Douglas PARTNERS

GROUNDED EXPERTISE

Construction Environmental Management Plan

Leichhardt Oval Refurbishment

68 Mary Street, Lilyfield NSW

Prepared for Inner West Council

Project 236743.01

12 November 2025

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Document History

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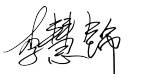
The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

Signature		Date
Author		12 November 2025
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Douglas Partners acknowledges Australia's First Peoples as the Traditional Owners of the Land and Sea on which we operate. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islander peoples across the many communities in which we live, visit and work. We recognise and respect their ongoing cultural and spiritual connection to Country.

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Leichhardt Oval Refurbishment
68 Mary Street, Lilyfield NSW

1. Introduction

Douglas Partners Pty Ltd (Douglas) has prepared this Construction Environmental Management Plan (CEMP) for the proposed Leichhardt Oval Refurbishment project at 68 Mary Street, Lilyfield NSW. The CEMP was commissioned by Joel Giblin of Inner West Council (Council) and was undertaken in accordance with Douglas' proposal 236743.00.P.002.Rev1 dated 13 August 2025.

The proposed development footprint is referred to herein as 'the subject site' or the 'site'. The subject site is part of Leichhardt Park, which is legally identified as Lot 6643 Deposited Plan 1137663. The location and boundary of the subject site and Leichhardt Park is shown on Drawing R.001.D.001, Appendix A.

The proposed development incorporates refurbishment, and upgrade works to Leichhardt Oval (herein after referred as the Oval) including upgrades to the existing Western Grandstand and seating bowl, a new Northern Grandstand.

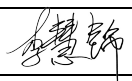
A long-term environmental management plan (CONSARA, 2025) (LTEMP) applies to the subject site and outlines the requirements for management of contamination. The CEMP has been prepared to address the requirements of the LTEMP for 'Major Works', including:

- Mitigation measures to minimise the potential health to on-site workers and neighbours during the proposed works;
- Mitigation measures to minimise the potential environmental impacts during the proposed works, including management of spoil and site water; and
- Requirements to reinstate the Surface Cover in accordance with the LTEMP to facilitate ongoing implementation of the LTEMP following the refurbishment and upgrade works.

It is understood the proposed works are subject to a State Significant Development (SSD-85149458) Application. This report has been prepared to respond to the Secretary's Environmental Assessment Requirements (SEARs) issued for the project on 23 June 2025 for SSD-85149458, specifically for the item listed in Table 1 below.

Table 1: SEARs Declaration

Declaration	
Name	Cathy Li
Professional Qualifications	Environmental Engineer
	The undersigned declares that this CEMP has been prepared to facilitate implementation of the LTEMP (CONSARA, 2025). The LTEMP addresses the

Declaration		
	SEARs requirements issued for the project on 23 June 2025 for SSD-85149458, as described below:	
SEARs item	SEARs Issue and Assessment Requirement	Relevant Section of this Report that addresses SEARs Requirement
17	In accordance with Chapter 4 of SEPP (Resilience and Hazards) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the subject site is suitable (or will be suitable, after remediation) for the development. Documentation required: • Preliminary Site Investigation If required: • Detailed Site Investigation • Remediation Action Plan including Interim Audit advice from an EPA accredited Site Auditor certifying the RAP as appropriate • Preliminary Long-term Environmental Management Plan	The SEARs condition for a Preliminary Long-term Environmental Management Plan is addressed by the LTEMP (CONSARA, 2025). The LTEMP (CONSARA, 2025) includes the requirements for the management of the potential risks to human health associated with the presence and potential presence of contamination in fill materials. Given the pre-existing LTEMP, no preliminary site investigation, detailed site investigation or remediation action plan were prepared for the project. The proposed works are considered to be classified as 'Major Works' in accordance with the requirements of the LTEMP. The LTEMP provides required management to be implemented for Major Works. To facilitate implementation of the LTEMP requirements and support management of contamination for the project the following documents have been prepared: • Report on factual contamination testing (Douglas, 2025a), which includes a review of site history information and provides the results of intrusive sampling and analysis of soil and groundwater for the identified contaminants of potential concern. • CEMP (**this report, in its entirety**) which provides construction phase control measures for contaminated soil and groundwater. • Letter on Suitability (Douglas, 2025b), which discusses the contamination testing results, and provides a statement regarding the suitability of the site for the proposed development, from a contamination perspective.
Signed		
Dated	12 November 2025	

It should be noted that this CEMP does not form a detailed specification for the proposed works at the subject site but rather represents a planning document which outlines the requirements on which the Principal Contractor for the works should base their detailed work plans.

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

2. Regulatory context and requirements

2.1 Context

Doulgas has prepared a letter (reference 236743.01.R.003, dated November 2025) outlining how the Secretary's Environmental Assessment Requirements (SEARs) dated 23 June 2025 issued for the State Significant Development (SSD- 85149458) Application have been addressed. This includes reference to this CEMP.

Douglas has also conducted testing for contaminants at the subject site (report reference 236743.01.R.001, dated November 2025), the results of which have been used to inform the requirements in this CEMP.

This CEMP has been prepared to address the requirements of the LTEMP for 'Major Works'. Information from the LTEMP relevant to this CEMP are outlined in Section 5.1 and included in relevant sections of this CEMP.

2.2 Regulatory requirements

All works are to be conducted in accordance with relevant regulations and guidelines, including:

- NSW Work Health and Safety Act 2011 (WHS Act);
- NSW Work Health and Safety Regulation 2017 (WHS Regulation);
- SafeWork NSW *Code of Practice: How to Manage and Control Asbestos in the Workplace (2022a)*;
- SafeWork *NSW Code of Practice: How to Safely Remove Asbestos (2022b)*;
- National Occupational Health and Safety Commission (NOHSC) *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres, 2nd Edition* [NOHSC:3003(2005)];
- Contaminated Land Management Act 1997 NSW (CLM Act);
- Protection of the Environment Operations Act 1997 NSW (POEO Act);
- NSW *Protection of the Environment Operations (Waste) Regulation* 2014 (the Waste Regulation);
- NSW Environment Protection Authority (EPA) *Waste Classification Guidelines*, November 2014 (EPA, 2014); and
- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999* (as amended 2013) [NEPM] (NEPC, 2013).

3. Site information

3.1 Site identification

Site address	68 Mary Street, Lilyfield NSW
Legal description	Part of the broader land parcel denoted as Lot 6643 Deposited Plan 1137663 (Leichhardt Park)
Area of the subject site	Approximately 2,000 m^2
Zoning	RE1 - Public Recreation
Local Council Area	Inner West Council
Current use	Leichhardt Oval
Surrounding uses (surrounding Leichhardt Oval)	North – Recreational (including Leichhardt Park Aquatic centre), then Iron Cove Bay East – We Help Ourselves (WHOS) health campus including health, educational, short-term residential and recreational uses South – Public roads and residential West – Leichhardt Park carpark, recreational (including Leichhardt Park Aquatic centre), then Iron Cove

The subject site, the Leichhardt Oval Refurbishment Project Site and Leichhardt Park boundaries are shown on Figure 1.

Figure 1: The subject site boundaries (red dash lines), Leichhardt Oval Refurbishment Project Site boundary (green dash line) and Leichhardt Park boundary (orange line)

3.2 **Proposed development**

The following project description was prepared by Planning & CO.

Refurbishment of the existing Leichhardt Oval at 68 Mary Street, Lilyfield to provide new and upgraded spectator and player amenities, broadcasting facilities, improved accessibility and increased number of fixed seating (no change to overall spectator capacity), including:

- *Upgrades to the existing Western Grandstand, including:*
  - *Demolition of the existing spectator and player amenities located on the ground floor, existing seating, broadcast areas, hospitality and coaching facilities on level 2, existing stairs at the front of the grandstand and some facade elements,*
  - *Upgrades to the existing ground floor to provide new player change rooms and facilities, medical facilities, facilities for match officials and coaching staff, spectator amenities, utilities and other 'match day' related facilities,*
  - *Upgrades to and expansion of the mezzanine level within the grandstand to provide a new 'Grandstand Bar', gym, spectator amenities, stairs and storage, as well as the relocation of the existing telecommunications server,*
  - *Upgrades to the existing level 2 to deliver new spectator seating, corporate suites, television and radio broadcasting facilities, spectator amenities and the upgrading of the existing Centurions Lounge corporate area,*
  - *Improved spectator circulation and egress arrangements to meet standards and general upgrades and maintenance to the existing building.*
- *The construction of a new 'Northern Grandstand', including:*
  - *Earthworks and modification of existing retaining wall and embankment,*
  - *A new concourse to provide spectator amenities and food and beverage offerings,*
  - *New spectator seating to level 1 of the grandstand above the concourse,*
  - *The removal of 13 trees to facilitate the new grandstand.*
- *The replacement of existing seating to the lower seating bowl surrounding the playing field to provide greater amenity and improved wheelchair accessibility.*

Based on the planner's information above, construction of the new 'Northern Grandstand' would incorporate earthworks and modification of existing retaining wall and embankment and the removal of 13 trees to facilitate the new grandstand. As such, most of the intrusive site works is expected (at this stage) to occur in the footprint of the new Northern Grandstand. With respect to the groundwork, the works are expected to include:

- Piling into rock, and off-site disposal of the resulting spoil;
- Bulk excavation is not expected but localised / minor excavation / soil disturbance is likely to occur;
- Removing or partially removing the current Surface Cover and replacing with validated fill and hardstand (predominately concrete slab); and
- Dewatering or excavation into the water table is not expected, groundwater seepage may be encountered in the piles or through the fill.

3.3 Environmental setting and summary history information

The following information has been summarised from Douglas (2025a).

Regional / Local Topography	The Oval is situated on the edge of a local crest with the regional topography sloping downwards to west towards Iron Cove (approximately 173 m downgradient to the west of the subject site), and to east towards Rozelle Bay and White Bay. The subject site's topography ranges between 20 m Australian Height Datum (m AHD) in the west, up to 24 m AHD in the Western Grandstand area and 22 m AHD towards the playing field in the centre of Oval. The Oval is elevated above adjacent land to the north, east and west.
Geology	Reference to the Sydney 1:100 000 Geological Series Sheet indicates that the subject site is underlain by Hawkesbury Sandstone of Triassic age, comprising medium to coarse-grained quartz sandstone with minor shale lenses. Hawkesbury Sandstone typically is pale to mid grey in colour, when fresh, and has both massive and cross bedded units with strength properties mainly in the medium to high strength range. The rock is prone to weathering with red brown or brown iron staining common in the upper beds.
Acid sulfate soils	Reference to the 1:25,000 Acid Sulfate Soils (ASS) Risk map indicates that the subject site is within an area mapped as no known occurrence of acid sulfate soils. The nearest mapped 'high probability of occurrence' of ASS is within the sediments of Iron Cove, which is approximately 200 m north and west of the subject site, with an area adjacent to the Cove and approximately 20 m northeast to the subject site mapped as being disturbed terrain of unknown risk. Reference to ASS Map Sheet ASS_004 of the Inner West Local Environmental Plan (LEP) 2022 indicated that the subject site is mapped as Class 5. According to the LEP 2022, for class 5 land, development consent is required for the carrying out of works within 500m of adjacent Class 1, 2, 3 or 4 land that is below 5 m Australian Height Datum and by which the water table is likely to be lowered below 1 m Australian Height Datum on adjacent Class 1, 2, 3 or 4 land. The proposed development is not expected to lower groundwater, and as such does not appear to trigger the LEP 2022 ASS clause. Based on the above and given the subject site 's topography (above 20 m AHD), the absence of bulk excavation or dewatering for the proposed development, and no signs of ASS was observed during field work nor via ASS screening test conducted on a potential ASS sample, further ASS assessment / treatment was assessed not to be warranted.

Surface water / Groundwater	The closest water body is Iron Cove, located approximately 170 m downgradient (west) of the subject site. Surface water runoff from the subject site is expected to follow the general regional topography, flowing to the local stormwater system, or into the unpaved ground. The groundwater is anticipated to follow the regional topography and flow to Iron Cove. the subject site Given the subject site is underlain by Hawkesbury Sandstone, groundwater in the fractured rock beneath the subject site is anticipated to be relatively fresh, as the sandstone itself is a freshwater-deposited fluvial unit with indicators of past freshwater environments. Accordingly, potential beneficial uses could include irrigation, although the future use of the groundwater for these purposes in the vicinity of the subject site is considered unlikely given the urban setting.
Site History	Site history information indicates the subject site has been part of the Leichhardt Oval since 1934. The Oval was gradually established overtime since 1943, with the ground undergoing a series of major changes in the 1970s, including the installation of better lighting and repositioning of the field from north-to-south rather than east-to-west. The subject site has historically been used as part of the Oval ground area, amenities, and open space, driveway, seating bowl area, and part of the Western Grandstand from 2011.

4. Scope of work

The scope of work to achieve the objective is as follows:

- Reviewing the proposed works;
- Reviewing the requirements of the LTEMP;
- Reviewing the findings of the contamination testing to inform the contamination risk(s) at the subject site;
- Define the roles and responsibilities under this CEMP;
- Outline the procedures to mitigate potential human-health and environmental impacts from construction activities;
- Describe the requirements for reinstatement of the Surface Cover; and
- Develop reporting requirements.

5. Information from previous reports

The following reports were refenced in the development of this CEMP:

- CONSARA (2025), '*Long-Term Environmental Management Plan for Parks and Playgrounds, prepared for Inner West Council*. Ref: C191011_LTEMP_29OCT2025, dated 29 October 2025 (CONSARA, 2025).
- Douglas (2025a), '*Factual Report on Contamination Testing, Leichhardt Oval Refurbishment, 68 Mary Street, Lilyfield*'. Ref: 236743.01.R.001,Rev2 dated November 2025 (Douglas, 2025a).

5.1 CONSARA (2025)

The LTEMP sets out the requirements for the management of the potential risks to human health associated with the presence and potential presence of contaminated fill to establish parts of Council's parks, playgrounds and other open spaces / recreation spaces.

The LTEMP states that waste materials generated from industrial activities were historically utilised to fill or reclaim land within the Council area. Some of these materials have been identified to contain a number of types of contaminants. The LTEMP provides the requirements to manage the following identified common contaminants of concern:

- Heavy metals, particularly lead (e.g. from paint, pipes and solder);
- Polycyclic aromatic hydrocarbons (PAH) (e.g. from partial burning of coal and coke);
- Heavy petroleum (e.g. oils, fuels and lubricants); and
- Asbestos-containing materials (ACM) (e.g. from demolition debris such as brick, pipe and glass).

The LTEMP outlines the control measures and procedures to protect the health of users of the parks, playgrounds and other open space / recreational areas including the public and construction / maintenance workers. These include control measures for 'Minor Works' and 'Major Works'. Douglas considers the proposed refurbishment, and upgrade works to be Major Works under the LTEMP.

Specific control measures for the following items outlined in the LTEMP are included in this CEMP, tailored for the proposed refurbishment and upgrade works, along with project specific requirements. This includes information in the below sections:

- Asbestos management: Section 8;
- Handling of contaminated and potentially contaminated materials: Section 9;
- Surface Cover requirements: Section 10;
- Unexpected finds protocol (UFP): Section 11; and
- Reporting of complaints and incidents: Section 13.4.

5.2 Douglas (2025)

Douglas (2025a) incorporated review of site and historical information to assess the potential contaminants of concern to be tested and soil sampling from nine (9) primary boreholes and three (3) additional boreholes for asbestos assessment. Two boreholes, BH2 and BH6a, were converted into landfill gas wells, and screened for landfill gas. Two deep

boreholes, BH102a and BH103, were converted into groundwater wells and sampled for groundwater (and opportunistically screened for landfill gas).

A summary of key findings during field work is outlined in the tables below. The identified contaminants are consistent with the contaminants of potential concern covered in the LTEMP.

Table 2: Summary of Field Work Results

Soil	Fill encountered during the subject site investigation, generally comprises variably compacted material of sandy, silty, and clayey materials containing gravel and cobbles, with frequent inclusions of building rubble (i.e. brick, tile, ceramic, glass, concrete fragments, metal and charcoal). Potential voids were identified around 3 m – 4 m below ground level (bgl) in borehole, BH02, and in two adjacent step-out boreholes. Asbestos containing material (apparent a rope) was recorded between depth of 5.8 m and 6.0 m bgl in borehole, BH06A. The depth of fill varied the subject site in the boreholes and was recorded up to depths of 5.75 m – 8.76 m bgl, underlain by residual clayey sand and Mittagong Formations / Hawkesbury Sandstone. A copy of Douglas (2025) borehole logs is attached in Appendix B.
Groundwater	The standing water levels were measured at 5.54 m bgl [16.54 m AHD] in BH103 and 10.06 m bgl [13.34 m AHD] in BH102a. The groundwater encountered during the investigation was encountered in wells screened to collect water perched in the fill or in the upper horizon of bedrock. The collected water aimed to assess what may be recorded during intrusive construction phase works. The dissolved oxygen levels indicated generally anaerobic conditions. The pH was slightly acidic. The electrical conductivity values are typical of fresh water. Redox potential (Eh) indicates slightly oxidising conditions. The field parameter of the surface water indicated a typical marine water condition with approximately neutral pH. A copy of Douglas (2025) groundwater field sheets is attached in Appendix B.
Landfill Gas	The Bureau of Meteorology (BoM) station recorded air pressure readings of 1024.5 mb at 9am and 1020.2 mb at 3pm on 2 September 2025. Observatory Hill indicated generally falling air pressure throughout the day. The recorded atmospheric pressures during the screening event were consistent at 1022 mb. Measured flowrates were zero for all wells screened. No methane or H_2S were detected. Carbon dioxide (CO_2) up to 4.9% was detected in BH6a. Carbon monoxide (CO) up to 42% was detected in BH103 at the starting of the screening and dropped to 11% at the completion of the screening.

A high-level summary of the analytical results is outlined in the table below. A copy of the summary tables of Douglas (2025) laboratory results is attached in Appendix C.

Table 3: Summary of Analytical Results

Soil	**Construction workers guidance:** Asbestos was identified in seven (7) samples recovered from four (4) boreholes and requires management during construction. **Ongoing recreational Use guidance:** The contamination testing identified the potential for risk to recreational users (when no management implemented) from: Human health guideline exceedances: • Asbestos • Benzo(a)pyrene [B(a)P] TEQ (PAH compounds) Terrestrial ecology guideline exceedances: • Copper • Zinc • PAH • Total recoverable hydrocarbons (TRH) The recorded contaminants are covered by the management requirements in the LTEMP.
Waste Classification	The contamination testing provided the following general advice on potential waste classification: • Fill impacted by asbestos would be classifiable as special waste (asbestos), with respect to asbestos; • Fill with results above the specific contaminant concentration and toxicity characteristic leaching procedure for general solid waste, SCC1 and TCLP1 thresholds, but below the SCC2 and TCLP2 thresholds generally classifies as restricted solid waste with respect to chemical contaminants. However, exemptions apply for some sources of total PAH and B(a)P [1]. The applicability of these to fill at the subject site could be assessed as part of any future waste classification; and • Fill soils with results below the SCC1 and TCLP1 thresholds would generally classify as general solid waste with respect to chemical contaminants.
Groundwater	**Construction workers guidance:** • All analytical results in groundwater samples were below the recreational guideline values[2] used to screen risk to construction workers apart from elevated levels of B(a)P in sample BH103 and its duplicate. **Ongoing recreational Use guidance:** No contamination of concern to future recreational users was identified in groundwater, based on the identified exposure pathways.

[1] (NSW EPA, 2014b);
[2] Recreational guidance value (GV) outlined in NHMRC (2008) was used as a screening level for construction workers.

	Aquatic ecosystem: • Elevated levels of metals (copper, lead and zinc), PAH, perfluorooctane sulfonate (PFOS) and nitrate above the (ANZG, 2018) marine water guidelines (MWG)[3] were recorded in groundwater samples, BH102a and/or BH103. • Detectable levels of OCP, OPP, VOC and TRH above the laboratory's reporting limit were noted in samples BH102a and/or BH103.
Landfill Gas	The contamination testing did not identify the need for mitigation measures for landfill gas. Findings included: • No significant quantities of putrescible materials were recorded in the fill and very low risk was calculated associated with natural soils with low organic content and typical fill. • Methane and surface gas results were below the limit of detection or within the adopted assessment criteria.

6. Identified exposure pathways

Activities which create the potential for exposure to contamination considered to comprise:

Construction phase works:

- Piling.
- Shallow trenching.
- Importation and disposal of soils.
- Groundwater encountered during piling.
- Surface water runoff across contaminated fill.

Long term use:

- Sitting, playing etc on contaminated fill at the ground surface.
- Animals foraging food from contaminated fill where present at the ground surface (noting the majority of the development area is expected to be paved).
- Surface water runoff across contaminated fill.
- Intrusive maintenance work (note exposure via this pathway will be directly managed under the LTEMP and is therefore not discussed further herein).

Note:

- Due to the depth of groundwater, there is not considered to be any potential for exposure to site users to groundwater.

[3] MWG for the protection of slightly to moderately disturbed marine water aquatic ecosystem

- Given that the fill has been on-site for a long period, the proposed works are not considered to change exposure to current soil ecology which is likely to be adapted to the fill conditions. As such remediation of the fill is not considered to be warranted to protected soil ecology. Management of risks to animals foraging food from contaminated fill at the ground surface is, however, considered to be warranted, if any soil is present at the ground surface at the completion of works.
- Potential for contamination from hazardous building materials in existing structures is not covered herein, and is understood to be addressed separately in accordance with regulatory requirements.

The potential exposure pathways between the identified contamination and receptors are summarised in Table 4, along with mitigation measure requirements included in this CEMP.

Table 4: Summary of potential exposure pathways and mitigation measures

Source and CoPC	Receptor	Exposure pathway	Mitigation Measures
Fill impacted by asbestos and B(a)P TEQ (above human heath-based guidelines) and copper, zinc, PAH and TRH (above ecological guidelines)	Construction and maintenance workers	• Ingestion and dermal contact	• WHS Controls (Section 12)
		• Inhalation of dust and/or vapours	• WHS Controls (Section 12)
	Site users	• Ingestion and dermal contact • Inhalation of dust and/or vapours	• Reinstatement of Surface Cover (Section 10)
	Adjacent site users	• Inhalation of dust and/or vapours	• Asbestos and dust management controls (Sections 8 and 13) • Reinstatement of Surface Cover (Section 10)
	Surface water	• Surface water run-off • Discharge of water to stormwater	• Soil and water management controls (Section 9) • Reinstatement of Surface Cover (Section 10)
	Terrestrial ecosystems (foraging animals)	• Inhalation, ingestion and absorption during surface foraging	• Reinstatement of Surface Cover (Section 10) within subject site • Further assessment should excess spoil be managed elsewhere within Leichhardt Park
Groundwater impacted by metals (copper, lead	Construction and maintenance workers	• Ingestion and dermal contact	• WHS Controls (Section 12)

Source and CoPC	Receptor	Exposure pathway	Mitigation Measures
and zinc), PAH, PFOS, and Nitrate	Surface water	• Discharge of water to stormwater	• Water management controls (Section 9.8)

7. Overview of construction phase contamination management

7.1 Overview of required mitigation measures

The following works are required, as outlined in more detail below:

- WHS controls, including for asbestos;
- Spoil management;
- Water management;
- Implementation of an UFP;
- Re-instatement of the Surface Cover;
- Assessment of any identified issues of potential concern by the Environmental Consultant; and
- Documentation of compliance with this CEMP.

7.2 Roles and responsibilities

7.2.1 Principal

The Principal is responsible for the following:

- Overseen the implementation of acceptable control measures during site works;
- Retain the overall responsibility for ensuring this CEMP is appropriately implemented;
- Nominate a representative (the Principal's Representative), who is responsible for overseeing the implementation of this CEMP;
- Provide appropriate information, including this CEMP, to the Principal Contractor to allow them to safely plan the required works; and
- Implement an appropriate communications plan.

7.2.2 Principal Contractor

The Principal Contractor will be the party responsible for the following:

- Daily implementation of this CEMP and fulfillment of the responsibilities of the Principal Contractor as defined by SafeWork NSW. It is noted that the Principal Contractor may appoint appropriately qualified sub-contractors or sub-consultants to assist in fulfilling the requirements of the procedures. The Principal Contractor will appoint a Site Manager;
- Ensure the sub-contractors obtain the relevant approvals as necessary to implement the earthworks including permits for removal of asbestos-containing material, SafeWork NSW notification etc;

- Prepare and/or reviewing any site plans to manage the works appropriately in a timely manner or stages;
- Ensure that all site works and associated activities are undertaken in accordance with this CEMP;
- Maintain all site records related to the implementation of this CEMP including but not limited to:
    - **Tracking** of all movement of soil within the subject site and off-site from cradle to grave;
    - **Transportation record:** comprising a record of all truckloads of soil (including aggregate) entering the subject site, including truck identification (e.g. registration number), date, time, source site, load characteristics (e.g. type of material, i.e. quarried aggregate, etc.), approximate volume, use (e.g. general site raising, service trenches, etc.);
    - **Disposal dockets:** for any soil disposed off-site including transportation records, spoil source, spoil disposal location, receipt provided by the receiving waste facility / site;
    - **Imported materials records: records** for any soil imported onto the subject site, including source site, classification reports, inspection records of soil upon receipt at site and transportation records;
    - Records relating to any **unexpected finds and contingency plans** implemented;
    - **Photographic records** by all subcontractors and consultants of the works undertaken within their purview of responsibilities;
    - **Surveys** pre- and post-installation of the Surface Cover;
    - **Airborne asbestos monitoring** records; and
    - **Interim / final visual and sampling clearances** for any asbestos related works.
- Ensure sufficient information is provided to engage or direct all required parties, including sub-contractors, to implement the requirements of the CEMP other than those that are the direct responsibility of the Principal Contractor;
- Manage the implementation of any recommendation made by those parties in relation to work undertaken in accordance with the CEMP;
- Inform the Council or its nominated representative and, if appropriate, the relevant regulatory authorities of any non-conformances with the procedures and requirements of the CEMP in accordance with the procedures outlined in this document;
- Retain records of any contingency actions;
- On completion of the project, review the CEMP records for completeness and update as necessary; and
- Recommend any modification to general documentation which would further improve the environmental outcomes of this CEMP.

7.2.3 Surveyor

The project surveyor will be a registered surveyor engaged by the Principal Contractor to undertake surveying works as required by this CEMP.

7.2.4 Asbestos Contractor

The Asbestos Contractor will be responsible for undertaking all asbestos work involving any asbestos impacted filling and will hold a Class A licence for the removal of asbestos (issued by SafeWork NSW), on the basis that the asbestos identified at the subject site to date has included both potentially friable and bonded asbestos.

The Asbestos Contractor is also responsible to prepare an asbestos removal control plan to be submitted as part of the SafeWork NSW notification process.

The Asbestos Contractor can be the same entity as the Principal Contractor or a sub-contractor.

7.2.5 Sub-contractors

All sub-contractors will be inducted onto the subject site, informed of their responsibilities in relation to this CEMP and sign their agreement to abide by the CEMP requirements. Where necessary, sub-contractors will also be trained in accordance with the requirements of this document. All sub-contractors must conduct their operations in accordance with the CEMP as well as all applicable regulatory requirements.

7.2.6 Environmental Consultant

The Environmental Consultant will provide advice on implementing the CEMP. The Environmental Consultant will be responsible for:

- Undertake any required assessments where applicable (e.g. waste classification, validation);
- Provide advice and recommendations arising from monitoring and/or inspections, including unexpected finds; and
- Notify their client of results of any assessments, and any observed non-conformances.

