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PAMBULA FOODWORKS

Detailed Site Investigation

35-37 Quondola Street, Pambula NSW

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EXECUTIVE SUMMARY

Pambula Foodworks (the client) engaged EI Australia (EI) to conduct a Detailed Site Investigation (DSI) at the site, located at 35-37 Quondola Street, Pambula NSW ('the site'), to assess the nature and degree of on-site contamination associated with current and former uses of the property. The site is identified as Lots 19 and 20 Section 33 in Deposited Plan (DP) 758825 and Lot 15 DP124078 and occupies an area of 6,316m^2

Proposed development for the site involves the demolition of the existing site structures and the construction of a new commercial building, comprising of a supermarket, drive through bottle shop and licensed café. No basement excavations are proposed.

The DSI has been prepared for the Development Application process with Bega Valley Shire Council (Council), and to satisfy requirements of *State Environmental Planning Policy (Hazards and Resilience (2021)* and obligations under the *Contaminated Land Management Act 1997* (CLM Act), for the assessment and management of contaminated soil and/or groundwater.

Objectives

The objectives of the assessment were to:

- Investigate the degree of potential contamination by intrusive sampling and laboratory analysis, for relevant contaminants;
- Make recommendations for the appropriate management of any contaminated soils and/or groundwater identified.

Scope

The scope of works included the drilling of 16 boreholes, including the installation of three groundwater monitoring wells, in a generally systematic sampling pattern across accessible areas of the site, with multiple level soil sampling of both fill and natural soils, one round of groundwater sampling, laboratory analysis and data interpretation.

Findings

The key findings of the assessment were as follows:

- The site was narrow and elongated between Quondola Street on the west boundary and Merimbola Street on the east boundary. A drainage line (aligned north-south) was located in the middle of the site. The western portion was occupied by a liquor store, a commercial hotel (Royal Willows Pub) and a residential block, which once operated as a motel. Several vehicles and boats were stored in the carpark. A grassed section with established trees surrounded the central drainage line. The eastern portion of the site was relatively bare, with gravel covering the majority of the ground surface. A storage shed was present in the south eastern corner.
- A potential fuel fill point for an underground storage tank (UST) was located in the western portion of the site next to the hotel building.
- A United Petroleum Service Station and a dry cleaning agency were located on the south boundary of the site. The dry cleaning agency was drop-off and pick-up, with no processing on site. A community garden and playground are located on the north boundary.
- The western portion of the subject site (Lots 19 & 20 Section 33 DP758825) has been used for commercial purposes (hotel operation) since the 1920s (and likely earlier). The motel building was constructed then operated since the 1960s and more recently used for residential accommodation. The eastern portion of the site was used for residential or

agricultural purposes (possible market gardening) until 1992 then for local government use (possible works depot) (from 1992 to 2015).

- Council records and anecdotal information confirmed that an underground storage tank and bowser was located in the access-way south of the hotel building and operated from the late 1960s. The current presence and status of the UST are unknown, however, is inferred to be located in the western portion of the site. A dangerous goods search through SafeWork NSW did not identify any records pertaining to the site.
- The site was free of statutory notices and licensing agreements issued under the *Contaminated Land Management Act 1997* and *Protection of the Environment Operations Act 1997*. It was not included on the *List of NSW Contaminated Sites Notified to the EPA.*
- The subsurface was observed to consist of a thin layer of topsoil (in the western portion) and predominantly sandy clay fill to a maximum depth of 1.4 m below ground level (BGL), overlying natural silty clay and sandy clay. Bedrock was not encountered to the maximum depth of investigation of 9 mBGL. Groundwater inflow (first) water was encountered at a depth of 7.5 mBGL.
    - Odorous soil (petroleum hydrocarbon) and elevated volatile organic compounds (VOCs) were encountered in recovered soil during drilling of borehole BH02.
    - No evidence of ash, slag, potential asbestos containing material (ACM) or other foreign materials were observed in fill or natural soil.
- Reported concentrations of contaminants (priority metals, PAHs, BTEX, TRHs, pesticides and PCBs) in recovered samples of soil from 16 locations were low or not detected above laboratory limit of reporting (LOR). Human health-based and ecological criteria were not exceeded.
    - Petroleum hydrocarbons (TRHs and BTEX compounds) were not detected above laboratory LOR in soil from borehole BH02M where hydrocarbon odours and elevated VOCs were observed.
- Asbestos was not detected (not present, at LOR of 0.01 %w/w) in soil samples assessed by the laboratory.
- Three monitoring wells were constructed and standing water level ranged between 2.03 and 2.42 mBGL. Recovered groundwater was oxygen depleted, acidic, marginally fresh to brackish, and reducing to oxidising. No odour or sheen was observed.
- Reported concentrations of contaminants (TRH, BTEX, PAHs, phenols and VOCs) in recovered groundwater were below the adopted health-based and ecological groundwater investigation levels.
- The risk of exposure from identified contaminants was considered to be low and acceptable. The following data gaps remained at the site:
    - The presence and condition of an underground storage tank potentially located in the access-way on the southern side of the hotel building.
    - Soil quality within the footprints of the hotel building and the residential/former motel building.

Conclusions

Based on the findings of this Detailed Site Investigation and in accordance with the Statement of Limitations (**Section 11**), the potential for site contamination was low. There is potential for an underground storage tank to be present on site, and this will require management.

EI considers that the site can be made suitable for the proposed commercial development, subject to the implementation of recommendations summarised below and provided in **Section 10**.

Recommendations

The following recommendations should be implemented for the proposed development:

- Conduct a Hazardous Materials Survey (HMS) of the current site prior to site demolition;
  - The HMS will guide demolition of existing buildings and ensure appropriate management of hazardous building materials if encountered.
- Prepare a Remedial Action Plan (RAP) that details methodology and procedures required for site remediation, including:
  - Removal of the UST and validation of resulting excavation according EPA Guidelines for Implementing the *Protection of the Environment Operations Underground Petroleum Storage Systems Regulation 2019*;
  - Investigation of soil within the footprints of the hotel building and motel building to verify consistency with site wide soil and to aid waste classification if required;
  - Waste classification of surplus site soils to be excavated and disposed off-site during remediation works and material imported to the site, in accordance with the NSW EPA (2014) *Waste Classification Guidelines*;
  - Work health and safety considerations;, and,
  - An unexpected finds protocol, for implementation if unusual or unexpected materials are encountered during excavation and construction activities.
- Prepare a validation report describing removal of the UST and associated materials if encountered.

These recommendations can be implemented within the framework of the development application process under *State Environment Protection Policy (Hazards and Resilience) 2021*.

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1. INTRODUCTION

1.1 Background and Purpose

Pambula Foodworks (the client) engaged EI Australia (EI) to conduct a Detailed Site Investigation (DSI) at the site, located at 35-37 Quondola Street, Pambula NSW ('the site'). The land parcel can also be identified as Lots 19 and 20 Section 33 in Deposited Plan (DP) 758825 and Lot 15 DP124078 (see **Appendix A, Figure A1**), within the Local Government Area of Bega Valley Shire Council, and occupies an area of 6,316m^2 (see **Appendix A, Figure A.2**).

At the time of this investigation, the site was occupied by a commercial liquor outlet (Liquor Works), a commercial building and former motel building currently used for residential purposes. Commercial properties, including a service station and dry cleaners to the south, bordered the site.

The DSI was required as part of the Development Application process with Bega Valley Shire Council (Council), and to satisfy requirements of *State Environmental Planning Policy (Hazards and Resilience (2021)* and obligations under the *Contaminated Land Management Act 1997* (CLM Act), for the assessment and management of contaminated soil and/or groundwater.

1.2 Proposed Development

The following architectural drawings were provided by the client:

- Plan of Proposed Supermarket Development at Lots 19 & 20 DP758825 35-37 Quondola St & Lot 15 DP1204078 Sec 33 36 Merimbola St Pambula, Gordon Building Design P/L, dated 20/07/2022.

Based on the proposed development plans provided, the proposed development involves the demolition of the existing site structures and the construction of a new commercial building, comprising of a supermarket, drive through bottle shop, licensed café and on ground car parking. No basement excavations are noted from review of architectural plans.

The proposed development plans are attached in **Appendix C**.

1.3 Regulatory Framework

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

- Contaminated Land Management Act 1997;
- Environmental Planning and Assessment Act 1979;
- EPA (2022) Sampling Design Guidelines;
- EPA (2017) Guidelines for the NSW Site Auditor Scheme – 3rd Edition
- EPA (2020) Consultants Reporting on Contaminated Land;
- NEPC (2013) Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater;
- NEPC (2013) Schedule B(2) Guideline on Site Characterisation;
- State Environment Protection Policy (Resilience and Hazards) (2021)
- Bega Valley Local Environmental Plan 2013 (LEP 2013); and
- Bega Valley Development Control Plan 2013 (DCP 2013).

1.4 Project Objectives

The primary objectives of this investigation were to:

- Evaluate the potential for site contamination on the basis of historical land uses, anecdotal and documentary evidence of possible pollutant sources; and
- To investigate the degree of any potential contamination by means of targeted intrusive sampling and laboratory analysis, for relevant contaminants of concern.

A further objective, should site contamination be confirmed, will be to make recommendations for the appropriate management of any contaminated soil and/or groundwater.

1.5 Scope of Works

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

1.5.1 Desktop Study

- Review of relevant hydrogeological and soil landscape maps for the project area;
- Review of all previous environmental reports (if applicable);
- Detailed site walkover inspection;
- Search of historical aerial photographs archived at the NSW Land and Property Information in order to review previous site use and the historical sequence of land development in the neighbouring area;
- Search of SafeWork NSW records for information relating to possible underground tank approvals and locations;
- Site history survey involving a detailed search of Council for information relating to operational site history
- A land titles search, also conducted through NSW Land Registry Services;
- Review of existing underground services on site; and
- Search through the OEH Land Information records to confirm that there are no statutory notices current on the site under the Contaminated Land Management Act (1997);

1.5.2 Fieldwork and Laboratory Analysis

- Construction of test boreholes at 16 locations distributed in a systematic pattern across accessible areas of the site;
- Construction of three groundwater monitoring bores drilled to a maximum depth of 9m (or refusal) both up gradient and downgradient of the proposed redevelopment area. Groundwater monitoring bores will be constructed to standard environmental protocols to investigate the potential for groundwater contamination, and migration of contaminants off-site;
- Multiple level soil sampling within fill and natural soils and one round of groundwater sampling from the newly constructed groundwater monitoring bores;
- Laboratory analysis of selected soil samples for relevant analytical parameters as determined from the site history survey and field observations during the investigation program; and
- Data interpretation and reporting.

1.5.3 Data Analysis and Reporting

Preparation of this DSI report generally in accordance with EPA (2020) which documents the desktop study findings, site observations made during the site inspection, data quality objectives, investigation methodologies, the factual field findings, a conceptual site model, the results of laboratory analyses, assessment of results and characterisation of the site, conclusions, and recommendations.

2. SITE DESCRIPTION

2.1 Property Identification, Location and Physical Setting

The site identification details and associated information are presented in **Table 2-1**, while the site locality is shown in **Figure A.1**.

Table 2-1 Site Identification, Location and Zoning

Attribute	Description
Street Address	35-37Quondola Street, Pambula NSW
Location Description	Approx. 160 m south of Pambula town centre, bound by: ▪ North: Commercial properties, Pambula Playground and some low density residential properties. ▪ East: Merimbola Street, followed by a vacant block of land. ▪ South: United Petroleum service station, followed by Bullara Street. ▪ West: Quondola Street, followed by commercial properties.
Site Coordinates	Northern-eastern corner of site (GDA2020-MGA56): ▪ Easting: 221712.471 ▪ Northing: 5908260.865 (Source: http://maps.six.nsw.gov.au)
Site Area	Approx. 6,316 m^2 (Source: http://maps.six.nsw.gov.au).
Lot and Deposited Plan (DP)	▪ Lots 19 and 20 Section 33 DP758825 ▪ Lot 15 DP1204078
State Survey Marks	There are two State Survey marks (SS) and two Permanent Mark (PM) situated within close proximity (approx. 100m) to the site: ▪ SS544794: Located on the eastern side of Quondola Street, approximately 20m south of the site; ▪ SS186471: Located at the intersection of Merimbola Street and Bullara Street, approximately 60m south of the site; ▪ PM28441: Located on the southern side of Bullara Street, approximately 70m south of the site; and ▪ PM113014D: Located on the vacant block of land at the intersection of Merimbola Street and Bullara Street, approximately 50m south east of the site. (Source: http://maps.six.nsw.gov.au).
Local Government Area	Bega Valley Shire Council
Parish	Auckland
County	Pambula
Current Zoning	B2 – Local Centre (Bega Valley Local Environmental Plan 2009)

2.2 Regional Setting

Local topography, geology, soil landscape and hydrogeological information are summarised in **Table 2-3**.

Table 2-2 Regional Setting Information

Attribute	Description
Topography	The site topography varied from RL 5.80 mAHD in the north western corner to RL 2.51 mAHD in the south eastern of the site (Gordon Building Design, 2022). The site appears to slope gently towards the south.
Site Drainage	Site drainage is expected to run off from paved and gravel surfaces on site to Quondola Street and Merimbola Street, where stormwater is collected via pit and pipe drainage. Following this, stormwater is expected to drain into the Pambula River, which drains into the Pacific Ocean. In areas of the ground surface with exposed soils, it is expected that drainage will be in the form of surface run-off consistent with topography (i.e. to the south) and direct infiltration.
Regional Geology	The Bega South 1:100,000 Coastal Quaternary Geology Map (2013) indicates the site is underlain by Holocene floodplain and Pleistocene terrace, consisting of silt, fluvial sand, clay and gravel.
Soil Landscapes	The NSW Government Department of Planning, Industry, and Environment *eSPADE v2.2* website indicates that the site overlies the *Pambula – Residual Landscape (pa).* The landscape consists of undulating rises to rolling low hills on Tertiary sediments, with local relief of 0-40m and partially cleared open-forest with heathland in exposed sites. Soils are identified as moderately deep well drained lateritic Soloths over deeply weathered Tertiary sediments on crests, summit surfaces, slopes and flats. Moderately deep to deep poorly drained brown clays are identified in drainage lines.
Likelihood & Depth of Filling	Based on previous an investigation completed by NSW Geotechnical & Environmental Public Works within close proximity of the site (approx. 60-170m), depth of fill is considered to be between 1-2mBGL.
Typical Soil Profile	Based on previous an investigation completed by NSW Geotechnical & Environmental Public Works within close proximity of the site (approx. 60-170m), the expected soil profile at the site is a layer of anthropogenic filling, overlying residual and alluvial soils,
Depth to Groundwater	Based on previous an investigation completed by NSW Geotechnical & Environmental Public Works within close proximity of the site (approx. 60-170m), groundwater was observed at depths of 0.8-1.6 mBGL (Bega Valley Shire Council (2014) *Pambula Sewerage Augmentation Sewer Rising Main Geotechnical Investigation,* Report Number: 14 – GS 13A) .

Attribute	Description
Nearest Surface Water Feature	▪ Panboola Wetlands (approximately 150m south) ▪ Pambula River (approximately 760m south) ▪ South-Pacific Ocean (approximately 2.8 km east)
Anticipated Groundwater Flow Direction	South, towards Panboola Wetlands and Pambula River.

2.3 Acid Sulfate Soils

The NSW Government eSPADE Acid Sulfate Soil Risk Mapping indicates the subject land lies within the map class description of *No Known Occurrence.* In such cases, acid sulfate soils (ASS) are not know or expected to occur and 'land management activities are not likely to be affected by ASS materials'. Mapped ASS zones in relation to the site are presented in **Figure 2-1**.

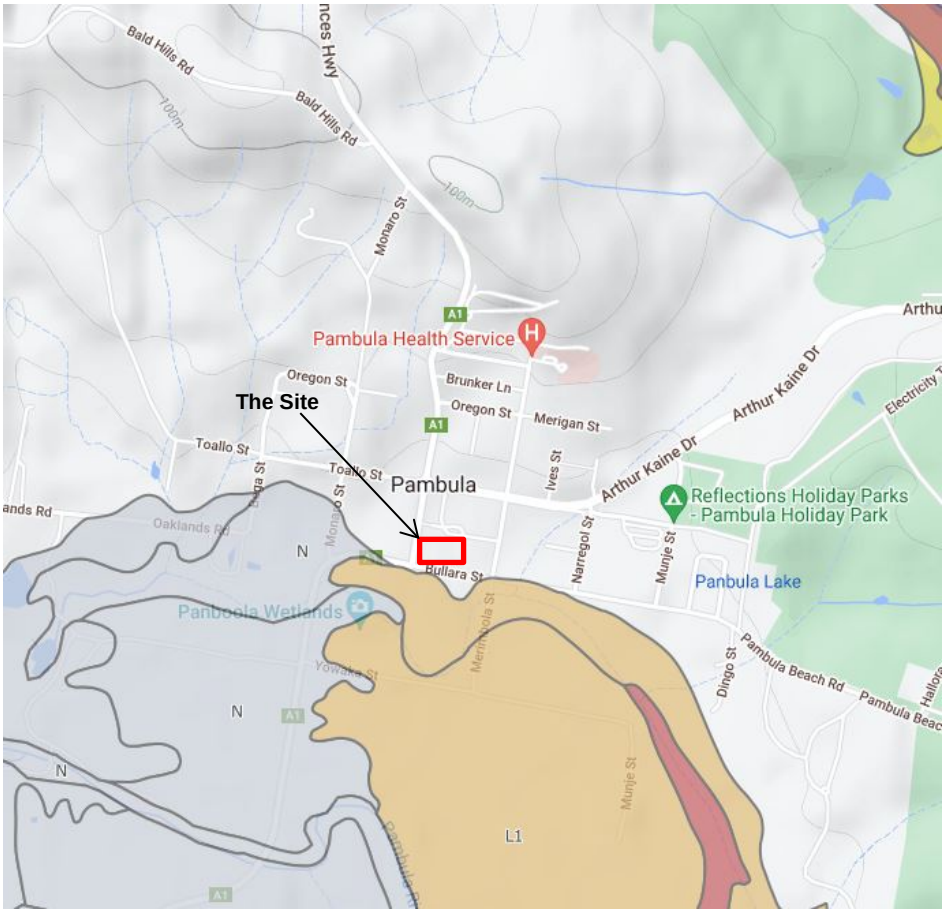


Figure 2-1 Acid Sulfate Soil Zones (eSPADE 2022)

The Bega Valley Local Environmental Plan (LEP) 2013 Acid Sulfate Soils Map (Sheet ASS_020A) indicated that the site was situated in a 'Class 5" area. This signifies that works within 500m of Class 1-4 land that is below 5 mAHD and by which the water table is likely to be lowered below 1 mAHD on adjacent Class 1-4 land requires development consent.

