF NAME AFFECTING LEASE AD14438 LESSEE
NOW ALPHA DISTRIBUTION MINISTERIAL HOLDING
CORPORATION
- 6 AE717083 LEASE TO TELSTRA CORPORATION LIMITED OF WORKS AREA,
CONCORD HOSPITAL BUILDING 75, ENGINEERING HOSPITAL
ROAD, CONCORD WEST SHOWN HATCHED IN PLAN WITH
AE717083. EXPIRES: 12/3/2013. OPTION OF RENEWAL: 5
YEARS WITH A FURTHER OPTION OF 5 YEARS.
- 7 DP1158616 RIGHT OF CARRIAGEWAY VARIABLE WIDTH AFFECTING THE
PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 8 DP1158616 EASEMENT FOR ELECTRICITY AND OTHER PURPOSES 2
METRE(S) WIDE AND VARIABLE WIDTH AFFECTING THE PART(S)
SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 9 DP1158616 EASEMENT FOR ELECTRICITY AND OTHER PURPOSES 3.3
METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED
IN THE TITLE DIAGRAM
- 10 AJ592039 LEASE TO VODAFONE NETWORK PTY LTD OF THE PART SHOWN
HATCHED IN PLAN WITH AJ592039. EXPIRES: 11/9/2020.
OPTION OF RENEWAL: 5 YEARS AND TWO FURTHER OPTIONS OF
5 YEARS.

NOTATIONS

DP1139098 PLAN OF PROPOSED EASEMENT

UNREGISTERED DEALINGS: L AS788012.

*** END OF SEARCH ***

1H Hospital Road, Concord West NSW

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