7.2.7 Licenced Asbestos Assessor (LAA)

A Licenced Asbestos Assessor will be required to be engaged independently of the Asbestos Contractor to undertake the following:

- Review documentation prepared by the Asbestos Contractor, as required;
- Prepare any WHS plans and advice required by the Principal Contractor;
- Undertake airborne asbestos monitoring;
- Undertake clearance inspections;
- Provide advice and recommendations arising from monitoring and/or inspections; and
- Notify their client of results of any assessments, and any observed non-conformances.

7.2.8 Site workers

All workers on the subject site are responsible for observing the requirements of this CEMP and other management plans. These responsibilities include the following:

- Being inducted on the subject site and advised of the general nature of the environmental issues at the subject site;

- Being aware of the requirements of this plan as relevant to their works;
- Wearing appropriate personal protective equipment (PPE) as required by this plan;
- Only entering restricted areas when permitted; and
- Requesting clarification when unclear of requirements of this or any other plans [e.g. safe work method statements (SWMS)].

7.3 Inductions

The Principal Contractor is responsible for undertaking inductions on the handling and management of contaminated materials (soil, rock, water and waste) on site prior to their site work. Inductions are also to cover relevant responsibilities under this CEMP.

Records of site inductions must be maintained and provided for inspected by the Council or its nominated representative upon request.

7.4 Asbestos management

Contaminated fill containing asbestos (bonded / potentially friable) was identified during the Douglas (2025) investigation. Based on the findings of the investigation, a higher risk of encountering asbestos is noted in the footprint of the proposed Northern Grandstand. However, given the sporadic nature of asbestos contamination in fill and inclusions of building rubble in most of the boreholes encountered during Douglas (2025) investigation, the fill in all proposed work areas should be handled or managed as asbestos-contaminated fill unless cleared of asbestos by the Environmental Consultant or LAA.

The control measures associated with the protection of the intrusive construction / maintenance workers and/or the neighbouring community during site preparation and construction are specified in Section 8.

7.5 Management of cross contamination

The Principal Contractor is to plan and conduct works in a method that minimises the risk of cross contamination of clean materials with contaminated materials. These could include:

- Ordering works to minimise the risk of contact between clean and contaminated materials;
- Segregating works areas to minimise the risk of contact between clean and contaminated materials;
- Use of geofabric / plastic to protect the ground surface and cover stockpiles;
- Diverting clean surface runoff away from excavation / works areas; and
- Collecting potentially contaminated water in a sump / excavation for appropriate management.

Where a risk of cross contamination with clean soils (e.g. soils in or proposed to be used within the Surface Cover) occurs the following is to be implemented:

- Scraping and removal of any potentially impacted soil, and management with other potentially contaminated soil at the subject site; and

- Validation sampling and analysis by the Environmental Consultant to assess the presence of any residual contamination impact, and implementation of any recommendations the Environmental Consultant may make based on the results of the assessment.

8. Asbestos works

All asbestos removal works are to be conducted in accordance with the WHS Act and Regulations and SafeWork NSW requirements.

Overarching guidance on asbestos works is outlined below:

- Given the presence of asbestos in fill materials on site, the Principal Contractor must be either appropriately licenced to undertake asbestos removal works or be able to engage an appropriately licenced asbestos removalist to ensure that any works that require the disturbance and/or handling of fill materials that contain or potentially contain asbestos are completed in accordance with the relevant legislation, regulations and codes of practice.
- Prior to the commencement of any earthworks or ground disturbance works the Principal Contractor or the licenced asbestos removalist shall prepare for implementation an Asbestos Removal Control Plan (ARCP) in accordance with the WHS Regulation 2017 and the SafeWork NSW Code of Practice How to Safely Remove Asbestos, December 2022 and any other relevant and applicable regulations and SafeWork NSW Codes of Practice or guidance documents.
- Douglas (2025) identified the presence of fragments of bonded cement containing asbestos material (ACM), and fibrous asbestos (in the <7 mm fibrous asbestos / asbestos fines (FA/AF) range) present in matted material and as isolated fibres in the fill materials.
- Utilising the above, and information provided in Douglas (2025), the ARCP must provide an assessment on whether the works to be undertaken that involve the disturbance, excavation, transportation, stockpiling and/or placement of materials containing asbestos are deemed to be “non-friable” or “friable” work. This determination should be supported by assessment by a licenced asbestos assessor.
- The ARCP will also provide recommendations on the location and type of works to which the ARCP applies. The ARCP must set out the minimum requirements that the Principal Contractor must meet in undertaking any works that require the disturbance and handling of asbestos containing fill materials including the following:
    - Licensing requirements;
    - Notification to SafeWork NSW requirements;
    - Requirement for preparation of an ARCP;
    - The objectives of the ARCP;
    - The steps to be undertaken in the event that during demolition of any existing structures asbestos containing materials are uncovered in the materials being subject to demolition and removal, including any pipes, pits, trenches, formwork, concrete slabs or similar (noting this may be covered by a separate ARCP, as appropriate);
    - The steps to be undertaken during disturbance or excavation of asbestos containing soils;

- The control measures that must be implemented to prevent release of asbestos fibres and to:
  - Protect the health of users of areas surrounding the work areas, including the users and occupants of the in-use areas of the surrounding Leichhardt Park;
  - Protect the health of workers;
- Health, safety and environmental management controls during excavation, transportation, stockpiling and placement (including compaction) of materials containing asbestos;
- The requirement for the preparation of an appropriately designed asbestos air monitoring program;
- Set out controls for conducting on-site containment of asbestos containing soils within Leichhardt Park in accordance with the LTEMP (also refer to Section 9.4);

- The Principal Contractor is to provide the ARCP to Council for review and acceptance as appropriate prior to commencing any works and will be required to notify the Council of any notifications sent to SafeWork NSW in relation to the asbestos related/removal works.
- The ARCP is to be implemented as required in the WHS Regulation, including during works which require the exposure, disturbance and/or handling of fill materials that contain or potentially contain asbestos. An ARCP will also be required to be implemented in the event that asbestos materials are uncovered during demolition of any existing structures (though this may be a separate ARCP).

9. Soil, rock and water management

9.1 Asbestos management

Refer to Section 8.

9.2 Stockpiling of contaminated material

Contaminated material shall be excavated and stockpiled at a suitably segregated location(s) away from sensitive areas (e.g. water bodies, drainage lines, stormwater pits, etc.) and ongoing excavations, and in a manner that will not cause nuisance to the neighbouring properties.

Soil stockpiles are to be managed as follows:

- In accordance with the LTEMP '*Excavated soils … containing or suspected of containing contamination must not be left unattended. If it is necessary to leave materials unattended, the soils are required to be either placed back int eh excavation and the surface cover reinstated so that exposure to these materials cannot be gained by sit users or must be formed into stockpiles that are covered with plastic /geofabric or similar*'.
- Stockpiles should be placed on exposed fill with similar contaminants issues of concern, or otherwise on an impermeable membrane such as HDPE sheeting should be provided at the surface by the Principal Contractor / Subcontractor prior to stockpiling. HDPE sheeting should be taped at joins, as necessary;
- All stockpiles of contaminated material shall be surrounded by star pickets and marking tape or other suitable material to clearly delineate their boundaries;

- Stockpiles shall be lightly conditioned by sprinkler / water truck or covered by HDPE sheeting or similar cover to prevent dust generation;
- Stockpiles impacted, or potentially impacted, with asbestos must be covered by HDPE sheeting;
- Measures should be taken by the Principal Contractor / Subcontractor to prevent the migration of stockpile materials (i.e. perimeter bunds, hay bales, silt fences, etc.); and
- A record of stockpile locations (stockpile register), dimensions, descriptions, environmental controls, etc. should be maintained by the Principal Contractor.

All movement of soil within the subject site and off-site is to be tracked by the Principal Contractor, from cradle to grave. Copies of tracking records must be provided to the Principal.

9.3 **Stockpiling of clean materials**

Imported material shall be stockpiled at a suitably segregated location(s) away from sensitive areas (e.g. water bodies, drainage lines, stormwater pits, etc.) and ongoing excavations. Soil stockpiles are to be managed as follows:

- Imported material should not be stockpiled on or immediately adjacent to contaminated soil. If this is unavoidable an impermeable membrane such as plastic sheeting should be provided at the surface by the Principal Contractor prior to stockpiling. Plastic sheeting should be taped at joins, as necessary;
- All stockpiles of material shall be surrounded by star pickets and marking tape or other suitable material to clearly delineate their boundaries;
- Stockpiles shall be lightly conditioned by sprinkler or covered by geotextile or similar cover to prevent dust generation; and
- A record of stockpile locations (stockpile register), dimensions, descriptions, environmental controls, etc. should be maintained by the Principal Contractor.

All movement of soil within the subject site is to be tracked by the Principal Contractor, from cradle to grave. Copies of tracking records must be provided to the Principal.

9.4 **On-site management of excess spoil**

The construction works will require excavation of the surface and into the sub-surface of parts of the subject site to achieve the required levels and construct foundations. Excess soils, if generated during the works, should be managed in accordance with the LTEMP. Council's preference is for material retained on-site, with the following requirements to be implemented:

- Assessment / planning as follows:
    - The Principal Contractor is to advise the quantity, type and source of the excess material, along with any relevant available data (eg. contaminant concentrations, geotechnical properties).
    - Council is to identify potential location(s) for the placement of excess material. From a legal perspective the subject site is considered to be part of the larger Leichhardt Park site, and potential locations for re-use or on-site containment are to be within Leichhardt Park.

  - The Environmental Consultant is to assess if the material is suitable for beneficial re-use or placement for on-site containment in accordance with the LTEMP, contaminant risk and regulatory requirements. This assessment is to include assessment of the suitability, from a contamination risk perspective, of the potential placement location(s) for the subject material.
- The Council is to identify the preferred placement location and management requirements based on the above assessment process and provide instruction to the Contractor.
- The Principal Contractor is to manage and relocate the spoil in accordance with Council instructions, this CEMP (including Sections 9.2 and 9.3) and the ARCP.
- Contaminated or potentially contaminated fill materials must be clearly segregated from non-contaminated materials (e.g. hardstand, subgrade, topsoil, or similar).
- For placement of contaminated material for containment under the LTEMP, the following minimum works are required:
  - Implementation of Council's instructions.
  - Upon completion of material placement, the Principal Contractor will survey the placement location. The survey must provide the lateral extent and RLs to the finished surface of the placed materials.
  - The Principal Contractor will then construct a surface covering over the placed material in accordance with the requirements of Table 1 of the LTEMP, and Section 10.1 of this CEMP. The Principal Contractor will survey the top of the surface cover. The survey must provide the lateral extent and RLs to the finished surface covering.
  - The Principal Contractor is to provide a survey drawing overlaying the above two surveys and recording the location and extent of the placed material and the thickness and levels of the surface covering.
  - The Council and Environmental Consultant are to inspect the finished surface covering.
- For beneficial re-use of the material, as a minimum the Principal Contractor will survey the location and extent of placement and prepare a survey drawing. Additional inspections and controls will be implemented as per the Council Instructions.
- Records of the movement will be prepared by the Principal Contractor and submitted to support the CEMP compliance reporting.
- Council will also ensure that the records are kept on the property file in a manner where they are readily accessible when searching for information on the placement location.

9.5 Transport of material off-site and on to site

Transport of contaminated material from the subject site and imported material to the subject site shall be via a clearly delineated haul route(s) and this route shall be used exclusively (where practicable) for entry and egress of vehicles used to transport contaminated / imported materials to or from the subject site. The proposed transport route(s) (to be determined by the Principal Contractor) will be notified to Council and truck dispatch shall be logged and recorded by the Principal Contractor for each load arriving or leaving the subject site. A record of the truck dispatch will be provided to the Principal.

All haulage routes for trucks transporting soil, materials, equipment or machinery to and from the subject site should be selected to meet the following objectives:

- Comply with all road traffic rules;
- Minimise noise, vibration and dust to adjacent premises; and
- Use State roads and minimise use of local roads as far as practicable.

The work will be conducted such that all vehicles:

- Conduct deliveries of soil, materials, equipment or machinery only during the specified hours of works, or as otherwise required to comply with traffic rules and consent conditions. Noting oversized vehicles cannot be driving on local public roads during standard hours;
- Have securely covered loads to prevent any dust or odour emissions during transportation; and
- Exit the subject site in a forward direction.

All loads will be securely covered and may be lightly wetted, if required, to ensure that no materials or dust are dropped or deposited outside or within the subject site. Prior to exiting the subject site each truck should be inspected by Principal Contractor personnel and either noted as clean (wheels and chassis) or swept prior to leaving the subject site.

In addition, measures will be implemented to ensure no contaminated material is spilled onto public roadways or tracked off-site on vehicle wheels. Roadways will be kept clean throughout the works and will be swept, if necessary, to achieve a clean environment.

All movement of soil within the subject site is to be tracked by the Principal Contractor, from cradle to grave. Copies of tracking records must be provided to the Principal.

9.6 Waste disposal

9.6.1 Applicability

Excess materials will, by preference, be retained on-site (subject to the requirements of the LTEMP, refer to Section 9.4). Off-site disposal is only to occur with the prior approval of the Principal's Representative.

The LTEMP requires that '*Where off-site disposal is required ensure all excavated materials (soils and / or waters) are handled, managed and disposed off-site in accordance with NSW EPA (2014) Waste Classification Guideline or equivalent and disposal to a facility licensed by NSW EPA to receive the class of waste material. Waste classification works must be completed by a Contaminated Site Consultant. Records of waste classification and disposal must be maintained and recorded in a material tracking register*.'

9.6.2 Waste classification

Any waste disposed off-site must be initially classified by the Environmental Consultant in accordance with:

- NSW EPA *Waste Classification Guidelines, Part 1: Classifying Waste* (NSW EPA, 2014a);
- NSW EPA *Waste Classification Guidelines, Part 2: Immobilisation of Waste* (NSW EPA, 2014b);
- NSW EPA *Waste Classification Guidelines, Part 4: Acid Sulfate Soils* (NSW EPA, 2014c); and

- NSW EPA *Addendum to the Waste Classification Guidelines (2014) - Part 1: Classifying Waste* (NSW EPA, 2016) [addendum for per- and poly-fluoroalkyl substances (PFAS)].

Samples will be collected from stockpiles / *in situ* fill at various depths to characterise the full depth of the material. The frequency is to be determined by the Environmental Consultant based on the risk of contamination and heterogeneity of the material, and the available previous data.

The Environmental Consultant will provide a waste classification report with the results of the assessment. For stockpiles comprising similar materials and a:

- Volume up to 200 m^3: a recommended minimum frequency of one sample per 25 m^3, with a minimum of three per stockpile (NSW EPA, 2022); or
- Volume greater than 200 m^3: a recommended minimum frequency of one sample per 25 m^3, with a minimum of 12 samples OR a minimum of 10 samples and calculation of the 95% upper confidence limit of the arithmetic mean for all applicable analytes (NSW EPA, 2022). Note that this does not apply to stockpiles impacted, or potentially impacted, by asbestos, and all fill should be either assumed to be asbestos contaminated or otherwise be assessed as potentially asbestos impacted in accordance with NSW EPA (2022) requirements.

It may be possible to classify excavated soil / fill for reuse on another site under a relevant NSW EPA resource recovery order (RRO) so that it can be used on other sites under the requirements of the corresponding NSW EPA resource recovery exemption (RRE). For this option, the frequency of sampling should be in accordance with the relevant RRO and the contaminants to be analysed will be determined by the Environmental Consultant. The Environmental Consult will provide a report confirming the suitability of the spoil for reuse under a RRO, or otherwise.

9.6.3 General requirements

Disposal of waste must be to an appropriately licensed waste facility, as per the POEO Act and Waste Regulation.

The Principal Contractor is to check the Environment Protection Licence (EPL) of any proposed waste facility to confirm that it can legally accept the waste prior to dispatching the waste.

All waste must be tracked by the Principal Contractor from 'cradle to grave'. Copies of all EPL, consignment notes / disposal dockets (or similar) must be maintained by the Principal Contractor and must be provided to the Principal.

9.6.4 Hazardous Waste plan

This plan caters for the storage, treatment and disposal of excavated spoil which fails to meet the criteria for direct disposal to a landfill (i.e. Hazardous Waste). Any suspected Hazardous Waste materials should have the classification confirmed by the Environmental Consultant, including additional sampling and analysis as appropriate, prior to implementing this contingency plan.

Hazardous Waste will be handled as follows:

- Materials of the same spoil category / contamination issue will be carefully excavated and placed as separate stockpiles at demarcated and contained locations. The

categorisation would be conducted based on on-site observations and the contaminant(s) of concern detected;

- Stockpiles of excavated materials will be appropriately bunded with hay bales / sandbags and covered with anchored impermeable plastic sheeting or alternatively placed in an appropriate container e.g. waste skip, with appropriate cover. Materials considered to have the potential to produce contaminated leachate will be stockpiled in an area with an appropriate leachate collection system;
- Sampling and analysis of segregated stockpiles will be conducted to determine the concentrations of the target parameters in the excavated materials (e.g. leachability of the contaminants of concern, treatability studies);
- Should the sampling and testing confirm the Hazardous Waste category, an appropriate treatment / disposal facility is to be identified by the Principal Contractor. It is anticipated that treatment and management of Hazardous Waste would be conducted by a specialised contractor; and
- Disposal consent must be sought from the EPA prior to the removal of Hazardous Waste from the subject site.

9.7 **Imported material**

Any soil, aggregate etc imported for the works must have contaminant concentrations that meet the relevant criteria outlined in Section 14. Imported materials will only be accepted for use within the subject site if:

- It can legally be accepted onto the subject site (e.g. classified as virgin excavated natural material (VENM), accompanied by a report / certificate prepared by a qualified environmental consultant);
- Visual inspection of the imported soil confirms that the soil has no signs of concern and is consistent with those described in the supporting classification documentation;
- Have no aesthetic issues of concern, and
- The materials are validated (by inspection / sampling) by the Environmental Consultant as being suitable for use within the subject site.

The classification report / certificate for all material proposed for import must be reviewed and approved in writing by the Environmental Consultant prior to import. Materials to be imported may need to meet other requirements which are to be assessed by others, as required (e.g. by the geotechnical engineer or landscaper).

If permitted by the development consent and approved by the Site Owner, Principal Contractor and Environmental Consultant, material classified under a NSW EPA RRO may also be accepted, provided the material can be used within the subject site in accordance with the corresponding RRE. This could include excavated natural material (ENM), classified under NSW EPA *Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014, The excavated natural material order 2014* (NSW EPA, 2014d).

Soil, aggregate or landscaping materials to be imported onto the site by the Principal Contractor must be subject to assessment by the Council, in consultation with the Environmental Consultant, to determine whether certification documentation supplied with the materials is deemed to appropriate and/or whether confirmation sampling and analysis is required.

Materials must not be imported until the Environmental Consultant has confirmed that the documentation supplied for the materials is appropriate to demonstrate that the materials meet the criteria set out above and/or whether confirmation sampling and analysis is required.

On approval for importation of materials the Environmental Consultant will advise the Principal Contractor of the requirements for any inspections or any sampling at time of importation.

9.8 Water management

9.8.1 Stormwater

Stormwater must be managed during the works such that potential adverse impacts from surface runoff (e.g. cross contamination, mobilisation of contaminants in soil particles, etc.) are appropriately mitigated. Accordingly, the Principal Contractor will take appropriate measures which may include:

- Construction, where necessary, of stormwater diversion channels, bunding and linear drainage sumps with catch pits in and around the works areas to divert stormwater from the contaminated areas;
- Provision of appropriately located sediment traps including geotextiles; and
- Discharge of excess water in excavations / low points on a regular basis to limit the potential for flooding.

9.8.2 Dewatering of excavations

Any runoff or seepage water accumulated in site excavations that requires removal must initially be sampled and tested for suspended solids, pH and the contaminants of potential concern (CoPC) as identified by the Environmental Consultant (as a minimum: metals, PAH and TRH). The options for management of excavation pump-out water, dependent upon the test results, are for disposal of the water as follows:

- Discharge to stormwater with prior approval from Council. Provided the test results comply with relevant ANZG *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018), or any other compliance requirements stipulated by Council. The Environmental Consultant must consider the most appropriate criteria to be used; or
- Discharge to sewer, as industrial trade wastewater, with prior approval from Sydney Water. This option would require the analysis of a larger list of analytes, and compliance with the Sydney Water acceptance standards; or
- Pumping by a liquid waste contractor for removal of the water off-site, in accordance with regulatory requirements.

In accordance with the LTEMP '*..waters containing or suspected of containing contamination must not be left unattended. If it is necessary to leave materials unattended.... waters that are required to be stored in appropriate containers that can be sealed and secured*'.

10. Reinstatement of Surface Cover

10.1 General requirements

At the completion of works, prior to handing the subject site back to the Principal, all Surface Cover must comply with the minimum requirements in the LTEMP.

In accordance with the LTEMP:

- '***Surface Cover*** *means surface treatments or finishes that cannot be removed readily without the use of tools as follows:*
  - *Unsealed (permeable) - Topsoils or topsoils with grass cover or mulch or wood chips or gravels / stones or similar to a minimum thickness of 50mm;*
  - *Area where trees or shrubs are present.*

OR

  - *Sealed (impermeable):*
    - *A durable surface treatment such as synthetic turf, softfall, plasticised matting or similar that is secured to the underlying surface; OR*
    - *Hardstand surfaces, such as concrete, asphaltic concrete, bitumen, pavers, tiles, stones that cannot be removed by users in the course of expected use of these areas.*'

Prior to commencement of works, the Surface Cover is to be designed in accordance with the definition and more detailed requirements in Section 10.2. This may comprise:

- Pre-existing hardstand surfaces in good condition, with no significance cracking or structural defects;
- New hardstand surfaces constructed in accordance with structural engineering requirements;
- New unsealed Surface Cover that cannot be removed readily without the use of tools and is designed to be durable under the expected use. This must be at least 50 mm thick and must be approved by the Principal. Note retention of existing unsealed Surface Cover as the ongoing Surface Cover may only be conducted if approved by the Environmental Consultant, and will require validation of the thickness and contamination status of the materials within the Surface Cover;
- For underground utilities these may be constructed within a thickened Surface Cover or beneath the Surface Cover, noting the latter will require additional management during maintenance. A marker layer may be placed around the utility trench where it is constructed in a thickened Surface Cover to facilitate future management during maintenance works. The approval of the Principal is required for any utilities constructed below the Surface Cover (ie in contaminated fill); and
- A marker layer may be placed (as an option) below new Surface Cover. The purpose of the marker layer is to clearly delineate the boundary between the Surface Cover and the underlying contaminated fill and facilitate future management. Given marker layer is understood not to be present in other areas of Leichhardt Oval, a marker layer is not compulsory, however the approval of the Principal is required should it not be placed.

The following works are to be conducted to construct / verify the Surface Cover:

- Following completion of excavation, survey (by a registered surveyor) of the top of the contaminated fill to record the reduced level and extent of excavation (the 'pre-construction' survey). The survey is to be accurate to 0.05 m and have survey points at a minimum of 2 m intervals around the edges of the excavation area and one point for every 25 m or part thereof on an approximate grid basis in the central portion of the area [**Hold Point**];
- Placement of the marker layer, if required by the Surface Cover design. If used, the placement of the marker layer is to be verified by inspection by the Environmental Consultant [**Hold Point**];
- Construction of the Surface Cover in accordance with the Surface Cover design, and with reference to the requirements of Section 10.2;
- Survey of the entire subject site, including new and pre-existing Surface Cover in accordance with the above survey requirements as well as clear record of the type of surface finish (e.g. concrete, asphalt, turf, mulch) (the 'post-construction' survey). This survey should aim to collect data at the same locations as the pre-construction to provide robust records of the Surface Cover thickness [**Hold Point**];
- Preparation of drawings by the Surveyor, including individual pre- and post-construction surveys as well as an overlay of the pre- and post- survey data clearly recording the thickness of the new Surface Cover;
- Review by the Environmental Consultant of the survey drawings and documentation for any soil / aggregate used in the Surface Cover;
- Inspection of the final capped surface by the Environmental Consultant [**Hold Point**]; and
- If any non-compliances, or potential non-compliances, are identified by the Environmental Consultant they will advise on the required rectification / further [verification works required, and these are to be implemented by the Principal Contractor.

10.2 **Specific Surface Cover requirements**

The following sections outline generic Surface Cover design requirements based on the requirements of the LTEMP, regulations and good practice for new construction.

A summary of the indicative Surface Cover designs described from top to bottom is outlined in Table 5, below. The detailed design for surface coverings is subject to review by the Council and Environmental Consultant.

Table 5: Summary of Capping Designs

Area	Example Minimum Cap Profile
Hardstand Surface Cover	Top to bottom: • Concrete or asphaltic pavement • Base course: the contamination status of the base course materials is to be approved by the Environmental Consultant, including with reference to the requirements for imported materials given in Section 9.7.
Unsealed Surface Cover	Top to bottom: • Shallow rooted vegetation (e.g. turf) or mulch • Soil / aggregate:

Area	Example Minimum Cap Profile
	○ The contamination status of the soil / aggregate is to be approved by the Environmental Consultant, including with reference to the requirements for imported materials given in Section 9.7. ○ Whilst the minimum required thickness in the LTEMP is 50 mm, this may not be sufficient in all areas to meet the overarching requirement in the LTEMP that cannot be removed readily without the use of tools'. As such the actual thickness must also be sufficient to meet this requirement for the anticipated wear in the subject area. This may vary across difference parts of the subject site. • Marker layer (optional) (see below requirements for marker layers). The need, or otherwise for a marker layer is to be provided by Council as required to support maintenance activities.
Underground utilities	Option 1: • Place below the above Surface Cover Option 2: Top to bottom: • Surface Cover (as above) • Utility embedded in soil / aggregate: ○ The contamination status of the soil / aggregate is to be approved by the Environmental Consultant, including with reference to the requirements for imported materials given in Section 9.7. • Marker layer lining the based and edges of the service trench (optional) (see below requirements for marker layers). The need, or otherwise for a marker layer is to be provided by Council as required to support maintenance activities.

Marker layer, if used, is to meet the following conditions (after WA DoH (2021)):

- Water permeable;
- Orange;
- Rot- proof and chemically inert;
- High tensile strength;
- Overlap adjoining sheets by at least 200 mm or otherwise secured; and
- Product to be approved by the Environmental Consultant prior to use.

The following figures depicts indicative Surface Cover designs for different final ground surfaces.