Preliminary screening of soils on-site has been conducted to address conditions stipulated as part of the Development Application. These results are presented as **Appendix B, Table B.2**, and discussed in **Section 8.1.3.**

2.4 Surrounding Land Use

The site is situated within a predominantly commercial area in the town of Pambula, as described in **Table 2-2**. The local sensitive receptors within close proximity to the site were also identified.

Table 2-3 Surrounding Land Uses

Direction	Land Use Description	Sensitive Receptors (distance from site)
North	Primarily commercial and residential properties, with Bennett Lane including a buss top, playground and community gardens.	▪ Commercial patrons/workers (20m) ▪ Residential occupants (60m) ▪ Recreational playground users (10m)
East	Merimbola Street, followed by vacant land, residential and commercial/industrial properties.	▪ Commercial industrial patrons/workers (70 m) ▪ Residential occupants (160 m)
South	United Petroleum Pambula service station, Dry Cleaners, followed by Bullara Street and commercial properties.	▪ Commercial patrons/workers (20 m)
West	Quondola Street, followed by commercial properties.	▪ Commercial patrons/workers (20 m)

2.5 Site Inspection

Site observations were recorded during a site walkover / fieldworks at the site on 26 October 2022. Site observations indicated that:

- The site was elongated between Quondola Street on the west boundary and Merimbola Street on the east boundary. A drainage line (aligned north-south) was located in the middle of the site, and divided the site into a western portion and an eastern portion (**Figure 2**).
- The western portion of the site sloped gently east towards the central surface drainage line. The eastern portion of the site appeared relatively flat.
- The western portion of the site was occupied by a liquor store, a commercial hotel (Royal Willows Pub), and a residential block, which once operated as a motel. Several vehicles and boats were stored within the carpark, along with several storage sheds. A grassed section with several established trees surrounded the central drainage line;
- The eastern portion of the site was relatively bare, with gravel covering the majority of the ground surface. A storage shed was present in the south eastern corner.;
- A sub-surface sewage line ran west-east through the site, with access and monitoring points present throughout the site;
- A range of vegetation was present within the central portion of the site, along the drainage channel, including small to large trees, flowering shrubs and weeds. The diversity of vegetation indicated that phytotoxicity of the local soils was not an issue for the land;
- A potential fuel fill point for an underground storage tank (UST) was located in the western portion of the site next to the hotel building. Through anecdotal information and upon

inspection, no odours or sheens were identified from the water accumulated within the within the fill point;

- A United Petroleum Service Station and a dry cleaners (pick-up and drop-off) bounded the site to the south;
- No suspicious odour (including hydrogen sulphide) was detected at any accessible part of the site;
- No above-ground storage tank (AST) was present;

Site photographs taken during the inspection are presented in **Appendix D**.

3. SITE HISTORY AND SEARCHES

3.1 Previous Investigations

No previous environmental investigations were provided by the client. However a geotechnical report completed by NSW Public Works was completed in 2014, which reports on subsurface and foundation conditions of nearby soils for the augmentation of a sewage line:

- NSW Government Public Works (2014) *Pambula Sewerage Augmentation Sewer Rising Main Geotechnical Investigation*, Report Number 14 – GS13A, dated July 2014.

Table 3-1 Summary of Nearby Previous Investigation Works and Findings

Assessment Details	Project Tasks and Findings
NSW Government Public Works (2014) *Pambula Sewerage Augmentation Sewer Rising Main Geotechnical Investigation*	
Aims of Investigation	The main aims of the investigation were to report on: ▪ Subsurface conditions, including groundwater levels, within target depths range; ▪ Foundation conditions; ▪ Presence, if any, of Acid Sulfate Soils (ASS); and ▪ Excavation characteristics on in-situ strata/
Summary and Discussion	▪ It was anticipated that the proposed sewer main will be founded at depths generally not exceeding 1.5m; ▪ It was concluded that the bearing capacity of the founded materials is adequate, with some potential for settlement to occur in parts of the alignment traversing the backswamp deposits on the western side of the Princes Highway; ▪ Potential acid sulfate soils (PASS) occur in the backswamp area on the western side of the highway, but occur below planned excavation depths and do not pose an issue.

3.2 Historical Aerial Review

A review of the available historical aerial photographs for the area was conducted on 24 October 2022. The historical aerial photographs reviewed included:

- 1998: NSW Government Historical Imagery, https://portal.spatial.nsw.gov.au/portal/apps/webappviewer/index.html?id=f7c215b873864d44bccddda8075238cb;
- 2018: Near Maps Imagery, https://apps.nearmap.com/maps/#/@-36.9273900,149.8750100,19.00z,0d/V+R/20180328?locationMarker

A summary of the aerial photography is provided in **Table 3-2**.

Table 3-2 Historical Aerial Photograph Review

Map	Onsite Land Use	Adjacent Land Use
1998	▪ The western side of the site consisted of a commercial hotel building, a liquor store, a large asphalt parking lot and a grassed and vegetated area. ▪ The eastern side of the site is unsealed and covered by surface soils. The shed is present in the south eastern corner.	▪ **North** – Commercial building along Quondola Street, with Bennett Lane and vacant blocks surrounding it. ▪ **East** – Merimbola Street followed by vacant blocks of land. ▪ **South** – Service Station along Quondola Street is present, with vacant blocks of land bordering the rest of the street. ▪ **West** – Quondola Street followed by commercial and residential buildings.
2018	▪ The western portion of the site remains relatively unchanged from previous imagery. ▪ The eastern portion of the site has been split up, with the community gardens occupying approximately half. The other half remains relatively unchanged.	▪ **North** – Commercial building along Quondola Street, with residential housing along Bennett Lane being built. ▪ **East** – Some commercial industrial buildings have been built to the north east, however large areas of vacant blocks are still present. ▪ **South** – The service station is still present, however many commercial buildings have been built along the southern boundary of the site, including a dry cleaners. ▪ **West** – Quondola Street, followed by commercial and residential buildings.

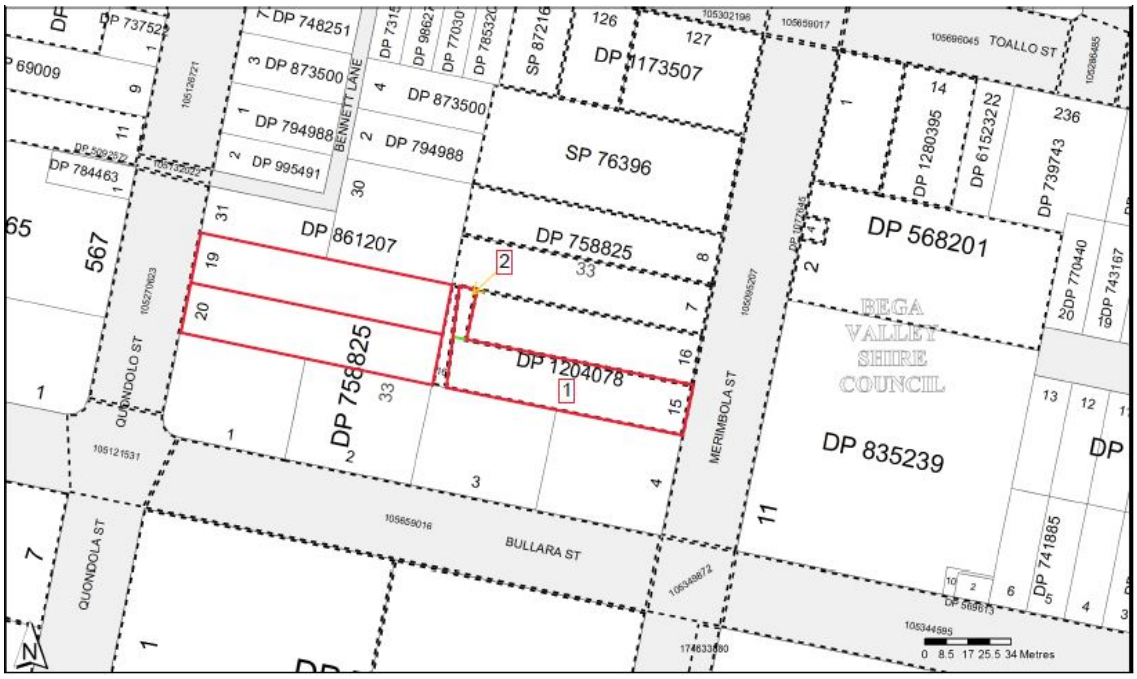
Minimal aerial imagery from pre 1998 is available for the site. The Bega Valley Shire Council was contacted by EI Australia on 24 October 2022 to request any available imagery of the area. The council provided the contact for the Bermagui Historical Society; however they had no aerial imagery from pre 1998 available.

In summary, the western portion of the site, containing the liquor store and commercial/ residential buildings has remained relatively unchanged since at least 1998. The eastern portion however has been halved sometime since 1998, with the community garden being introduced.

3.3 Land Titles Search

A historical land titles search was conducted through InfoTrack Pty Ltd. Copies of relevant documents from this search are presented in **Appendix F**. The cadastral extent of the site is identified in **Figure 3-1** in red.

Figure 3-1 Cadastral Site Area



A summary of the land titles information is provided in **Table 3-3**.

Table 3-3 Land Titles

Years	Registered Proprietor(s)
Lots 19 & 20 Section 33 D.P. 758825	
1928 – 1929	Michael McDonough (Hotelkeeper)
1929 – 1930	Alexander Parsell (Licensed Publican) Evelyn Parsell (Married Woman)
1930 – 1937	Daniel Grant (Ex-Licensed Publican Now Hotelkeeper)
1937 – 1937	John Bernard McTiernan (Hotelkeeper)
1937 – 1939	Albert John Grant (Licensed Publican)
1939 – 1951	Egbert Dunkerton Francis (Gentleman) George Charles Boulton (Gentleman) David Benjamin Bertram (Freeholder)
1951 – 1954	Athol James Stubbs (Hotelkeeper)
1954 – 1954	Charles Milsom (Hotelkeeper)
1954 – 1969	Inland Hotels Pty Limited
1969 – 1980	Jack Christian Hansen (Farmer) Mervyn Lewis Hansen (Clerk)
1980 – 1982	Sylpa Pty Limited
1982 – 1985	Klestate Management Pty Limited
1985 – 1987	Rogsan Pty Ltd
1987 – 1998	Kizie Pty Limited

Years	Registered Proprietor(s)
1998 – 2005	John Anthony Hussey Gina Mariella Hussey
2005 – 2009	Nathan Andrew Wilson Joanne Katherine Wilson
2009 – 2014	Anthony Paul Harmey Angel Jane Harmey
2014 – 2018	Jeanette May Stolzenhein Kelvin John Stolzenhein Sean Stolzenhein Nathan Stolzenhein Kurt Stolzenhein
2018 - Date	Jeanette May Stolzenhein Kelvin John Stolzenhein
Lot 15 in DP 758825	
As regards to the part numbered 1	
1921 - 1932	Rosina Behl (Married Woman)
1932 – 1956	Mary Jane Bennett (Married Woman)
1956 – 1980	John Edward Bennett (Farmer)
1980 – 1986	Sylpa Pty Limited
1986 – 2019	Maxwell Gregory Sinclair Ailsa Catherine Sinclair
As regards to the part numbered 2	
1909 – 1956	Robert William Bray (Farmer)
1956 – 1963	William Melville Bray (Farmer)
1963 – 1987	Hadley James Ballantyne (Mail Contractor)
1987 – 1992	John Edward Bennet (Farmer)
1992 – 2015	The Council of The Shire of Bega Valley Now Bega Valley Shire Council
2015 – 2019	Maxwell Gregory Sinclair Ailsa Catherine Sinclair
As regards to the whole of Lot 15 in DP 758825	
2019 - Date	Jeanette May Stolzenhein Kelvin John Stolzenhein

Land titles information indicate that the western portion of the subject site (Lots 19 & 20 Section 33 DP758825) has been used for commercial purposes (hotel operation) since the 1920s (and likely earlier), and the eastern portion of the site for possibly residential or agricultural purposes (market gardening) until 1992 then for local government use (possible works depot) (from 1992 to 2015).

3.4 EPA Online Records

3.4.1 Record of Notices under Section 58 of CLM Act (1997)

The contaminated land public record is a searchable database of:

- Orders made under Part 3 of the *Contaminated Land Management Act 1997* (CLM Act);
- Notices available to the public under Section 58 of the CLM Act;
- Approved voluntary management proposals under the CLM Act that have not been fully carried out and where the approval of the Environment Protection Authority (EPA) has not been revoked;
- Site audit statements provided to the NSW EPA under section 53B of the CLM Act that relate to significantly contaminated land;
- Where practicable, copies of anything formerly required to be part of the public record; and
- Actions taken by NSW EPA under section 35 or 36 of the *Environmentally Hazardous Chemicals Act 1985* (EHC Act).

An on-line search of the contaminated land public record of EPA Notices was conducted on 24 October 2022. The search confirmed that the site known as 35-37 Quondola Street, Pambula and lands in its close proximity (within 500 m), are not subject to any regulatory notices issued by the NSW EPA.

3.4.2 List of NSW contaminated sites notified to EPA

A search through the List of NSW Contaminated Sites notified to the EPA under Section 60 of the CLM Act 1997 was conducted on 24 October 2022. This list is maintained by NSW EPA and includes properties on which contamination has been identified. Not all notified land is deemed to be impacted significantly enough to warrant regulation by the NSW EPA.

This search confirmed that the site known as 35-37 Quondola Street, Pambula had no regulatory NSW EPA involvement in relation to the area of investigation. However, one entry was identified within close proximity of the site (500m). The site and its management class are identified in **Table 3-4** below.

Table 3-4 List of NSW contaminated sites notified to EPA within 500m of site

Address	Distance and Direction from Site	Contamination Activity	Management Class
Corner Quondola Street and Bullara Street	10m (South)	Service Station	Management under CLM Act not required

Due to the site not requiring contamination management by the EPA, and the service station site being down-gradient, it is not considered to have an impact on the site.

3.4.3 POEO Public Register

A search of the Protection of the Environment Operations (POEO) Act public register was conducted on 24 October 2022. The public register contains records related to environmental protection licences, applications, notices, audits, pollution studies, and reduction programmes. There was one entry identified within a 500 m radius of the site boundary.

Table 3-5 POEO Public Register

Address	Distance and Direction from Site	POEO Record Type	Comments
Merimbola Street, Pambula NSW 2549	Approximately 500m North	POEO License (Current issued August 2000)	▪ License for Hazardous, Industrial, or Group A Waste Generation or Storage
		License Variations (2 total between 2001 and 2022)	▪ Variations include removal of waste tracking requirements and EPA Region.

3.5 Groundwater Bore Records and Local Groundwater Use

EI conducted an online search of registered groundwater bores through WaterNSW (Ref. https://realtimedata.waternsw.com.au/water.stm) on 31 October 2022. There were four registered bores identified within a 500m radius of the site. Summary details for the bores are presented in **Table 3-3**. The summary reports obtained from the search are presented in **Appendix M**.

Table 3-3 Summary of Registered Groundwater Bores

Bore	Date Drilled	Depth (m)	SWL/Salinity/Yield	Purpose	Proximity
GW040588	01/01/1900	7.30	- / - / -	Public/Municipal	135m north
GW040587	8/5/2013	3.70	2.900 / - / -	Not Known	470m west
GW109457	01/01/1990	15.00	- / - / -	Stock, Domestic	450m west
GW028587	01/12/1968	5.20	- / - / -	Stock, Domestic	420m south west

Standing water level (SWL) measured in m BGL, Yield measured in L/s, '-' – no data

In summary, the monitoring bores within a 500m radius of the site are authorized for several different purposes, including domestic use, public use and providing water for stock. The only standing water level provided was from GW040587 and was 2.90m BGL.

3.6 SafeWork NSW Search – Additional Information

EI submitted a search for information on potential dangerous goods and USTs on 10 October 2022. A response from SafeWork was received on 14 November 2022, which confirmed that SafeWork held no documentation for potential dangerous goods and/or USTs for the site. A copy of the response from SafeWork NSW is presented in **Appendix L**.

3.7 Council Information

A request to access documents held by the Bega Valley Shire Council was submitted on 18 October 2022. An email response was received on 20 October 2022, which addressed that only specific files can be obtained via an informal request for information. These files included

Development Applications, Building Approvals and Building Permits, which were to be supplied by the council.

The majority of the files obtained relate to the ongoing development and certification of the motel and on-site liquor store. However, a building permit dated 13 August 1969, provided by *Council Chambers Imlay Street, Eden 2551*, outlines the approval in 1969 of the construction of a '*Petrol Pump'* on Lot 19 & 20 Section 33 Quondola Street, Pambula. The Building Approval outlined several special conditions, which included compliance with the requirements set out by the '*Mines Dept'*, as well as '*the pump not being within 12' (approx. 3.5 m) of the street alignment or other boundary*'. Plans of the approved construction are not provided. The referenced council information is presented in **Appendix G**.

3.8 Anecdotal Information

Information relating to the existence of a petroleum fuel bowser and underground storage tank (UST, size unknown) was provided by the client, which is a photograph of the Royal Willows Pub from Quondola Street, and shows the presence of a fuel bowser (red highlight) on the southern (right) side of the hotel building next to the driveway leading to the rear motel building (see **Figure 3-1**). It was explained that Council records of the site are relatively incomplete regarding the information of past use of the site for fuel storage and dispensing. The photograph is unreferenced, however the type of the vehicles in the car park suggest late1960s.

Further, during the site walkover, the residents of the site identified a potential fill point to an underground storage tank, and explained however, that there has never been any suspicious odours or oily sheens associated with the fill point (**Appendix D**).

Figure 3-2 Historical Photograph

4. CONCEPTUAL SITE MODEL

In accordance with NEPC (2013) *Schedule B2 – Guideline on Site Characterisation* and to aid in the assessment of data collection for the site, EI developed a conceptual site model (CSM) assessing plausible pollutant linkages between potential contamination sources, migration pathways and receptors. The CSM provides a framework for identifying data gaps in the existing site characterisation and future site assessments. Potential contamination sources, exposure pathways and receptors that were considered relevant for this assessment are summarised along with a qualitative assessment of the potential risks posed by complete exposure pathways.