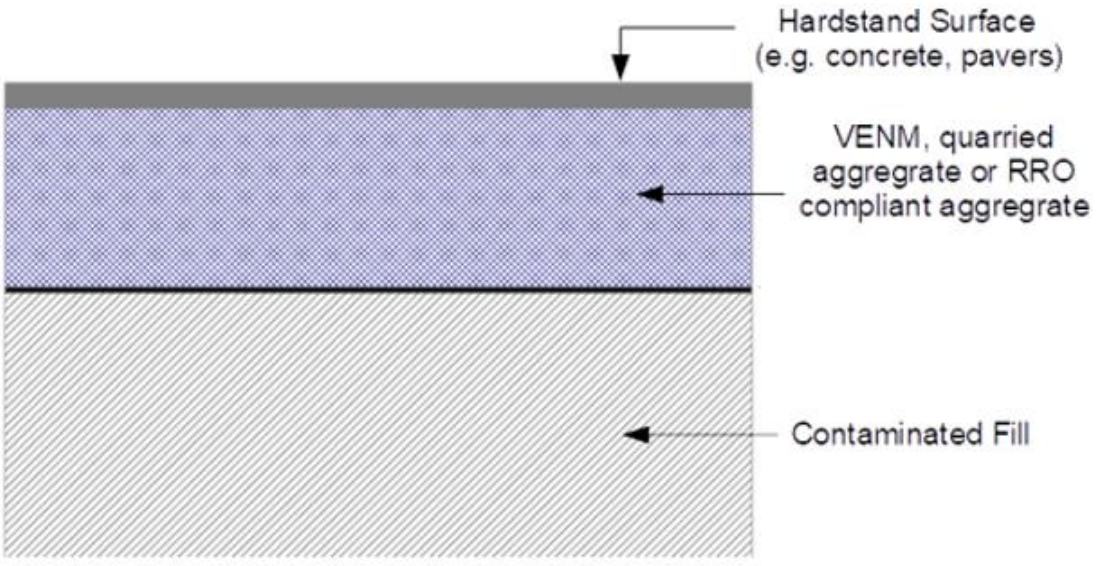


Figure 2: Indicative design for Surface Cover in areas of hardstand

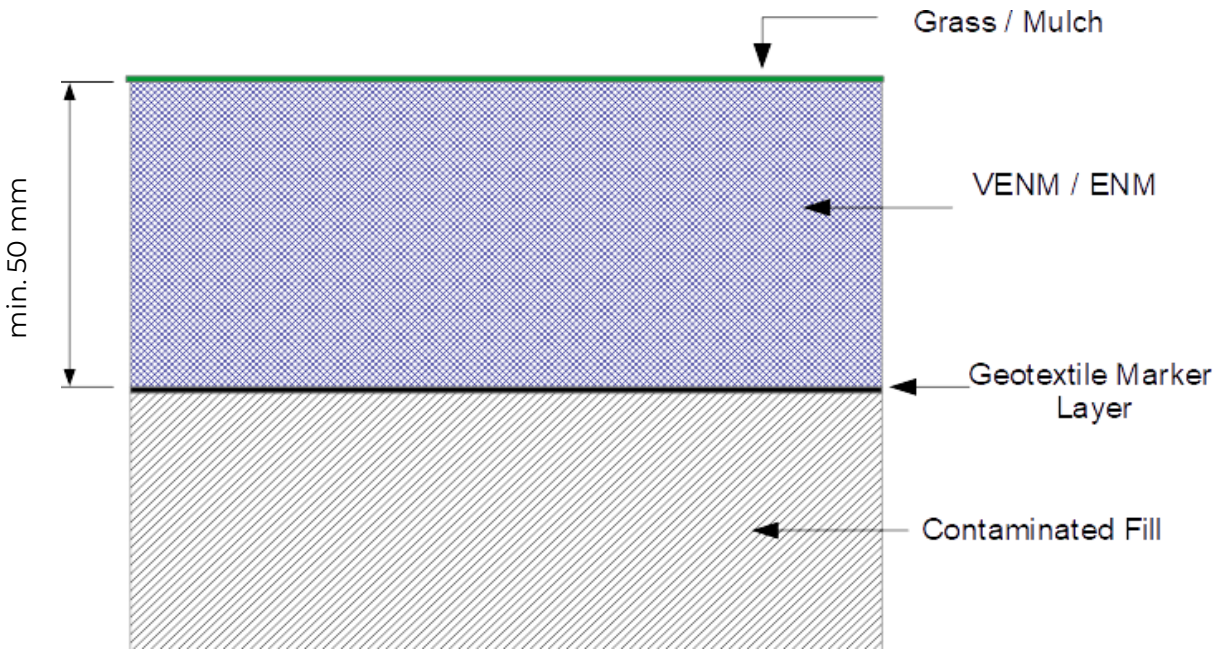


Figure 3: Indicative Surface Cover design for grassed areas (minimum thickness shown). Note: need, or otherwise, for marker layer is to be provided by Council

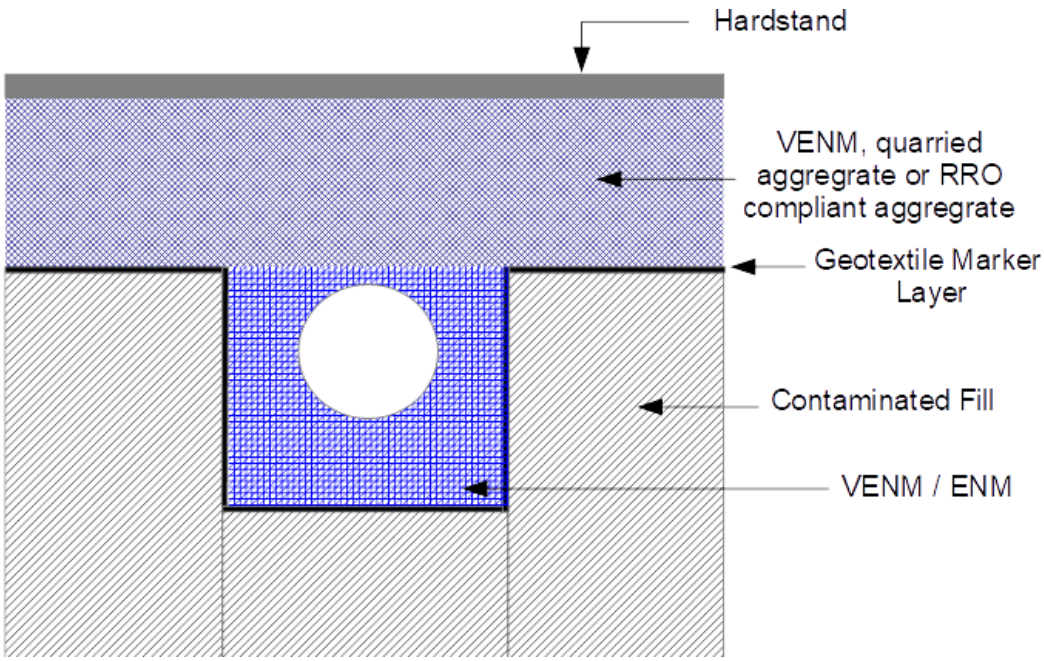


Figure 4: Indicative Surface Cover design for underground utilities. Note: need, or otherwise, for marker layer is to be provided by Council

11. Unexpected finds protocol

All site personnel will be inducted into their responsibilities under the UFP. All site personnel are required to report to the Site Manager if the unplanned for signs of environmental concern are encountered. This could include:

- Petroleum, or other chemical odours;
- Unnatural staining or sheens;
- Buried drums or tanks; and/or
- Chemical spills.

Should signs of concern be observed, the Principal Contractor will, as soon as practical:

- Cease work in the affected area;
- Place barricades around the affected area;
- Notify authorities needed to obtain emergency response for any health or environmental concerns;
- Notify the Council or its nominated representative of the occurrence;
- Notify any of the authorities that the Council or its nominated representative is legally required to notify (e.g. EPA);
- Notify the Environmental Consultant, and engage to undertake an inspection and assessment of the identified issue, and to recommend any required mitigation measures;
- Implementation of the recommended mitigation measures, including validation and documentation of their appropriate implementation, in accordance with the

recommendations of the Environmental Consultant and the requirements of this LTEMP; and

- Once the recommended measures are validated as complete, or if the assessment indicates the find does not present a risk and that no mitigation measures are required, works can recommence in the area.

12. Work health and safety (WHS) plan

12.1 General

The Principal Contractor is responsible to devise a work health and safety plan and implement proper controls that provide a safe workplace. This CEMP does not relieve the Principal Contractor or subcontractors of their ultimate responsibility for work health and safety of their workforce.

This outline work health safety plan has been prepared with refence to CRC CARE *Remediation Action Plan: Implementation - Guideline on Health and Safety* (CRC CARE, 2019). The requirements of this WHSP must be incorporated into the Principal Contractor's work health and safety plan.

All site work must be undertaken in a controlled and safe manner with due regard to potential hazards, training and safe work practices. To attain this plan developed or approved by the Principal Contractor must comply with policies specified in the Work Health and Safety Regulation 2011.

All appropriate permits, licences and notifications required for the activities must be obtained prior to the commencement of works.

12.2 Site access

Appropriate fencing and signage must be installed around and within the subject site to prevent unauthorised access and restrict access to works areas and/or deep excavations. Access restrictions and administrative arrangements for management of entry of workers or related personnel on site is the responsibility of the Principal Contractor.

Any existing pits or unstable areas on site that may generate potential safety, or operational risk should be demarcated and taped off, with appropriate rectification action undertaken (e.g. backfilling of pits).

12.3 Personnel and responsibilities

Before undertaking works on site, all personnel will be made aware of the officer responsible for implementing WHS procedures. All personnel must read and understand this WHSP and relevant SWMS prior to commencing site works and sign a statement to that effect. Principal Contractors employed at the subject site will be responsible for ensuring that their employees are aware of, and comply with, the requirements of this WHS plan and Contractor's SWMS.

12.4 Chemical contamination hazards

Chemical compounds or substances that may be present in the soils at the subject site include the key CoPC metals, PAH and TRH. There is also a lower probability of other contaminants being present.

The risks associated with the identified contaminants to site personnel and workers involved in the works are considered to be low due to the concentrations within groundwater limited exposure durations. These risks are associated with:

- Ingestion of contaminated soil and/or water;
- Dermal contact with contaminated soil and/or water; and
- Inhalation of dusts or vapours of the CoPC.

Personnel will endeavour, wherever possible, to avoid direct contact with potentially contaminated material. This is to include:

- Avoiding contact with soils or waters were practicable (wear gloves);
- No eating, drinking, smoking whilst working;
- Washing hands prior to eating and at any time when they are finishing, or taking a break from, work activities; and
- Washing clothes at the completion of work activities.

Workers must avoid the potential exposures listed above as far as is practicable. Appropriate personal protective equipment (PPE) must be used to mitigate potential risks.

12.5 Asbestos

Refer to Section 8.

12.6 Physical hazards

The following physical hazards are associated with conditions that may be created during works:

- Heat exposure;
- Excavations;
- Buried services;
- Noise;
- Dust;
- Electrical equipment; and
- Heavy equipment and truck operation.

Safe work practices must be employed to manage the physical risks identified above. For the most part these risks can be managed through appropriate demarcation, access controls and the use of appropriate PPE.

12.7 Safe work practices and general PPE

The appropriate safe work practices should be clearly defined by the Principal Contractor in their SWMS. As a minimum, all personnel on site will be required to wear the following PPE:

- Steel-capped boots;
- Long pants and sleeves;
- High visibility clothing / vest;
- Safety glasses or safety goggles with side shields requirements (as necessary);
- Hard hat (as necessary);
- Appropriate respiratory and protective equipment for any works involving asbestos (refer to Section 8;
- Gloves appropriate to the work being undertaken (as necessary); and
- Hearing protection when working in the vicinity of machinery or plant equipment if noise levels exceed exposure standards (as necessary).

Each item of PPE should meet the corresponding relevant Australian Standard(s).

Specific safe work practices will be adopted when working with asbestos, in accordance with (but not limited to) the following codes of practice:

- SafeWork NSW *Code of Practice, How to Manage and Control Asbestos in the Workplace* (SafeWork NSW, 2019a);
- SafeWork *NSW Code of Practice, How to Safely Remove Asbestos* (SafeWork NSW, 2019b);
- WorkCover *NSW Managing Asbestos in or on Soil* (WorkCover NSW, 2014); and
- NOHSC *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Ed* (NOHSC, 2005).

13. General site management

13.1 Site management plan

A general site management plan for issues related to contamination during construction works is outlined below. The plan includes soil, noise, dust, works schedule, hours of operation and incident response. The Principal Contractor is to incorporate these requirements into their overarching management plan to be implemented for the duration of the construction works.

13.2 Site responsibilities

The site management plan for the subject site provides a summary of the general program management and associated responsibilities. Contact details for key utilities are also included in the event of needing to respond to any incidents.

13.3 Schedule and hours of operation

The works will be conducted within the days and hours specified in the development consent.

13.4 Response to incidents

The key to effective management of incidents is the timely action taken before any situation reaches a reportable or critical level. Therefore, surveillance activities are extremely important, and should be conducted for the measures prescribed herein and any other measures prescribed in any additional environmental management plan developed subsequently. During construction activities on the subject site, the following inspection or preventative actions should be performed by the Principal Contractor:

- Regular inspection of works;
- Completion of routine environmental checklists and follow-up of non-compliant situations;
- Maintenance and supervision on-site; and
- An induction process for site personnel involved in the works that includes relevant information on the contamination status of the subject site, the works being undertaken, worker health and environmental protection requirements and ensures that all site personnel are familiar with the site emergency procedures.

An emergency response plan will be in place for all aspects of site works. Any emergency will be reported immediately to the site office and/or the Site Manager (and Safety Officer), and the appropriate emergency assistance should be sought. The Site Manager should be responsible for initiating an immediate emergency response using the resources available on the subject site. Where external assistance is required, the relevant emergency services should be contacted. A table such as that below, containing contact details for key personnel, consent authority and/or utility providers who may be involved in an environmental emergency response should be completed and be made readily available to all site workers.

The Principal Contractor will be responsible for ensuring that site personnel are aware of the emergency services available and the appropriate contact details. A site Safety Officer should be available on site or contactable, during works.

Table 6: Summary of roles and contact details

Role	Personnel / contact	Phone contact details
Principal		
Principal's Representative		
Site Manager		
Contractor and Builder		
Site Office		
Environmental Consultant		
Consent Authority		
Regulator	NSW EPA (pollution line and general enquiries)	131 555
Utility Provider	Water (Sydney Water Corporation)	13 20 92
Utility Provider	Power (Ausgrid)	13 13 88

Utility Provider	Gas (Jemena Limited)	131 909
Utility Provider	Telecommunications (Telstra Corporation Limited)	13 22 03
Utility Provider	Telecommunications (Optus)	1800 505 777
Utility Provider	Telecommunications (NBN Co Limited)	1800 687 626

13.5 **Noise and vibration control plan**

All equipment and machinery should be operated in an efficient manner to minimise the emission of noise. The use of any plant and/or machinery should not cause unacceptable vibrations to nearby properties and should meet Council requirements.

13.6 **Dust control plan**

Dust emissions must be confined within the subject site's boundary as far as is practicable. The following example dust control procedures could be employed to comply with this requirement, as necessary:

- Erection of dust screens around the perimeter of the subject site (as applicable);
- Securely covering all loads entering or exiting the subject site;
- Use of water sprays across the subject site to suppress dust;
- Covering of all stockpiles of contaminated soil remaining on site more than 24 hours;
- Include wheel wash (if applicable); and
- Keeping excavation and stockpile surfaces moist.

Regular checking of the fugitive dust issues is to be undertaken. Remedial measures are to be undertaken to rectify any cases of excessive dust.

13.7 **Odour control plan**

No odours should be detected at any boundary of the subject site during works by an authorised Council Officer relying solely on sense of smell. The following example procedures could be employed to comply with this requirement as necessary:

- Use of appropriate covering techniques such as plastic sheeting, polythene or geotextile membranes to cover excavation faces or stockpiles;
- Fine spray of water and/or hydrocarbon mitigating agent on impacted areas / stockpiles or loads to lightly condition the material;
- If required, restrict uncovered stockpiles to appropriate sizes to minimise odour generation;
- Ceasing works during periods of inclement weather such as high winds or heavy rain;
- Regular checking of the fugitive dust and odour issues to ensure compliance. Undertake immediate remediation measures to rectify any cases of excessive dust or odour (e.g. use of misting sprays or odour masking agent); and
- Adequate maintenance of equipment and machinery to minimise exhaust emissions.

14. Soil and water assessment plan

14.1 Assessment criteria

14.1.1 On-site use

Site assessment criteria (SAC) for soils to be used in or above the Surface Cover are provided in Appendix D, protective of human and ecological health.

14.1.2 Off-site disposal (soils)

Waste classification criteria associated with off-site disposal issued by the NSW EPA (refer to Section16.

14.1.3 Off-site disposal (water)

The assessment criteria for off-site discharge of groundwater / surface water will be based on the method of disposal (i.e. disposal to a liquid waste facility, to stormwater or to sewer). The criteria are to be sourced from or approved by the relevant organisation or authority. As a guide, standard criteria relevant to stormwater disposal are provided in Appendix D.

14.2 Sampling and analysis plan

14.2.1 General

- Field assessment by the Environmental Consultant comprising:
  - Visual inspection, including taking photographs for record purposes;
  - Collecting samples as required to characterise the soils / water being assessed; and
  - Screening samples, were relevant, with a calibrated photoionisation detector (PID) to assess risk of volatile contaminants.
- Laboratory analysis of validation samples at a NATA accredited laboratory for:
  - Contaminants / analytes relevant to the issue being assessed; and
  - Quality control (QC) samples in accordance with Section 14.3.
- Comparison by the Environmental Consultant of the laboratory results with the appropriate assessment criteria (refer to Section 14.1); and
- Issue of written advice / reports suitable for the purpose of the assessment.

14.2.2 Sampling frequencies

The sampling frequency will depend on the volume or area to be assessed and the previous results. The following approximate sampling frequencies will be adopted but may be modified by the Environmental Consultant to take into account previous results, where applicable, and findings from the visual inspections.

Stockpiled site-sourced soils:

- In general, for ex situ (stockpile) waste classification, one sample will be taken per 25 m^3 to 200 m^3 depending on the total volume and homogeneity of the material with a minimum of three samples per stockpile. The following sampling rates, based on the requirements of EPA (2022) will be adopted:

Table 7: Minimum number of samples for ex situ waste classification

Volume (m^3)	Minimum number of samples
<200	One sample per 25 m^3, minimum of three samples.
≥200	A recommended minimum frequency of one sample per 25 m^3, with a minimum of 12 samples OR a minimum of 10 samples and calculation of the 95% upper confidence limit of the arithmetic mean for all applicable analytes (NSW EPA, 2022). Note that this does not apply to stockpiles potentially impacted by asbestos. For stockpiles greater than 200 m^3 which are potentially impacted, the stockpile should either be assumed to be asbestos impacted or otherwise testing for asbestos is to be undertaken in accordance with NSW EPA (2022).

Imported soils:

- Refer to Section 9.7.

Other (if required):

- The sampling frequency to be determined by the Environmental Consultant based on purpose of the sampling and with referenced to published guidance.

14.3 Quality assurance and quality control

Field quality assurance and quality control (QA / QC) testing will include the following:

- 5% sample inter-laboratory analysis, analysed for the same suite as primary sample;
- 5% sample intra-laboratory analysis, analysed for the same suite as primary sample; and
- Trip spike and trip blank samples (analysed for BTEX) (approximately one per batch of samples where volatile contaminants are CoPC)(not required for waste classification).

The laboratory will undertake analysis in accordance with its NATA accreditation, including in-house QA / QC procedures.

The QC analytical results will be assessed using the following criteria:

- Sampling location rationale met the sampling objective;
- Standard operating procedures (SOP) are followed;
- Appropriate QA / QC samples are collected / prepared and analysed;
- Samples are stored under secure, temperature-controlled conditions;
- Chain of custody documentation is employed for the handling, transport and delivery of samples to the selected laboratory;
- Conformance with specified holding times;

- Accuracy of spiked samples within the laboratory's acceptable range (typically 70-130% for inorganic contaminants and greater for some organic contaminants); and
- Field and laboratory duplicate, and replicate samples will have a precision average of +/- 30% relative percentage difference (RPD).

15. CEMP Compliance Reporting

A CEMP compliance report should be prepared following construction. The report is to include:

- Copies or verification of any licences and relevant approvals (e.g. SafeWork notifications) required for the works;
- Details of all excavation works, including location, depths, volumes and extent of excavations to be recorded by the Principal Contractor;
- Documentation for the re-use or containment of excess soils within Leichhardt Park. Council will also ensure that these records are kept on the property file in a manner where they are readily accessible when searching for information on the placement location;
- Transportation Record obtained by the Principal Contractor: comprising a record of all truck-loads of soil (including recycled aggregate) entering the subject site, including truck identification (e.g. registration number), date, time, source site, load characteristics (e.g. type of material, i.e. quarried aggregate, etc.), approximate volume, use (e.g. general site raising, service trenches, etc.);
- Disposal dockets logged by the Principal Contractor: for any soil disposed off-site. The Principal Contractor will supply records of: transportation records, spoil source, spoil disposal location, receipt provided by the receiving waste facility / site. Note: A record of the building materials disposed off-site is also be kept and provided to the Principal, on request;
- Records relating to any unexpected finds and contingency plans implemented provided by the Principal Contractor;
- Photographic records by the Principal Contractor and subcontractors of the works conducted within their purview of responsibilities;
- Airborne asbestos monitoring records prepared by LAA;
- Interim / final visual and sampling clearances for any asbestos related works conducted by LAA;
- Verification records for the re-instatement of the Surface Cover;
- Reports / records prepared by the Environment Consultant (e.g. waste classification report(s), approval of imported materials);
- Laboratory certificates and chain-of-custody documentation provided by the Environmental Consultant; and
- Inspections records from the Environmental Consultant.

16. References

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

ANZG. (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* Canberra, ACT: Australian and New Zealand Governments and Australian state and territory governments.

CONSARA. (2025). *Long-Term Environmental Management Plan for Parks and Playgrounds.* Reference C191011_LTEMP_29OCT2025, October 2025: CONSARA Pty Ltd.

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

CRC CARE. (2019). *Remediation Action Plan: Implementation - Guideline on Health and Safety.* National Remediation Framework: CRC for Contamination Assessment and Remediation of the Environment.

CRC CARE. (2019a). *Remediation Action Plan: Development - Guideline on Establishing Remediation Objectives.* National Remediation Framework: CRC for Contamination Assessment and Remediation of the Environment.

CRC CARE. (2019b). *Remediation Action Plan: Development - Guideline on Performing Remediation Options Assessment.* National Remediation Framework: CRC for Contamination Assessment and Remediation of the Environment.

Douglas. (2025a). *Factual Report on Contamination Testing, Leichhardt Oval Refurbishment, 68 Mary Street, Lilyfield NSW.* Reference 236743.01.R.001.Rev2, November 2025: Douglas Partners Pty Ltd.

Douglas. (2025b). *Letter on Site Suitability Leichhardt Oval Refurbishment 68 Mary Street, Lilyfield NSW.* Reference 236743.01.R.003.Rev2, November 2025: Douglas Partners Pty Ltd.

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

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

NOHSC. (2005). *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Ed.* Canberra, April 2005, NOHSC:3003: National Occupational Health and Safety Commission, Commonwealth of Australia.

NSW EPA. (2014a). *Waste Classification Guidelines, Part 1: Classifying Waste.* NSW Environment Protection Authority.

NSW EPA. (2014b). *Waste Classification Guidelines, Part 2: Immobilisation of Waste.* NSW Environment Protection Authority.

NSW EPA. (2014c). *Waste Classification Guidelines, Part 4: Acid Sulfate Soils.* NSW Environment Protection Authority.

NSW EPA. (2014d). *Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014, The excavated natural material order 2014.* NSW Environment Protection Authority.

NSW EPA. (2016). *Addendum to the Waste Classification Guidelines (2014) - Part 1: Classifying Waste.* NSW Environment Protection Authority.

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

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

NSW EPA. (2022). *Sampling Design, Part 1: Application; Part 2: Interpretation.* NSW Environment Protection Authority.

SafeWork NSW. (2019a). *Code of Practice, How to Manage and Control Asbestos in the Workplace.* August 2019.

SafeWork NSW. (2019b). *Code of Practice, How to Safely Remove Asbestos.* August 2019: SafeWork NSW, NSW Government.

WA DoH. (2021). *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia.* WA Department of Health.

WorkCover NSW. (2014). *Managing Asbestos in or on Soil.* March 2014: WorkCover NSW, NSW Government.

17. **Limitations**

Douglas Partners Pty Ltd (Douglas) has prepared this report for this project at 68 Mary Street, Lilyfield NSW in line with Douglas' proposal dated 13 August 2025 and acceptance received from Joel Giblin of Inner West Council dated 14/08/2025. The work was carried out under Consultancy Agreement (Ref: RFQ 196-25). This report is provided for the exclusive use of Inner West Council for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of Douglas, does so entirely at its own risk and without recourse to Douglas for any loss or damage. In preparing this report Douglas has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions within the subject site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change

abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after Douglas' field testing has been completed.

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

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

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

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

Appendix A

Drawings

About this Report

SITE LOCATION

LEGEND

- Leichhardt Park Boundary
- Leichhardt Oval Refurbishment Project Site Boundary
- Subject Site Boundary

NOTE:
1. Drawing projection in GDA2020 / MGA zone 56, adapted from aerial imagery from MetroMAP dated 16.09.2025

0 30 60 90 m

Douglas PARTNERS

CLIENT: Inner West Council		
OFFICE: SYD	DRAWN BY: CL	
SCALE: 1:3500 @A3	DATE: 12.November.2025	

TITLE: **Subject Site Location Plan**
Leichhardt Oval Refurbishment
68 Mary Street, Lilyfield NSW

PROJECT:	236743.01
DRAWING No:	R.001.D.01
REVISION:	2

SITE LOCATION

LEGEND

- Leichhardt Park Boundary
- Leichhardt Oval Refurbishment Project Site Boundary
- Subject Site Boundary

Test Location Plan

- Geotechnical Borehole
- Contamination Investigation Borehole
- Gas Well
- Geotechnical Borehole / Groundwater Well

NOTE:
1. Drawing projection in GDA2020 / MGA zone 56, adapted from aerial imagery from MetroMAP dated 16.09.2025
2. Test locations are approximate only and were located using differential GPS typically accurate to ± 0.1 m depending on satellite coverage

0 10 20 30 40 50 m

Douglas PARTNERS

CLIENT: Inner West Council		
OFFICE: SYD	DRAWN BY: CL	
SCALE: 1:1300 @A3	DATE: 12.November.2025	

TITLE: **Test Location Plan**
Leichhardt Oval Refurbishment
68 Mary Street, Lilyfield NSW

N

PROJECT:	236743.01
DRAWING No:	R.001.D.02
REVISION:	2

About this Report

November 2023

Introduction

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

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

Copyright

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

Borehole and Test Pit Logs

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

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

Groundwater

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

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

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

Reports

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

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

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

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

continued next page

About this Report

Site Anomalies

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

Information for Contractual Purposes

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

Site Inspection

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

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Appendix B

Douglas (2025) Field Notes

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW 2040

SURFACE LEVEL: 23.0 AHD
COORDINATE: E:329264.0, N:6250936.9
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH01
PROJECT No: 236743.01
DATE: 28/08/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^]	DENSITY.[^] MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
28/08/25 No Free Groundwater Observed Whilst Augering		0.10	ASPHALT; 100mm.		NA		NA				0.10		
		0.15	FILL / SAND: pale red-brown; fine to medium.		FILL				ES		0.15	PID	<1ppm
			FILL / Silty SAND trace gravel: dark brown; fine to coarse sand, fine to coarse, angular to sub-angular, sandstone and igneous gravel.		FILL		D		* ES		0.20	PID	<1ppm
											0.40		
		0.70	FILL / CLAY trace sand trace gravel: brown; low to medium plasticity; fine to medium sand; fine to coarse, angular to sub-angular, sandstone and igneous gravel.						ES		0.70	PID	<1ppm
	22	1				ND					0.90		
					FILL		w<PL				1		
									ES		1.30	PID	<1ppm
											1.50		
									ES		1.80	PID	<1ppm
	21	2									2.00		
			Borehole discontinued at 2.00m depth. Target depth reached.										