4.1 Sub-surface Conditions

Based on a previous geotechnical investigation completed by NSW Government Public Works (2014), the inferred ground profile expected at the site is shown in **Table 4-1**.

Table 4-1 Conceptual Ground Model

Unit	Material	Comment
1	Topsoil/Fill	A layer of topsoil and sandy/silty clay fill material across the site. Fill is likely reworked natural soil. Minor filling may also be present beneath existing structures used for levelling purposes.
2	Residual soils	Silty/Sandy CLAY; Mid grey to brown, with orange and yellow mottling, firm/stiff, trace sands and gravels, wet.
3	Groundwater	Based on the borehole logs recorded by NSW Government Public Works, the depth to groundwater is inferred to be approximately 0.8-1.6mBGL.

4.2 Potential Contamination Sources

The potential contamination sources were as follows:

4.2.1 Historical / Current Land-Use

- Leakage from potential underground storage tank present on site;
- Leakage from vehicles in parking areas (commercial motel, now used for residential accommodation);
- Weathering of exposed building fabrics containing hazardous substances (including bonded asbestos-containing materials (ACM), lead-based paints and metallic surfaces) and/or deposition of such in near-surface soils;
- Potential contamination from previous site users, including potential agricultural use (use of pesticides) on the eastern portion of the site.

4.2.2 Per or Poly-fluoroalkyl Substances (PFAS)

EPA (2017) requires that PFAS is considered in assessing land contamination. A PFAS probability of occurrence desktop information survey is provided in **Table 4-2**, based on the PFAS National Environmental Management Plan (HEPA, 2020) and EPA guidance.

Table 4-2 PFAS Decision Tree

Preliminary Screening	Probability of Occurrence[1]
Is the past or present site activity listed in the NEMP (HEPA, 2020)[2]. If so list activity: _____.	L
Is the past or present off-site activity up-gradient or adjacent to the site listed in the NEMP (HEPA, 2020)[5]. If so list activity: _____.	L
Did fire training involving the use of suppressants occur on-site between 1970 and 2010?	L
Did fire training occur up-gradient of or adjacent to the site between 1970 and 2010? [3]	L
Have "fuel" fires ever occurred on-site? e.g. ignition of fuel (solvent, petrol, diesel, kero) tanks?	L
Have PFAS been used in manufacturing or stored on-site ?[4]	L
Could PFAS have been imported to the site in fill materials from a site with activity listed in NEMP (HEPA, 2020)?	L
Could PFAS-contaminated groundwater or run-off have migrated on to the site?	L
Is the site or adjacent sites listed in the NSW EPA PFAS Investigation Program? [5]	L
If the probability is medium or high in any of the rows, does the site analytical suite need to be optimised to include preliminary sampling and testing for PFAS in soil (incl. ASLP testing) and waters?	**No**

Note 1 Probability: L – low (all necessary documentation has been reviewed and there is no recorded instance or compelling rationale), M – medium/moderate (all necessary documentation has been reviewed and there is potential evidence of a recorded instance with compelling rationale); H – high (all necessary documentation has been reviewed and there is evidence of a recorded instance with compelling rationale); risk, N/A – not applicable (or "-")
Note 2 Activities listed in Appendix B of the NEMP (HEPA, 2020). Further information, refer to https://www.oecd.org/env/ehs/risk-management/PFC_FINAL-Web.pdf
Note 3 Runoff from up-gradient PFAS use may impact surface water, soil, sediment and groundwater.
Note 4 PFAS is used wide range of industrial processes and consumer products, including in the manufacture of non-stick cookware, specialised garments and textiles, Scotchguard™ and similar products (used to protect fabric, furniture, leather and carpets from oils and stains), metal plating and in some types of fire-fighting foam (https://www.nicnas.gov.au/chemical-information/factsheets/chemical-name/perfluorinated-chemicals-pfas)
Note 5 https://www.epa.nsw.gov.au/your-environment/contaminated-land/pfas-investigation-program

4.2.3 Emerging Chemicals

The EPA uses chemical control orders (CCOs) as a primary legislative tool under the *Environmentally Hazardous Chemicals Act 1985* to manage chemicals of concern and limit their potential impact on the environment. CCOs provide the EPA a flexible mechanism for responding to emerging chemical issues. EI considered chemicals controlled by CCOs, as well as other emerging chemicals, in this assessment, as outlined in **Table 4-3**.

Table 4-3 Emerging or Controlled Chemicals

Chemicals of Concern (CCO or Emerging)	Decision
Were aluminium smelter wastes used or stored on site (CCO 1986)?	No
Do dioxin contaminated wastes (CCO 1986) have the potential to impact the site? [1]	No
Were organotin products (CCO,1989) used or stored on site ? [2]	No
Were polychlorinated biphenyls (PCBs) used or PCB wastes (CCO, 1997) stored on-site? [3]	No
Were scheduled chemical or wastes (CCO, 2004) used or stored? [4]	Yes – possible application of OCP termiticides to building footings
Are other emerging chemicals suspected? [5]	No
If Yes to any questions, has site sampling suite been optimised to include specific sampling for other chemicals of concern in soil, air and water	**No**

Note 1 From burning of certain chemicals, smelting or chemical manufacturing or fire on or near the site.
Note 2 From anti-fouling paints used or removed at boat & ship yards and marinas.
Note 3 From older transformer oils & electrical capacitors.
Note 4 Twenty-four mostly organochlorine pesticides and industrial by-products.
Note 5 Other chemicals considered as emerging (e.g. 1,4 dioxane, associated with some CVOC).

4.3 Potential Contaminants

Based on the findings of the desktop study and site history review, the potential contaminants considered at the site are summarised in **Table 4-4**:

Table 4-4 Potential Contaminants

Potential Contaminants	Soil	Groundwater
Priority Metals (arsenic, cadmium, chromium copper, lead, mercury, nickel, zinc)	✓	✓
Petroleum hydrocarbons (as Total Recoverable Hydrocarbons (TRH))	✓	✓
Benzene, Toluene, Ethylbenzene, Xylene and Naphthalene (BTEXN)	✓	✓
Polycyclic Aromatic Hydrocarbons (PAH)	✓	✓
Organochlorine and organophosphorus pesticides (OCP/OPP)	✓	
Asbestos	✓	

4.4 Potential Contamination in the Context of the Site

As noted from the historical information, the site has predominantly been used for commercial purposes. A fuel bowser and UST were present on site in the late 1960s, and the UST likely remained on site. The potential sources of contamination are likely to be point sources, which would result in localised impacts, if present.

With depth to groundwater predicted to be between 0.8 and 1.6mBGL (**Section 4.1**), it should be considered that impacts to groundwater is potential for the site.

Table 4-5 Assessment of Potential Contamination Risks

Potential Source	Impacted Medium	COPC	Likelihood (Risk) of Contamination
Use of fill	Surface soil / Groundwater	Metals, TRH, BTEX, PAH, OCP, OPP, , asbestos	**Low** Only minor amounts (shallow layers) of filling expected to be present.
Fuel UST	Underlying soil and groundwater	TRH, BTEX, lead	**Med** UST unlikely to have been used for many years. UST status unknown.
Weathering / deposition of building fabrics (e.g. fences) with hazardous materials.	Surface soil	Metals (lead in particular), PCB, asbestos	**Low** Few hazardous materials present in the existing building fabrics.
Migration from off-site sources and onsite deposits (Adjacent service station)	Underlying soils / Groundwater	Metals, TRH, BTEX, PAH, VOC, PFAS	**Low – Med** Potential for localised impacts from related business activities on and off site. Service station is located of down gradient boundary
Leakage from vehicles	Surface soil Groundwater	Metals, TRH, (including BTEX)	**Low – Med** Any contamination likely to be low level and localised. Anecdotal evidence of UST.
Application of pesticides/herbicides	Surface soil	Metals (arsenic and copper in particular), OCP, OPP	**Low** If applied, probably restricted to localised areas.

4.5 Potential Receptors

The following potential receptors of contamination from the site were identified as:

- Future residential, maintenance, and service workers within the site;
- Construction/demolition workers;
- Users of the adjacent land;
- Ecological receptors in areas of exposed soil/landscaping; and
- Down-gradient ecological receptors.

4.6 Potential Pollutant Linkages

The conceptual site model (CSM) derived for the site is included as **Figure 4-1**, and the potential pollutant linkages associated with the site are discussed in **Table 4-6**.

Figure 4-1 Conceptual Site Model

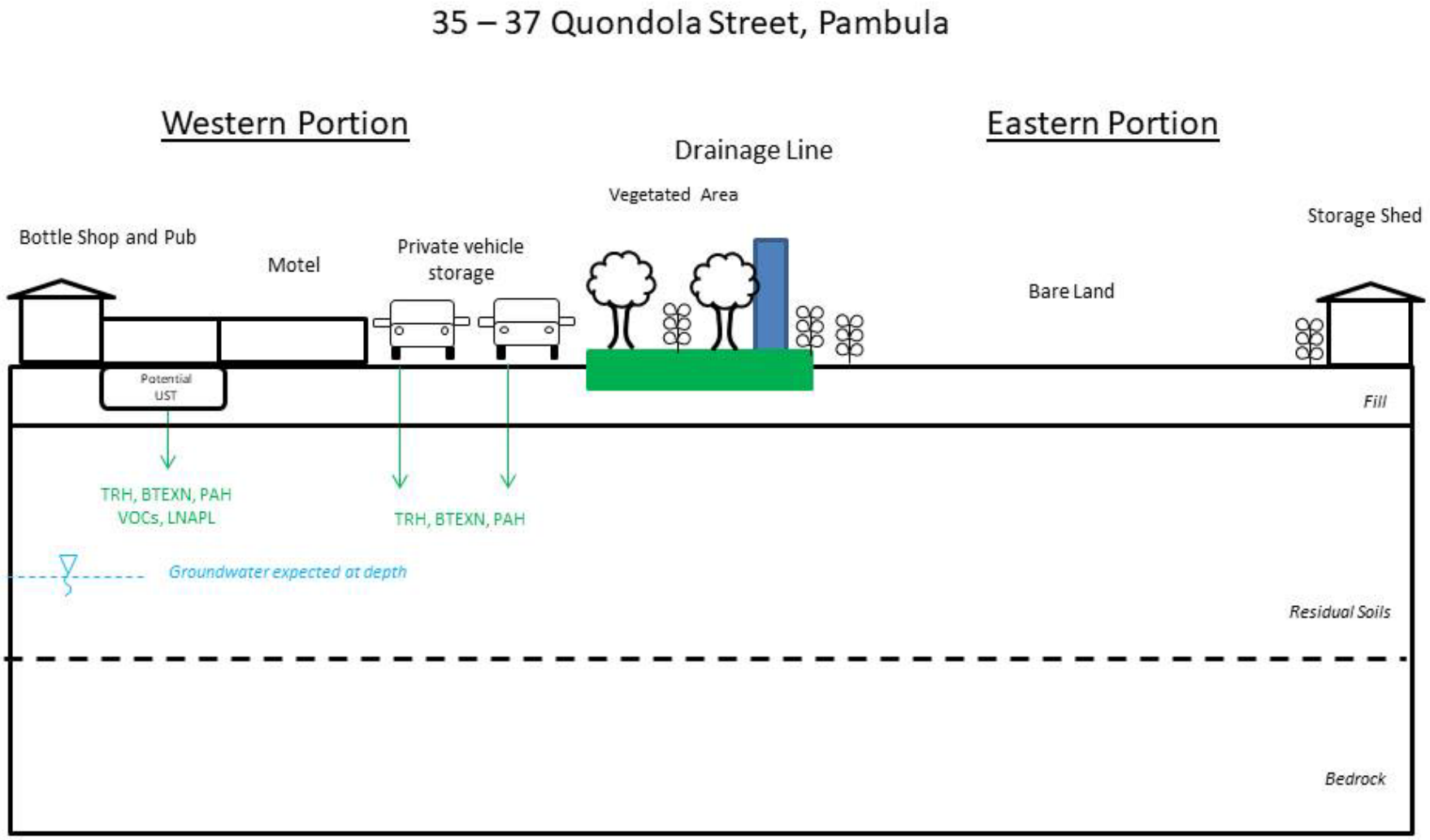


Table 4-6 Potential Pollutant Linkages

Medium	Potential Source	COPC	Transport Mechanism	Exposure Pathway	Potential Receptor	Potential Risk of Exposure Pathway
Soil	Minor filling Demolition / weathering of former building fabrics	Metals TRH BTEX PAH OCP / OPP Asbestos	Disturbance of surface and subsurface soils during site redevelopment, future site maintenance and future use of the site post redevelopment	Accidental ingestion Dermal contact Inhalation of dust particulates	Existing site users Site workers (during construction) Adjacent site users Future users of the site Ecological receptors	**Low** Note: since the use of personal protective equipment (PPE) is mandatory during construction works, any associated exposure likelihood can be reduced to low and acceptable.
			Atmospheric dispersion from soil to outdoor and indoor air spaces	Inhalation dust particulates		
			Volatilisation of contamination from soil and diffusion to indoor air spaces	Inhalation of vapours from impacted soil		
			Plant uptake of contamination present in the root zone	Plant uptake		
	Potential leakage of petroleum hydrocarbons from vehicles and underground storage tanks	Lead TRH BTEX PAH	Physical spreading during earthworks/excavation	Accidental ingestion; Inhalation Dermal contact	Site workers (during construction) End users of site	**Medium** Should contamination be present, the impacts would be localised and shallow.
			Physical erosion of tank, leading to leakages	Inhalation of vapours from impacted soil		
Groundwater	Impacted fill material leaching to the groundwater Vertical migration of mobile contaminants UST onsite and at adjacent service station	Dissolved Metals TRH VOC PAH LNAPL	Volatilization of contamination from groundwater to indoor or outdoor air spaces (onsite and offsite) Migration of dissolved phase impacts in groundwater via diffusion and advection.	Accidental ingestion Dermal contact Inhalation of vapours	Site workers (during construction) End users of site Maintenance workers Ecological receptors	**Medium** Risk is present for off-site migration. Adjacent service station is down gradient.

4.7 Data Gaps and Uncertainties

The CSM derived for the site was used to qualitatively assess the risks, and identified data gaps. The impact from a UST and fuel dispensing on site are unknown. An operational service station is immediately adjacent (down-gradient) of the subject site.

Data gaps include:

- Further evaluation of the contaminants that may have resulted from the potentially contaminating activities that historically occurred within or migrated onto the land.

5. METHODOLOGY

5.1 Sampling and Analysis Quality Plan (SAQP)

The SAQP ensures that the data collected as part of the environmental works carried out at the site are representative, and provide a robust basis for site assessment decisions. This SAQP includes the following:

- Data quality objectives, including a summary of the objectives of the ESA;
- Investigation methodology including media to be sampled, details of analytes and parameters to be monitored and a description of intended sampling points;
- Sampling methods and procedures;
- Field screening methods;
- Analysis Methods;
- Sample handling, preservation, and storage; and
- Analytical QA/QC.

5.2 Data Quality Objectives (DQO)

In accordance with the US EPA (2006) *Data Quality Assessment* and the EPA (2017): *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme*, the process of developing Data Quality Objectives (DQO) was used by the EI assessment team to determine the appropriate level of data quality needed for the specific data requirements of the project. The DQO process that was applied for this assessment is documented in **Table 5-1**.

Table 5-1 Summary of Project Data Quality Objectives

DQO Steps	Details
1. State the Problem Summarise the contamination problem that will require new environmental data, and identify the resources available to resolve the problem; develop a conceptual site model.	The site located at 35-37 Quondola Street, Pambula NSW was currently occupied by a commercial hotel, liquor store and residential buildings (former motel) in the eastern portion, and an unsealed vacant block of land in the eastern portion. . The purpose of the assessment was to comply with conditions required as part of a Development Application. A review of previous investigations and site history (summarised in **Section 3.0**) identified potential contamination that may be present in site soil and groundwater, contributed by various potential sources listed in **Section 4.2**. A review of previous investigations, anecdotal information and site history (summarised in **Section 3**) identified potential contamination that may be present in site soils and groundwater, contributed by various potential sources listed in **Section 4.2** and summarised in **Section 4.3**. The proposed redevelopment of the site, which is outlined in **Section 1.2**, involves the demolition of all existing structures and the construction of a new commercial building, comprising of a supermarket, drive through bottle shop and licensed café. No basement excavations are noted in the architectural plans. This investigation is required to characterise the condition of site soils and enable the developer to meet their obligations under *SEPP (2021)* and the *Contaminated Land Management Act 1997* (CLM Act), for the assessment and management of contaminated soil and/or groundwater.
2. Identify the Goal of the Study (Identify the decisions) Identify the decisions that need to be made on the contamination problem and the new environmental data required to make them.	Based on the objectives outlined in **Section 1.4**, the decisions that need to be made are: ▪ Has the nature, extent and source of any soil and/or groundwater impacts on-site been defined? ▪ What impact do the site specific, geological and hydrogeological conditions have on the fate and transport of any impacts that may be identified? ▪ Does the level of impact coupled with the fate and transport of identified contaminants represent an unacceptable risk to identified human and/or environmental receptors on or offsite? ▪ Does the collected data provide sufficient information to allow the suitability of the site to be determined, or selection and design of an appropriate remedial strategy, if necessary? ▪ If the data does not provide sufficient information, what data gaps require closure to enable the suitability of the site to be determined, or selection and design of an appropriate remedial strategy?

DQO Steps	Details
3. Identify Information Inputs (Identify inputs to decision) Identify the information needed to support any decision and specify which inputs require new environmental measurements.	Inputs to the decision making process include: ▪ Proposed residential end land use with landscaping areas to be used by the residential community; ▪ Review of previous investigations at the site; ▪ National and NSW EPA guidelines made or approved under the *NSW Contaminated Land Management Act 1997*; ▪ National and NSW EPA guidelines published or endorsed in the absence of criteria; ▪ Soil and groundwater samples, and observations obtained from intrusive investigation at locations, and to depths deemed appropriate for investigative purposes (or prior refusal); ▪ Investigation sampling to verify the presence of contamination and to evaluate the potential risks to receptors; and ▪ Laboratory analysis of selected soil samples as per **Section 4.3.** At the end of the assessment, a decision must be made regarding whether the environmental conditions are suitable for the proposed redevelopment, or if additional investigations are required to confirm site suitability, or remedial works to make the site suitable for the proposed use.
4. Define the Boundaries of the Study Specify the spatial and temporal aspects of the environmental media that the data must represent to support decision.	Lateral – The cadastral boundaries of the site; Vertical – The deepest investigated depth, including underlying fill and natural soil horizons, and water-bearing zones. Temporal – The results will be valid on the day samples are collected and will remain valid as long as no changes occur in regards to site use, and contamination (if present) does not migrate onto the site from off-site sources.