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Geoprobe
METHOD: AD/T (100 mm) to 2m
REMARKS: Duplicate sample *BD2/20250828 taken at 0.20-0.40m. Coordinate extracted from a geo-reference aerial

OPERATOR: Stratacore (M.Grima)

LOGGED: S. A. Ferguson
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW 2040

SURFACE LEVEL: 22.7 AHD
COORDINATE: E:329254.2, N:6250922.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH02
PROJECT No: 236743.01
DATE: 28/08/25
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	TESTING AND REMARKS: RESULTS AND REMARKS	BACKFILL / WELL PIPE
28/08/25 No Free Groundwater Observed Whilst Augering	22.7	0.05	ASPHALTIC; 50mm.						ES	0.10	0.10	PID	<1ppm	Concrete
	22.6	0.10	FILL / Gravelly SAND: dark grey; fine to coarse; fine to medium, angular to sub-angular, igneous gravel.		FILL		D		ES	0.20	0.20	PID	<1ppm	
	22	0.70	FILL / Silty SAND trace gravel: dark brown; fine to coarse sand, fine to coarse, sub-rounded to sub-angular, igneous gravel.						ES	0.40	0.40			Bentonite
	21.3	1	FILL / CLAY trace sand trace gravel: brown; low to medium plasticity; fine to medium sand; fine to coarse, angular to sub-angular, igneous and sandstone gravel.						ES	0.70	0.70	PID	<1ppm	
										0.90	0.90			
	20.7	2							ES	1.80	1.80	PID	<1ppm	Sand
										2.00	2.00			
	19.7	3	3.00m-4.00m: Building rubble (Sheet metal and metal wire); no soil return on auger; potential voids		FILL	ND	ND		ES	2.80	2.80	PID	<1ppm	
										3.00	3.00			
	18.7	4	Soil present after 4m, but no soil return on auger								4			Backfill
	17.7	5									5			
	16.7	6	Borehole discontinued at 5.70m depth. Refusal on possible bedrock.											
	15.7	7												
	14.7	8												
	13.7	9												

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Geoprobe
METHOD: AD/T (100 mm) to 5.7m
REMARKS:

OPERATOR: Stratacore (M.Grima)

LOGGED: S. A. Ferguson
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW 2040

SURFACE LEVEL: 23.0 AHD
COORDINATE: E:329258.0, N:6250917.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH03
PROJECT No: 236743.01
DATE: 28/08/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
28/08/25 No Free Groundwater Observed Whilst Augering		0.05	ASPHALTIC; 50mm.		NA		NA				0.05		
			FILL / Gravelly SAND: dark grey; fine to coarse sand; fine to coarse, angular to sub-angular, igneous gravel.		FILL				ES		0.15	PID	<1ppm
		0.20	FILL / Silty SAND trace gravel: dark brown; fine to coarse sand, fine to medium, sub-rounded to sub-angular, sandstone and igneous gravel.		FILL		D		ES		0.20	PID	<1ppm
											0.40		
		0.80	FILL / CLAY trace sand trace gravel: brown; low to medium plasticity; fine to medium sand; fine to medium, sub-rounded to sub-angular, sandstone and igneous gravel.		FILL	ND	w<PL		ES		0.80	PID	<1ppm
	22	1									1.00		
									ES		1.30	PID	<1ppm
											1.50		
									ES		1.80	PID	<1ppm
	21	2									2.00		
			Borehole discontinued at 2.00m depth. Target depth reached.										

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Geoprobe
METHOD: AD/T (100 mm) to 2m
REMARKS:

OPERATOR: Stratacore (M.Grima)

LOGGED: S. A. Ferguson
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW 2040

SURFACE LEVEL: 22.5 AHD
COORDINATE: E:329297.1, N:6250812.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH04
PROJECT No: 236743.01
DATE: 28/08/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] / DENSITY.[*]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
28/08/25 No Free Groundwater Observed Whilst Augering	22	ASPHALT; 80mm.		NA		NA				0.10		
	0.08	FILL / Gravelly SAND: dark grey; fine to coarse sand, fine to medium, angular to sub-angular, igneous gravel.		FILL		D		ES		0.20	PID	<1ppm
	0.20	FILL / Gravelly CLAY: brown mottled grey; low to medium plasticity; fine to coarse, angular to sub-angular, igneous and sandstone gravel; and cobbles; trace fine to coarse sand; trace brick fragments and charcoal.		FILL	ND	w=PL		ES		0.40	PID	<1ppm
	0.60	FILL / Clayey SAND trace gravel: dark grey; fine to coarse; low plasticity clay; fine to medium, angular to sub-angular, igneous and sandstone gravel.		FILL		D		ES		0.60	PID	<1ppm
		Borehole discontinued at 0.70m depth. Hand auger refusal in fill.								0.70		
	1											
	21											
	2											
	20											

NOTES: [#] Soil origin is "probable" unless otherwise stated. [*] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand Tools
METHOD: HA (100mm) to 0.7m
REMARKS:

OPERATOR: (S. A. Ferguson)

LOGGED: S. A. Ferguson
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW 2040

SURFACE LEVEL: 21.0 AHD
COORDINATE: E:329351.2, N:6250934.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH05
PROJECT No: 236743.01
DATE: 26/08/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
26/08/25 No Free Groundwater Observed Whilst Augering		CONCRETE; 300mm.		NA		NA						
	0.30	FILL / Gravelly SAND: pale brown-grey; fine to coarse sand, fine to coarse, sub-angular to sub-rounded, sandstone gravel and cobbles.		FILL	ND	D		ES		0.30 0.50 0.60	PID	<1ppm
								ES		0.80	PID	<1ppm
		Borehole discontinued at 0.80m depth. Hand auger refusal in fill.										
	20 1											
	19 2											

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand Tools
METHOD: HA (100mm) to 0.8m
REMARKS:

OPERATOR: (S. A. Ferguson)

LOGGED: S. A. Ferguson
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW 2040

SURFACE LEVEL: 24.4 AHD
COORDINATE: E:329347.0, N:6250946.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH06
PROJECT No: 236743.01
DATE: 26/08/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^] / DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
26/08/25 No Free Groundwater Observed Whilst Augering	24	FILL / Sandy CLAY trace gravel: dark brown; low to medium plasticity; fine to medium sand; fine to coarse, angular to sub-angular, sandstone and igneous gravel; trace brick and metal fragments and rootlets.		FILL	ND	w=PL		* ES		0.20	PID	<1ppm
	0.40	FILL / Sandy CLAY trace gravel: brown mottled pale brown and grey; low to medium plasticity; medium to coarse sand; fine to medium, angular to sub-angular, sandstone gravel; trace brick fragments and charcoal.		FILL				ES		0.40 0.60	PID	<1ppm
	1	Borehole discontinued at 0.70m depth. Hand auger refusal in fill (possible building rubble) .										
	23											
	2											
	22											

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand Tools
METHOD: HA (100mm) to 0.7m
REMARKS: Duplicate sample *BD1/20250826 taken at 0-0.20m

OPERATOR: (S. A. Ferguson)

LOGGED: S. A. Ferguson
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

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Douglas PARTNERS

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW 2040

SURFACE LEVEL: 23.1 AHD
COORDINATE: E:329338.3, N:6250943.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH06A
PROJECT No: 236743.01
DATE: 28/08/25
SHEET: 1 of 1

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
28/08/25 No Free Groundwater Observed Whilst Augering	23	0.12	CONCRETE; 200mm.		NA		NA							Concrete	
		0.40	FILL / SAND: pale brown; medium to coarse; trace shell fragments.		FILL		M		* ES		0.20 0.30	PID	<1ppm		
			FILL / Sandy CLAY trace gravel: brown to pale brown; low to medium plasticity; fine to coarse sand; fine to coarse, angular to sub-angular, sandstone gravel; and cobbles.		FILL		w=PL		ES		0.40 0.50	PID	<1ppm		
	22	1.10	FILL / Silty SAND trace gravel: dark brown; fine to medium; fine, angular to sub-angular, sandstone gravel; trace plastic, glass and ceramic tile.						ES		0.90 1.00	PID	<1ppm	Bentonite	
			1.80m-2.00m: Trace clay						ES		1.10 1.30	PID	<1ppm		
	21	2							ES		1.80 2.00	PID	<1ppm		
	20	3				ND			ES		2.80 3.00	PID	<1ppm	Sand	
					FILL		D								
	19	4							ES		3.80 4.00	PID	<1ppm		
	18	5	4.80m-5.00m: Trace fine to coarse, angular to sub-angular, igneous gravel; 2mm diameter steel rod; trace ash and charcoal						ES		4.80 5.00	PID	<1ppm		
			5.80m-6.00m: With asbestos rope						ES		5.80 6.00	PID	<1ppm		
	17	6	Borehole discontinued at 6.00m depth. Target depth reached.												
	16	7													
	15	8													
	14	9													

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Geoprobe
METHOD: DT (150mm) to 0.12m, then AD/T (100mm) to 6m
REMARKS: Duplicate sample *BD1/20250828 taken at 0.20-0.30m

OPERATOR: Stratacore (M.Grima)

LOGGED: S. A. Ferguson
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW 2040

SURFACE LEVEL: 23.2 AHD
COORDINATE: E:329365.5, N:6250933.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101
PROJECT No: 236743.01
DATE: 26/08/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] / DENSITY.[*]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	23	FILL / Sandy CLAY trace gravel: dark brown; low to medium plasticity; fine to coarse sand, fine to coarse, angular to sub-angular, sandstone gravel, trace brick fragments, ceramic tile, plastic and rootlets.		FILL	ND	w=PL						
		Borehole discontinued at 0.30m depth. Target depth reached.										
	1											
	22											
	2											
	21											

NOTES: [#] Soil origin is "probable" unless otherwise stated. [*] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand Auger
METHOD: HA (100mm) to 0.3m
REMARKS:

OPERATOR: (S. A. Ferguson)

LOGGED: S. A. Ferguson
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW 2040

SURFACE LEVEL: 23.4 AHD
COORDINATE: E:329319.1, N:6250950.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102
PROJECT No: 236743.01
DATE: 26/08/25
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[^]	DENSITY.[^]	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	0.20	FILL / Sandy CLAY trace gravel: dark brown; low to medium plasticity; fine to coarse sand, fine to coarse, angular to sub-angular, sandstone gravel, trace brick fragments and rootlets.		FILL	ND		ND						
	23	FILL / Clayey SAND trace gravel: pale brown; fine to coarse sand, fine to medium, angular to sub-angular, sandstone gravel, trace brick fragments and rootlets.		FILL									
		Borehole discontinued at 0.30m depth. Target depth reached.											
	1												
	22												
	2												
	21												

NOTES: [#] Soil origin is "probable" unless otherwise stated. [^] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand Auger
METHOD: HA (100mm) to 0.3m
REMARKS:

OPERATOR: (S. A. Ferguson)

LOGGED: S. A. Ferguson
CASING: Uncased

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Soil Log

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 23.2 AHD
COORDINATE: E:329320.3, N:6250947.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101a
PROJECT No: 236743.00
DATE: 26/08/25
SHEET: 1 of 3

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] / DENSITY.[*]	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	RESULTS AND REMARKS
	23	0.12	CONCRETE; 120 mm.		NA	NA	NA		ES	0.12–0.20	0.12		
			FILL / SAND with gravel trace silt: dark brown; fine to coarse; fine to coarse, sub-rounded to sub-angular, igneous, sandstone and ironstone gravel.		FILL	ND	M		ES	0.50–0.70	0.20		
									ES	0.90–1.00	0.50		
	22	1.00	FILL / Sandy CLAY: orange-brown and red; low to medium plasticity; fine to coarse sand.		FILL	VC	w<PL		SPT	1.00–1.45	0.70	SPT	4,6,4 N=10
		1.30	FILL / Silty SAND with clay trace gravel: grey; fine to coarse; low plasticity silt; fine to medium, sub-angular, sandstone, ironstone and igneous gravel.								0.90		
											1.00		
											1.45		
									ES	1.70–2.30	1.70		
	21	2			FILL		W				2		
											2.30		
									SPT	2.50–2.95	2.50	SPT	9,13,10 N=23
			From 3.00m: concrete fragments								2.95		
		3					M		ES	3.20–3.90	3.20		
	20	3.50	FILL / SAND with gravel: pale yellow and dark grey-brown; fine to coarse; sub-rounded to sub-angular, igneous, ironstone and sandstone gravel.		FILL	PC	M				3.90		
									ES	3.90–4.00	4.00		
		4							SPT	4.00–4.45	4.45	SPT	6,4,3 N=7
	19	5.00	FILL / Silty SAND with gravel: brown and grey; fine to coarse; coarse gravel; ironstone, sandstone, igneous, tile, glass, ceramic, and concrete rubble.								5		
									ES	5.20–5.50	5.20		
	18								SPT	5.50–5.95	5.50	SPT	6,2,4 N=6
		6									5.95		
	17				FILL						6.50		
									ES	6.50–7.00	7.00		
	16	7							SPT	7.00–7.45	7.45	SPT	10,12,7 N=19
											8		
	15	8									8.20		
		8.20	FILL / Clayey SAND with gravel: dark brown and pale grey; fine to coarse; medium plasticity clay; fine to coarse, sandstone, igneous and ironstone gravel; glass and ceramic tile fragments.		FILL		W		ES	8.20–8.50	8.50		
▼ 26/08/25		8.60							D/SPT	8.50–8.60	8.60	SPT	6/100 R
	14	9	Continued as rock log								9		

NOTES: [#] Soil origin is "probable" unless otherwise stated. [*] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Massenza M12
OPERATOR: Stratacore (M. Grima)
LOGGED: C. Lambert-Bridges
METHOD: DT (260mm) to 0.12m, then AD/T (127mm) to 8.6m, then NMLC to 14.17m
CASING: HQ to 8.6m
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Split Soil-Rock Log

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 23.2 AHD
COORDINATE: E:329320.3, N:6250947.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101a
PROJECT No: 236743.00
DATE: 26/08/25
SHEET: 2 of 3

CONDITIONS ENCOUNTERED														SAMPLE				TESTING			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA (SOIL STRENGTH (where encountered) / SOIL MOISTURE)	GRAPHIC	WEATH. (PS, XW, DW, HW, MW, SW, FR)	DEPTH (m)	STRENGTH (VL, L, M, H, VH, EH)	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
▼ 26/08/25	14	9.00	Continued from soil log SANDSTONE: red- orange-pale grey, medium to coarse grained, 0 to 20°, thinly bedded to medium bedded; indistinctly and distinctly bedded. Hawkesbury Sandstone.	MW	MW	8.60 9.00	M	88	85		9.20m: B, 20°, PR, VNR Clay, RF 9.27m: EW, 20mm 9.44m: B, 0°, PR, SN Fe, He 9.90m: B, 20°, PR, SN Fe, RF				9	PLT	PL(A)=0.58MPa		

NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Massenza M12
OPERATOR: Stratacore (M. Grima)
LOGGED: C. Lambert-Bridges
METHOD: DT (260mm) to 0.12m, then AD/T (127mm) to 8.6m, then NMLC to 14.17m
CASING: HQ to 8.6m
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 23.2 AHD
COORDINATE: E:329320.3, N:6250947.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101a
PROJECT No: 236743.00
DATE: 26/08/25
SHEET: 3 of 3

CONDITIONS ENCOUNTERED														SAMPLE				TESTING			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA (SOIL STRENGTH (where encountered) / SOIL MOISTURE)	GRAPHIC	WEATH. (PS, XW, DW [HW, MW], SW, FR)	DEPTH (m)	STRENGTH (VL, L, M, H, VH, EH)	RECOVERY (%)	RQD	FRACTURE SPACING (m) (0.03, 0.06, 0.20, 0.60, 2.00)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
	13	10.00									9.90m: B, 20°, PR, SN Fe, RF				10	PLT	PL(A)=0.64MPa		
											10.36m: B, 20°, PR, CN, RF					PLT	PL(A)=0.53MPa		
	11							88	85						11	PLT	PL(A)=0.46MPa		
	12				MW						11.22m: B, 10°, PR, CT Clay, RF 11.29m: JT, 70°, PR, CT Clay, RF 11.35m: B, 20°, PR, CN, RF								
											11.88m: B, 20°, PR, CN, RF								
	11		12.30m-12.47m: Pale grey, indistinctly bedded, trace carbonaceous laminations and siltstone flecks				M								12	PLT	PL(A)=1.4MPa		
											12.23m: B, 0°, PR, CN, RF 12.25m: B, 0°, PR, CN, RF 12.30m: B, 0°, PR, CT Clay 10mm 12.47m: EW, Clay 30mm 12.64m: B, 20°, PR, CN, RF					PLT	PL(A)=0.29MPa		
	10	13	From 13.10m: Pale grey, indistinctly bedded, frequent siltstone flecks					100	94						13	PLT	PL(A)=0.73MPa		
																PLT	PL(A)=0.87MPa		
					FR	13.30													
	9	14	Borehole discontinued at 14.17m depth. Target Depth Reached.												14	PLT	PL(A)=0.65MPa		
	8	15																	
	7	16																	
	6	17																	
	5	18																	
	4	19																	

NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Massenza M12
OPERATOR: Stratacore (M. Grima)
LOGGED: C. Lambert-Bridges
METHOD: DT (260mm) to 0.12m, then AD/T (127mm) to 8.6m, then NMLC to 14.17m
CASING: HQ to 8.6m
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Split Soil-Rock Log

CORE PHOTO LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 23.2 AHD
COORDINATE: E:329320.3, N:6250947.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH101a
PROJECT No: 236743.00
DATE: 26/08/25
SHEET: 1 of 1

8.60-12.00 m depth

12.00-14.17 m depth

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 23.4 AHD
COORDINATE: E:329364.7, N:6250930.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102a
PROJECT No: 236743.00
DATE: 26/08/25
SHEET: 1 of 3

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN[#]	CONSIS.[*] DENSITY.[*]	MOISTURE	REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING AND REMARKS: TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
		0.10	CONCRETE; 100 mm.		NA	NA	NA				0.10				
	23		FILL / Silty SAND trace gravel: brown-grey; fine to coarse; fine, sandstone gravel.				W		ES		0.30				
									ES		0.50				
											0.70			Bentonite	
	1				FILL						1.00				
									SPT		1.45	SPT	5,4,3 N=7		
	22						M								
		2.00	FILL / Sandy CLAY trace gravel: pale grey, red, brown; low to medium plasticity; fine to coarse sand; fine, sandstone gravel.						ES		2.00				
	21				FILL						2.20				
									SPT		2.50	SPT	6,5,4 N=9		
		3.00	FILL / Gravelly SAND trace silt: dark brown; fine to medium; fine to medium, sub-angular to sub-rounded, sandstone and ironstone gravel; ceramic tile fragments.						ES		2.95				
	20					PC					3.20				
									ES		3.90				
	4										4.00				
									SPT		4.45	SPT	2,2,2 N=4		
	19				FILL									Backfill	
			From 5.00m: fragments of glass and concrete rubble				D		ES		5.00				
	5										5.20				
									SPT		5.50	SPT	4,5,5 N=10		
	18										5.95				
	6														
		6.50	FILL / SAND trace clay trace gravel: brown; fine to medium; fine to medium, sub-angular, igneous and sandstone gravel.						ES		6.50				
	17				FILL						7.00				
	7								SPT		7.45	SPT	5,4,2 N=6		
		7.50	Clayey SAND (SC): pale grey; fine to coarse; low to medium plasticity clay.						ES						
	16				RS possibly XWM	(MD)	M				8.00				
									ES					Sand	
▼ 26/08/25	15										8.50				
		8.70	Continued as rock log			VD	W		SPT			SPT	9,7/100 (HB)		
	9										9				
	14													Sand	

NOTES: [#] Soil origin is "probable" unless otherwise stated. [*] Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Massenza M12
OPERATOR: Stratacore (M. Grima)
LOGGED: C. Lambert-Bridges
METHOD: DT (260mm) to 0.1m, then AD/T (127mm) to 8.7m, then NMLC to 14.2m
CASING: HQ to 8.7m
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

Generated with CORE-GS by Geroc - Split Soil-Rock Log

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 23.4 AHD
COORDINATE: E:329364.7, N:6250930.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102a
PROJECT No: 236743.00
DATE: 26/08/25
SHEET: 2 of 3

CONDITIONS ENCOUNTERED														SAMPLE				TESTING			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA (SOIL STRENGTH (where encountered) / SOIL MOISTURE)	GRAPHIC	WEATH. (PS, XW, DW [HW, MW], SW, FR)	DEPTH (m)	STRENGTH (VL, L, M, H, VH, EH)	RECOVERY (%)	RQD	FRACTURE SPACING (m) (0.03, 0.06, 0.20, 0.60, 2.00)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
26/08/25	23	0																		Bentonite	
	22	1																			
	21	2																			
	20	3																			
	19	4																			
	18	5																			
	17	6																			
	16	7																		Sand	
	15	8																			
	14	9	Continued from soil log SANDSTONE: See next page.			9.06		90	95		9.61m: B, 20°, IR, INF CBS, Ti 9.99m: B x2, 20°, PR,				8.75	PLT	PL(A)=0.71MPa PL(A)=0.48MPa		Sand	

NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Massenza M12
OPERATOR: Stratacore (M. Grima)
LOGGED: C. Lambert-Bridges
METHOD: DT (260mm) to 0.1m, then AD/T (127mm) to 8.7m, then NMLC to 14.2m
CASING: HQ to 8.7m
REMARKS:

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 23.4 AHD
COORDINATE: E:329364.7, N:6250930.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102a
PROJECT No: 236743.00
DATE: 26/08/25
SHEET: 3 of 3

CONDITIONS ENCOUNTERED															SAMPLE				TESTING			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA (SOIL STRENGTH (where encountered), SOIL MOISTURE)	GRAPHIC	WEATH. (PS, XW, DW, HW, MW, SW, FR)	DEPTH (m)	STRENGTH (VL, L, M, H, VH, EH)	RECOVERY (%)	RQD	FRACTURE SPACING (m) (0.03, 0.06, 0.20, 0.60, 2.00)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
	13		SANDSTONE: pale grey, pale orange, pale red, coarse grained, 0 to 20°, thinly bedded to medium bedded, 1-5% carbonaceous laminations, fine siltstone and lithic clasts; distinctly bedded. Hawkesbury Sandstone.		MW		M	90	95		VNR Clay, RF 10.26m: B, 20°, PR, CN, RF 10.88m: B, 0°, PR, CT Clay 2mm, RF				11	PLT	PL(A)=0.29MPa		
	12	11				11.20 11.30	SEAM			SEAM	11.15m: B, 0°, PR, CN, RF 11.20-11.30m: EW, Clay 100mm					PLT	PL(A)=0.70MPa		
	11	12	From 11.90m: indistinct bedding, pale grey, frequent siltstone flecks			11.90					11.58m: B, 20°, UN, SN Fe, RF 11.59m: B, 20°, UN, SN Fe, RF 11.66m: B x2, 0°, UN, SN Fe, RF 11.82m: B, 0°, UN, SN Fe, RF 11.84m: B, 0°, UN, CN, RF				12	PLT	PL(A)=0.28MPa		
	10	13			FR		L to M	100	100						13	PLT	PL(A)=0.56MPa	Sar	
	9	14	Borehole discontinued at 14.20m depth. Target Depth Reached.												14	PLT	PL(A)=0.29MPa		
	8	15														PLT	PL(A)=0.53MPa		
	7	16																	
	6	17																	
	5	18																	
	4	19																	

NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Massenza M12
OPERATOR: Stratacore (M. Grima)
LOGGED: C. Lambert-Bridges
METHOD: DT (260mm) to 0.1m, then AD/T (127mm) to 8.7m, then NMLC to 14.2m
CASING: HQ to 8.7m
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

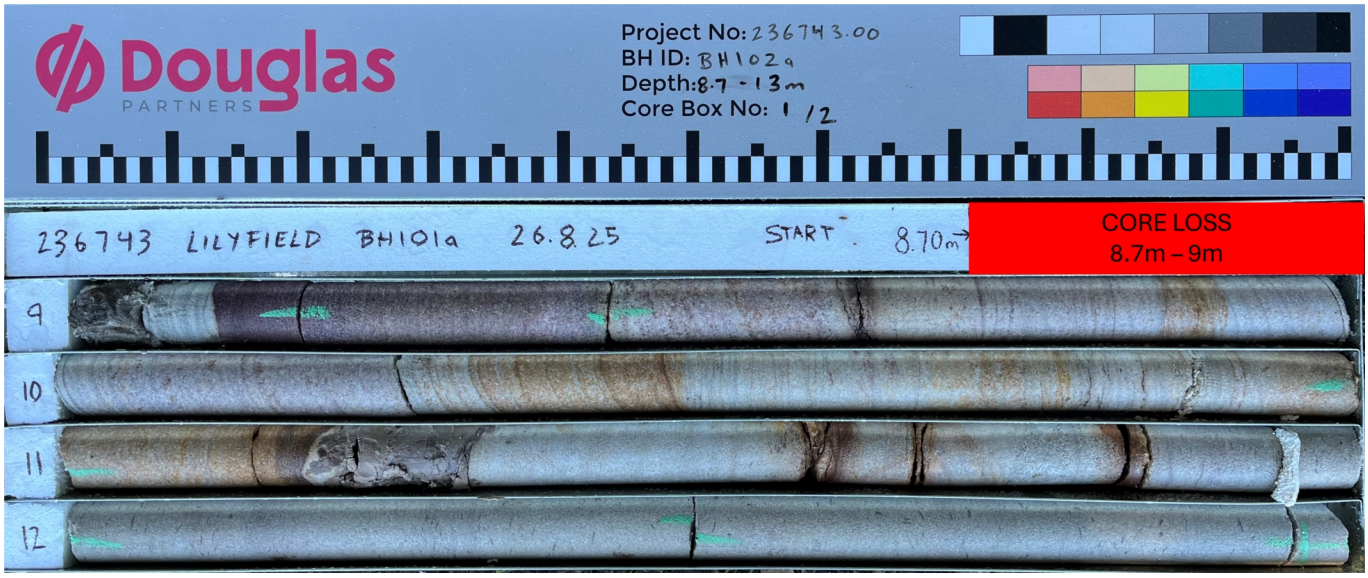
Generated with CORE-GS by Geroc - Split Soil-Rock Log

CORE PHOTO LOG

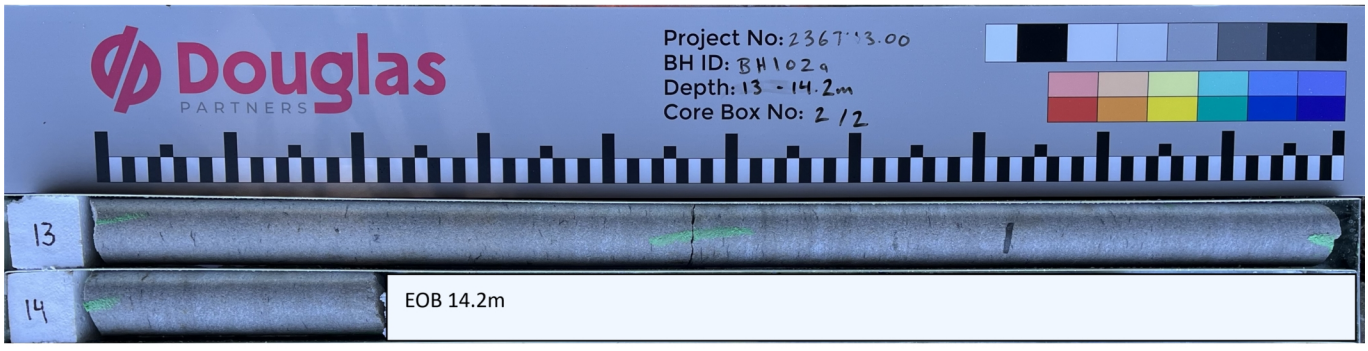
CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 23.4 AHD
COORDINATE: E:329364.7, N:6250930.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH102a
PROJECT No: 236743.00
DATE: 26/08/25
SHEET: 1 of 1