5. Develop the Analytic Approach (Develop a decision rule)
To define the parameter of interest, specify the action level, and integrate previous DQO outputs into a single statement that describes a logical basis for choosing from alternative actions.
	The decision rules for the investigation are:
	▪ What are the characteristics of soil and groundwater at the site?
	  ‣ Soil boreholes will be advanced to natural, sampled and logged to characterise underlying conditions.
	  ‣ Groundwater monitoring wells will be installed to screen underlying water bearing zones, these will be sampled and logged to characterise underlying conditions.
	▪ Is the site suitable for the proposed land use?
	  ‣ If the concentrations of contaminants in the soil and groundwater data are below the relevant health-based and ecological criteria for the intended land use; then the site will be deemed suitable for the proposed development.
	▪ Is additional information required to determine the suitability of the site for its proposed use?
	  ‣ Should additional information be required as determined by the conceptual site model (CSM), then appropriate recommendations will be provided.
	▪ Decision criteria for analytical data are defined by the Data Quality Indicators (DQI) in **Table 5-2.**

DQO Steps	Details
6. Specify Performance or Acceptance Criteria (Specify limits on decision errors) Specify the decision-maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data.	Specific limits for this project are to be in accordance with the National and NSW EPA guidance, and appropriate indicators of data quality and standard procedures for field sampling and handling. This should include the following points to quantify tolerable limits: ▪ The null hypothesis for the investigation is that the 95% Upper Confidence Limits (UCL) of the mean for contaminants of concern exceed relevant residential with minimal access to soil land use criteria across the site. ▪ The acceptance of the site will be based on the probability that: ‣ The 95% UCL of the mean of the data will satisfy the given site criteria. Therefore, a limit on the decision error will be 5% that a conclusive statement may be incorrect; ‣ The standard deviation of the results is less than 50% of the relevant remediation acceptance criterion; and ‣ No single results exceed the remediation acceptance criteria by 250% or more. ▪ Concentrations for chemicals of concern that are below investigation criteria made or approved by the NSW EPA will be treated as acceptable and indicative of suitability for the proposed land use(s). ▪ If contaminant concentrations in soil exceed the adopted criteria, further investigation will be considered prudent. If no contamination is detected, no further action is required.
7. Develop the Detailed Plan for Obtaining Data (Optimise the design for obtaining data) Identify the most resource-effective sampling and analysis design for general data that are expected to satisfy the DQOs.	In order to identify the most resource-effective sampling and analysis design for general data that are expected to satisfy the DQOs: ▪ 16 sampling locations are proposed for the site using a systematic sampling pattern across accessible areas of the site ▪ 3 groundwater monitoring wells were proposed to be installed and gauged to assess groundwater quality at the site. ▪ An upper soil profile sample will be collected at each borehole location, with 16 discrete soils samples tested for potential contaminants and against the NSW EPA (2014) Waste Classification Criteria, to assess the conditions of the fill layer, and impacts from activities at ground level. ▪ A further 9 discrete natural samples will be analysed for priority metals, TRHs, BTEX and PAHs. Samples will be selected based on field observations (including visual and olfactory evidence) whilst giving consideration to characterise the sub-surface soil stratigraphy. ▪ Written instructions will be issued to guide field personnel in the required fieldwork activities; ▪ Field screening for potential VOC contamination will be carried out with a portable Photo-Ionisation Detector (PID); ▪ Review of the results will be undertaken to determine if further excavation and additional sampling is warranted. Additional investigations would be considered to be warranted where soil concentrations are found to exceed remediation criteria endorsed by the NSW EPA, relevant to the proposed land use(s).

5.3 Data Quality Indicators

To ensure that the validation data were of an acceptable quality, they were assessed against the data quality indicators (DQI) outlined in **Table 5-2**, which related to both field and laboratory-based procedures. The overall assessment of data quality is discussed in **Section 6**.

Table 5-2 Data Quality Indicators

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

5.4 Sampling Rationale

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

- Sampling fill and natural soils from 16 test bore locations located in a generally systematic distribution across accessible areas of the site to characterise in-situ soils;
- Sampling groundwater during a single groundwater monitoring event (GME), from three newly installed groundwater monitoring wells to characterise groundwater on-site; and
- Laboratory analysis of representative soil and groundwater samples for the identified contaminants of concern.

The site occupies an area of 6,316 m^2 and the number of systematic investigation locations (16) satisfies minimum requirements listed in Table 2 of NSW EPA (2022) sampling design (application) for systematic sampling.

5.5 Assessment Criteria

For the purposes of this investigation, the adopted soil assessment criteria are referred to as the Soil Investigation Levels (SILs). SILs are presented alongside the analytical results in the corresponding summary tables, which are discussed in **Section 7**.

The assessment criteria proposed for this project are outlined in **Table 5-3** and **Table 5-5**. These were selected from available published guidelines that are made or approved by NSW EPA. Where criteria were not available, guidelines published or endorsed by NSW EPA were reviewed. The criteria were selected with due consideration of the exposure scenario that is expected for various parts of the site, the likely exposure pathways and the identified potential receptors.

5.5.1 Soil

The soil assessment criteria proposed for this project are outlined in **Table 5-3**.

Table 5-3 Adopted Investigation Levels for Soil

Adopted Guidelines	Rationale
NEPM, 2013 Soil HILs, HSLs, Management Limits for TPH Ecological Criteria	**Soil Health-based Investigation Levels (HILs)** Samples will be assessed against the NEPM 2013 HIL-D thresholds for commercial/industrial sites, such as shops, offices, factories and industrial sites. **Soil Health-based Screening Levels (HSLs)** NEPM 2013 HSL-D thresholds were applied for vapour intrusion, as the single story building is designated to be used for commercial purposes, per Section 2.4.8, Schedule B(1) NEPM (2013)). **Asbestos Health Based Screening Levels** For asbestos in soil, the following criteria are applicable: ▪ Asbestos not present in soil samples (LOR <0.01 %w/w) ▪ No visible asbestos on soil surface in all areas of the site. **Management Limits for Petroleum Hydrocarbons** Should the HSLs be exceeded for petroleum hydrocarbons, soil samples would also assessed against the NEPM 2013 *Management Limits* for the TRH fractions F1 – F4 to assess propensity for phase-separated hydrocarbons (PSH), fire and explosive hazards & adverse effects on buried infrastructure.

Adopted Guidelines	Rationale
	Ecological Investigation Levels (EILs) / Ecological Screening Levels (ESLs) Soil will be assessed against the NEPC 2013 EILs/ESLs for commercial/industrial land use scenarios. Ecological criteria has been adopted to assess the potential impact to potential proposed landscaping areas where plants could be exposed to soils, and where precipitation may result in subsurface infiltration and resulting leaching of contaminants.

Note 1 Ecological values were derived using assumed conservative site specific Added Contamination Limits (ACL) of fill soils for the site (pH=5.5 / CEC= 5.5), plus an ambient background concentration for the area (ABC) (ACL + ABC).
Note 2 Pambula is defined as an old suburb (houses generally >20 years old) with low traffic (<250 cars pass by per hour at peak traffic conditions). Aged soils >2 years have been used in determination of EILs.

5.5.2 Groundwater

In accordance with DEC (2007) *Guidelines for the Assessment and Management of Groundwater Contamination*, groundwater acceptance criteria are based on environmental values considered relevant for groundwater use at the site and surrounding uses of groundwater and surface waters that may be effected by the site. Potential environmental values include:

- Aquatic ecosystems: surface water and groundwater ecosystems;
- Human Uses: these include but are not limited to potable water supply, agricultural water supply (irrigation and stock watering), industrial water use, aquaculture and human consumption of aquatic foods, recreational use (primary and secondary contact with surface waters), and visual amenity of surface waters;
- Human health in non-use scenarios: this includes consideration of health risks that may arise without direct contact between humans and the groundwater, for example, exposure to volatile contaminants above groundwater contaminant plumes; and,
- Buildings and structures: this includes protection from groundwater contaminants that can degrade building materials through contact, for example, the weakening of building footings resulting from chemically aggressive groundwater.

Cultural and spiritual values that are associated with the environment, including groundwater, should also be protected. Cultural and spiritual values may include spiritual relationships, sacred sites, customary uses, the plants and animals associated with the water, drinking water supplies, and recreational activities. In managing groundwater contamination, it is generally considered that cultural and spiritual values will be protected where groundwater quality protects all other relevant environmental values on a site.

Based on the groundwater bore search (**Section 3.5**), there were four registered bores located within a 500 m radius of the site. The most common registered use for the bores was for stock/domestic purposes, with one being used for public and municipal purposes. This suggests that the groundwater may be somewhat utilised in the area; however with the monitoring well located up-gradient from the site, it was considered to be of little risk. The drilled bore depths ranged from 3.4 – 15.0 mBGL with the only recorded standing water level being 2.900 mBGL.

An assessment of the applicability of groundwater environmental values for the site and off-site is provided in **Table 5-4** below.

Table 5-4 Assessment of Groundwater Environmental Values

Environmental Value		Relevance
Aquatic Ecosystems - Surface water ecosystems and groundwater ecosystems		The closest down-gradient surface water ecosystem is inferred as the Panboola Wetlands, which is located approximately 200m south of the site, and Pambula River which is located approximately 800m south of the site.. The South Pacific Ocean is also located approximately 2.6km east of the site. This environmental value applies to all natural waterways and should be assessed.
Human Uses	Potable Water	Potable water for the site will be supplied by municipal reticulated supply. The use of groundwater for potable uses was registered within 500m of the site, however was in an up-gradient direction from the site. Potable water is not considered to be a relevant environmental value for the site.
	Agricultural Water supply (Irrigation and livestock watering)	There is no planned use of groundwater for agricultural purposes (irrigation and stock-watering) at the site. The use of groundwater for agricultural purposes was registered within 500m of the site, however was far up gradient of the site. Agricultural water supply is not considered to be a relevant environmental value for the site.
	Industrial Water use	There is no planned use of groundwater for industrial purposes at the site. Groundwater off-site for industrial purposes may be used however its use would be assessed for specific industrial use. The use of groundwater for industrial uses is not registered within 500 m radius of the site, or within a down-gradient direction from the site. Industrial water supply is not considered to be a relevant environmental value for the site.
	Aquaculture / human consumption of Aquatic foods	There is no planned use of groundwater for aquaculture/human consumption of aquatic foods at the site. EI reviewed the NSW Department of Primary Industries Aquaculture Industry Directory 2019 for listings of aquaculture businesses in Wollongong and in neighbouring areas. The directory is not inclusive of all producers in NSW but does list businesses nominating to be listed. No businesses were listed for Wollongong or surrounding areas. The use of groundwater for aquaculture uses is not registered within 500 m radius of the site, or within a down-gradient direction from the site. Aquaculture water supply is not considered to be a relevant environmental value for the site.
	Recreational use (primary and secondary contact)	There is no planned use of groundwater for recreational use at the site. The use of groundwater for recreational purposes is not located within a 500 m radius of the site (i.e. in swimming pools, pumping groundwater for irrigation, car washing, etc.). Given the proximity of Panboola Wetlands, Pambula River and the South Pacific Ocean to the site, recreational use of water is not considered to be a relevant environmental value for the site.
	Visual amenity to surface waters	Given the distance of the Panboola Wetlands, Pambula River and South Pacific Ocean to the site, this environmental value is not considered relevant.
Human health in non-use scenarios (Vapour intrusion from groundwater impacts)		The potential for vapour exposure from groundwater, without direct contact with groundwater, may occur if groundwater is contaminated with volatile contaminants. Potential sources of volatile contamination (i.e. underground petroleum storage systems or solvent use) have potentially been identified at the site in the form of a underground storage tank and may have had the potential to contaminate the site. This environmental value may be further assessed on the basis of soil and groundwater investigation results.
Buildings and structures		Future foundations may be in contact with groundwater. This environmental value should be assessed.

Based on the above assessment, the groundwater environmental values (REVs) to be further assessed are: Aquatic Ecosystems and Buildings and Structures. The presence or indication of volatile contaminants (i.e. TRH, BTEX, or VOCs) in soil may trigger further investigation of groundwater for the potential of vapour intrusion.

For the relevant environmental values, the adopted GILs are summarised in **Table 5-5** below.

Table 5-5 Adopted Investigation Levels for Groundwater

Adopted Guidelines	Rationale
ANZG 2018, GILs for Fresh Waters; and NEPM, 2013 Groundwater HSLs.	**Groundwater Investigation Levels (GILs) for Fresh Water** ANZG 2018 provides GILs for typical, slightly-moderately disturbed aquatic ecosystems, Trigger Values (TVs) for the 95% level of protection of aquatic ecosystems; however, the 99% TVs were applied for the bio-accumulative metals *cadmium* and *mercury*. **Health-based Screening Levels (HSLs)** The NEPC 2013 groundwater HSLs for vapour intrusion were used to assess for potential human health impacts from residual vapours resulting from petroleum, BTEX and naphthalene impacts. The HSL D thresholds for commercial/industrial sites were applied.

5.6 Soil Investigation

Soil investigation works conducted at the site are described in **Table 5-6**. Sampling locations are illustrated in **Figure A.2, Appendix A**.

Table 5-6 Summary of Soil Investigation Methodology

Activity/Item	Details
Fieldwork	An intrusive investigation for soil sampling and analysis was conducted from the 26 to 28 October 2022.
Drilling Method & Investigation Depth	Test bores BH01 – BH16M were drilled using a ute-mounted drill rig, fitted with solid flight augers. Borehole details are presented in the detailed logs attached in **Appendix E**.
Soil Logging	Drilled soils were classified in the field with respect to lithological characteristics and evaluated on a qualitative basis for odour and visual signs of contamination. Soil classifications and descriptions were based on Australian Standard (AS) 1726:2017. Soil logs are presented in **Appendix E.**
Soil Sampling	▪ Soil samples were collected using a dry grab method (unused, dedicated nitrile gloves) and placed into laboratory-supplied, acid-washed, solvent-rinsed glass jars. ▪ Blind field duplicates was separated from the primary samples and placed into glass jars. ▪ A duplicate was separated from a fill sample and placed into a zip-lock bag for asbestos analysis.

Activity/Item	Details
Decontamination Procedures	Soil samples were collected using grab/dry methods and placed into laboratory-supplied, acid-washed, solvent-rinsed glass jars using dedicated nitrile gloves. Blind field duplicates were separated from the primary samples and placed into glass jars. A small amount of duplicate was collected from samples and placed into a zip-lock bag for Photo-ionisation Detector (PID) screening and asbestos analysis.
Sample Preservation	Samples were stored in chilled (ice -filled) chests, whilst on-site and in transit to the laboratory, which was performed under strict Chain-of-Custody (COC) conditions. Copies of the completed COC documentation (used to track sample movements) and laboratory Sample Receipt Advice (SRA) forms are provided in **Appendix H.**
Management of Soil Cuttings	Soil cuttings were used as backfill for completed boreholes.
Quality Control & Laboratory Analysis	A number of soil samples were submitted for analysis by SGS. QA/QC testing comprised intra-laboratory duplicates ('field duplicates') tested blind by SGS and an inter-laboratory field duplicate tested blind by Envirolab Services (Envirolab). All samples were transported under strict Chain-of-Custody (COC) conditions and COC certificates and laboratory sample receipt documentation were provided to EI for confirmation purposes, as discussed in **Section 6**.
Soil Vapour Screening	PID screening for potential VOCs within soil samples was completed during intrusive investigations. Hydrocarbon odours were detected at BH02 only. Individual screening of samples ranged from 0.0 – 330 ppm, which were consistent with the presence of any suspicious odours in the examined soils.

5.7 Groundwater Investigation

The groundwater investigation works conducted at the site are described in **Table 5-7**. Monitoring well locations are illustrated in **Figure A.2**.

Table 5-7 Summary of Groundwater Investigation Methodology

Activity/Item	Details
Fieldwork	Three groundwater monitoring wells (BH02M, BH15M and BH16M) were installed on 26 and 28 October 2022, as part of the Detailed Site Investigation. All wells were subsequently developed to remove any water and/or seepage following drilling. Water level gauging, well purging, field testing and groundwater sampling was conducted on 28 October 2022.

Activity/Item	Details
Well Construction	▪ On-site monitoring wells were constructed to the following depths: ‣ BH02M: 7.2 mBGL ‣ BH15M: 9.0 mBGL ‣ BH16M: 7.2 mBGL The boreholes were drilled and cored using a ute-mounted drill rig. Well construction details are tabulated in **Table 7-2** and documented in the bore logs presented in **Appendix E**. Well construction was in general accordance with the standards described in NUDLC 2020, and involved the following: ▪ 50 mm, Class 18 uPVC, threaded, machine-slotted screen and casing, with slotted intervals in shallow wells set to screen above the standing water level to allow sampling of phase-separated hydrocarbon product, if present; ▪ Base and top of each well was sealed with a uPVC cap; ▪ Annular, graded sand filter was used to approximately 300 mm above top of screen interval; ▪ Granular bentonite was applied above annular filter to seal the screened interval; ▪ A bentonite/cement grout was used to fill the bore annulus to just below ground level; and ▪ Surface completion was comprised of a steel gatic cover at surface, or a 1m uPVC stick up.
Well Development	Well development was conducted by EI staff following installation. Well development was considered successful upon purging three times the well volume or until dry.
Well Survey (Elevation and location)	Well elevation has been estimated from the survey plan provided by the Client. (Ref. *Modified Architectural Plans 35-27 Quondola Street, Pambula NSW 2549 Parcel 41754*, 2021.358 PAN-115457). Surface levels are assumed accurate to approximately 0.2 m, based on the interpolation of survey information.
Well Gauging	Monitoring wells were gauged for standing water level (SWL, depth to groundwater) prior to well purging at the commencement of the GME on 28 October 2022. Gauging was conducted with a water/oil interface probe.
Well Purging& Field Testing	Groundwater sampling was conducted using a combination of peristaltic pump, and high-density polyethylene (HDPE) disposable bailers. Field measurement of water quality parameters was conducted on purged groundwater with a water quality meter (Hanna Multi Parameter 9829) positioned within a sample jar. Groundwater parameters tested in the field were Dissolved Oxygen (DO), Electrical Conductivity (EC), Redox, Temperature and pH. The measured parameters were recorded onto a field data sheet (**Appendix K**), along with the purged water volume at the time of measurement. Total water volume purged and stabilised groundwater parameters are summarised in **Table 7-3.**
Decontamination Procedure	The water level probe was washed in a solution of *Decon 90,* then rinsed with potable water. All sample containers were supplied by the laboratory for the particular project and only opened once immediately prior to sampling. HDPE disposable bailers were opened once immediately prior to sampling.

Activity/Item	Details
Sample Preservation	The following sample containers supplied by the laboratory were used to store groundwater samples: ▪ One, amber glass, acid-washed and solvent-rinsed bottle; ▪ Two, 40 ml amber glass vials, pre-preserved with dilute hydrochloric acid, Teflon-sealed; ▪ One, 250 mL, HDPE bottle, pre-preserved with dilute nitric acid (1 mL); ▪ One, 250 mL HDPE bottle, non-preserved; and ▪ One, 90m mL, HDPE bottle, preserved. Samples collected for metal analysis were field-filtered using 0.45 µm pore-size filters. All containers were filled with sample to the brim then capped and stored in ice-filled chests, until completion of the fieldwork and during sample transit to the laboratory.
Quality Control & Laboratory Analysis	All groundwater samples were submitted for analysis by Eurofins Scientific (Eurofins). QA/QC testing comprised intra-laboratory duplicates ('field duplicates') tested blind by Eurofins and an inter-laboratory field duplicate tested blind by Envirolab Services (Envirolab).
Sample Transport	After sampling, refrigerated sample chests were transported to Eurofins using strict Chain-of-Custody (COC) procedures. Inter-laboratory duplicate (ILD) samples were forwarded to Envirolab Services Pty Ltd (Envirolab) for QA/QC analysis. A Sample Receipt Advice (SRA) was provided by each laboratory to document sample condition upon receipt. Copies of SRA and COC certificates are presented in **Appendix H**.

6. DATA QUALITY ASSESSMENT

6.1 Data Quality Assessment

In accordance with the EPA (2017) Guidelines for the NSW Site Auditor Scheme, Data Quality Objectives (DQOs) (based on the US EPA (2006) Data Quality Assessment) were established to determine the appropriate level of field and laboratory data quality needed for the specific data requirements of the project. The DQO process that was applied for this DSI is documented in **Table 6 1**. The findings of the data quality assessment in relation to the current investigation at the site are discussed in detail in **Appendix J**.

The QC measures generated from the field sampling and laboratory analytical program are summarised in **Table 6-1**.

Table 6-1 Quality Control Process

Data Quality	Control	Conformance [Yes, Part, No]	Report Sections
Preliminaries	Data Quality Objectives established	Yes	See **Section 5**
Field work	Suitable documentation of fieldwork observations including borehole logs, field notes.	Yes	See **Appendix E** and **Appendix K**
Sampling Plan	Use of relevant and appropriate sampling plan (density, type, and location)	Yes	See **Section 5.4**.
	All media sampled and duplicates collected	Yes	See **Appendix I** and **Appendix J**
	Use of approved and appropriate sampling methods (soil, groundwater)	Yes	See **Section 5.6** and **5.7.**
	Selection of soil samples according to field PID readings (where VOCs are present)	Yes	See **Section 7**
	Preservation and storage of samples upon collection and during transport to the laboratory	Yes	See **Section 5.6** and **5.7.**
	Appropriate Rinsate, Field and Trip Blanks taken	Yes	See **Appendix J**
	Completed field and analytical laboratory sample COC procedures and documentation	Yes	See **Appendix H** and **Appendix I**
Laboratory	Sample holding times within acceptable limits	Yes	See **Appendix I** and **Appendix J**
	Use of appropriate analytical procedures and NATA-accredited laboratories	Yes	See **Appendix I** and **Appendix J**
	LOR/PQL low enough to meet adopted criteria	Yes	See **Appendix I** and **Appendix J**
	Laboratory blanks	Yes	See **Appendix I** and **Appendix J**

Data Quality	Control	Conformance [Yes, Part, No]	Report Sections
	Laboratory duplicates	Yes	See **Appendix I** and **Appendix J**
	Matrix spike/matrix spike duplicates (MS/MSDs)	Yes	See **Appendix I** and **Appendix J**
	Surrogates (or System Monitoring Compounds)	Yes	See **Appendix I** and **Appendix J**
	Analytical results for replicated samples, including field and laboratory duplicates and inter-laboratory duplicates, expressed as Relative Percentage Difference (RPD)	Yes	See **Appendix I** and **Appendix J**
	Checking for the occurrence of apparently unusual or anomalous results, e.g. laboratory results that appear to be inconsistent with field observations or measurements	Yes	See **Appendix E** and **Appendix I**
Reporting	Report reviewed by certified practitioner (CEnvP (SC Specialist) to assess project meets desired quality, EPA guidelines and project outcomes.	Yes	See Report Distribution page at front of report.

6.2 Quality Overview

On the basis of the field and analytical data validation procedure employed, the overall quality of the analytical data produced for the site was considered to be of an acceptable standard for interpretive use and preparation of a conceptual site model (CSM).

7. RESULTS

7.1 Soil Investigation Results

7.1.1 Site Geology and Sub-surface Conditions

The general site geology encountered during the drilling of the soil investigation boreholes was a layer of filling, overlying residual clays. Bedrock was not encountered during the investigation.

The geological information obtained during the investigation is summarised in **Table 7-1**, with borehole logs from the works are presented in **Appendix E**.

Table 7-1 Generalised Sub-surface Profile

Layer	Description	Minimum & maximum depth of layer (mBGL)
Topsoil	Grassed Topsoil	0.00 – 0.10
Fill	Silty SAND[2]	0.00 – 0.30
	Sandy CLAY	0.00 – 1.40
Residual Soil	Silty CLAY	0.20 – 7.50+
	Sandy CLAY	0.20 – 4.50

Note 1 **+** Denotes the material was detected at the termination depth.
Note 2 Silty sand located only at BH15M and BH16M

7.1.2 Field Observations

Soil samples were obtained from bores at various depths ranging between 0.1 mBGL to 4.6 mBGL. All examined soil samples were evaluated on a qualitative basis for odour and visual signs of contamination (e.g. hydrocarbon odours, oil staining, petrochemical filming, asbestos fragments, ash, and charcoal) and the following observations were noted (Photographs are presented in **Appendix D**):

- Some sub-angular to angular gravels were reported within fill materials;
- Hydrocarbon odours were identified at BH02M, particularly at depths from 0.00 – 4.5 mBGL;
- No evidence of ash, slag, potential asbestos containing material (ACM) or other foreign materials were observed during the investigation;
- Bedrock was not encountered during the intrusive investigation;
- Photo-ionisation Detector (PID) analysis of soil samples did not exceed 0.0 ppm except at BH02M where PID readings ranged between 4.3 and 330 ppm..

7.2 Groundwater Investigation Results

A single GME was undertaken on 28 October 2022. On this date, standing water levels (SWLs) were measured prior to well purging and recorded with well purge volumes and laboratory based water test results. A summary of well construction details is presented in **Table 7-2**.

Table 7-2 Monitoring Well Construction Details

Well ID	Top of casing (mBGL)	Extrapolated Ground Level RL(mAHD)	Bore Depth (mBGL)	Screen Interval (mBGL)	Lithology Screened
BH02M	0.1	4.92	7.20	4.20 – 7.20 [4]	Silty CLAY
BH15M	+ 1.00 (stick-up)	3.71	7.50	4.50 – 7.50	Silty CLAY
BH16M	0.1	5.09	9.00	6.00 – 9.00	Silty CLAY

Note 1 mBGL – metres below ground level
Note 2 mAHD – metres relative to Australian Height Datum
Note 3 Ground level RLs have been extrapolated from the survey plan (Ref. *Modified Architectural Plans 35-27 Quondola Street, Pambula NSW 2549 Parcel 41754*, 2021.358 PAN-115457).

Water quality parameters tested in the field on groundwater sampled at three monitoring wells are tabulated in **Table 7-3**. Details of the portable water quality meters used, including copies of field data sheets are provided in **Appendix K**. Samples were also evaluated on a qualitative basis for odour and visual signs of contamination and the following observations were noted:

- No olfactory or visual evidence of contamination was noted during the GME (i.e. sheens, odour); and
- Groundwater within monitoring wells was noted to be clear, with low turbidity

Table 7-3 Groundwater Field Data

Sampling Point (date)	DTW [1]	RL TOC [2]	SWL [3]	Well Purge Volume (L)	DO(mg/L)	pH	EC (µS/cm)	Temp (°C)	Red-Ox [4]	Odours / Visual observations
GME – 28 October 2022										
BH02M	2.028	4.82	2.792	2.0	0.42	5.64	2,069	20.46	220	Clear, colourless, odourless, no sheen.
BH15M	2.284	4.71	2.426	2.0	0.33	6.11	1,060	18.8	23	Clear, slightly turbid, no odour, no sheen.
BH16M	2.420	4.99	2.57	2.0	0.11	6.10	1,331	20.28	-75	Slightly turbid, colourless, no odour, no sheen.

Note 1 DTW – Depth to Water, measured in monitoring wells in metres below top of well casing (mBTOC) prior to well purging.
Note 2 Estimated RL (TOC) – Reduced Level, elevation at TOC in metres relative to Australian Height Datum (mAHD). Ground level RLs have been extrapolated from the survey plan (Ref. C. Robson & Associates, Job Ref: 21664, Drawing No: 21664/0 Revision A, dated 26 October 2021).

Note 3 Estimated SWL = Standing Water Level - Calculated groundwater level, relative to AHD (calculated as RL (TOC) – SWL).
Note 4 Redox – Oxidation and reduced potential. Redox reported in the above table has been adjusted relative to standard hydrogen electrode (by adding 205 mV to the field reading, as advised by the test equipment manufacturer.

Groundwater recovered from monitoring wells at the site was clear to slightly turbid, with no odour or sheen observed. Groundwater was generally oxygen depleted, acidic and marginally fresh to brackish. Field readings of oxidation-reduction potential indicated reducing conditions in groundwater at monitoring well BH16M and oxidising conditions at well BH15M.

7.3 Laboratory Analytical Results

7.3.1 Soil Analytical Results

A summary of laboratory results, is presented in **Table 7-4.** More detailed tabulations of results showing the tested concentrations for individual samples alongside the adopted soil criteria are presented in **Appendix B, Table B.1** at the end of this report.

Completed documentation used to track soil sample movements and laboratory receipt (i.e. COC and SRA forms) are copied in **Appendix H** and all laboratory analytical reports for tested soil samples are presented in **Appendix I**.

Table 7-4 Summary of Soil Analytical Results

No. of primary samples	Analyte	Min Conc. (mg/kg)	Max Conc. (mg/kg)	Samples exceeding investigation and ecological levels
Metals				
27	Arsenic	<1	11	None
27	Cadmium	<0.3	<0.3	None
27	Chromium (Total)	1.7	19	None
27	Copper	0.8	30	None
27	Lead	2	470	None
27	Mercury	<0.05	2.3	None
27	Nickel	0.5	150	None
27	Zinc	0.13	270	None
PAHs				
27	Naphthalene	<0.5	<0.5	None
27	Benzo(a)pyrene	<0.5	<0.5	None
27	Carcinogenic PAHs (as B(a)P TEQ)	<0.5	<0.5	None
27	Total PAH	<0.5	<0.5	None
BTEX				
27	Benzene	<0.1	<0.1	None
27	Toluene	<0.1	0.3	None
27	Ethyl benzene	<0.1	2.4	None
27	Xylenes (Total)	<0.3	20	None

No. of primary samples	Analyte	Min Conc. (mg/kg)	Max Conc. (mg/kg)	Samples exceeding investigation and ecological levels
TRHs				
27	F1 [1]	<20	23	None
27	F2 [2]	<50	<50	None
27	F3 [3]	<100	<100	None
27	F4 [4]	<100	<100	None
Pesticides				
16	OCPs	ND	<1	None
16	OPPs	ND	<1.7	None
PCBs				
16	Total PCBs	<1	<1	None
Asbestos				
16	Asbestos	Not detected	Not detected	None

Note 1 To obtain F1, subtract the sum of BTEX concentrations from the C_6-C_{10} fraction.
Note 2 To obtain F2, subtract Naphthalene from the >C_{10}-C_{16} fraction.
Note 3 F3 – (C_{16}-C_{34}).
Note 4 F4 – (C_{34}-C_{40}).

7.4 Groundwater Analytical Results

A summary of laboratory results showing test sample quantities, maximum analyte concentrations and samples found to exceed the GILs, are presented in **Table 7-6**. More detailed tabulations of results showing the tested concentrations for individual samples alongside the adopted groundwater criteria are presented in **Appendix B**, **Table B.3**.

Completed documentation used to track groundwater sample movements and laboratory receipt (i.e. COC and SRA forms) are copied in **Appendix H** and all laboratory analytical reports for tested groundwater samples are presented in **Appendix I**.

Table 7-5 Summary of Groundwater Analytical Results

No. of primary samples	Analyte	Min Conc. (µg/L)	Max Conc. (µg/L)	Samples exceeding investigation levels
Metals				
3	Arsenic	<1	<1	None
3	Cadmium	<0.1	<0.1	None
3	Chromium (Total)	<1	<1	None
3	Copper	1	3	ANZG – Fresh Water – 2 µg/L ▪ BH02M-1 (3 µg/L) ▪ BH16M-1 (2 µg/L)
3	Lead	<1	<1	None
3	Mercury	<0.1	<0.1	None

No. of primary samples	Analyte	Min Conc. (µg/L)	Max Conc. (µg/L)	Samples exceeding investigation levels
3	Nickel	<2	5	ANZG – Fresh Water - 5 µg/L ▪ BH02M-1 (5 µg/L) ▪ BH16M-1 (5 µg/L)
3	Zinc	27	80	ANZG – Fresh Water – 15 µg/L ▪ BH02M-1 (56 µg/L) ▪ BH15M-1 (27 µg/L) ▪ BH16M-1 (80 µg/L)
PAHs				
3	Naphthalene	<1	0.1	None
3	Benzo(a)pyrene	<1	<1	None
3	Total PAH	<1	<1	None
BTEX				
3	Benzene	<1	12	None
3	Toluene	<1	1.2	None
3	Ethyl benzene	<1	5.9	None
3	Xylenes (Total)	<1.5	32	None
TRHs				
3	F1 [1]	<50	<50	None
3	F2 [2]	<60	<60	None
3	F3 [3]	<500	<500	None
3	F4 [4]	<500	<500	None
VOCs				
3	Total VOCs	<10	56	None
Phenols				
3	Total Phenols	<0.05	<0.05	None

Note 1 To obtain F1, subtract the sum of BTEX concentrations from the C_6-C_{10} fraction.
Note 2 To obtain F2, subtract Naphthalene from the >C_{10}-C_{16} fraction.
Note 3 F3 – (C_{16}-C_{34}).
Note 4 F4 – (C_{34}-C_{40}).
Note 5 ND – Not Detected

8. SITE CHARACTERISATION

8.1 Soil Characterisation

8.1.1 Human Health

Soil samples from each borehole were assessed against the adopted human health criteria (HIL-D *Commercial/Industrial*). Reported concentrations of priority metals, TRHs, BTEX, PAHs, pesticides, PCBs were low or not detected above laboratory limit of reporting (LOR). Adopted human health criteria were not exceeded.

Petroleum hydrocarbons and BTEX compounds were not detected above laboratory limit of reporting in soil from borehole BH02M where hydrocarbon odours and elevated PID readings were observed.

Results are summarised in **Tables 7-4** and **Appendix B, Table B.2**.

8.1.2 Ecological

Samples collected from the boreholes on site were assessed against the adopted ecological criteria, with concentrations of TRH, BTEX, PAH and selected pesticides all reported below the adopted ecological criteria.

Results are summarised in **Tables 7-4** and **Appendix B, Table B.2**.

8.2 Groundwater

8.2.1 Hydrogeology

Groundwater was analysed across the site at three monitoring well locations (BH02M, BH15M, and BH16M). Standing water levels (SWLs) were recorded between 2.028 – 2.420 mBGL during a GME, conducted approximately 72 hours following well installation and development. Based on the standing water levels and regional topography, groundwater was inferred to be migrating south/south-east across the site, towards Panboola Wetlands and Pambula River..

8.2.2 Groundwater Analysis

Reported concentrations of TRH, BTEX, PAHs, phenols and VOCs were below the adopted groundwater investigation levels. Results are summarised in **Table 7-6** and **Appendix B, Table B.3**.

Minor concentrations of BTEX compounds were reported in groundwater recovered from well BH02M. Adopted health-based criteria were not exceeded.

Priority metals were also reported below the adopted criteria, with the exception of copper at BH01M and BH16M, and zinc at all monitoring wells. The reported concentrations of copper and zinc were typical of urban environments and represented background conditions. The risk to human health and the environment was low and acceptable.

8.3 Asbestos Risk

Asbestos was not identified within site soil at the sampling locations investigated across the site, and the risk of exposure to asbestos within soil is low. However asbestos containing material may be present in buildings at the site, and an exposure risk exists from maintenance to or demolition of buildings.

8.4 Underground Storage Tank

A review of site history (**Section 3**) revealed the presence of a UST located in the western portion of the site. A Ground Penetrating Radar (GPR) scan of the site conducted by a DBYD certified locator could not confirm the bounds of the suspected tank location due to ground disturbance in the area (e.g. anthropogenic materials within fill), however, a fill point was identified in the western portion of the site next to the hotel building. The inferred location of the UST is presented as **Figure A.2, Appendix A.**

Confirmed decommissioning and removal will need to be managed in accordance with the Underground Petroleum Storage Systems Regulation (POEO, 2019) and Guidelines for Implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation (NSW EPA, 2020) during further stages of works.

8.5 Review of Conceptual Site Model

On the basis of investigation findings, the CSM discussed in **Section 4** was considered to appropriately identify contamination sources, migration mechanisms and exposure pathways, as well as potential on-site and off-site receptors. Data gaps remain at the site as follows:

- The presence and condition of an underground storage tank potentially located in the access-way on the southern side of the hotel building. Soil and groundwater sampling at locations BH01, BH02M, BH16M near to the estimated location of the UST indicated minor localised impact from petroleum hydrocarbons.
- Soil quality within the footprint of the hotel building and the residential/former motel building.