8.70-13.00 m depth



13.00-14.20 m depth

Generated with CORE-GS by Geroc - Split Soil-Rock Log

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 26.2 AHD
COORDINATE: E:329243.4, N:6250881.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 236743.00
DATE: 27/08/25
SHEET: 1 of 3

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
27/08/25 No Free Groundwater Observed While Augering	26	0.07	ASPHALT; 70mm.				NA		ES		0.12				
			FILL / Clayey SAND trace gravel: brown; fine to coarse; low plasticity clay; fine to medium, sub-angular to sub-rounded, sandstone gravel.		FILL	ND			ES		0.50 0.70				
	25	1							ES SPT		1.00 1.20 1.45	SPT	10,12,12 N=24		
		1.50	FILL / Clayey SAND with gravel: dark brown; fine to coarse; low plasticity clay; fine to medium, igneous, ironstone and sandstone gravel; ceramic tile fragments.						ES		1.90 2.20			Bentonite	
	24	2							SPT		2.50 2.95	SPT	5,11,7 N=18		
	23	3	From 3.50m: Red-brown		FILL	VC	D		ES		3.50				
	22	4							SPT		4.00 4.45	SPT	8,5,6 N=11		
	21	5.00	Clayey SAND (SC): pale brown-red; medium to coarse; low plasticity clay.		RS	(VD)			D SPT		5.00 5.50 5.63	SPT	5/130 (HB)	Sand	
		5.75	Continued as rock log												
	20	6									6				
	19	7									7				
	18	8									8			Bentonite	
	17	9									9				

NOTES: (#) Soil origin is "probable" unless otherwise stated. (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Massenza M12
OPERATOR: Stratacore (M. Grima)
LOGGED: C. Lambert-Bridges
METHOD: DT (260mm) to 0.07m, then AD/T(127mm) to 5.75m, then NMLC to 11.86m
CASING: HQ to 5.75m
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

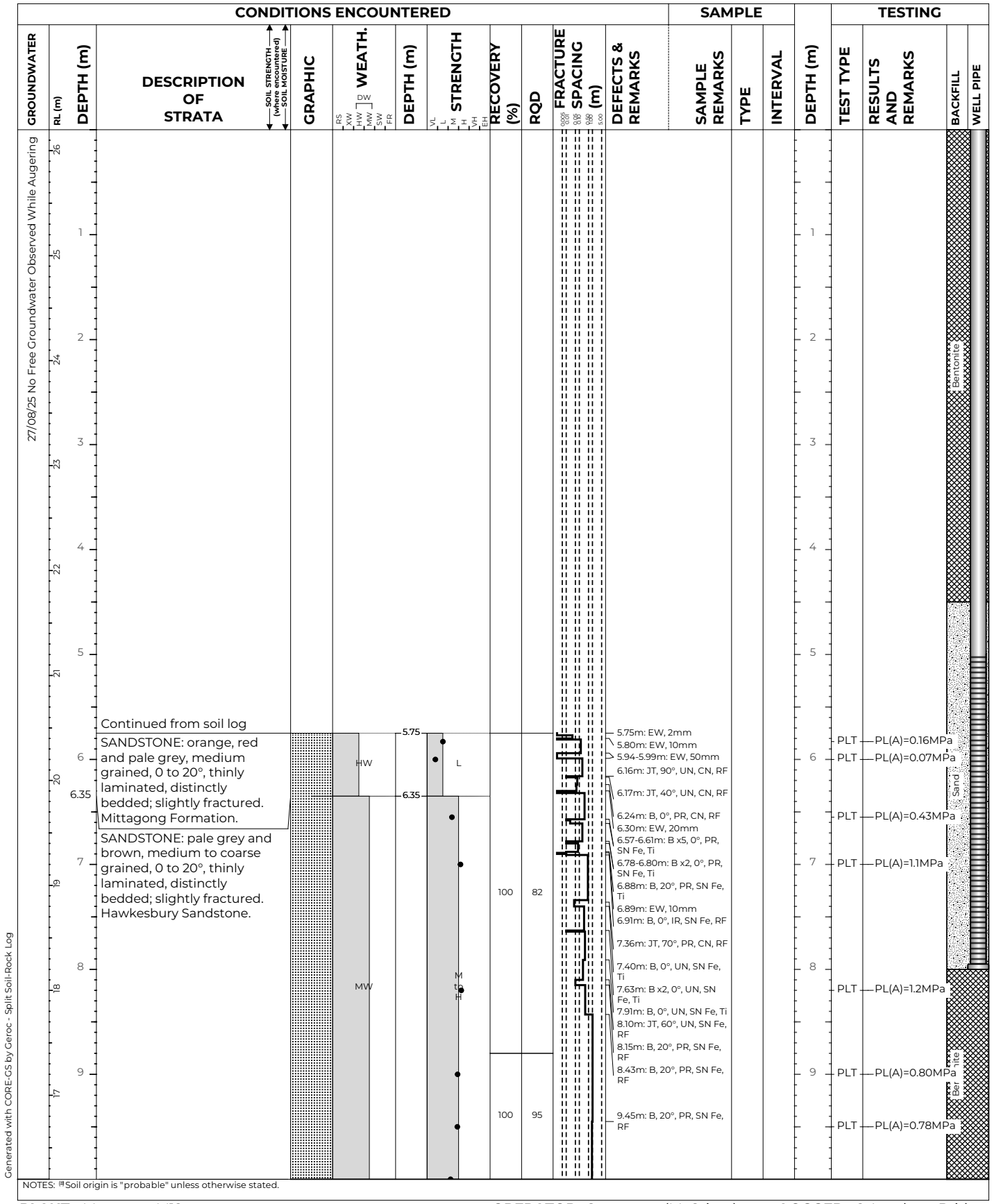
Generated with CORE-GS by Geroc - Split Soil-Rock Log

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 26.2 AHD
COORDINATE: E:329243.4, N:6250881.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 236743.00
DATE: 27/08/25
SHEET: 2 of 3



NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Massenza M12
OPERATOR: Stratacore (M. Grima)
LOGGED: C. Lambert-Bridges
METHOD: DT (260mm) to 0.07m, then AD/T(127mm) to 5.75m, then NMLC to 11.86m
CASING: HQ to 5.75m
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

BOREHOLE LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 26.2 AHD
COORDINATE: E:329243.4, N:6250881.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 236743.00
DATE: 27/08/25
SHEET: 3 of 3

CONDITIONS ENCOUNTERED														SAMPLE				TESTING			
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA (SOIL STRENGTH (where encountered) / SOIL MOISTURE)	GRAPHIC	WEATH. (PS, XW, DW, HW, MW, SW, FR)	DEPTH (m)	STRENGTH (VL, L, M, H, VH, EH)	RECOVERY (%)	RQD	FRACTURE SPACING (m) (<0.06, 0.06-0.2, 0.2-0.6, 0.6-2, >2)	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS	BACKFILL	WELL PIPE
	16		[CONT] SANDSTONE: pale grey and brown, medium to coarse grained, 0 to 20°, thinly laminated, distinctly bedded; slightly fractured. Hawkesbury Sandstone.		MW		M to H	100	95		10.37m: B, 0°, PR, SN Fe, RF 10.46m: B, 0-20°, PR, SN Fe, RF 10.53m: EW, SN Fe 10mm				11	PLT	PL(A)=0.37MPa	Bentonite	
	15	11	11.50m-11.54m: Grey siltstone band								11.07m: B, 0°, PR, CN, RF 11.20m: B, 0°, PR, CN, RF					PLT	PL(A)=0.43MPa		
	14	12	Borehole discontinued at 11.86m depth. Target Depth Reached.								11.54m: B, 20°, PR, CN, RF 11.55m: B, 20°, PR, CT Clay, RF 11.83m: B, 20°, PR, CN, RF					PLT	PL(A)=1.7MPa		
	13															PLT	PL(A)=1.6MPa		
	12	14																	
	11	15																	
	10	16																	
	9	17																	
	8	18																	
	7	19																	

NOTES: [a] Soil origin is "probable" unless otherwise stated.

PLANT: Massenza M12
OPERATOR: Stratacore (M. Grima)
LOGGED: C. Lambert-Bridges
METHOD: DT (260mm) to 0.07m, then AD/T(127mm) to 5.75m, then NMLC to 11.86m
CASING: HQ to 5.75m
REMARKS:

Refer to explanatory notes for symbol and abbreviation definitions

Douglas PARTNERS

Generated with CORE-GS by Geroc - Split Soil-Rock Log

CORE PHOTO LOG

CLIENT: Inner West Council
PROJECT: Leichhardt Oval Refurbishment
LOCATION: 68 Mary Street, Lilyfield, NSW

SURFACE LEVEL: 26.2 AHD
COORDINATE: E:329243.4, N:6250881.0
DATUM/GRID: MGA2020 Zone 56
DIP/AZIMUTH: 90°/---°

LOCATION ID: BH103
PROJECT No: 236743.00
DATE: 27/08/25
SHEET: 1 of 1

5.75-11.86 m depth

Generated with CORE-GS by Geroc - Split Soil-Rock Log

Douglas PARTNERS

Terminology, Symbols and Abbreviations

November 2023

Introduction to Terminology, Symbols and Abbreviations

Douglas Partners' reports, investigation logs, and other correspondence may use terminology which has quantitative or qualitative connotations. To remove ambiguity or uncertainty surrounding the use of such terms, the following sets of notes pages may be attached Douglas Partners' reports, depending on the work performed and conditions encountered:

- Soil Descriptions;
- Rock Descriptions; and
- Sampling, insitu testing, and drilling methodologies

In addition to these pages, the following notes generally apply to most documents.

Abbreviation Codes

Site conditions may also be presented in a number of different formats, such as investigation logs, field mapping, or as a written summary. In some of these formats textual or symbolic terminology may be presented using textual abbreviation codes or graphic symbols, and, where commonly used, these are listed alongside the terminology definition. For ease of identification in these note pages, textual codes are presented in these notes in the following style XW. Code usage conforms with the following guidelines:

- Textual codes are case insensitive, although herein they are generally presented in upper case; and
- Textual codes are contextual (i.e. the same or similar combinations of characters may be used in different contexts with different meanings (for example `PL` is used for plastic limit in the context of soil moisture condition, as well as in `PL(A)` for point load test result in the testing results column)).

Data Integrity Codes

Subsurface investigation data recorded by Douglas Partners is generally managed in a highly structured database environment, where records "span" between a top and bottom depth interval. Depth interval "gaps" between records are considered to introduce ambiguity, and, where appropriate, our practice guidelines may require contiguous data sets. Recording meaningful data is not always appropriate (for example assigning a "strength" to a concrete pavement) and the following codes may be used to maintain contiguity in such circumstances.

Term	Description	Abbreviation Code
Core loss	No core recovery	KL
Unknown	Information was not available to allow classification of the property. For example, when auguring in loose, saturated sand auger cuttings may not be returned.	UK
No data	Information required to allow classification of the property was not available. For example if drilling is commenced from the base of a hole predrilled by others	ND
Not Applicable	Derivation of the properties not appropriate or beyond the scope of the investigation. For example providing a description of the strength of a concrete pavement	NA

Graphic Symbols

Douglas Partners' logs contain a "graphic" column which provides a pictorial representation of the basic composition of the material. The symbols used are directly representing the material name stated in the adjacent "Description of Strata" column, and as such no specific graphic symbology legend has been provided in these notes.

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Soil Descriptions

Terminology
Symbols
Abbreviations

March 2024

Introduction

All materials which are not considered to be "in-situ rock" are described in general accordance with the soil description model of AS 1726-2017 Part 6.1.3, and can be broken down into the following description structure:

The "classification" comprises a two character "group symbol" providing a general summary of dominant soil characteristics. The "name" summarises the particle sizes within the soil which most influence its behaviour. The detailed description presents more information about composition, condition, structure, and origin of the soil.

Classification, naming and description of soils require the relative proportion of particles of different sizes within the whole soil mixture to be considered.

Particle size designation and Behaviour Model

Solid particles within a soil are differentiated on the basis of size.

The engineering behaviour properties of a soil can subsequently be modelled to be either "fine grained" (also known as "cohesive" behaviour) or "coarse grained" ("non cohesive" behaviour), depending on the relative proportion of fine or coarse fractions in the soil mixture.

Particle Size Designation	Particle Size (mm)	Behaviour Model	
		Behaviour	Approximate Dry Mass
Boulder	>200	Excluded from particle behaviour model as "oversize"	
Cobble	63 - 200		
Gravel[1]	2.36 - 63	Coarse	>65%
Sand[1]	0.075 - 2.36		
Silt	0.002 - 0.075	Fine	>35%
Clay	<0.002		

[1] – refer grain size subdivision descriptions below

The behaviour model boundaries defined above are not precise, and the material behaviour should be assumed from the name given to the material (which considers the particle fraction which dominates the behaviour, refer "component proportions" below), rather than strict observance of the proportions of particle sizes. For example, if a material is named a "Sandy CLAY", this is indicative that the material exhibits fine grained behaviour, even if the dry mass of coarse grained material may exceed 65%.

Component proportions

The relative proportion of the dry mass of each particle size fraction is assessed to be a "primary", "secondary", or "minor" component of the soil mixture, depending on its influence over the soil behaviour.

Component Proportion Designation	Definition[1]	Relative Proportion	
		In Fine Grained Soil	In Coarse Grained Soil
Primary	The component (particle size designation, refer above) which dominates the engineering behaviour of the soil	The clay/silt component with the greater proportion	The sand/gravel component with the greater proportion
Secondary	Any component which is not the primary, but is significant to the engineering properties of the soil	Any component with greater than 30% proportion	Any granular component with greater than 30%; or Any fine component with greater than 12%
Minor[2]	Present in the soil, but not significant to its engineering properties	All other components	All other components

[1] As defined in AS1726-2017 6.1.4.4

[2] In the detailed material description, minor components are split into two further sub-categories. Refer "identification of minor components" below.

Composite Materials

In certain situations, a lithology description may describe more than one material, for example, collectively describing a layer of interbedded sand and clay. In such a scenario, the two materials would be described independently, with the names preceded or followed by a statement describing the arrangement by which the materials co-exist. For example, "INTERBEDDED Silty CLAY AND SAND".

Soil Descriptions

Classification

The soil classification comprises a two character group symbol. The first character identifies the primary component. The second character identifies either the grading or presence of fines in a coarse grained soil, or the plasticity in a fine grained soil. Refer AS1726-2017 6.1.6 for further clarification.

Soil Name

For most soils, the name is derived with the primary component included as the noun (in upper case), preceded by any secondary components stated in an adjective form. In this way, the soil name also describes the general composition and indicates the dominant behaviour of the material.

Component [1]	Prominence in Soil Name
Primary	Noun (eg "CLAY")
Secondary	Adjective modifier (eg "Sandy")
Minor	No influence

[1] – for determination of component proportions, refer component proportions on previous page

For materials which cannot be disaggregated, or which are not comprised of rock or mineral fragments, the names "ORGANIC MATTER" or "ARTIFICIAL MATERIAL" may be used, in accordance with AS1726-2017 Table 14.

Commercial or colloquial names are not used for the soil name where a component derived name is possible (for example "Gravelly SAND" rather than "CRACKER DUST").

Materials of "fill" or "topsoil" origin are generally assigned a name derived from the primary/secondary component (where appropriate). In log descriptions this is preceded by uppercase "FILL" or "TOPSOIL". Origin uncertainty is indicated in the description by the characters (?), with the degree of uncertainty described (using the terms "probably" or "possibly" in the origin column, or at the end of the description).

Identification of minor components

Minor components are identified in the soil description immediately following the soil name. The minor component fraction is usually preceded with a term indicating the relative proportion of the component.

Minor Component Proportion Term	Relative Proportion	
	In Fine Grained Soil	In Coarse Grained Soil
With	All fractions: 15-30%	Clay/silt: 5-12% sand/gravel: 15-30%
Trace	All fractions: 0-15%	Clay/silt: 0-5% sand/gravel: 0-15%

The terms "with" and "trace" generally apply only to gravel or fine particle fractions. Where cobbles/boulders are encountered in minor proportions (generally less than about 12%) the term "occasional" may be used. This term describes the sporadic distribution of the material within the confines of the investigation excavation only, and there may be considerable variation in proportion over a wider area which is difficult to factually characterise due to the relative size of the particles and the investigation methods.

Soil Composition

Plasticity

Descriptive Term	Laboratory liquid limit range	
	Silt	Clay
Non-plastic materials	Not applicable	Not applicable
Low plasticity	≤50	≤35
Medium plasticity	Not applicable	>35 and ≤50
High plasticity	>50	>50

Note, Plasticity descriptions generally describe the plasticity behaviour of the whole of the fine grained soil, not individual fine grained fractions.

Grain Size

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

Grading

Grading Term	Particle size (mm)
Well	A good representation of all particle sizes
Poorly	An excess or deficiency of particular sizes within the specified range
Uniformly	Essentially of one size
Gap	A deficiency of a particular size or size range within the total range

Note, AS1726-2017 provides terminology for additional attributes not listed here.

Soil Condition

Moisture

The moisture condition of soils is assessed relative to the plastic limit for fine grained soils, while for coarse grained soils it is assessed based on the appearance and feel of the material. The moisture condition of a material is considered to be independent of stratigraphy (although commonly these are related), and this data is presented in its own column on logs.

Applicability	Term	Tactile Assessment	Abbreviation code
Fine	Dry of plastic limit	Hard and friable or powdery	w<PL
	Near plastic limit	Can be moulded	w=PL
	Wet of plastic limit	Water residue remains on hands when handling	w>PL
	Near liquid limit	"oozes" when agitated	w=LL
	Wet of liquid limit	"oozes"	w>LL
Coarse	Dry	Non-cohesive and free running	D
	Moist	Feels cool, darkened in colour, particles may stick together	M
	Wet	Feels cool, darkened in colour, particles may stick together, free water forms when handling	W

The abbreviation code NDF, meaning "not-assessable due to drilling fluid use" may also be used.

Note, observations relating to free ground water or drilling fluids are provided independent of soil moisture condition.

Consistency/Density/Compaction/Cementation/Extremely Weathered Material

These concepts give an indication of how the material may respond to applied forces (when considered in conjunction with other attributes of the soil). This behaviour can vary independent of the composition of the material, and on logs these are described in an independent column and are generally mutually exclusive (i.e it is inappropriate to describe both consistency and compaction at the same time). The method by which the behaviour is described depends on the behaviour model and other characteristics of the soil as follows:

- In fine grained soils, the "consistency" describes the ease with which the soil can be remoulded, and is generally correlated against the materials undrained shear strength;
- In granular materials, the relative density describes how tightly packed the particles are, and is generally correlated against the density index;
- In anthropogenically modified materials, the compaction of the material is described qualitatively;
- In cemented soils (both natural and anthropogenic), the cemented "strength" is described qualitatively, relative to the difficulty with which the material is disaggregated; and
- In soils of extremely weathered material origin, the engineering behaviour may be governed by relic rock features, and expected behaviour needs to be assessed based the overall material description.

Quantitative engineering performance of these materials may be determined by laboratory testing or estimated by correlated field tests (for example penetration or shear vane testing). In some cases, performance may be assessed by tactile or other subjective methods, in which case investigation logs will show the estimated value enclosed in round brackets, for example (VS).

Consistency (fine grained soils)

Consistency Term	Tactile Assessment	Undrained Shear Strength (kPa)	Abbreviation Code
Very soft	Extrudes between fingers when squeezed	<12	VS
Soft	Mouldable with light finger pressure	>12 - ≤25	S
Firm	Mouldable with strong finger pressure	>25 - ≤50	F
Stiff	Cannot be moulded by fingers	>50 - ≤100	St
Very stiff	Indented by thumbnail	>100 - ≤200	VSt
Hard	Indented by thumbnail with difficulty	>200	H
Friable	Easily crumbled or broken into small pieces by hand	-	Fr

Relative Density (coarse grained soils)

Relative Density Term	Density Index	Abbreviation Code
Very loose	<15	VL
Loose	>15 - ≤35	L
Medium dense	>35 - ≤65	MD
Dense	>65 - ≤85	D
Very dense	>85	VD

Note, tactile assessment of relative density is difficult, and generally requires penetration testing, hence a tactile assessment guide is not provided.

Compaction (anthropogenically modified soil)

Compaction Term	Abbreviation Code
Well compacted	WC
Poorly compacted	PC
Moderately compacted	MC
Variably compacted	VC

Cementation (natural and anthropogenic)

Cementation Term	Abbreviation Code
Moderately cemented	MOD
Weakly cemented	WEK

Extremely Weathered Material

AS1726-2017 considers weathered material to be soil if the unconfined compressive strength is less than 0.6 MPa (i.e. less than very low strength rock). These materials may be identified as "extremely weathered material" in reports and by the abbreviation code XWM on log sheets. This identification is not correlated to any specific qualitative or quantitative behaviour, and the engineering properties of this material must therefore be assessed according to engineering principles with reference to any relic rock structure, fabric, or texture described in the description.

Soil Origin

Term	Description	Abbreviation Code
Residual	Derived from in-situ weathering of the underlying rock	RS
Extremely weathered material	Formed from in-situ weathering of geological formations. Has strength of less than 'very low' as per as1726 but retains the structure or fabric of the parent rock.	XWM
Alluvial	Deposited by streams and rivers	ALV
Fluvial	Deposited by channel fill and overbank (natural levee, crevasse splay or flood basin)	FLV
Estuarine	Deposited in coastal estuaries	EST
Marine	Deposited in a marine environment	MAR
Lacustrine	Deposited in freshwater lakes	LAC
Aeolian	Carried and deposited by wind	AEO
Colluvial	Soil and rock debris transported down slopes by gravity	COL
Slopewash	Thin layers of soil and rock debris gradually and slowly deposited by gravity and possibly water	SW
Topsoil	Mantle of surface soil, often with high levels of organic material	TOP
Fill	Any material which has been moved by man	FILL
Littoral	Deposited on the lake or seashore	LIT
Unidentifiable	Not able to be identified	UID

Cobbles and Boulders

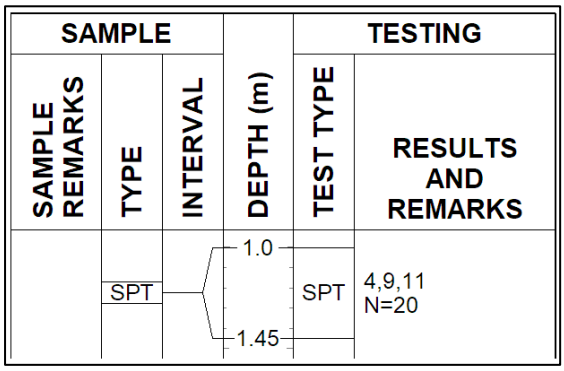
The presence of particles considered to be "oversize" may be described using one of the following strategies:

- Oversize encountered in a minor proportion (when considered relative to the wider area) are noted in the soil description; or
- Where a significant proportion of oversize is encountered, the cobbles/boulders are described independent of the soil description, in a similar manner to composite soils (described above) but qualified with "MIXTURE OF".

intentionally blank

Sampling and Testing

A record of samples retained, and field testing performed is usually shown on a Douglas Partners' log with samples appearing to the left of a depth scale, and selected field and laboratory testing (including results, where relevant) appearing to the right of the scale, as illustrated below:



Sampling

The type or intended purpose for which a sample was taken is indicated by the following abbreviation codes.

Sample Type	Code
Auger sample	A
Acid Sulfate sample	ASS
Bulk sample	B
Core sample	C
Disturbed sample	D
Environmental sample	ES
Driven Tube sample	DT
Gas sample	G
Piston sample	P
Sample from SPT test	SPT
Undisturbed tube sample	U[1]
Water sample	W
Material Sample	MT
Core sample for unconfined compressive strength testing	UCS

[1] – numeric suffixes indicate tube diameter/width in mm

The above codes only indicate that a sample was retained, and not that testing was scheduled or performed.

Field and Laboratory Testing

A record that field and laboratory testing was performed is indicated by the following abbreviation codes.

Test Type	Code
Pocket penetrometer (kPa)	PP
Photo ionisation detector (ppm)	PID
Standard Penetration Test x/y =*x* blows for *y* mm penetration HB = hammer bouncing HW = fell under weight of hammer	SPT
Shear vane (kPa)	V
Unconfined compressive strength, (MPa)	UCS
Point load test, (MPa), axial (A), diametric (D), irregular (I)	PLT(_)
Dynamic cone penetrometer, followed by blow count penetration increment in mm (cone tip, generally in accordance with AS1289.6.3.2)	DCP9/150
Perth sand penetrometer, followed by blow count penetration increment in mm (flat tip, generally in accordance with AS1289.6.3.3)	PSP/150
Dynamic probe super heavy, followed by blow count penetration increment in mm	DPSH/100

Groundwater Observations

	water seepage/inflow
	water seepage/outflow
	standing or observed water level
NFGWO	no free groundwater observed
OBS	observations obscured by drilling fluids

Drilling or Excavation Methods/Tools

The drilling/excavation methods used to perform the investigation may be shown either in a dedicated column down the left-hand edge of the log, or stated in the log footer. In some circumstances abbreviation codes may be used.