9. CONCLUSIONS

The site located at 35-37 Quondola Street, Pambula NSW was the subject of a Detailed Site Investigation. The key findings of the assessment were as follows:

- The site was narrow and elongated between Quondola Street on the west boundary and Merimbola Street on the east boundary. A drainage line (aligned north-south) was located in the middle of the site. The western portion was occupied by a liquor store, a commercial hotel (Royal Willows Pub) and a residential block, which once operated as a motel. Several vehicles and boats were stored in the carpark. A grassed section with established trees surrounded the central drainage line. The eastern portion of the site was relatively bare, with gravel covering the majority of the ground surface. A storage shed was present in the south eastern corner.
- A potential fuel fill point for an underground storage tank (UST) was located in the western portion of the site next to the hotel building.
- A United Petroleum Service Station and a dry cleaning agency were located on the south boundary of the site. The dry cleaning agency was drop-off and pick-up, with no processing on site. A community garden and playground are located on the north boundary.
- The western portion of the subject site (Lots 19 & 20 Section 33 DP758825) has been used for commercial purposes (hotel operation) since the 1920s (and likely earlier). The motel building was constructed then operated since the 1960s and more recently used for residential accommodation. The eastern portion of the site was used for residential or agricultural purposes (possible market gardening) until 1992 then for local government use (possible works depot) (from 1992 to 2015).
- Council records and anecdotal information confirmed that an underground storage tank and bowser was located in the access-way south of the hotel building and operated from the late 1960s. The current presence and status of the UST are unknown, however, is inferred to be located in the western portion of the site. A dangerous goods search through SafeWork NSW did not identify any records pertaining to the site.
- The site was free of statutory notices and licensing agreements issued under the *Contaminated Land Management Act 1997* and *Protection of the Environment Operations Act 1997*. It was not included on the *List of NSW Contaminated Sites Notified to the EPA.*
- The subsurface was observed to consist of a thin layer of topsoil (in the western portion) and predominantly sandy clay fill to a maximum depth of 1.4 mBGL, overlying natural silty clay and sandy clay. Bedrock was not encountered to the maximum depth of investigation of 9 mBGL. Groundwater inflow (first) water was encountered at a depth of 7.5 mBGL.
    - Odorous soil (petroleum hydrocarbon) and elevated PID readings (max of 330 ppm) were encountered in recovered soil during drilling of borehole BH02.
    - No evidence of ash, slag, potential asbestos containing material (ACM) or other foreign materials were observed in fill or natural soil.
- Reported concentrations of contaminants (priority metals, PAHs, BTEX, TRHs, pesticides and PCBs) in recovered samples of soil from 16 locations were low or not detected above LOR. Human health-based and ecological criteria were not exceeded.
    - Petroleum hydrocarbons and BTEX compounds were not detected above laboratory LOR in soil from borehole BH02M where hydrocarbon odours and elevated PID readings were observed.

- Asbestos was not detected (not present, at LOR of 0.01 %w/w) in soil samples assessed by the laboratory.
- Three monitoring wells were constructed and standing water level ranged between 2.03 and 2.42 mBGL. Recovered groundwater was oxygen depleted, acidic, marginally fresh to brackish, and reducing to oxidising. No odour or sheen was observed.
- Reported concentrations of contaminants (TRH, BTEX, PAHs, phenols and VOCs) in recovered groundwater were below the adopted health-based and ecological groundwater investigation levels.
- The conceptual site model developed for the site was considered to appropriately identify contamination sources, migration mechanisms and exposure pathways, as well as potential on-site and off-site receptors. The risk of exposure from identified contaminants was considered to be low and acceptable. However data gaps remain at the site as follows:
  - The presence and condition of an underground storage tank potentially located in the access-way on the southern side of the hotel building.
  - Soil quality within the footprints of the hotel building and the residential/former motel building.

Based on the findings of this DSI, and in accordance with the Statement of Limitations (**Section 11**), it was concluded that the potential for site contamination was low. There is potential for a UST to be present on site, and this will require management. EI considers that the site can be made suitable for the proposed commercial development, subject to the implementation of recommendations provided in **Section 10**.

10. RECOMMENDATIONS

The following recommendations should be implemented for the proposed development:

- Conduct a Hazardous Materials Survey (HMS) of the current site prior to site demolition;
  - The HMS will guide demolition of existing buildings and ensure appropriate management of hazardous building materials if encountered.
- Prepare a Remedial Action Plan (RAP) that details methodology and procedures required for site remediation, including:
  - Removal of the UST and validation of resulting excavation according EPA Guidelines for Implementing the *Protection of the Environment Operations Underground Petroleum Storage Systems Regulation 2019*;
  - Investigation of soil within the footprints of the hotel building and motel building to verify consistency with site wide soil and to aid waste classification if required;
  - Waste classification of surplus site soils to be excavated and disposed off-site during remediation works and material imported to the site, in accordance with the NSW EPA (2014) *Waste Classification Guidelines*;
  - Work health and safety considerations;, and,
  - An unexpected finds protocol, for implementation if unusual or unexpected materials are encountered during excavation and construction activities.
- Prepare a validation report describing removal of the UST and associated materials if encountered.

These recommendations can be implemented within the framework of the development application process under *State Environment Protection Policy (Hazards and Resilience) 2021*.

11. STATEMENT OF LIMITATIONS

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

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

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

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

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

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

REFERENCES

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

Australian Standard (2005). Table E1 – *Minimum sampling points required for site characterisation*, in Guide to the investigation and sampling of sites with potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds, Standards Australia, AS 4482.1-2005, p45.

Australian Standard (2017). Geotechnical Site Investigations, AS 1726:2017.

Bega Valley Shire Council Development Control Plan 2013 (DCP 2013). Retrieved from https://begavalley.nsw.gov.au/services/development-controls

Bega Valley Shire Council Local Environmental Plan 2013 (LEP 2013). Retrieved from https://begavalley.nsw.gov.au/services/local-environmental-plan

Bega Valley Shire Council (2014) *Pambula Sewerage Augmentation Sewer Rising Main Geotechnical Investigation,* Report Number: 14 – GS 13A

DPIE (2022). *eSPADE v2.2 Portal*, NSW Department of Planning, Industry and Environment, Retrieved from www.espade.environment.nsw.gov.au

NSW EPA (2014) Waste Classification Guidelines

NSW EPA (2017). *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme*, 3rd Edn. EPAP0269, October 2017.

NSW EPA (2020). *Consultants Reporting on Contaminated Land, Contaminated Land Guidelines*, NSW EPA, April 2020.

NSW EPA (2022). *Sampling Design Part 1 – Application, Contaminated Land Guidelines*, EPA 222P3915, dated August 2022.

HEPA (2020). *PFAS National Environmental Management Plan Version 2.0*, Heads of EPA Australia and New Zealand 2020.

NEPC (2013). *Schedule B1 Guideline on Investigation Levels for Soil and Groundwater*, Schedule B2 Guideline on Site Characterisation and Schedule B4 Guideline on site-specific health risk assessments, National Environmental Protection (Assessment of Site Contamination) Measure 1999, National Environmental Protection Council, December 1999, Amendment 2013.

State Environment Protection Policy (Hazards and Resilience) 2021

Troedson A.L. & Hashimoto T.R. (Compilers) 2008. Coastal Quaternary Geology – north and south coast of NSW. *Geological Survey of New South Wales,* Bulletin 34.

US EPA (2006). *Data Quality Assessment: A Reviewers Guide – EPA QA/G-9R. USEPA Office of Environmental Information*, EPA/240/B-06/002, February 2006.

ABBREVIATIONS

ACM	Asbestos-containing materials
ANZG	Australian and New Zealand Guidelines for Fresh and Marine Water Quality
AS	Australian Standard
ASS	Acid sulfate soils
B(a)P	Benzo(a)Pyrene (a PAH compound), - B(a)P TEQ Toxicity Equivalent Quotient
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
CLM	Contaminated Land Management
CSM	Conceptual Site Model
COC	Chain of Custody
DA	Development Application
DBYD	Dial before you dig
DEC	Department of Environment and Conservation, NSW (see OEH)
DECC	Department of Environment and Climate Change, NSW (see OEH)
DECCW	Department of Environment, Climate Change and Water, NSW (see OEH)
DA	Development Application
DP	Deposited Plan
DSI	Detailed Site Investigation
EIL	Ecological Investigation Level
EPA	Environment Protection Authority
ESL	Ecological Screening Level
F1	TRH C_6 – C_{10} less sum of BTEX concentrations (Ref. NEPM 2013, Schedule B1)
F2	TRH >C_{10} – C_{16} less naphthalene (Ref. NEPM 2013, Schedule B1)
F3	TRH >C_{16} – C_{34} (Ref. NEPM 2013, Schedule B1)
F4	TRH >C_{34} – C_{40} (Ref. NEPM 2013, Schedule B1)
HEPA	Heads of EPAs Australia and New Zealand
HIL	Health-based Investigation Level
HSL	Health-based Screening Level
km	Kilometres
LOR	Limit Of Reporting of laboratory instruments (see PQL)
m	Metres
mAHD	Metres Australian Height Datum
mBGL	Metres Below Ground Level
mg/L	Milligrams per litre
µg/L	Micrograms per litre
NATA	National Association of Testing Authorities, Australia
NEMP	National Environmental Management Plan
NEPC	National Environmental Protection Council
NEPM	National Environmental Protection Measure
NSW	New South Wales
OCP	Organochlorine pesticides
OPP	Organophosphorus pesticides
OEH	Office of Environment and Heritage, NSW (formerly DEC, DECC, DECCW)
PASS	Potential Acid Sulfate Soils
PAHs	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PFAS	Per or Poly-Fluoroalkyl Substances
PID	Photo-ionisation Detector
pH	Measure of the acidity or basicity of an aqueous solution
PQL	Practical Quantitation Limit (limit of detection for laboratory instruments)

QA/QC	Quality Assurance / Quality Control
RAP	Remediation Action Plan
RL	Reduced Level
SRA	Sample Receipt Advice (document confirming laboratory receipt of samples)
SWL	Standing Water Level
TPH	Total Petroleum Hydrocarbons (superseded term equivalent to TRH)
TRH	Total Recoverable Hydrocarbons (non-specific analysis of organic compounds)
UCL	Upper Confidence Limit of the mean
UPSS	Underground Petroleum Storage System
US EPA	United States Environmental Protection Agency
UST	Underground Storage Tank

Appendix A - Figures

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Approved:	-
Date:	20-10-22
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Pambula Foodworks Pty Ltd

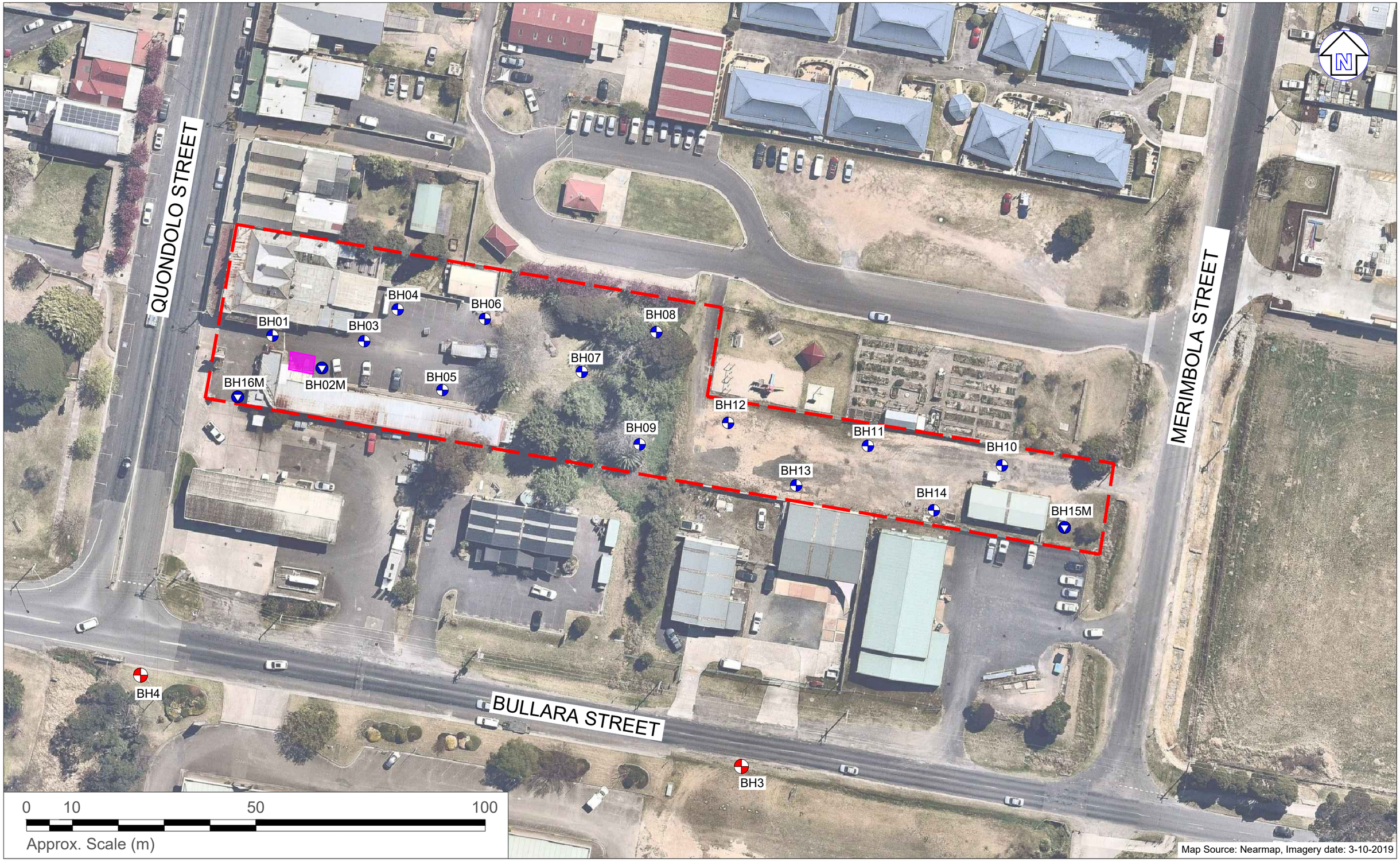
Detailed Site Investigation

35-37 Quondolo Street, Pambula NSW

Site Locality Plan

Figure: 1

Project: E25846.E02



LEGEND (Note: All locations are approximate)

- Site boundary
- Proposed Borehole Location
- Proposed Monitoring Well Location
- Former Borehole Location (NSW Gov, 2014)
- Inferred Underground Storage Tank Location

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Pambula Foodworks Pty Ltd
Detailed Site Investigation
35-37 Quondolo Street, Pambula NSW

Sampling Location Plan

Figure: A.2

Project: E25846.E02_Rev1

Appendix B – Tables

Table B.1 - Sample Register for 35-37 Quondola Street, Pambula NSW

Sample ID	Date	Scheduled Analysis [#]									Primary Laboratory	Secondary Laboratory
		Metals	TRH	BTEX	PAH	OCP / OPP	PCB	Asbestos	VOCs	Phenols	SGS Batch No.	Envirolab Batch No.
Detailed Site Investigation - EI, 2022												
Soils												
BH01_0.1-0.2		X	X	X	X	X	X	X				
BH01_0.9-1.0		X	X	X	X							
BH02_0.1-0.2		X	X	X	X	X	X	X				
BH02_0.5-0.6		X	X	X	X							
BH02_1.3-1.4		X	X	X	X							
BH02_2.0-2.1												
BH02_2.5-2.6												
BH02_3.0-3.1		X	X	X	X							
BH02_3.5-3.6												
BH02_4.0-4.1												
BH02_4.5-4.6		X	X	X	X							
BH03_0.1-0.2		X	X	X	X	X	X	X				
BH03_0.5-0.6		X	X	X	X							
BH04_0.1-0.2		X	X	X	X	X	X	X				
BH04_0.5-0.6												
BH05_0.1-0.2		X	X	X	X	X	X	X				
BH05_0.5-0.6		X	X	X	X							
BH06_0.1-0.2		X	X	X	X	X	X	X				
BH06_0.7-0.8												
BH07_0.1-0.2		X	X	X	X	X	X	X				
BH07_0.5-0.6												
BH08_0.1-0.2		X	X	X	X	X	X	X			SE238476	309483
BH08_0.5-0.6		X	X	X	X							
BH09_0.1-0.2		X	X	X	X	X	X	X				
BH09_0.5-0.6												
BH10_0.2-0.3		X	X	X	X	X	X	X				
BH10_1.3-1.4												
BH11_0.4-0.5		X	X	X	X	X	X	X				
BH11_1.1-1.2												
BH12_0.3-0.4		X	X	X	X	X	X	X				
BH12_1.2-1.3												
BH13_0.3-0.4		X	X	X	X	X	X	X				
BH13_1.4-1.5		X	X	X	X							
BH14_0.3-0.4		X	X	X	X	X	X	X				
BH14_1.4-1.5												
BH16M_0.1-0.2		X	X	X	X	X	X	X				
BH15M_0.1-0.2		X	X	X	X	X	X	X				
BH15M_0.5-0.6		X	X	X	X							
BH16M_0.4-0.5												
BH16M_1.0-1.1		X	X	X	X							
QD271022		X	X	X								
QT271022		X	X	X								
QR271022		X	X	X								
Groundwater												
BH02M		X	X	X	X				X	X	SE238475	309482
BH15M-1[1]		X	X	X	X				X	X		
BH16M-1[1]		X	X	X	X				X	X		
QD281022		X	X	X								
QT281022		X	X	X								

Table B.2 – Summary of Soil Investigation Results for 35-37 Quondola Street, Pambula NSW **E25846.E02 - Pambula**

Sample ID + Depth	Sampling Date	Metals								PAHs				BTEX				TRHs				OCPs	OPPs	Total PCBs	Asbestos
		As	Cd	Cr#	Cu	Pb	Hg	Ni	Zn	Carcinogenic PAHs (as B(a)P TEQ)	Benzo(a)pyrene	Total PAHs	Naphthalene	Benzene	Toluene	Ethylbenzene	Total Xylenes	F1	F2	F3	F4				
Fill Soils / Topsoils																									
BH01_0.1-0.2	28/10/2022	3	<0.3	5.4	2.7	99	<0.05	1.6	18	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH02_0.1-0.2		3	<0.3	3.8	1.7	20	<0.05	2.5	12	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH03_0.1-0.2		2	<0.3	7.5	5.8	31	0.06	1.7	44	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH04_0.1-0.2		5	<0.3	14	4.3	100	<0.05	3.8	6.1	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH05_0.1-0.2		4	<0.3	3.8	2.3	72	0.08	1.5	36	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH06_0.1-0.2		4	<0.3	12	10	32	<0.05	2.7	31	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH07_0.1-0.2		5	<0.3	8.1	7	170	0.08	3.5	96	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH08_0.1-0.2		4	<0.3	8.2	6.6	430	0.06	1.5	210	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH09_0.1-0.2		11	<0.3	11	9	98	0.13	2.3	150	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH10_0.2-0.3		1	<0.3	5.5	1	2	<0.05	<0.5	<2	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH11_0.4-0.5		2	<0.3	4.6	1.6	2	<0.05	<0.5	2.1	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH12_0.3-0.4		1	<0.3	4.5	1.1	2	<0.05	<0.5	<2	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH13_0.3-0.4		1	<0.3	5.3	1.1	2	<0.05	<0.5	<2	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH14_0.3-0.4		1	<0.3	12	1.9	2	<0.05	<0.5	2.6	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH15M_0.1-0.2		2	<0.3	9.7	2.6	3	<0.05	1.8	9.6	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
BH16M_0.1-0.2		3	<0.3	9.6	5.8	9	<0.05	1.3	28	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	ND
Residual Soils																									
BH01_0.9-1.0	28/10/2022	<1	<0.3	1.9	1	6	<0.05	<0.5	2.7	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH02_0.5-0.6		7	<0.3	7.7	30	470	0.79	6.8	270	<0.3	<0.1	1.5	1.3	<0.1	0.3	2	20	51	70	<90	<120	NA	NA	NA	NA
BH02_1.3-1.4		2	<0.3	12	1	11	<0.05	2.8	5.8	<0.3	<0.1	1.8	0.9	<0.1	<0.1	2.4	9.7	130	86	<90	<120	NA	NA	NA	NA
BH02_3.0-3.1		1	<0.3	7.6	1.2	7	0.06	1.3	2.2	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH02_4.5-4.6		3	<0.3	19	6.7	15	<0.05	3.3	9	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH03_0.5-0.6		<1	<0.3	1.7	0.9	4	<0.05	0.5	<2	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH05_0.5-0.6		3	<0.3	5.1	9.9	180	0.16	2.5	180	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH08_0.5-0.6		4	<0.3	5.3	11	260	0.25	1.6	130	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH13_1.4-1.5		2	<0.3	16	0.8	5	<0.05	<0.5	12	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH15M_0.5-0.6		4	<0.3	20	2.8	10	<0.05	0.6	11	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH16M_1.0-1.1		2	<0.3	15	1.2	10	0.06	4.9	4.4	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
Statistical Analysis																									
Maximum Concentration		11	0.3	20	30	470	0.79	6.8	270	0.3	0.1	1.8	1.3	0.1	0.3	2.4	20	130	86	90	120	1	1.7	1	NC
Minimum Concentration		1	0.3	1.7	0.8	2	0.05	0.5	2	0.3	0.1	0.8	0.1	0.1	0.1	0.1	0.3	25	25	90	120	1	1.7	1	NC
Mean		3.0	0.3	8.8	4.9	76.0	0.1	1.9	47.4	0.3	0.1	0.86	0.17	0.1	0.11	0.26	1.38	29.85	28.93	90	120	1	1.7	1	NC
HIL D - *Commercial/Industrial*		3,000	900	3,600 Cr(VI)	240,000	1,500	730	6,000	400,000	40	NR	4,000										NR	NR	7	
HSL D - *Commercial / Industrial*		Source depths (0 m to <1 m BGL)											NL	4	NL	NL	NL	310	NL						
Soil texture classification – Clay [1]		Source depths (1 m to <2 m BGL)											NL	6	NL	NL	NL	480	NL						
		Source depths (2 m to < 4 m BGL)											NL	9	NL	NL	NL	NL	NL						
		Source depths (4 m + BGL)											NL	20	NL	NL	NL	NL	NL						
EIL/ESL - Commercial / Industrial [2]		160	NR	670 Cr(VI)	170	1,800	NR	75	380	NR	172 [3]	NR	370	95	135	185	95	215	170	2,500	6,600	640	NR	NR	
Management Limits – Commercial and industrial, Fine grained soil texture [1]																		700	1,000	5,000	10,000				
Asbestos contamination HSL Bonded ACM (%w/w)																									<0.05
Asbestos contamination HSL Non Bonded / Friable Asbestos (%w/w)																									<0.001

Notes: All results are recorded in mg/kg, unless otherwise specified.

Highlighted value indicates concentration exceeds HIL / HSL

Highlighted value indicates concentration exceeds EIL / ESL

Highlighted value indicates concentration exceeds HIL / HSL and EIL / ESL

HIL D	NEPC 2013 Health Investigation Level for commercial/indsutrial sites.
HSL D	NEPC 2013 Health Screening Level for commercial/industrial sites.
EIL	Ecological Investigation Level
ESL	Ecological Screening Level
#	Thresholds are for Chromium VI.
NR	No current published criterion.
NL	'Not Limiting'
ND	'Not detected' i.e. all concentrations of the compounds within the analyte group were found to be below the laboratory limits of detection.
NA	'Not Analysed' i.e. the sample was not analysed.
1	As strata is predominantly clay, fine grained soil values were applied.
2	EILs/ESLs were derived using assumed conservative added Contamination Limits (pH = 5.5 / CEC = 5.5) plus Added Background Concentrations (old suburn / high traffic).
3	Value derived from CRC Care Report No. 39, Table 11.
F1	TRH C_6-C_{10} less the sum concentration of BTEX.
F2	TRH $C_{>10}$-C_{16} less the concentration of Naphthalene.
F3	TRH $C_{>16}$-C_{34}
F4	TRH $C_{>34}$-C_{40}

eiaustralia

Table B.3 – Summary of Groundwater Analytical Results for 35-37 Quondola Street, Pambula NSW

E25846.E02 - Pambula

Sample Identification		Date	Metals								PAHs			BTEX						TRHs				Phenols	VOCs
			As	Cd	Cr	Cu	Pb	Hg[4]	Ni	Zn	Total PAHs	Benzo(a)pyrene	Naphthalene	Benzene	Toluene	Ethylbenzene	m/p-xylene	o-xylene	Total Xylenes	F1	F2	F3	F4	Total	Total
Detailed Site Investigation (2021)																									
GME1																									
BH02M-1		29/09/2022	<1	<0.1	<1	3	<1	<0.1	5	56	<1	<0.1	0.1	12	1.2	5.9	29	2.4	32	<50	<60	<500	<500	<0.05	56
BH15M-1			<1	<0.1	<1	1	<1	<0.1	2	27	<1	<0.1	<0.1	<0.5	<0.5	<0.5	<1	<0.5	<1.5	<50	<60	<500	<500	<0.05	<10
BH16M-1			<1	<0.1	<1	2	<1	<0.1	5	80	<1	<0.1	<0.1	<0.5	<0.5	<0.5	<1	<0.5	<1.5	<50	<60	<500	<500	<0.05	<10
GILs																									
Maximum			1	0.1	1	3	1	0.1	5	80	1	0.1	0.1	12	1.2	5.9	29	2.4	32	50	60	500	500	0.5	56
Mean			1	0.1	1	2	1	0.1	5	80	1	0.1	0.1	12	1.2	5.9	29	2.4	2.4	50	60	500	500	0.5	56
ANZG (2018)	***Fresh Water***		94 (AsIII)[2] 42 (AsV)[2]	0.4	3.3 (Cr III) 6.0 (Cr VI)[4]	1.4[2]	5.6	1.9[2]	13	15[2]		0.4	37	1300	230	110	275[1]	470						600	
NEPC (2013)	**HSL D - Clay[3]**		Source Depths 2m to <4m										NL	5,000	NL	NL	NL	NL		6,000	NL				
			Source Depths 4m to <8m										NL	5,000	NL	NL	NL	NL		6,000	NL				
			Source Depths 8m+										NL	5,000	NL	NL	NL	NL		7,000	NL				

Notes:

Highlighted indicates ecological criteria exceeded

Highlighted indicates criteria exceeded in latest round of testing

All values are µg/L unless stated otherwise

ANZG	Australian and New Zealand Guidleines for Fresh and Marine Water Quality
HSL	Health Screening Level
NL	Not Limiting
NA	Not Analysed
ND	Not Detected
PQL	Practical Quantitation Limit (laboratory detection limit)
F1	To obtain F1 subtract the sum of BTEX concentrations from the C6-C10 fraction.
F2	To obtain F2 subtract naphthalene from the >C10-C16 fraction.
F3	(>C16-C34)
F4	(>C34-C40)
1	In absence of marine water criteria, fresh water criteria was used.
2	The default guideline value may not protect key test species from chronic toxicity.
3	Clay values were applied, being the predominant sub-strata.
4	Values reported in mg/L

Appendix C – Proposed Development Plans

PLAN OF PROPOSED SUPERMARKET DEVELOPMENT AT LOTS 19 & 20 DP758825 35-37 QUONDOLA ST & LOT 15 DP1204078 SEC 33 36 MERIMBOLA ST PAMBULA

GORDON BUILDING DESIGN P/L
PO BOX 320 BEGA 2550
200A CARP ST, BEGA
+61 2 6492 1723
office@gordondrafting.com.au
BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

DA APPROVALS 20211117

GENERAL NOTES

1. Do not obtain dimensions by scaling
2. All owners, builders, sub-contractors and suppliers must verify all dimensions and levels before commencing any work or making any shop drawings.
3. These drawings are to be read with all other contract documents and requirements of the relevant Controlling Authority.
4. The title boundaries as shown have been determined by plan dimensions only and not by field survey.
5. Services shown have been located where possible by field measurement. If not able to be located, services have been plotted from relevant authority records.
6. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of underground services and detailed locations of all services.
7. Proposed lot boundaries dimensions and areas are subject to survey.
8. Building works to be set out by a registered surveyor.

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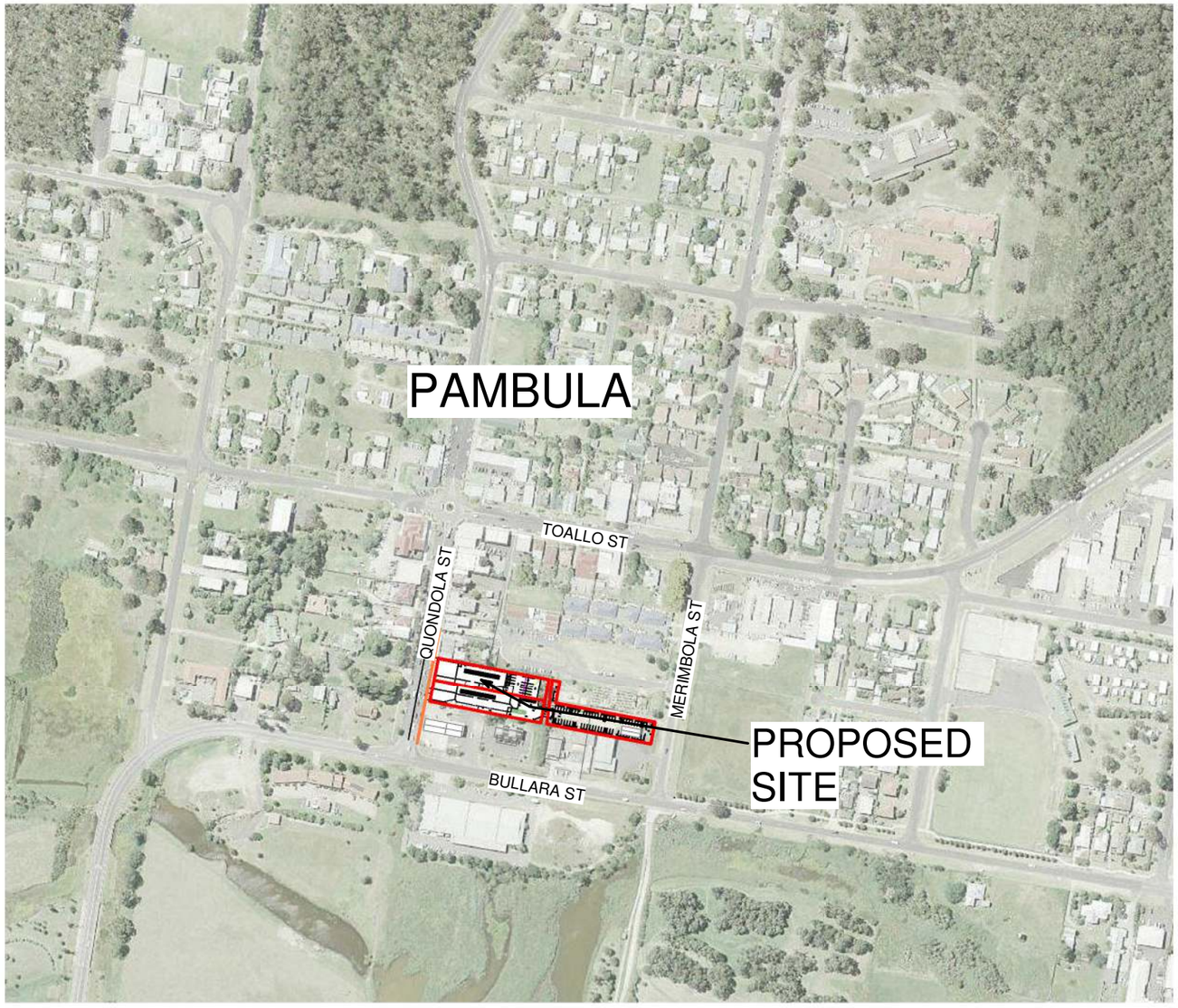
COVER SHEET	
07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-001

DRAWINGS	
A-001	COVER SHEET
A-002	LOCATION PLAN
A-003	SITE PLAN
A-101	MAIN FLOOR LEVEL
A-102	PARKING LEVEL
A-110	ROOF PLAN
A-120	UPPER FLOOR AREAS
A-121	LOWER FLOOR AREAS
A-201	ELEVATIONS 1
A-202	ELEVATIONS 2
A-301	SECTIONS
A-302	SECTIONS
A-601	BUILDING CODE INFO
A-602	PARKING SCHEDULE
A-901	PHOTO RENDERING VIEW FROM SW
A-910	NORTHWEST PERSPECTIVE
A-911	SOUTHWEST PERSPECTIVE
A-912	NORTHEAST PERSPECTIVE
A-913	SOUTHEAST PERSPECTIVE
A-921	RENDERED WEST ELEVATION
A-922	RENDERED EAST ELEVATION
A-923	RENDERED NORTH ELEVATION
A-924	RENDERED SOUTH ELEVATION
A-990	SAFETY NOTES
RA101	SITE EXISTING
RA102	DEMOLITION
V-101	SITE SURVEY



1 : 5000

LOCATION PLAN

GENERAL NOTES

1. Do not obtain dimensions by scaling
2. All owners, builders, sub-contractors and suppliers must verify all dimensions and levels before commencing any work or making any shop drawings.
3. These drawings are to be read with all other contract documents and requirements of the relevant Controlling Authority.
4. The title boundaries as shown have been determined by plan dimensions only and not by field survey.
5. Services shown have been located where possible by field measurement. If not able to be located, services have been plotted from relevant authority records.
6. Prior to any demolition, excavation or construction on the site, the relevant authority should be contacted for possible location of underground services and detailed locations of all services.
7. Proposed lot boundaries dimensions and areas are subject to survey.
8. Building works to be set out by a registered surveyor.

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ZONING - B2 LOCAL CENTRE

True

PLAN OF PROPOSED SUPERMARKET DEVELOPMENT AT LOTS 19 & 20 DP758825 35-37 QUONDOLA ST & LOT 15 DP1204078 SEC 33 36 MERIMBOLA ST PAMBULA

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0m 100m 200m

SCALE 1:5000 @ A3

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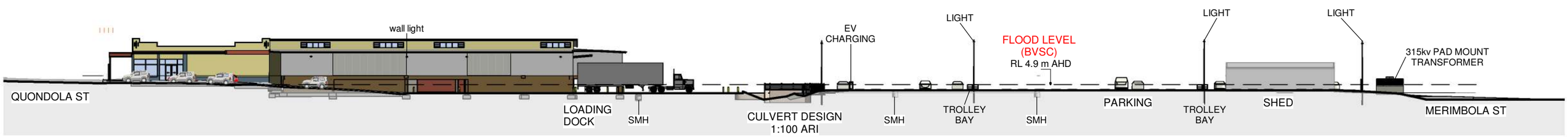
LOCATION PLAN	
07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-002



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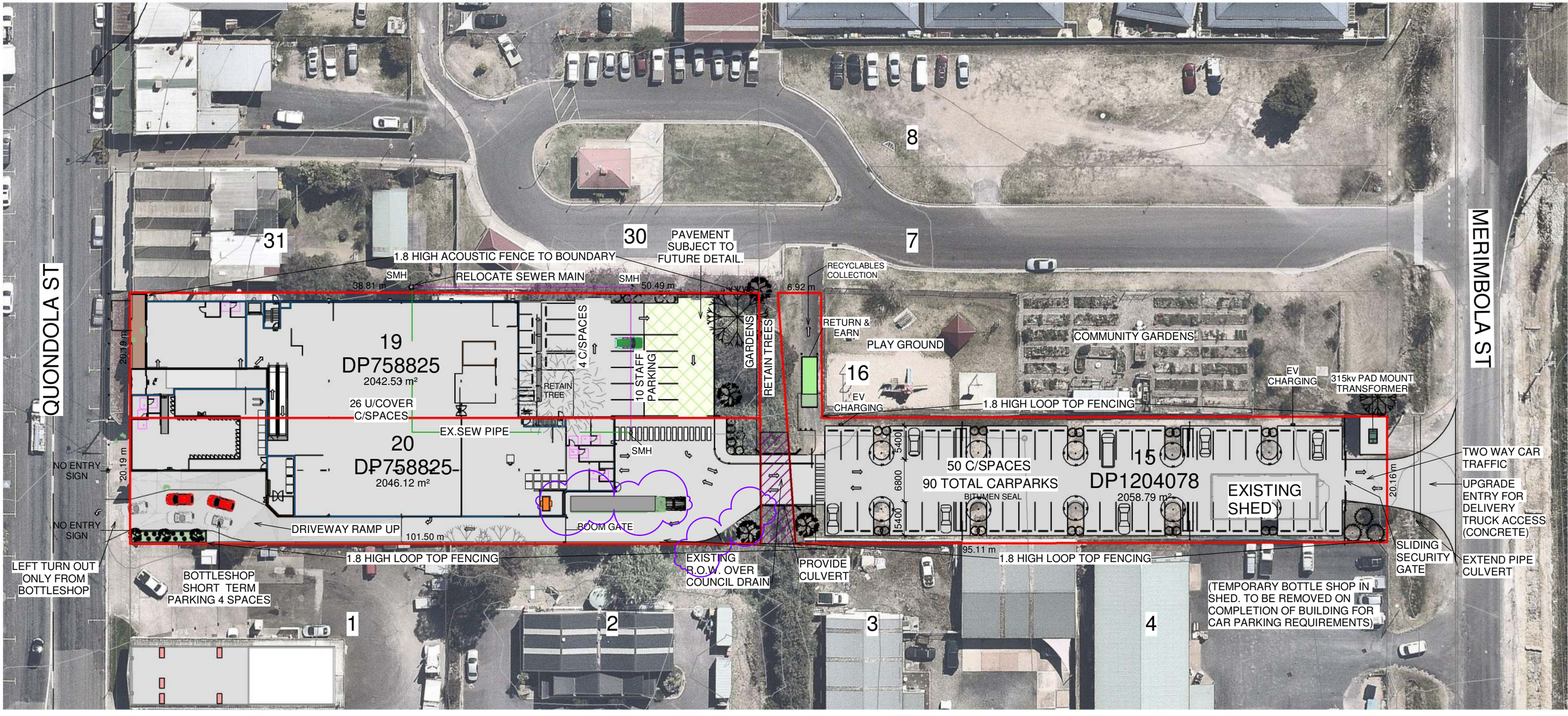