Method	Abbreviation Code
Direct Push	DP
Solid flight auger. Suffixes: /T = tungsten carbide tip, /V = v-shaped tip	AD[1]
Air Track	AT
Diatube	DT[1]
Hand auger	HA[1]
Hand tools (unspecified)	HAND
Existing exposure	X
Hollow flight auger	HSA[1]
HQ coring	HQ3
HMLC series coring	HMLC
NMLC series coring	NMLC
NQ coring	NQ3
PQ coring	PQ3
Predrilled	PD
Push tube	PT[1]
Ripping tyne/ripper	R
Rock roller	RR[1]
Rock breaker/hydraulic hammer	EH
Sonic drilling	SON[1]
Mud/blade bucket	MB[1]
Toothed bucket	TB[1]
Vibrocore	VC[1]
Vacuum excavation	VE
Wash bore (unspecified bit type)	WB[1]

[1] – numeric suffixes indicate tool diameter/width in mm

Douglas PARTNERS

Groundwater (GW) Field Sheet

Project and Bore Installation Details						
Project Name / Site Location					Project Number	236742.01
Well Construction Details	Well ID	BH102a	Drilling Method		Hole Diameter (m)~	
	Well Depth (m bgl)		Screened (m bgl)		Stick Up (m)	
Survey Information	Easting		Northing		Elevation RL	
GW Level During Drilling		m bgl				
Contaminants/Comments						

Well Development Details					
Date / Time / Weather Conditions	27/08/25 7:26am			Purged By	CLB
Purge Method / Equipment	Tubing Pump				
Product observed / Thickness	—	mm	Confirmed with Bailer? (Y / N)	—	
GW Level (pre-purge)	9.96	m bgl	Observed Well Depth	14	m bgl
Height of Water Column (H)	4.04	m bgl	Estimated Bore Volume*	21.816	L
GW Level (post-purge)	11.13	m bgl	Total Volume Purged**	100	L
Appearance/Comments	Pale brown, no odour				

Sampling Details					
Date / Time / Weather Conditions	2/9/25 10:55 Cloudy			Sampled By	SAF
Sampling Method / Equipment	Bladder pump				
WQM Model	YSI		WQM Calibration Date		
Product observed / Thickness	—	mm	Confirmed with Bailer? (Y / N)	Y	
GW Level (pre-micropurge)	10.06	m bgl	Observed Well Depth	13.79	m bgl
Height of Water Column	3.73	m bgl	Estimated Bore Volume*	20.1	L
GW Level (post sample)	10.06	m bgl	Total Volume of Micro-Purged	8	L

Water Quality Parameters

Time	Cumulative Volume (L)	Temp (°C)	DO (mg/L)#	EC (µS or mS/cm)	pH	Redox (mV)	Turbidity^
Stabilisation Target (3 readings)		0.2	+/- 10%	+/- 5%	+/- 0.1	+/- 10 mV	+/- 10%
11:20	1	18.9	0.60	423.2	4.61	187.0	1515
11:22	2	18.9	0.22	398.5	4.30	209.6	582
11:24	3	18.9	0.15	396.6	4.30	211.8	457
11:26	4	18.9	0.12	394.2	4.30	213.6	397
Notes:	# Considered stabilised if three DO values are less than 0.5 mg/L			^ Considered stabilised if three Turbidity values are less than 5 NTU			

Sample Details						
Sampling Depth (rationale)	12	m bgl,	mid-column			
Sample Observations (e.g. colour, sediment, sheen, odour)	Slight grey, no silt, no sheen, faint sulphur odour					
Sample ID	BH102a					
QAQC Samples	Replicate		Triplicate		Other	
Sample Containers Quantity / Preservation / Filtration	Amber glass		Plastic		PFAS (no teflon)	
	Metals (F/UF) (HNO3)		Phenols/COD/NH3 (H2SO4)		Vials (HCl)	
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)		Other	
Comments						

*Estimated Well Volume = H * F	Std. Drilling Diameter	NMLC (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
**Purge Target: min. 3 well volumes	Factor (F):	2.8	3.7	5.2	5.4	11.1

Groundwater (GW) Field Sheet

Project and Bore Installation Details						
Project Name / Site Location					Project Number	236743.01
Well Construction Details	Well ID	BH103	Drilling Method		Hole Diameter (m)~	
	Well Depth (m bgl)		Screened (m bgl)		Stick Up (m)	
Survey Information	Easting		Northing		Elevation RL	
GW Level During Drilling		m bgl				
Contaminants/Comments						

Well Development Details					
Date / Time / Weather Conditions	28/8/25 Sunny 6:45			Purged By	SAF
Purge Method / Equipment	Peri pump				
Product observed / Thickness	–	mm	Confirmed with Bailer? (Y / N)	Yes	
GW Level (pre-purge)	5.54	m bgl	Observed Well Depth	8.16	m bgl
Height of Water Column (H)	2.62	m bgl	Estimated Bore Volume*	14.1	L
GW Level (post-purge)	5.54	m bgl	Total Volume Purged**	100	L
Appearance/Comments	Clear, no silt, no sheen, no odour				

Sampling Details							
Date / Time / Weather Conditions	2/9/25 8:10 Clear					Sampled By	SAF
Sampling Method / Equipment	Bladder pump						
WQM Model	YSI				WQM Calibration Date	1/9/25	
Product observed / Thickness	–	mm			Confirmed with Bailer? (Y / N)	Y	
GW Level (pre-micropurge)	5.66	m bgl			Observed Well Depth	8.07	m bgl
Height of Water Column	2.37	m bgl			Estimated Bore Volume*	12.8	L
GW Level (post sample)	5.66	m bgl			Total Volume of Micro-Purged	12	L

Water Quality Parameters

Time	Cumulative Volume (L)	Temp (°C)	DO (mg/L)#	EC (µS or mS/cm)	pH	Redox (mV)	Turbidity^
Stabilisation Target (3 readings)		0.2	+/- 10%	+/- 5%	+/- 0.1	+/- 10 mV	+/- 10%
9:00	2	19.3	1.08	841	5.42	133.4	857
9:02	3	19.5	0.90	828	5.32	137.4	652
9:04	4	19.6	0.79	811	5.25	142.9	425
9:06	5	19.7	0.76	799	5.20	146.8	362
9:08	6	19.7	0.71	780	5.13	152.1	280
9:10	7	19.7	0.69	768	5.08	156.5	222
9:12	8	19.7	0.68	761	5.04	159.2	188

Notes: # Considered stabilised if three DO values are less than 0.5 mg/L ^ Considered stabilised if three Turbidity values are less than 5 NTU

Sample Details							
Sampling Depth (rationale)	7	m bgl,	mid-column				
Sample Observations (e.g. colour, sediment, sheen, odour)	Slight brown, no silt, no sheen, no odour						
Sample ID	BH103						
QAQC Samples	Replicate	BD1/20250902	Triplicate		Other		
Sample Containers Quantity / Preservation / Filtration	Amber glass		Plastic		PFAS (no teflon)		
	Metals (F/UF) (HNO3)		Phenols/COD/NH3 (H2SO4)		Vials (HCl)		
	Ferrous/Ferric Iron (HCl)		Cyanides/Chromium (NaOH)		Other		
Comments							

*Estimated Well Volume = H * F	Std. Drilling Diameter	NMLC (0.075)	HQ (0.096)	PQ (0.1226)	SFA (0.125)	HFA (0.194)
**Purge Target: min. 3 well volumes	Factor (F):	2.8	3.7	5.2	5.4	11.1

Appendix C

Douglas (2025) Summary Table of Laboratory Results

Table H1: Summary of Laboratory Results – SAC for construction and maintenance workers

				Priority metals								Priority PAH				Priority TRH						BTEX			
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	FI ((C6-C10)- BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	Total Xylenes
			PQL	4	0.4	1	1	1	0.1	1	1	1	0.05	0.5	0.05	25	50	25	50	100	100	0.2	0.5	1	1
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0 - 0.3 m	FILL	26/08/25	**13**	<0.4	**11**	**47**	**140**	**0.1**	**7**	**130**	<1	**3.7**	**5.2**	**31**	<25	<50	<25	<50	**190**	<100	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH101 - [TRIPLICATE]	0 - 0.3 m	FILL	26/08/25	**14**	<0.4	**12**	**53**	**140**	**0.1**	**6**	**120**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101a	0.5 - 0.7 m	FILL	26/08/25	**31**	**2**	**13**	**98**	**280**	**0.3**	**12**	**280**	<1	**14**	**19**	**130**	<25	<50	<25	<50	**740**	**250**	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH101a	5.2 - 5.5 m	FILL	26/08/25	**10**	**1**	**18**	**660**	**340**	**0.2**	**38**	**770**	<1	**11**	**16**	**110**	<25	<50	<25	<50	**1000**	**280**	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH101a	6.5 - 7 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101a	8.2 - 8.5 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.5	<1	<1
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	3 -	20 000 -	85000 -	230 -
BH102	0 - 0.2 m	FILL	26/08/25	**14**	<0.4	**8**	**60**	**150**	**0.1**	**7**	**120**	<1	**8.4**	**13**	**77**	<25	<50	<25	<50	**470**	**180**	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH102a	0.1 - 0.3 m	FILL	26/08/25	**10**	<0.4	**10**	**66**	**74**	**0.1**	**19**	**95**	<1	**2**	**2.9**	**22**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH102a	3 - 3.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	4 - 4.1 m	FILL	26/08/25	**11**	**1**	**19**	**160**	**490**	**0.6**	**19**	**620**	**2.4**	**20**	**32**	**280**	<25	**51**	<25	<50	**1,400**	**410**	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH102a	5 - 5.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	7.5 - 8 m	Natural	26/08/25	<4	<0.4	**6**	**8**	**19**	<0.1	**5**	**32**	<1	**0.73**	**1.1**	**8.8**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH103	1 - 1.2 m	FILL	26/08/25	**7**	<0.4	**11**	**20**	**92**	<0.1	**4**	**57**	<1	**0.91**	**1.3**	**8.6**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	370 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH103	1.9 - 2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH103	3.5 - 4 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH1	0.2 - 0.4 m	FILL	28/08/25	**9**	<0.4	**16**	**47**	**110**	**0.1**	**21**	**69**	<1	**1.6**	**2.2**	**14**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BD2/20250828	0.2 - 0.4 m	FILL	28/08/25	**10**	<1	**17**	**48**	**123**	**0.1**	**25**	**76**	<1	**2.2**	**2.8**	**17.1**	<10	<50	<10	<50	<100	<100	<0.2	<0.5	<0.5	<0.5
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH2	0.7 - 0.9 m	FILL	28/08/25	**9**	<0.4	**19**	**23**	**46**	<0.1	**20**	**38**	<1	**0.5**	**0.6**	**5.4**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH2	1.8 - 2 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH3	0.05 - 0.15 m	FILL	28/08/25	<4	<0.4	**6**	**51**	**7**	<0.1	**10**	**26**	<1	**0.06**	<0.5	**0.94**	<25	<50	<25	<50	**2,500**	**1,700**	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH3	0.8 - 1 m	FILL	28/08/25	<4	<0.4	**11**	**31**	**13**	<0.1	**40**	**25**	<1	**0.2**	<0.5	**2.1**	<25	<50	<25	<50	**260**	**180**	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -

Table H1: Summary of Laboratory Results – SAC for construction and maintenance workers

				Priority metals								Priority PAH				Priority TRH						BTEX			
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)- BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	Total Xylenes
			PQL	4	0.4	1	1	1	0.1	1	1	1	0.05	0.5	0.05	25	50	25	50	100	100	0.2	0.5	1	1
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH4	0.2 - 0.4 m	FILL	28/08/25	**6**	<0.4	**13**	**20**	**21**	<0.1	**27**	**24**	<1	**0.67**	**1**	**6.2**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH5	0.3 - 0.5 m	FILL	26/08/25	**6**	<0.4	**15**	**100**	**140**	<0.1	**9**	**83**	<1	**5.6**	**8.3**	**45**	<25	<50	<25	<50	**280**	**120**	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH6	0 - 0.2 m	FILL	26/08/25	**14**	<0.4	**10**	**93**	**150**	<0.1	**13**	**110**	<1	**3**	**4.2**	**24**	<25	<50	<25	<50	**220**	<100	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH6a	0.2 - 0.3 m	FILL	28/08/25	<4	<0.4	**2**	**10**	**5**	<0.1	**1**	**13**	<1	**0.1**	<0.5	**0.76**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BD1/20250828	0.2 - 0.3 m	FILL	28/08/25	<4	<0.4	**2**	**7**	**7**	<0.1	**2**	**15**	<1	**0.09**	<0.5	**0.3**	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH6a	1.1 - 1.3 m	FILL	28/08/25	**11**	**0.8**	**17**	**69**	**230**	**0.2**	**14**	**560**	<1	**5.6**	**8.5**	**55**	<25	<50	<25	<50	**390**	**120**	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH6a	2.8 - 3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6a	3.8 - 4 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6a	4.8 - 5 m	FILL	28/08/25	**24**	**0.8**	**21**	**210**	**530**	**0.3**	**27**	**690**	<1	**6.2**	**8.6**	**56**	<25	<50	<25	<50	**400**	**140**	<0.2	<0.5	<1	<1
				3,000 -	900 -	3,600 -	240,000 -	1,500 -	730 -	6,000 -	400,000 -	29000 -	- -	40 -	4,000 -	- -	- -	260 -	62000 -	85000 -	1.2E+05 -	3 -	20 000 -	85000 -	230 -
BH6a	5.8 - 6 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Lab result

HIL/HSL value EIL/ESL/EGV value

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

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

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

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

Notes:

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

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

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

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

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

HIL	HIL-D (NEPC, 2013 or HEPA, 2025 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2025)
HSL (vapour intrusion)	HSL-D (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL C Recreational /Open space (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2025)

Table H1: Summary of Laboratory Results – SAC for construction and maintenance workers

				VOC	Priority phenols	Priority OCP									Priority OPP	PCB	Priority PFAS				
				Summary	Total Phenolics	DDT+DDE+DDDc	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyriphos	Total PCB	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS
			PQL	1	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0 - 0.3 m	FILL	26/08/25	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.0025**	**0.0003**	**0.0022**	**0.0022**	<0.0001
				- -	660 -	3,600 -	45 -	530 -	2,000 -	100 -	50 -	80 -	2,500 -	100 -	2,000 -	7 -	- -	50 -	20 -	20 -	20 -
BH101 - [TRIPLICATE]	0 - 0.3 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101a	0.5 - 0.7 m	FILL	26/08/25	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				- -	660 -	3,600 -	45 -	530 -	2,000 -	100 -	50 -	80 -	2,500 -	100 -	2,000 -	7 -	- -	- -	- -	- -	- -
BH101a	5.2 - 5.5 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101a	6.5 - 7 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101a	8.2 - 8.5 m	FILL	26/08/25	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102	0 - 0.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	0.1 - 0.3 m	FILL	26/08/25	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				- -	660 -	3,600 -	45 -	530 -	2,000 -	100 -	50 -	80 -	2,500 -	100 -	2,000 -	7 -	- -	- -	- -	- -	- -
BH102a	3 - 3.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	4 - 4.1 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	5 - 5.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	7.5 - 8 m	Natural	26/08/25	<1	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	50 -	20 -	20 -	20 -
BH103	1 - 1.2 m	FILL	26/08/25	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				- -	660 -	3,600 -	45 -	530 -	2,000 -	100 -	50 -	80 -	2,500 -	100 -	2,000 -	7 -	- -	- -	- -	- -	- -
BH103	1.9 - 2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH103	3.5 - 4 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH1	0.2 - 0.4 m	FILL	28/08/25	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.0001**	<0.0001	**0.0001**	**0.0001**	<0.0001
				- -	660 -	3,600 -	45 -	530 -	2,000 -	100 -	50 -	80 -	2,500 -	100 -	2,000 -	7 -	- -	50 -	20 -	20 -	20 -
BD2/20250828	0.2 - 0.4 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	<0.0002	<0.0002
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	50 -	20 -	20 -	20 -
BH2	0.7 - 0.9 m	FILL	28/08/25	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH2	1.8 - 2 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	50 -	20 -	20 -	20 -
BH3	0.05 - 0.15 m	FILL	28/08/25	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				- -	660 -	3,600 -	45 -	530 -	2,000 -	100 -	50 -	80 -	2,500 -	100 -	2,000 -	7 -	- -	- -	- -	- -	- -
BH3	0.8 - 1 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Douglas PARTNERS

Table H1: Summary of Laboratory Results – SAC for construction and maintenance workers

				VOC	Priority phenols	Priority OCP									Priority OPP	PCB	Priority PFAS				
				Summary	Total Phenolics	DDT+DDE+DDD c	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyriphos	Total PCB	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS
			PQL	1	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH4	0.2 - 0.4 m	FILL	28/08/25	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				- -	660 -	3,600 -	45 -	530 -	2,000 -	100 -	50 -	80 -	2,500 -	100 -	2,000 -	7 -	- -	- -	- -	- -	- -
BH5	0.3 - 0.5 m	FILL	26/08/25	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6	0 - 0.2 m	FILL	26/08/25	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				- -	660 -	3,600 -	45 -	530 -	2,000 -	100 -	50 -	80 -	2,500 -	100 -	2,000 -	7 -	- -	- -	- -	- -	- -
BH6a	0.2 - 0.3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	50 -	20 -	20 -	20 -
BD1/20250828	0.2 - 0.3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	50 -	20 -	20 -	20 -
BH6a	1.1 - 1.3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6a	2.8 - 3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6a	3.8 - 4 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6a	4.8 - 5 m	FILL	28/08/25	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				- -	660 -	3,600 -	45 -	530 -	2,000 -	100 -	50 -	80 -	2,500 -	100 -	2,000 -	7 -	- -	- -	- -	- -	- -
BH6a	5.8 - 6 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Lab result

HIL/HSL value EIL/ESL/EGV value

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

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

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

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

Notes:

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

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

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

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

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

HIL	HIL-D (NEPC, 2013 or HEPA, 2025 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2025)
HSL (vapour intrusion)	HSL-D (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL C Recreational /Open space (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2025)

Table H1: Summary of Laboratory Results – SAC for construction and maintenance workers

				Asbestos (500mL)							Asbetsos (40g)		pH, EC and CEC	
				Asbestos ID in soil >0.1g/kg	Trace Analysis (NEPC)	Total Asbestos#1	Asbestos ID in soil <0.1g/kg	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Trace Analysis (AS)	Asbestos ID in soil >0.1g/kg	pH 1:5 soil:water	Cation Exchange Capacity
			PQL			0.1				0.001				1
Sample ID	Depth	Soil Matrix	Sample Date	-	-	g/kg	-	g	g	%(w/w)	-	-	pH Units	cmol/kg
BH101	0 - 0.3 m	FILL	26/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	**6.8**	**10**
								- -	- -	0.001 -			- -	- -
BH101 - [TRIPLICATE]	0 - 0.3 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH101a	0.5 - 0.7 m	FILL	26/08/25	**Detected**	NAD	**0.1323**	NAD	-	**0.071**	**0.0132**	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH101a	5.2 - 5.5 m	FILL	26/08/25	**Detected**	NAD	**1.0603**	NAD	**1.0317**	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH101a	6.5 - 7 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	**Detected**	-	-
								- -	- -	- -			- -	- -
BH101a	8.2 - 8.5 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	**Detected**	-	-
								- -	- -	- -			- -	- -
BH102	0 - 0.2 m	FILL	26/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	**6.6**	**8.1**
								- -	- -	0.001 -			- -	- -
BH102a	0.1 - 0.3 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH102a	3 - 3.2 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	NAD	-	-
								- -	- -	- -			- -	- -
BH102a	4 - 4.1 m	FILL	26/08/25	NAD	NAD	<0.1	**Detected**	-	**0.0176**	**0.0041**	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH102a	5 - 5.2 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	NAD	-	-
								- -	- -	- -			- -	- -
BH102a	7.5 - 8 m	Natural	26/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH103	1 - 1.2 m	FILL	26/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH103	1.9 - 2 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	NAD	-	-
								- -	- -	- -			- -	- -
BH103	3.5 - 4 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	NAD	-	-
								- -	- -	- -			- -	- -
BH1	0.2 - 0.4 m	FILL	28/08/25	NAD	NAD	<0.1	**Detected**	-	**0.0185**	**0.0031**	-	-	-	-
								- -	- -	0.001 -			- -	- -
BD2/20250828	0.2 - 0.4 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH2	0.7 - 0.9 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH2	1.8 - 2 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH3	0.05 - 0.15 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH3	0.8 - 1 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -

Table H1: Summary of Laboratory Results – SAC for construction and maintenance workers

				Asbestos (500mL)							Asbetsos (40g)		pH, EC and CEC	
				Asbestos ID in soil >0.1g/kg	Trace Analysis (NEPC)	Total Asbestos#1	Asbestos ID in soil <0.1g/kg	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Trace Analysis (AS)	Asbestos ID in soil >0.1g/kg	pH 1:5 soil:water	Caton Exchange Capacity
			PQL			0.1				0.001				1
Sample ID	Depth	Soil Matrix	Sample Date	-	-	g/kg	-	g	g	%(w/w)	-	-	pH Units	cmol/kg
BH4	0.2 - 0.4 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH5	0.3 - 0.5 m	FILL	26/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH6	0 - 0.2 m	FILL	26/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH6a	0.2 - 0.3 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BD1/20250828	0.2 - 0.3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH6a	1.1 - 1.3 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	**8**	**11**
								- -	- -	0.001 -			- -	- -
BH6a	2.8 - 3 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH6a	3.8 - 4 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH6a	4.8 - 5 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH6a	5.8 - 6 m	FILL	28/08/25	**Detected**	NAD	**120.5590**	NAD	-	**73.5**	**12.0559**	-	-	-	-
								- -	- -	0.001 -			- -	- -

Lab result

HIL/HSL value EIL/ESL/EGV value

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

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

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

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

Notes:

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

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

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

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

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

HIL	HIL-D (NEPC, 2013 or HEPA, 2025 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2025)
HSL (vapour intrusion)	HSL-D (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL C Recreational /Open space (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2025)

Table H2: Summary of Laboratory Results – SAC for generic recreational land use

				Priority metals								Priority PAH				Priority TRH						
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)- BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	Silica Gel Clean F3 (>C16-C34)	F4 (>C34-C40)
			PQL	4	0.4	1	1	1	0.1	1	1	1	0.05	0.5	0.05	25	50	25	50	100	50	100
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0 - 0.3 m	FILL	26/08/25	**13**	<0.4	**11**	**47**	**140**	**0.1**	**7**	**130**	<1	**3.7**	**5.2**	**31**	<25	<50	<25	<50	**190**	**-**	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH101 - [TRIPLICATE]	0 - 0.3 m	FILL	26/08/25	**14**	<0.4	**12**	**53**	**140**	**0.1**	**6**	**120**	-	-	-	-	-	-	-	-	-	-	-
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101a	0.5 - 0.7 m	FILL	26/08/25	**31**	**2**	**13**	**98**	**280**	**0.3**	**12**	**280**	<1	**14**	**19**	**130**	<25	<50	<25	<50	**740**	**-**	**250**
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH101a	5.2 - 5.5 m	FILL	26/08/25	**10**	**1**	**18**	**660**	**340**	**0.2**	**38**	**770**	<1	**11**	**16**	**110**	<25	<50	<25	<50	**1000**	**620**	**280**
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH101a	6.5 - 7 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101a	8.2 - 8.5 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102	0 - 0.2 m	FILL	26/08/25	**14**	<0.4	**8**	**60**	**150**	**0.1**	**7**	**120**	<1	**8.4**	**13**	**77**	<25	<50	<25	<50	**470**	-	**180**
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH102a	0.1 - 0.3 m	FILL	26/08/25	**10**	<0.4	**10**	**66**	**74**	**0.1**	**19**	**95**	<1	**2**	**2.9**	**22**	<25	<50	<25	<50	<100	-	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH102a	3 - 3.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	4 - 4.1 m	FILL	26/08/25	**11**	**1**	**19**	**160**	**490**	**0.6**	**19**	**620**	**2.4**	**20**	**32**	**280**	<25	**51**	<25	<50	**1,400**	**980**	**410**
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH102a	5 - 5.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	7.5 - 8 m	Natural	26/08/25	<4	<0.4	**6**	**8**	**19**	<0.1	**5**	**32**	<1	**0.73**	**1.1**	**8.8**	<25	<50	<25	<50	<100	-	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH103	1 - 1.2 m	FILL	26/08/25	**7**	<0.4	**11**	**20**	**92**	<0.1	**4**	**57**	<1	**0.91**	**1.3**	**8.6**	<25	<50	<25	<50	<100	-	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH103	1.9 - 2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH103	3.5 - 4 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH1	0.2 - 0.4 m	FILL	28/08/25	**9**	<0.4	**16**	**47**	**110**	**0.1**	**21**	**69**	<1	**1.6**	**2.2**	**14**	<25	<50	<25	<50	<100	-	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- -	- 2,800
BD2/20250828	0.2 - 0.4 m	FILL	28/08/25	**10**	<1	**17**	**48**	**123**	**0.1**	**25**	**76**	<1	**2.2**	**2.8**	**17.1**	<10	<50	<10	<50	<100	-	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- -	- 2,800
BH2	0.7 - 0.9 m	FILL	28/08/25	**9**	<0.4	**19**	**23**	**46**	<0.1	**20**	**38**	<1	**0.5**	**0.6**	**5.4**	<25	<50	<25	<50	<100	-	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- -	- 2,800
BH2	1.8 - 2 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH3	0.05 - 0.15 m	FILL	28/08/25	<4	<0.4	**6**	**51**	**7**	<0.1	**10**	**26**	<1	**0.06**	<0.5	**0.94**	<25	<50	<25	<50	**2,500**	**2,500**	**1,700**
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH3	0.8 - 1 m	FILL	28/08/25	<4	<0.4	**11**	**31**	**13**	<0.1	**40**	**25**	<1	**0.2**	<0.5	**2.1**	<25	<50	<25	<50	**260**	-	**180**
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH4	0.2 - 0.4 m	FILL	28/08/25	**6**	<0.4	**13**	**20**	**21**	<0.1	**27**	**24**	<1	**0.67**	**1**	**6.2**	<25	<50	<25	<50	<100	-	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH5	0.3 - 0.5 m	FILL	26/08/25	**6**	<0.4	**15**	**100**	**140**	<0.1	**9**	**83**	<1	**5.6**	**8.3**	**45**	<25	<50	<25	<50	**280**	-	**120**
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH6	0 - 0.2 m	FILL	26/08/25	**14**	<0.4	**10**	**93**	**150**	<0.1	**13**	**110**	<1	**3**	**4.2**	**24**	<25	<50	<25	<50	**220**	-	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800

Table H2: Summary of Laboratory Results – SAC for generic recreational land use

				Priority metals								Priority PAH				Priority TRH						
				Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Naphthalene [b]	Benzo(a)pyrene (B(a)P)	Benzo(a)pyrene TEQ (B(a)P TEQ)	Total PAH	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)- BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	Silica Gel Clean F3 (>C16-C34)	F4 (>C34-C40)
			PQL	4	0.4	1	1	1	0.1	1	1	1	0.05	0.5	0.05	25	50	25	50	100	50	100
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH6a	0.2 - 0.3 m	FILL	28/08/25	<4	<0.4	**2**	**10**	**5**	<0.1	**1**	**13**	<1	**0.1**	<0.5	**0.76**	<25	<50	<25	<50	<100	-	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BD1/20250828	0.2 - 0.3 m	FILL	28/08/25	<4	<0.4	**2**	**7**	**7**	<0.1	**2**	**15**	<1	**0.09**	<0.5	**0.3**	<25	<50	<25	<50	<100	-	<100
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH6a	1.1 - 1.3 m	FILL	28/08/25	**11**	**0.8**	**17**	**69**	**230**	**0.2**	**14**	**560**	<1	**5.6**	**8.5**	**55**	<25	<50	<25	<50	**390**	-	**120**
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	260 180	NL -	- 300	- 300	- 2,800
BH6a	2.8 - 3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6a	3.8 - 4 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6a	4.8 - 5 m	FILL	28/08/25	**24**	**0.8**	**21**	**210**	**530**	**0.3**	**27**	**690**	<1	**6.2**	**8.6**	**56**	<25	<50	<25	<50	**400**	-	**140**
				300 100	90 -	300 200	17,000 210	600 1,100	80 -	1,200 160	30,000 510	NL 170	- 0.7	3 -	300 -	- -	- 120	NL 180	NL -	- 300	- 300	- 2,800
BH6a	5.8 - 6 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Lab result

HIL/HSL value EIL/ESL/EGV value

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

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

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

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

Notes:

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

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

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Recreational C including public open space

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

HIL	HIL-C (NEPC, 2013 or HEPA, 2025 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2025)
HSL (vapour intrusion)	HSL-C (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL C Recreational /Open space (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2025)

Table H2: Summary of Laboratory Results – SAC for generic recreational land use

				BTEX				VOC	Priority phenol	Priority OCP									Priority OPP	PCB	Priority PFAS				
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Summary	Total Phenolics	DDT+DDE+DDD [C]	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyriphos	Total PCB	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS
			PQL	0.2	0.5	1	1	1	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0 - 0.3 m	FILL	26/08/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.0025**	**0.0003**	**0.0022**	**0.0022**	<0.0001
				3 50	NL 85	NL 70	230 105	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 0/0.001	1 -	1 1/0.003	1 -
BH101 - [TRIPLICATE]	0 - 0.3 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101a	0.5 - 0.7 m	FILL	26/08/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -
BH101a	5.2 - 5.5 m	FILL	26/08/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101a	6.5 - 7 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH101a	8.2 - 8.5 m	FILL	26/08/25	<0.2	<0.5	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102	0 - 0.2 m	FILL	26/08/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	0.1 - 0.3 m	FILL	26/08/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -
BH102a	3 - 3.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	4 - 4.1 m	FILL	26/08/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	5 - 5.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH102a	7.5 - 8 m	Natural	26/08/25	<0.2	<0.5	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	10 0/0.001	1 -	1 1/0.003	1 -
BH103	1 - 1.2 m	FILL	26/08/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -
BH103	1.9 - 2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH103	3.5 - 4 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH1	0.2 - 0.4 m	FILL	28/08/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.0001**	<0.0001	**0.0001**	**0.0001**	<0.0001
				3 50	NL 85	NL 70	230 105	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	10 0/0.001	1 -	1 1/0.003	1 -
BD2/20250828	0.2 - 0.4 m	FILL	28/08/25	<0.2	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	<0.0002	<0.0002
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	10 0/0.001	1 -	1 1/0.003	1 -
BH2	0.7 - 0.9 m	FILL	28/08/25	<0.2	<0.5	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH2	1.8 - 2 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	10 0/0.001	1 -	1 1/0.003	1 -
BH3	0.05 - 0.15 m	FILL	28/08/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -
BH3	0.8 - 1 m	FILL	28/08/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH4	0.2 - 0.4 m	FILL	28/08/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -
BH5	0.3 - 0.5 m	FILL	26/08/25	<0.2	<0.5	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6	0 - 0.2 m	FILL	26/08/25	<0.2	<0.5	<1	<1	-	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -

Douglas PARTNERS

Table H2: Summary of Laboratory Results – SAC for generic recreational land use

				BTEX				VOC	Priority phenol	Priority OCP									Priority OPP	PCB	Priority PFAS				
				Benzene	Toluene	Ethylbenzene	Total Xylenes	Summary	Total Phenolics	DDT+DDE+DDD [c]	Aldrin + Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	Hexachlorobenzene	Methoxychlor	Mirex	Chlorpyriphos	Total PCB	Total Positive PFAS	PFOA	PFOS + PFHxS	PFOS	PFHxS
			PQL	0.2	0.5	1	1	1	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0001	0.0001	0.0001	0.0001	0.0001
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH6a	0.2 - 0.3 m	FILL	28/08/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	10 0/0.001	1 -	1 1/0.003	1 -
BD1/20250828	0.2 - 0.3 m	FILL	28/08/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	10 0/0.001	1 -	1 1/0.003	1 -
BH6a	1.1 - 1.3 m	FILL	28/08/25	<0.2	<0.5	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6a	2.8 - 3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6a	3.8 - 4 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
BH6a	4.8 - 5 m	FILL	28/08/25	<0.2	<0.5	<1	<1	<1	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
				3 50	NL 85	NL 70	230 105	- -	120 -	400 180	10 -	70 -	340 -	20 -	10 -	10 -	400 -	20 -	250 -	1 -	- -	- -	- -	- -	- -
BH6a	5.8 - 6 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Lab result

HIL/HSL value EIL/ESL/EGV value

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

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

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

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

Notes:

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

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

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Recreational C including public open space

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

HIL	HIL-C (NEPC, 2013 or HEPA, 2025 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2025)
HSL (vapour intrusion)	HSL-C (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL C Recreational /Open space (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2025)

Table H2: Summary of Laboratory Results – SAC for generic recreational land use

				Asbestos (500mL)							Asbetsos (40g)		pH, EC and CEC	
				Asbestos ID in soil >0.1g/kg	Trace Analysis (NEPC)	Total Asbestos#1	Asbestos ID in soil <0.1g/kg	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Trace Analysis (AS)	Asbestos ID in soil >0.1g/kg	pH 1:5 soil:water	Cation Exchange Capacity
			PQL			0.1				0.001				1
Sample ID	Depth	Soil Matrix	Sample Date	-	-	g/kg	-	g	g	%(w/w)	-	-	pH Units	cmol/kg
BH101	0 - 0.3 m	FILL	26/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	**6.8**	**10**
								- -	- -	0.001 -			- -	- -
BH101 - [TRIPLICATE]	0 - 0.3 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH101a	0.5 - 0.7 m	FILL	26/08/25	**Detected**	NAD	**0.1323**	NAD	-	**0.071**	**0.0132**	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH101a	5.2 - 5.5 m	FILL	26/08/25	**Detected**	NAD	**1.0603**	NAD	**1.0317**	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH101a	6.5 - 7 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	**Detected**	-	-
								- -	- -	- -			- -	- -
BH101a	8.2 - 8.5 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	**Detected**	-	-
								- -	- -	- -			- -	- -
BH102	0 - 0.2 m	FILL	26/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	**6.6**	**8.1**
								- -	- -	0.001 -			- -	- -
BH102a	0.1 - 0.3 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH102a	3 - 3.2 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	NAD	-	-
								- -	- -	- -			- -	- -
BH102a	4 - 4.1 m	FILL	26/08/25	NAD	NAD	<0.1	**Detected**	-	**0.0176**	**0.0041**	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH102a	5 - 5.2 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	NAD	-	-
								- -	- -	- -			- -	- -
BH102a	7.5 - 8 m	Natural	26/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH103	1 - 1.2 m	FILL	26/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH103	1.9 - 2 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	NAD	-	-
								- -	- -	- -			- -	- -
BH103	3.5 - 4 m	FILL	26/08/25	-	-	-	-	-	-	-	NAD	NAD	-	-
								- -	- -	- -			- -	- -
BH1	0.2 - 0.4 m	FILL	28/08/25	NAD	NAD	<0.1	**Detected**	-	**0.0185**	**0.0031**	-	-	-	-
								- -	- -	0.001 -			- -	- -
BD2/20250828	0.2 - 0.4 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH2	0.7 - 0.9 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH2	1.8 - 2 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH3	0.05 - 0.15 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH3	0.8 - 1 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH4	0.2 - 0.4 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH5	0.3 - 0.5 m	FILL	26/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH6	0 - 0.2 m	FILL	26/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -

Table H2: Summary of Laboratory Results – SAC for generic recreational land use

				Asbestos (500mL)							Asbetsos (40g)		pH, EC and CEC	
				Asbestos ID in soil >0.1g/kg	Trace Analysis (NEPC)	Total Asbestos#1	Asbestos ID in soil <0.1g/kg	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Trace Analysis (AS)	Asbestos ID in soil >0.1g/kg	pH 1:5 soil:water	Cation Exchange Capacity
			PQL			0.1				0.001				1
Sample ID	Depth	Soil Matrix	Sample Date	-	-	g/kg	-	g	g	%(w/w)	-	-	pH Units	cmol/kg
BH6a	0.2 - 0.3 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BD1/20250828	0.2 - 0.3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-
								- -	- -	- -			- -	- -
BH6a	1.1 - 1.3 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	**8**	**11**
								- -	- -	0.001 -			- -	- -
BH6a	2.8 - 3 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH6a	3.8 - 4 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH6a	4.8 - 5 m	FILL	28/08/25	NAD	NAD	<0.1	NAD	-	-	<0.001	-	-	-	-
								- -	- -	0.001 -			- -	- -
BH6a	5.8 - 6 m	FILL	28/08/25	**Detected**	NAD	**120.5590**	NAD	-	**73.5**	**12.0559**	-	-	-	-
								- -	- -	0.001 -			- -	- -

Lab result

HIL/HSL value EIL/ESL/EGV value

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

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

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

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

Notes:

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

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

c EIL criteria applies to DDT only

Site Assessment Criteria (SAC):

SAC based on generic land use thresholds for Recreational C including public open space

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

HIL	HIL-C (NEPC, 2013 or HEPA, 2025 (PFAS only))	EGV	EGV, all land uses, direct exposure (HEPA, 2025)
HSL (vapour intrusion)	HSL-C (NEPC, 2013)	ESL	Urban Residential and Public Open Space (NEPC, 2013)
DC	Direct contact HSL C Recreational /Open space (CRC CARE, 2011)	ML	Residential, Parkland and Public Open Space (NEPC, 2013)
		EGV-Indir	EGV, all land uses, Indirect exposure (HEPA, 2025)

Table H4: Summary of Laboratory Results – Waste Classification

				Metals							TRH		BTEX				PAH				Phenols
				Total Arsenic	Cadmium	Total Chromium	Lead	TCLP- Lead	Mercury (inorganic)	Nickel	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)pyrene (B(a)P)	TCLP Benzo(a)pyrene (B(a)P)	Total PAH	Total +ve PAH's	Total Phenolics
			PQL	4	0.4	1	1	0.03	0.1	1	25	50	0.2	0.5	1	1	0.05	0.0001	0.05	-	5
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/lL	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg
BH101	0 - 0.3 m	FILL	26/08/25	**13**	<0.4	**11**	**140**	**0.05**	**0.1**	**7**	<25	**130**	<0.2	<0.5	<1	<1	**3.7**	<0.0001	**31**	**0.0005**	<5
BH101 - [TRIPLICATE]	0 - 0.3 m	FILL	26/08/25	**14**	<0.4	**12**	**140**	**-**	**0.1**	**6**	-	-	-	-	-	-	-	-	-	**-**	-
BH101a	0.5 - 0.7 m	FILL	26/08/25	**31**	**2**	**13**	**280**	**0.3**	**0.3**	**12**	<25	**850**	<0.2	<0.5	<1	<1	**14**	<0.0001	**130**	**0.0009**	<5
BH101a	5.2 - 5.5 m	FILL	26/08/25	**10**	**1**	**18**	**340**	**0.33**	**0.2**	**38**	<25	**1,200**	<0.2	<0.5	<1	<1	**11**	<0.0001	**110**	**0.0017**	-
BH101a	6.5 - 7 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101a	8.2 - 8.5 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	<0.2	<0.5	<1	<1	-	-	-	-	-
BH102	0 - 0.2 m	FILL	26/08/25	**14**	<0.4	**8**	**150**	**0.04**	**0.1**	**7**	<25	**540**	<0.2	<0.5	<1	<1	**8.4**	<0.0001	**77**	**NIL(+) VE**	-
BH102a	0.1 - 0.3 m	FILL	26/08/25	**10**	<0.4	**10**	**74**	-	**0.1**	**19**	<25	<50	<0.2	<0.5	<1	<1	**2**	**-**	**22**	**-**	<5
BH102a	3 - 3.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
BH102a	4 - 4.1 m	FILL	26/08/25	**11**	**1**	**19**	**490**	**0.52**	**0.6**	**19**	<25	**1,700**	<0.2	<0.5	<1	<1	**20**	<0.0001	**280**	**0.035**	-
BH102a	5 - 5.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102a	7.5 - 8 m	Natural	26/08/25	<4	<0.4	**6**	**19**	-	<0.1	**5**	<25	<50	<0.2	<0.5	<1	<1	**0.73**	**-**	**8.8**		-
BH103	1 - 1.2 m	FILL	26/08/25	**7**	<0.4	**11**	**92**	-	<0.1	**4**	<25	<50	<0.2	<0.5	<1	<1	**0.91**	**-**	**8.6**		<5
BH103	1.9 - 2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
BH103	3.5 - 4 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-
BH1	0.2 - 0.4 m	FILL	28/08/25	**9**	<0.4	**16**	**110**	**0.1**	**0.1**	**21**	<25	<50	<0.2	<0.5	<1	<1	**1.6**	<0.0001	**14**	**0.0007**	<5
BD2/20250828	0.2 - 0.4 m	FILL	28/08/25	**10**	<1	**17**	**123**	-	**0.1**	**25**	<10	<50	<0.2	<0.5	<0.5	<0.5	**2.2**	**-**	**17.1**	**-**	-
BH2	0.7 - 0.9 m	FILL	28/08/25	**9**	<0.4	**19**	**46**	-	<0.1	**20**	<25	<50	<0.2	<0.5	<1	<1	**0.5**	**-**	**5.4**	**-**	-
BH2	1.8 - 2 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
BH3	0.05 - 0.15 m	FILL	28/08/25	<4	<0.4	**6**	**7**	-	<0.1	**10**	<25	**3,100**	<0.2	<0.5	<1	<1	**0.06**	-	**0.94**	**-**	<5
BH3	0.8 - 1 m	FILL	28/08/25	<4	<0.4	**11**	**13**	-	<0.1	**40**	<25	**260**	<0.2	<0.5	<1	<1	**0.2**	-	**2.1**	**-**	-
BH4	0.2 - 0.4 m	FILL	28/08/25	**6**	<0.4	**13**	**21**	-	<0.1	**27**	<25	<50	<0.2	<0.5	<1	<1	**0.67**	-	**6.2**	**-**	<5
BH5	0.3 - 0.5 m	FILL	26/08/25	**6**	<0.4	**15**	**140**	<0.03	<0.1	**9**	<25	**330**	<0.2	<0.5	<1	<1	**5.6**	<0.0001	**45**	**0.0006**	-
BH6	0 - 0.2 m	FILL	26/08/25	**14**	<0.4	**10**	**150**	0.05	<0.1	**13**	<25	**260**	<0.2	<0.5	<1	<1	**3**	<0.0001	**24**	**-**	<5
BH6a	0.2 - 0.3 m	FILL	28/08/25	<4	<0.4	**2**	**5**	-	<0.1	**1**	<25	<50	<0.2	<0.5	<1	<1	**0.1**	**-**	**0.76**	**-**	-
BD1/20250828	0.2 - 0.3 m	FILL	28/08/25	<4	<0.4	**2**	**7**	-	<0.1	**2**	<25	<50	<0.2	<0.5	<1	<1	**0.09**	**-**	**0.3**	**-**	-
BH6a	1.1 - 1.3 m	FILL	28/08/25	**11**	**0.8**	**17**	**230**	**-**	**0.2**	**14**	<25	**440**	<0.2	<0.5	<1	<1	**5.6**	**-**	**55**	**-**	-
BH6a	2.8 - 3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-

Table H4: Summary of Laboratory Results – Waste Classification

				Metals							TRH		BTEX				PAH				Phenols
				Total Arsenic	Cadmium	Total Chromium	Lead	TCLP- Lead	Mercury (inorganic)	Nickel	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Benzo(a)pyrene (B(a)P)	TCLP Benzo(a)pyrene (B(a)P)	Total PAH	Total +ve PAH's	Total Phenolics
			PQL	4	0.4	1	1	0.03	0.1	1	25	50	0.2	0.5	1	1	0.05	0.0001	0.05	-	5
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/lL	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg
BH6a	3.8 - 4 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
BH6a	4.8 - 5 m	FILL	28/08/25	**24**	**0.8**	**21**	**530**	**0.61**	**0.3**	**27**	<25	**460**	<0.2	<0.5	<1	<1	**6.2**	<0.0001	**56**	**0.0013**	<5
BH6a	5.8 - 6 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**	-
Waste Classification Criteria [f]																					
CT1				100	20	100	100	-	4	40	650	10,000	10	288	600	1000	0.8	-	200	-	288
SCC1				500	100	1,900	1,500	-	50	1,050	650	10,000	18	518	1,080	1,800	10	-	200	-	518
TCLP1				-	-	-	-	5	-	-	-	-	-	-	-	-	-	0.04	-	-	-
CT2				400	80	400	400	-	16	160	2,600	40,000	40	1,152	2,400	4,000	3.2	-	800	-	1,152
SCC2				2,000	400	7,600	6,000	-	200	4,200	2,600	40,000	72	2,073	4,320	7,200	23	-	800	-	2,073
TCLP2				-	-	-	-	20	-	-	-	-	-	-	-	-	-	0.16	-	-	-

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

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

Notes:

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

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

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

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

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

PQL Practical quantitation limit

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

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

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

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

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

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

Table H4: Summary of Laboratory Results – Waste Classification

				OCP				OPP	PCB	VOC														
				Scheduled Chemical Waste (standard)	Total Endosulfan	Total Analysed OCP	Mirex	Total Analysed OPP	Total PCB	carbon tetrachloride	Monochlorobenzene	Chloroform	1,2-dichlorobenzene	1,4-dichlorobenzene	1,2-dichloroethane	1,1-Dichloroethene	Styrene (vinylbenzene)	1,1,1,2-tetrachloroethane	1,1,2,2-tetrachloroethane	tetrachloroethene	1,1,1-trichloroethane	1,1,2-trichloroethane	1,1,2-trichloroethylene	Vinyl Chloride
			PQL	0.1	0.1	0.1	0.1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH101	0 - 0.3 m	FILL	26/08/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101 - [TRIPLICATE]	0 - 0.3 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101a	0.5 - 0.7 m	FILL	26/08/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101a	5.2 - 5.5 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101a	6.5 - 7 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101a	8.2 - 8.5 m	FILL	26/08/25	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH102	0 - 0.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102a	0.1 - 0.3 m	FILL	26/08/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102a	3 - 3.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102a	4 - 4.1 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102a	5 - 5.2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102a	7.5 - 8 m	Natural	26/08/25	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH103	1 - 1.2 m	FILL	26/08/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH103	1.9 - 2 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH103	3.5 - 4 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH1	0.2 - 0.4 m	FILL	28/08/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD2/20250828	0.2 - 0.4 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH2	0.7 - 0.9 m	FILL	28/08/25	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH2	1.8 - 2 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3	0.05 - 0.15 m	FILL	28/08/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH3	0.8 - 1 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH4	0.2 - 0.4 m	FILL	28/08/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH5	0.3 - 0.5 m	FILL	26/08/25	-	-	-	-	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH6	0 - 0.2 m	FILL	26/08/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6a	0.2 - 0.3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD1/20250828	0.2 - 0.3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6a	1.1 - 1.3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6a	2.8 - 3 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table H4: Summary of Laboratory Results – Waste Classification

				OCP				OPP	PCB	VOC													
				Scheduled Chemical Waste (standard)	Total Endosulfan	Total Analysed OCP	Mirex	Total Analysed OPP	Total PCB	carbon tetrachloride	Monochlorobenzene	Chloroform	1,2-dichlorobenzene	1,4-dichlorobenzene	1,2-dichloroethane	1,1-Dichloroethene	Styrene (vinylbenzene)	1,1,1,2-tetrachloroethane	1,1,2,2-tetrachloroethane	tetrachloroethene	1,1,1-trichloroethane	1,1,2-trichloroethane	1,1,2-trichloroethylene	Vinyl Chloride
			PQL	0.1	0.1	0.1	0.1	0.1	0.1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH6a	3.8 - 4 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH6a	4.8 - 5 m	FILL	28/08/25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH6a	5.8 - 6 m	FILL	28/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Waste Classification Criteria [f]																							
CT1				<50	60	-	-	4	<50	10	2,000	120	86	150	10	14	60	200	26	14	600	24	10	4
SCC1				<50	108	-	-	7.5	<50	18	3,600	126	155	270	18	25	108	360	46.8	25.2	1,080	43.2	18	7.2
TCLP1				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CT2				<50	240	-	-	16	<50	40	8,000	480	344	600	40	56	240	800	104	56	2,400	96	40	16
SCC2				<50	432	-	-	30	<50	72	14,400	864	620	1,080	72	100	432	1,440	187.2	100.8	4,320	172.8	72	28.8
TCLP2				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Notes:

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

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

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

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

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

PQL Practical quantitation limit

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

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

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

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

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

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

Table H4: Summary of Laboratory Results – Waste Classification

				PFAS				Asbestos (40g)		Asbestos (500mL)						
				PFOA	TCLP PFOA	PFOS + PFHxS	TCLP PFOS + PFHxS	Asbestos ID in soil >0.1g/kg	Trace Analysis (AS)	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Total Asbestos#1
			PQL	0.0001	0.00001	0.0001	0.00001								0.001	0.1
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/L	mg/kg	mg/L	-	-	-	-	-	g	g	%(w/w)	g/kg
BH101	0 - 0.3 m	FILL	26/08/25	**0.0003**	<0.00001	**0.0022**	**0.00001**	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH101 - [TRIPLICATE]	0 - 0.3 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-
BH101a	0.5 - 0.7 m	FILL	26/08/25	-	-	-	-	-	-	**Detected**	NAD	NAD	–	**0.0710**	**0.0132**	**0.1323**
BH101a	5.2 - 5.5 m	FILL	26/08/25	-	-	-	-	-	-	**Detected**	NAD	NAD	**1.0317**	–	<0.001	**1.0603**
BH101a	6.5 - 7 m	FILL	26/08/25	-	-	-	-	**Detected**	NAD	-	-	-	-	-	-	-
BH101a	8.2 - 8.5 m	FILL	26/08/25	-	-	-	-	**Detected**	NAD	-	-	-	-	-	-	-
BH102	0 - 0.2 m	FILL	26/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH102a	0.1 - 0.3 m	FILL	26/08/25	-	-	-	-	-	-	-	-	-	-	-	-	-
BH102a	3 - 3.2 m	FILL	26/08/25	-	-	-	-	NAD	NAD	-	-	-	-	-	-	-
BH102a	4 - 4.1 m	FILL	26/08/25	-	-	-	-	-	-	NAD	**Detected**	NAD	–	**0.0176**	**0.0041**	<0.1
BH102a	5 - 5.2 m	FILL	26/08/25	-	-	-	-	NAD	NAD	-	-	-	-	-	-	-
BH102a	7.5 - 8 m	Natural	26/08/25	<0.0001	-	<0.0001	-	-	-	-	-	-	-	-	-	-
BH103	1 - 1.2 m	FILL	26/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH103	1.9 - 2 m	FILL	26/08/25	-	-	-	-	NAD	NAD	-	-	-	-	-	-	-
BH103	3.5 - 4 m	FILL	26/08/25	-	-	-	-	NAD	NAD	-	-	-	-	-	-	-
BH1	0.2 - 0.4 m	FILL	28/08/25	<0.0001	<0.00001	**0.0001**	<0.00001	-	-	NAD	**Detected**	NAD	–	**0.0185**	**0.0031**	<0.1
BD2/20250828	0.2 - 0.4 m	FILL	28/08/25	<0.0002	-	<0.0002	-	-	-	-	-	-	-	-	-	-
BH2	0.7 - 0.9 m	FILL	28/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH2	1.8 - 2 m	FILL	28/08/25	<0.0001	-	<0.0001	-	-	-	-	-	-	-	-	-	-
BH3	0.05 - 0.15 m	FILL	28/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH3	0.8 - 1 m	FILL	28/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH4	0.2 - 0.4 m	FILL	28/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH5	0.3 - 0.5 m	FILL	26/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH6	0 - 0.2 m	FILL	26/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH6a	0.2 - 0.3 m	FILL	28/08/25	<0.0001	-	<0.0001	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BD1/20250828	0.2 - 0.3 m	FILL	28/08/25	<0.0001	-	<0.0001	-	-	-	-	-	-	-	-	-	-
BH6a	1.1 - 1.3 m	FILL	28/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH6a	2.8 - 3 m	FILL	28/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1

Table H4: Summary of Laboratory Results – Waste Classification

				PFAS				Asbestos (40g)		Asbestos (500mL)						
				PFOA	TCLP PFOA	PFOS + PFHxS	TCLP PFOS + PFHxS	Asbestos ID in soil >0.1g/kg	Trace Analysis (AS)	Asbestos ID in soil >0.1g/kg	Asbestos ID in soil <0.1g/kg	Trace Analysis (NEPC)	ACM >7mm Estimation	FA and AF Estimation	FA and AF Estimation	Total Asbestos#1
			PQL	0.0001	0.00001	0.0001	0.00001								0.001	0.1
Sample ID	Depth	Soil Matrix	Sample Date	mg/kg	mg/L	mg/kg	mg/L	-	-	-	-	-	g	g	%(w/w)	g/kg
BH6a	3.8 - 4 m	FILL	28/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH6a	4.8 - 5 m	FILL	28/08/25	-	-	-	-	-	-	NAD	NAD	NAD	–	–	<0.001	<0.1
BH6a	5.8 - 6 m	FILL	28/08/25	-	-	-	-	-	-	**Detected**	NAD	NAD	–	**73.5000**	**12.0559**	**120.5590**
Waste Classification Criteria [f]																
CT1				-	-	-	-	-	-	-	-	-	-	-	-	-
SCC1				18	-	1.8	-	-	-	-	-	-	-	-	-	-
TCLP1				-	0.5	-	0.05	-	-	-	-	-	-	-	-	-
CT2				-	-	-	-	-	-	-	-	-	-	-	-	-
SCC2				72	-	7.2	-	-	-	-	-	-	-	-	-	-
TCLP2				-	2	-	0.2	-	-	-	-	-	-	-	-	-

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

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

Notes:

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

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

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

d Criteria for scheduled chemicals used as an initial screen

e Criteria for Chlorpyrifos used as initial screen

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

PQL Practical quantitation limit

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

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

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

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

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

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

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Table H5: Summary of Laboratory Results – Groundwater

		Metals - Dissolved								metallic Inorg	TRH				BTEX					
		Total Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Cyanide (total)	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Total Xylenes
	PQL	1	0.1	1	1	1	0.05	1	1	4	10	50	100	100	1	1	1	1	2	1
ANZG (2018) 95% LOP Marine			5.5	4.4	1.3	4.4	**0.1**	70	8	4					700	180	80		75	
HEPA (2018) 99% LOP Marine																				
NHMRC (2012) Recreation		100	20		20,000	50	10	200		800					10	8,000	3,000			6,000
NEPC (2013) HSL 2-4m											6,000	NL			5,000	NL	NL			NL
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH102a	02/09/25	<1	**0.1**	<1	**50**	**8**	<0.05	**48**	**260**	<4	<10	**73**	<100	<100	<1	<1	<1	<1	<2	<1
BH103	02/09/25	<1	<0.1	<1	**27**	**4**	<0.05	**51**	**150**	<4	**12**	<50	<100	<100	<1	<1	<1	<1	<2	<1
BD1/20250902	02/09/25	<1	<0.1	<1	**28**	**4**	<0.05	**52**	**150**	-	**13**	<50	<100	<100	<1	<1	<1	<1	<2	<1
SW1	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

- No criterion / not defined / not tested / not applicable
- * QA/QC replicate of sample listed directly below the primary sample
- a pH adjusted criteria
- NL Not limiting
- PQL Practical quantitation limit

Shaded cell is exceedance of guideline value

Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded

NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Sand 2-4m

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Marine aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]

HEPA (2025) PFAS National Environmental Management Plan, Version 3.0 99% level of protection for Marine water aquatic ecosystems

NHMRC (2008) Guidelines for Managing Risk in Recreational Water

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection

Underlining of ANZG (2018) criteria indicates a criteria with an ‘unknown’ level of protection.

ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic

ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered

ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table H5: Summary of Laboratory Results – Groundwater

		PAH																				
		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Naphthalene	Benzo(a)pyrene (B(a)P)	Benzo(b,j+k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenzo(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene	Sum of detected PAH	DDE	DDT	DDD	Aldrin	Dieldrin
	PQL	0.1	0.1	0.1	0.1	1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.001	0.001	0.001	0.001	0.001
ANZG (2018) 95% LOP Marine				**0.01**		70	**0.1**					**1**			**0.6**				**0.0004**		**0.003**	
HEPA (2018) 99% LOP Marine																						
NHMRC (2012) Recreation							0.1												90			
NEPC (2013) HSL 2-4m						NL																
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH102a	02/09/25	**0.2**	<0.1	**0.2**	**0.2**	<1	**0.1**	**0.2**	<0.1	**0.2**	<0.1	**0.5**	**0.2**	<0.1	**0.9**	**0.5**	**3.6**	<0.001	<0.001	<0.001	<0.001	<0.001
BH103	02/09/25	**0.6**	**0.2**	**0.8**	**0.9**	<1	**0.7**	**1**	**0.4**	**0.7**	<0.1	**2.9**	**0.3**	**0.3**	**4.2**	**3.1**	**16**	<0.001	<0.001	<0.001	<0.001	<0.001
BD1/20250902	02/09/25	**0.2**	<0.1	**0.4**	**0.7**	<1	**0.6**	**0.9**	**0.4**	**0.6**	<0.1	**1.6**	**0.1**	**0.3**	**1.5**	**1.6**	**9.1**	-	-	-	-	-
SW1	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

- No criterion / not defined / not tested / not applicable
* QA/QC replicate of sample listed directly below the primary sample
a pH adjusted criteria
NL Not limiting
PQL Practical quantitation limit

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NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Sand 2-4m

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ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table H5: Summary of Laboratory Results – Groundwater

		OCP																			
		Aldrin + Dieldrin (calculated)	alpha-chlordane	gamma-Chlordane	Endosulfan I	Endosulfan II	Endosulfan Sulphate	Endrin	Endrin Aldehyde	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	alpha-BHC	beta-BHC	delta-BHC	Lindane	Sum of detected OCP	Azinphos methyl (Guthion)	Bromophos-ethyl	Chlorpyriphos	Chlorpyriphos-methyl
	PQL	0.001	0.001	0.001	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.02	0.05	0.009	0.05
ANZG (2018) 95% LOP Marine								**0.004**		**0.0004**		0.1	**0.004**				0.007				**0.0005**	
HEPA (2018) 99% LOP Marine																						
NHMRC (2012) Recreation		3								3							100		300	100	100	
NEPC (2013) HSL 2-4m																						
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH102a	02/09/25	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05
BH103	02/09/25	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.02	<0.05	<0.009	<0.05
BD1/20250902	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW1	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

- \- No criterion / not defined / not tested / not applicable
- * QA/QC replicate of sample listed directly below the primary sample
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ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic

ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered

ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table H5: Summary of Laboratory Results – Groundwater

		OPP													PCB							
		Diazinon	Dichlorvos	Dimethoate	Ethion	Ronnel (fenchlorphos)	Fenitrothion	Fenthion	Malathion	Parathion	Parathion-methyl	Methidathion	Fenamiphos	Sum of detected OPP	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Aroclor 1260	Sum of detected PCB
	PQL	0.01	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.004	0.05	0.05	0.05	0.004	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ANZG (2018) 95% LOP Marine							0.001															
HEPA (2018) 99% LOP Marine																						
NHMRC (2012) Recreation		40	50	70	40		70	70	700	200	7	60	5									
NEPC (2013) HSL 2-4m																						
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH102a	02/09/25	<0.01	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BH103	02/09/25	<0.01	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.004	<0.05	<0.05	<0.05	<0.004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
BD1/20250902	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW1	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

- No criterion / not defined / not tested / not applicable
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ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection
Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.
ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic
ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered
ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table H5: Summary of Laboratory Results – Groundwater

		1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	tetrachloroethene	1,1,2-trichloroethane	1,1,2-trichloroethylene	1,1-dichloroethane	1,1-Dichloroethene	1,1-dichloropropene	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethyl benzene	1,2-dibromo-3-chloropropane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethyl benzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene
	PQL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANZG (2018) 95% LOP Marine			270	400	70	1,900	330		700				**20**				1,900	900			1,100	
HEPA (2018) 99% LOP Marine																						
NHMRC (2012) Recreation					500				300							15,000	30					400
NEPC (2013) HSL 2-4m																						
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH102a	02/09/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH103	02/09/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BD1/20250902	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW1	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

- \- No criterion / not defined / not tested / not applicable
- * QA/QC replicate of sample listed directly below the primary sample
- a pH adjusted criteria
- NL Not limiting
- PQL Practical quantitation limit

Shaded cell is exceedance of guideline value

Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded

NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Sand 2-4m

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Marine aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]

HEPA (2025) PFAS National Environmental Management Plan, Version 3.0 99% level of protection for Marine water aquatic ecosystems

NHMRC (2008) Guidelines for Managing Risk in Recreational Water

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ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered

ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table H5: Summary of Laboratory Results – Groundwater

		VOC (excluding BTEX)																			
		2,2-dichloropropane	2-chlorotoluene	4-chlorotoluene	4-isopropyl toluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	carbon tetrachloride	Chloroethane	Vinyl Chloride	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Isopropylbenzene (cumene)	Cyclohexane	dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	1,2-dibromoethane
	PQL	1	1	1	1	1	1	1	1	1	10	10	1	10	1	1	1	1	1	1	10	1
ANZG (2018) 95% LOP Marine										240		100	770				30					
HEPA (2018) 99% LOP Marine																						
NHMRC (2012) Recreation										30		3										10
NEPC (2013) HSL 2-4m																						
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH102a	02/09/25	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<10	<1	<1	<1	**2**	<1	<1	<10	<1
BH103	02/09/25	<1	<1	<1	<1	<1	<1	**2**	<1	<1	<10	<10	**14**	<10	<1	<1	<1	<1	<1	<1	<10	<1
BD1/20250902	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW1	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

- No criterion / not defined / not tested / not applicable
* QA/QC replicate of sample listed directly below the primary sample
a pH adjusted criteria
NL Not limiting
PQL Practical quantitation limit

Shaded cell is exceedance of guideline value

Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded

NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Sand 2-4m

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Marine aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]

HEPA (2025) PFAS National Environmental Management Plan, Version 3.0 99% level of protection for Marine water aquatic ecosystems

NHMRC (2008) Guidelines for Managing Risk in Recreational Water

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection

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ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered

ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table H5: Summary of Laboratory Results – Groundwater

														PFAS					
		hexachlorobutadiene	Bromomethane	Monochlorobenzene	n-butyl benzene	n-propyl benzene	sec-butyl benzene	Styrene (vinylbenzene)	Tert-butyl benzene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Sum of detected VOC	PFOS	PFOA	PFHxS	Perfluorobutanesulfonic acid (PFBS)	6:2 FTS	8:2 FTS	Sum of detected PFAS
	PQL	1	10	1	1	1	1	1	1	1	1	10	1	0.0002	0.0002	0.0002	0.0004	0.0004	0.0004	0.0002
ANZG (2018) 95% LOP Marine				55																
HEPA (2018) 99% LOP Marine														**0.00023**	**19**					
NHMRC (2012) Recreation		7	10	3,000				300						2	10	2				
NEPC (2013) HSL 2-4m																				
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH102a	02/09/25	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	**2**	**0.0006**	**0.002**	**0.002**	**0.002**	**0.002**	<0.0004	**0.008**
BH103	02/09/25	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<10	**16**	**0.012**	**0.035**	**0.014**	**0.011**	**0.002**	<0.0004	**0.074**
BD1/20250902	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW1	02/09/25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

- No criterion / not defined / not tested / not applicable
- * QA/QC replicate of sample listed directly below the primary sample
- a pH adjusted criteria
- NL Not limiting
- PQL Practical quantitation limit

Shaded cell is exceedance of guideline value

Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded

NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Sand 2-4m

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Marine aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]

HEPA (2025) PFAS National Environmental Management Plan, Version 3.0 99% level of protection for Marine water aquatic ecosystems

NHMRC (2008) Guidelines for Managing Risk in Recreational Water

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection

Underlining of ANZG (2018) criteria indicates a criteria with an 'unknown' level of protection.

ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic

ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered

ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table H5: Summary of Laboratory Results – Groundwater

		Nutrients								Anions & Cations - Dissolved	
		Nitrogen	Ammonia as N	TKN in water	Nitrate as N	Nitrite as N	NOx as N	Organic Nitrogen as N	Phosphorous	Calcium	Magnesium
	PQL	100	5	100	5	5	5	200	50	500	500
ANZG (2018) 95% LOP Marine			2150[a]		700						
HEPA (2018) 99% LOP Marine											
NHMRC (2012) Recreation					113,000	9,000					
NEPC (2013) HSL 2-4m											
Sample ID	Sample Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BH102a	02/09/25	**800**	**610**	**800**	**40**	<5	**40**	<200	**70**	-	-
BH103	02/09/25	**39,000**	**550**	<100	40,000	**310**	**40,000**	<200	**80**	-	-
BD1/20250902	02/09/25	-	-	-	-	-	-	-	-	-	-
SW1	02/09/25	-	-	-	-	-	-	-	-	**330,000**	**1,100,000**

Notes:

- No criterion / not defined / not tested / not applicable
* QA/QC replicate of sample listed directly below the primary sample
a pH adjusted criteria
NL Not limiting
PQL Practical quantitation limit

Shaded cell is exceedance of guideline value

Where one or more guideline value is exceeded, the cell is shaded to the colour of the highest guideline value exceeded

NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013), health screening level Sand 2-4m

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 95% level of protection of species for Marine aquatic ecosystems [NB: 99% level of protection adopted for bioaccumulative chemicals]

HEPA (2025) PFAS National Environmental Management Plan, Version 3.0 99% level of protection for Marine water aquatic ecosystems

NHMRC (2008) Guidelines for Managing Risk in Recreational Water

ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, orange text is 'unknown' level of protection

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ANZG (2018) DGV adopted for most conservative species of following analytes: DGV for xylene (m) adopted for xylene (m+p); DGV for CrVI adopted for total chromium; DGV for AsV adopted for total arsenic

ANZG (2018) DGV adopted for aluminium in freshwater is for receiving waters with pH >6.5. For receiving waters with pH <6.5 suitability of the more conservative, low reliability DGV of unknown LOP should be considered

ANZG (2018) Ammonia DGV is pH and temperature dependant. DGV for a pH of 8 provided in table.

Table H6: Sumamry of LFG screening (2 September 2025)

Atm Pressure - 1024.5 to 1020.2 mb

Gas	CH4	CO2	O2*	H2S	CO	Flow
Units	%	%	%	ppm	ppm	L/hr
ID						
BH6a	0	4.9	12.8	0	12	0
BH102a	0	3.2	14.3	0	7	0
BH103	0	0.2	17.6	0	42	0
BH2	0	3.4	16.4	0	1	0

Peak % (highest of CH4 and CO2)	4.9
Peak Flow (assumed, based on no detectable flow)	0.3
GSV (calculated)	0.0147

GSV = peak flow (L/hr) * peak concentration (% v/v)

A flowrate of 0.3 L/hr was adopted given no bore flow was recorded. The flowrate was assumed based on the flowrate accuracy range of GA5000 (±0.3 L/hr)

*Note: minimum concentrations recorded during the monitoring shown for O2

The Bureau of Meteorology (BoM) station's recorded air pressure readings at 9am then 3pm of 1024.5 mb then 1020.2 mb at Observatory Hill

Appendix D

Assessment Criteria

1. Introduction

1.1 Guidelines

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

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013).
- CRC CARE *Health screening levels for petroleum hydrocarbons in soil and groundwater* (CRC CARE, 2011).
- HEPA *PFAS National Environmental Management Plan (NEMP)* (HEPA, 2025).
- ANZG *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018).
- NHMRC *Guidelines for Managing Risks In Recreational Water* (NHMRC, 2008).
- NHMRC, NRMMC *Australian Drinking Water Guidelines 6 2011, Version 3.2* (NHMRC, NRMMC, 2022).
- ANZECC *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC, 2000).
- NSW EPA *Assessment and management of Hazardous Ground Gases* (NSW EPA, 2020)
- NSW EPA *Environmental Guidelines, Solid Waste Landfills, Second Edition, 2016.* NSW Environment Protection Authority. (NSW EPA, 2016).

1.2 General

The SAC applied in the current investigation are informed by the existing LTEMP and this CEMP which identified the need to manage potential contamination during minor and major construction works, to ensure that the health of the users of the oval including the public and maintenance or construction works, are protected. Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013).

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

- Construction and maintenance workers:
  - Intrusive maintenance worker; and
  - Land use category 'D', commercial (where no guidance for intrusive maintenance workers available). It is noted that these SAC are based on 'standard' commercial use, which is likely to underestimate the soil contact relative to some construction and intrusive maintenance workers.
- Land use: recreational:
  - Corresponding to land use category 'C', public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate.

- Note: land use category 'C' does not assess for enclosed spaces, and it is considered that land use category 'D' is the most appropriate category for assessing for potential vapour intrusion into buildings.

- Soil type: sand.

2. Soils

2.1 Health investigation and screening levels

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

Table 1: Health investigation levels (mg/kg)

Contaminant	HIL-C	HIL-D
Metals		
Arsenic	300	3000
Cadmium	90	900
Chromium (VI)	300	3600
Copper	17 000	240 000
Lead	600	1500
Mercury (inorganic)	80	730
Nickel	1200	6000
Zinc	30 000	400 000
PAH		
B(a)P TEQ	3	40
Total PAH	300	4000
Phenols		
Phenol	40 000	240 000
Pentachlorophenol	120	660
OCP		
DDT+DDE+DDD	400	3600
Aldrin and dieldrin	10	45
Chlordane	70	530
Endosulfan	340	2000
Endrin	20	100

Contaminant	HIL-C	HIL-D
Heptachlor	10	50
HCB	10	80
Methoxychlor	400	2500
Mirex	20	100
OPP		
Chlorpyrifos	250	2000
PCB		
PCB	1	7
VOC (various analytes)	-	-

Table 2: Health screening levels (mg/kg)

Contaminant	HSL-C	HSL-D	IMW (shallow trench)
SAND	**0 m to <1 m**	**0 m to <1 m**	**0 m to <2 m**
Benzene	NL	3	77
Toluene	NL	NL	NL
Ethylbenzene	NL	NL	NL
Xylenes	NL	230	NL
Naphthalene	NL	NL	NL
TRH F1	NL	260	NL
TRH F2	NL	NL	NL

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

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

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

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

Contaminant	DC HSL-C	DC HSL-IMW
TRH F2	3800	62 000
TRH F3	5300	85 000
TRH F4	7400	120 000

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

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

The laboratory analytical results for per- and poly-fluoroalkyl substances (PFAS) in soil have been assessed against HIL published in HEPA (2025). The HIL represent a nationally-agreed suite that should be used to inform site investigations. The HIL are intentionally conservative, and an exceedance of these criteria may not constitute a risk if other exposure pathways are controlled. An exceedance of the HIL should trigger further investigations, such as a site-specific risk assessment. At the time of this investigation, screening values were available only for perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexane sulfonate (PFHxS).

The HIL derived from Table 5 of HEPA (2025) are in Table 4.

Table 4: Health investigation levels (mg/kg)

Contaminant	HIL-C	HIL-D
PFOS and PFHxS *	1	20
PFOA	10	50

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

2.3 Asbestos in soil

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

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

The HSL are in Table 5. No asbestos HSL has been provided for construction and maintenance workers, and any detection should trigger consideration of the need for appropriate WHS controls.

Table 5: Health screening levels for asbestos

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

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

Where insufficient sample recovery is possible for FA and AF analysis the presence or absence of asbestos at a limit of reporting of 0.1 g/kg (AS:4964) will be adopted for the assessment as an initial screen.

2.4 Ecological investigation levels

Schedule B5A of NEPC (2013) states that the aim of the EIL is that varying levels of protection will be provided to the following ecological receptors at all sites:

- Biota supporting ecological processes, including microorganisms and soil invertebrates;
- Native flora and fauna;
- Introduced flora and fauna; and
- Transitory or permanent wildlife.

In determining the relevance of EIL (and ESL / EGV) the presence or absence of sensitive ecological receptors must be considered. In this regard both the potential ecological receptors on and off-site must be considered in conjunction with the proposed development.

Generally, the ecological criteria apply to the upper 2 m of the soil profile.

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

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

Variable	Input	Rationale
Age of contaminants	"Aged" (>2 years)	Assumed based on site history
pH	7.13	Average of laboratory results
CEC	9.7 $cmol_c/kg$	Average of laboratory results
Clay content	1%	Assumed based on soil profile
Traffic volumes	high	The site is bounded by public roads
State / Territory	NSW	Site locality

Table 7: Ecological investigation levels (mg/kg)

Contaminant	EIL-A-B-C
Metals	
Arsenic	100
Copper	210
Nickel	160
Chromium III	200
Lead	1100

Contaminant	EIL-A-B-C
Zinc	510
PAH	
Naphthalene	170
OCP	
DDT	180

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

2.5 Ecological screening levels

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

The applicability of ecological criteria is discussed in Section 2.4, noting that generally, the ecological criteria apply to the upper 2 m of the soil profile.

Table 8: Ecological screening levels (mg/kg)

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

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

2.6 Ecological soil guideline values

The interim ecological soil guideline values (EGV) derived from Table 6 of HEPA (2025) are in Table 9. The applicability of ecological criteria is discussed in Section 2.4, noting that generally, the ecological criteria apply to the upper 2 m of the soil profile.

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

Contaminant	Direct exposure	Indirect exposure
PFOS	1	0.003

PFOA	10 (0.005 for reptiles)	0.003
PFHxS	NC	NC

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

2.7 Management limits

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

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

The adopted management limits are in Table 10.

Table 10: Management limits (mg/kg)

Contaminant	Soil type	ML-A-B-C
TRH F1	Coarse	700
TRH F2	Coarse	1000
TRH F3	Coarse	2500
TRH F4	Coarse	10 000

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

3. Groundwater / stormwater discharge criteria

3.1 Introduction

The assessment criteria for off-site discharge of groundwater / surface water are the same as the Tier 1 site assessment criteria (SAC) adopted in here for protective of human and marine aquatic health.

The groundwater investigation levels (GIL) used for interpretation of the groundwater data (as a Tier 1 assessment) have been selected based on the potential risks posed from contamination sourced from the site to receptors at or down-gradient of the site, as identified by the conceptual site model (CSM). The receptors, exposure points and pathways are summarised in Table 11.

Table 11: Summary of potential receptors and potential risks

Receptor	Location	Exposure point	Exposure pathway
Surface water aquatic ecosystem	Down-gradient from site.	Receiving surface water body at the groundwater discharge point.	Exposure to contaminants.

Receptor	Location	Exposure point	Exposure pathway
Occupants of buildings	On site and down-gradient from site.	Enclosed buildings (existing).	Inhalation of VOC (including TRH and BTEX) overlying VOC impacted groundwater via the vapour intrusion pathway. Note, these values are not applicable to stormwater disposal.
Construction workers	On-site	At works location when recovering soils / liquid from below the water table (e.g. During piling)	Direct contact with water

The rationale for the selection of GIL is in Table 12.

Table 12: Groundwater investigation level rationale

Receptor / beneficial use	GIL	Source	Comments / rationale
Aquatic ecosystem	DGV	ANZG (2018)	Marine water 99% LOP for bioaccumulative contaminants 95% LOP for non-bioaccumulative contaminants
Aquatic ecosystem	DGV	HEPA (2025)	Marine water 99% LOP as recommended for potential bioaccumulation. Screening values were only available for PFOS and PFOA at the time of this investigation.
Aquatic ecosystem	-	-	Note no DGV are available for TRH suitable for stormwater disposal. Any detections of TRH above the laboratory practical quantitation limit are to be reviewed by the Environmental Consultant, and will only be considered acceptable if they are found not to present an unacceptable ecological risk.
Building occupants (vapour intrusion)	HSL	NEPC (2013)	2 m to <4 m Note, these values are not applicable to stormwater disposal.
Construction workers	GV	NHMRC (2008)	Recreational guidance used as a screening level. Based on the NHMRC (2022) values x10 (lower limit of recommended 10-20x) to account for ingestion of water whilst undertaking recreational activities. PFAS GV adopted as per NHMRC (2019) guidance note.

Notes: DGV default guideline value
% LOP percentage level of protection of species

HSL health screening level
GV guideline value

3.2 Groundwater investigation levels for aquatic ecosystems

The DGV for the protection of aquatic ecosystems derived from ANZG (2018) are in Table 13.

Table 13: Groundwater investigation levels for protection of aquatic ecosystems (µg/L)

Contaminant	Marine DGV 95% LOP	Notes
Metals / metalloids		
Arsenic	24 / 13	Levels provided for As III / As IV respectively as adopted from freshwater criteria in absence of marine criteria. Unknown reliability.
Cadmium	0.7	99% LOP adopted as recommended due to potential for bioaccumulation. Very high reliability.
Chromium (VI)	4.4	Chromium VI levels adopted as initial screen for total chromium. Very high reliability.
Copper	1.3	Very high reliability.
Cyanide	4	Very low reliability.
Lead	4.4	Low reliability.
Mercury (inorganic)	0.1	99% LOP adopted as recommended due to potential for bioaccumulation. Very high reliability.
Nickel	7	99% LOP adopted as recommended to protect key species from chronic toxicity. Very high reliability.
Zinc	8	Very high reliability.
BTEX		
Benzene	500	99% LOP adopted as recommended to protect key species from chronic toxicity. Moderate reliability.
Ethylbenzene	80	Unknown reliability.
m-Xylene	75	Unknown reliability.
o-xylene	350	Adopted from freshwater criteria for in absence of marine criteria. Unknown reliability.
p-Xylene	200	Adopted from freshwater criteria for in absence of marine criteria. Unknown reliability.
Toluene	180	Unknown reliability.
PAH		
Anthracene	0.01	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.

Contaminant	Marine DGV 95% LOP	Notes
Benzo(a)pyrene	0.1	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
Fluoranthene	1	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
Naphthalene	50	99% LOP adopted as recommended to protect key species from chronic toxicity. Moderate reliability.
Phenanthrene	0.6	99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
OCP		
Aldrin	0.003	Unknown reliability and LOP.
Chlordane	0.001	Unknown reliability and LOP.
DDT	0.0004	Unknown reliability and LOP.
Dieldrin	0.01	Freshwater criteria adopted in absence of marine criteria. Unknown reliability and LOP.
Endosulfan	0.005	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
Endrin	0.004	99% LOP adopted as recommended due to potential for bioaccumulation. Moderate reliability.
Heptachlor	0.0004	Unknown reliability and LOP.
Methoxychlor	0.004	Unknown reliability and LOP.
OPP		
Chlorpyrifos	0.009	Low reliability.
Diazinon	0.01	Freshwater criteria adopted in absence of marine criteria. Unknown reliability.
Dimethoate	0.15	Freshwater criteria adopted in absence of marine criteria. Unknown reliability.
Fenitrothion	0.001	Unknown reliability and LOP.
Malathion	0.05	Freshwater criteria adopted in absence of marine criteria. Unknown reliability.
Parathion	0.004	Freshwater criteria adopted in absence of marine criteria. Unknown reliability.
PCB		

Contaminant	Marine DGV 95% LOP	Notes
Aroclor 1242	0.3	Adopted from freshwater criteria for in absence of marine criteria. 99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
Aroclor 1254	0.01	Adopted from freshwater criteria for in absence of marine criteria. 99% LOP adopted as recommended due to potential for bioaccumulation. Unknown reliability.
VOC		
Tetrachloroethene (PCE)	70	Unknown reliability.
Trichloroethene (TCE)	330	Unknown reliability.
cis-1,2-dichloroethene (DCE)	700	Unknown reliability.
Chloroethene (vinyl chloride / VC)	100	Unknown reliability.
Tetrachloromethane (carbon tetrachloride / CT)	240	Unknown reliability.
Trichloromethane (chloroform / TCM)	370	99% LOP adopted as recommended to protect key species from chronic toxicity. Unknown reliability.
Inorganics		
Ammonia	2150	At a receiving body pH of 7.54. Note: ammonia toxicity is pH and temperature dependent. Very high reliability.
Nitrate	700	Freshwater criteria adopted in absence of marine criteria.

Notes: 95% LOP for non-bioaccumulative contaminants
99% LOP for bioaccumulative contaminants

The DGV for the protection of aquatic ecosystems derived from HEPA (2025) are in Table 14.

Table 14: Groundwater investigation levels for protection of aquatic ecosystems (µg/L)

Contaminant / LOP	Interim marine water DGV
PFOS 99% LOP	0.00023
PFOA 99% LOP	19

3.3 Health screening levels for vapour intrusion

The HSL to evaluate potential vapour intrusion risks derived from NEPC (2013) are in Table 15. There are no generic HSL for groundwater within 2 m of the ground (or basement) level.

Note, these values are not applicable to stormwater disposal.

Table 15: Groundwater health screening levels for vapour intrusion (µg/L)

Contaminant	HSL-C	HSL-D	IMW (shallow trench)
SAND	**2 m to <4 m**	**2 m to <4 m**	**2 m to <4 m**
Benzene	NL	5000	NL
Toluene	NL	NL	NL
Ethylbenzene	NL	NL	NL
Xylenes	NL	NL	NL
Naphthalene	NL	NL	NL
TRH F1	NL	6000	NL
TRH F2	NL	NL	NL

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

3.4 Construction worker exposure

The GV for recreational water derived from NHMRC (2008) are in Table 16.

Table 16: Groundwater investigation levels for protection of recreational waters (µg/L)

Contaminant	Recreational water guideline values
Metals / metalloids	
Arsenic	100
Cadmium	20
Chromium (VI)	500
Copper	20000
Cyanide	800
Lead	100
Manganese	5000
Mercury (inorganic)	10
Nickel	200
Zinc	30000 (aesthetic only)
BTEX	
Benzene	10

Contaminant	Recreational water guideline values
Ethylbenzene	3000
Xylenes	6000
Toluene	8000
PAH	
Benzo(a)pyrene	0.1
OCP	
Aldrin + Dieldrin	3
Chlordane	20
DDT	90
Endosulfan	200
Heptachlor	3
Methoxychlor	3000
OPP	
Chlorpyrifos	100
Diazinon	40
Dimethoate	70
Fenitrothion	70
Malathion	700
Parathion	200
PFAS	
PFOS + PFHxS*	2
PFOA	10
VOC	
Tetrachloroethene (PCE)	500
cis-1,2-dichloroethene (DCE)	300
Chloroethene (vinyl chloride / VC)	3
Tetrachloromethane (carbon tetrachloride / CT)	30
Trihalomethanes (THM) (including trichloromethane (chloroform / TCM), bromodichloromethane, dibromochloromethane and tribromomethane (bromoform)	2500
Physical properties / aesthetics	
pH	6.5-8.5 (aesthetic only)

Contaminant	Recreational water guideline values
Dissolved oxygen	>80% saturation (aesthetic only)

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

4. References

ANZECC. (2000). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Australia and New Zealand Environment and Conservation Council.

ANZG. (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. Canberra, ACT: Australian and New Zealand Governments and Australian state and territory governments.

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

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

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

NHMRC. (2008). *Guidelines for Managing Risks In Recreational Water*.

NHMRC. (2019). *Guidance on Per and Polyfluoroalkyl (PFAS) in Recreational Water*. National Health and Medical Research Council.

NHMRC, NRMMC. (2022). *Australian Drinking Water Guidelines 6 2011, Version 3.7*. Canberra: National Health and Medical Research Council, National Resource Management Ministerial Council.

NSW EPA. (2016). *NSW EPA Environmental Guidelines, Solid Waste Landfills, Second Edition, 2016. NSW Environment Protection Authority.Environmental Guidelines, Solid Waste Landfills, Second Edition, 2016.* . NSW Environment Protection Authority.

NSW EPA. (2020). *NSW EPA Assessment and management of Hazardous Ground Gases* . NSW Environmental Protection Authority .