GORDON BUILDING DESIGN P/L

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1 : 600

SITE PLAN

N True

0m 12m 24m

SCALE 1:600 @ A3

DA APPROVALS 20211117

SITE PLAN	
07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-003

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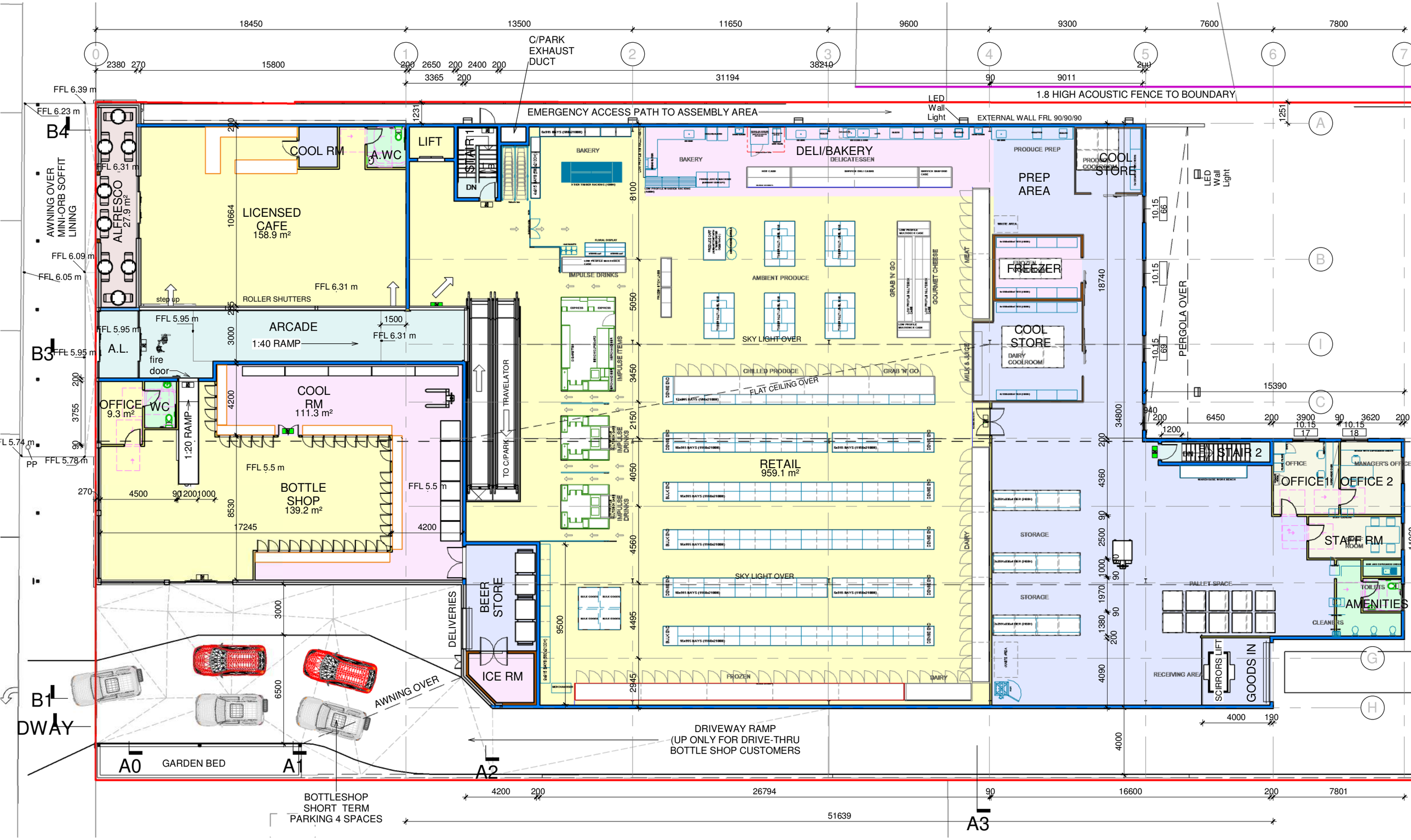

GORDON BUILDING DESIGN P/L

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

1 : 200

FLOOR PLAN

N True

0m 4m 8m

SCALE 1:200 @ A3

DA APPROVALS 20211117

MAIN FLOOR LEVEL

07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-101

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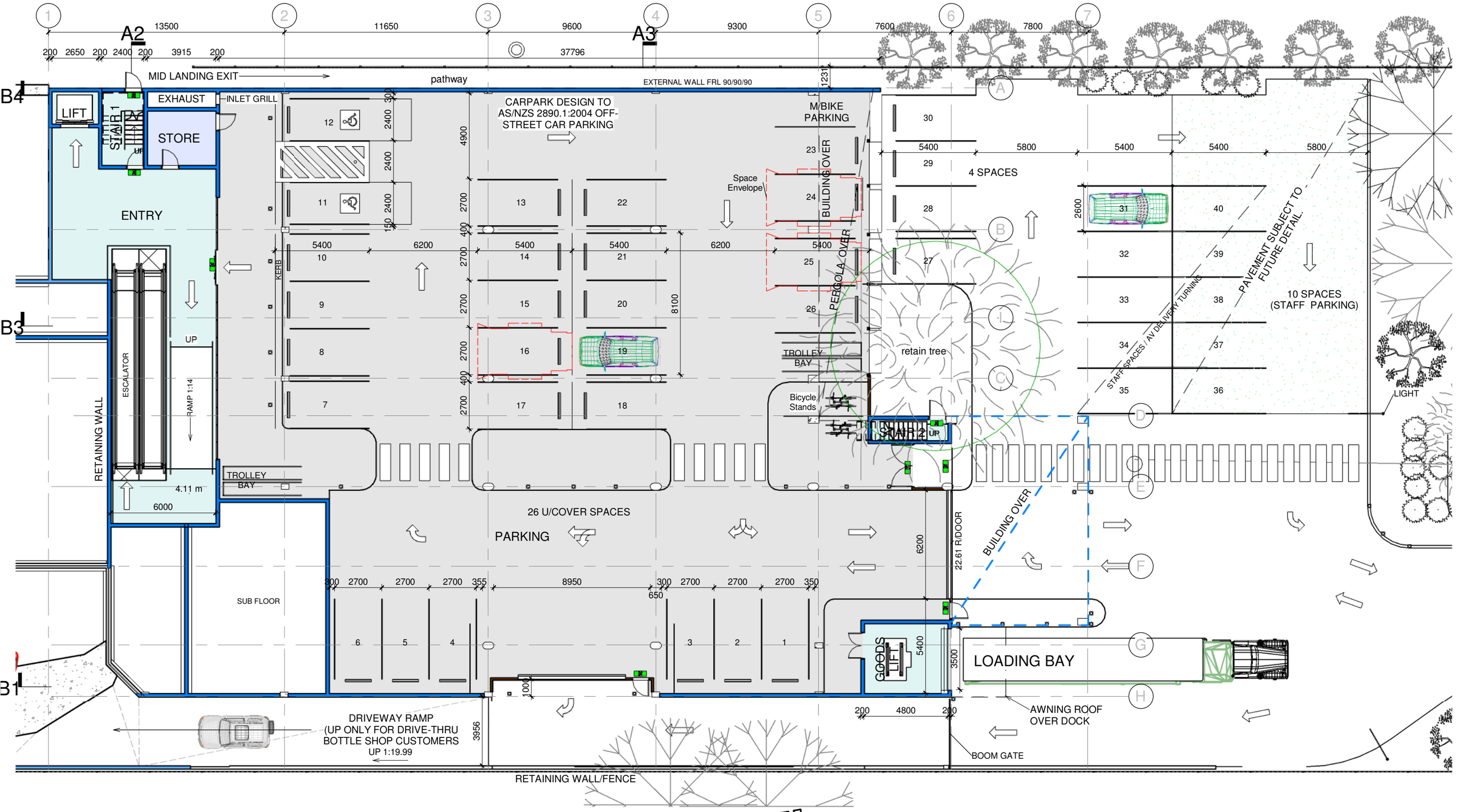

GORDON BUILDING DESIGN P/L

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

1 : 200

CARPARK

True North

0m 4m 8m

SCALE 1:200 @ A3

DA APPROVALS 20211117

PARKING LEVEL

07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-102

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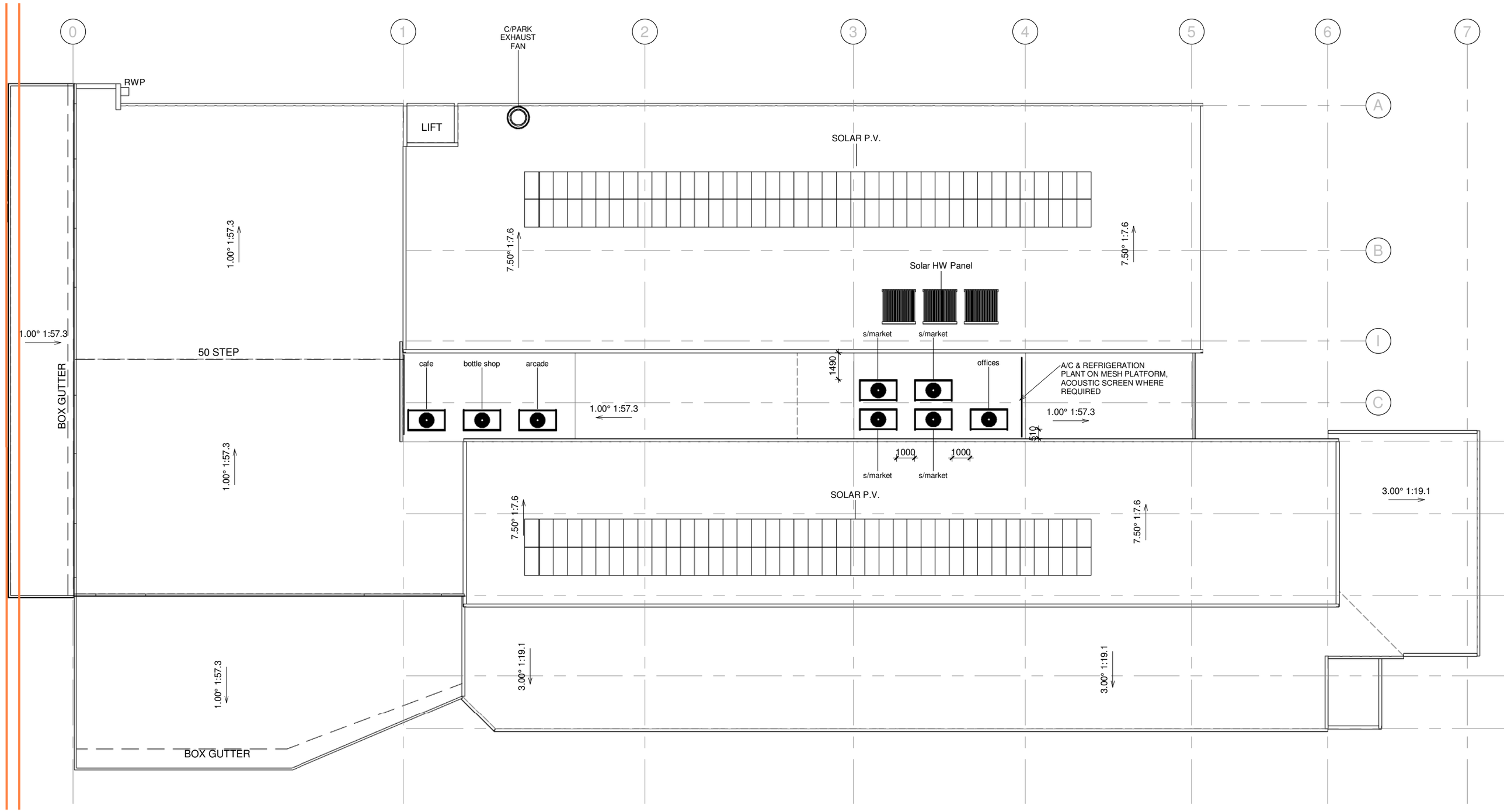

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BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

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1 : 200

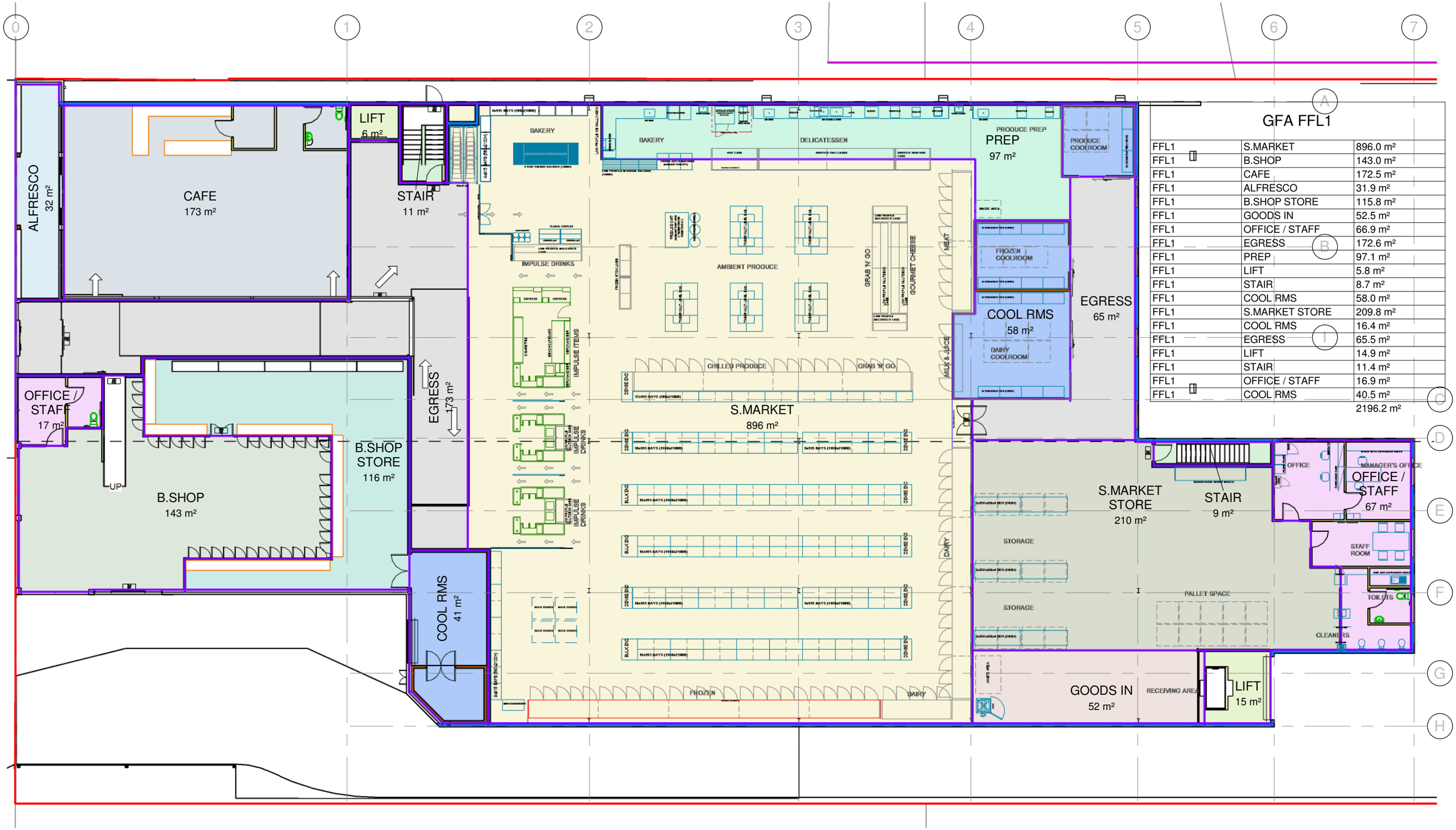
ROOF PLAN

0m 4m 8m

SCALE 1:200 @ A3

DA APPROVALS 20211117

ROOF PLAN	
07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-110



GFA FFL1

FFL1		S.MARKET	896.0 m²
FFL1		B.SHOP	143.0 m²
FFL1		CAFE	172.5 m²
FFL1		ALFRESCO	31.9 m²
FFL1		B.SHOP STORE	115.8 m²
FFL1		GOODS IN	52.5 m²
FFL1		OFFICE / STAFF	66.9 m²
FFL1		EGRESS	172.6 m²
FFL1		PREP	97.1 m²
FFL1		LIFT	5.8 m²
FFL1		STAIR	8.7 m²
FFL1		COOL RMS	58.0 m²
FFL1		S.MARKET STORE	209.8 m²
FFL1		COOL RMS	16.4 m²
FFL1		EGRESS	65.5 m²
FFL1		LIFT	14.9 m²
FFL1		STAIR	11.4 m²
FFL1		OFFICE / STAFF	16.9 m²
FFL1		COOL RMS	40.5 m²
			2196.2 m²

1 : 200

UPPER FLOOR AREAS

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N True

0m 4m 8m
SCALE 1:200 @ A3

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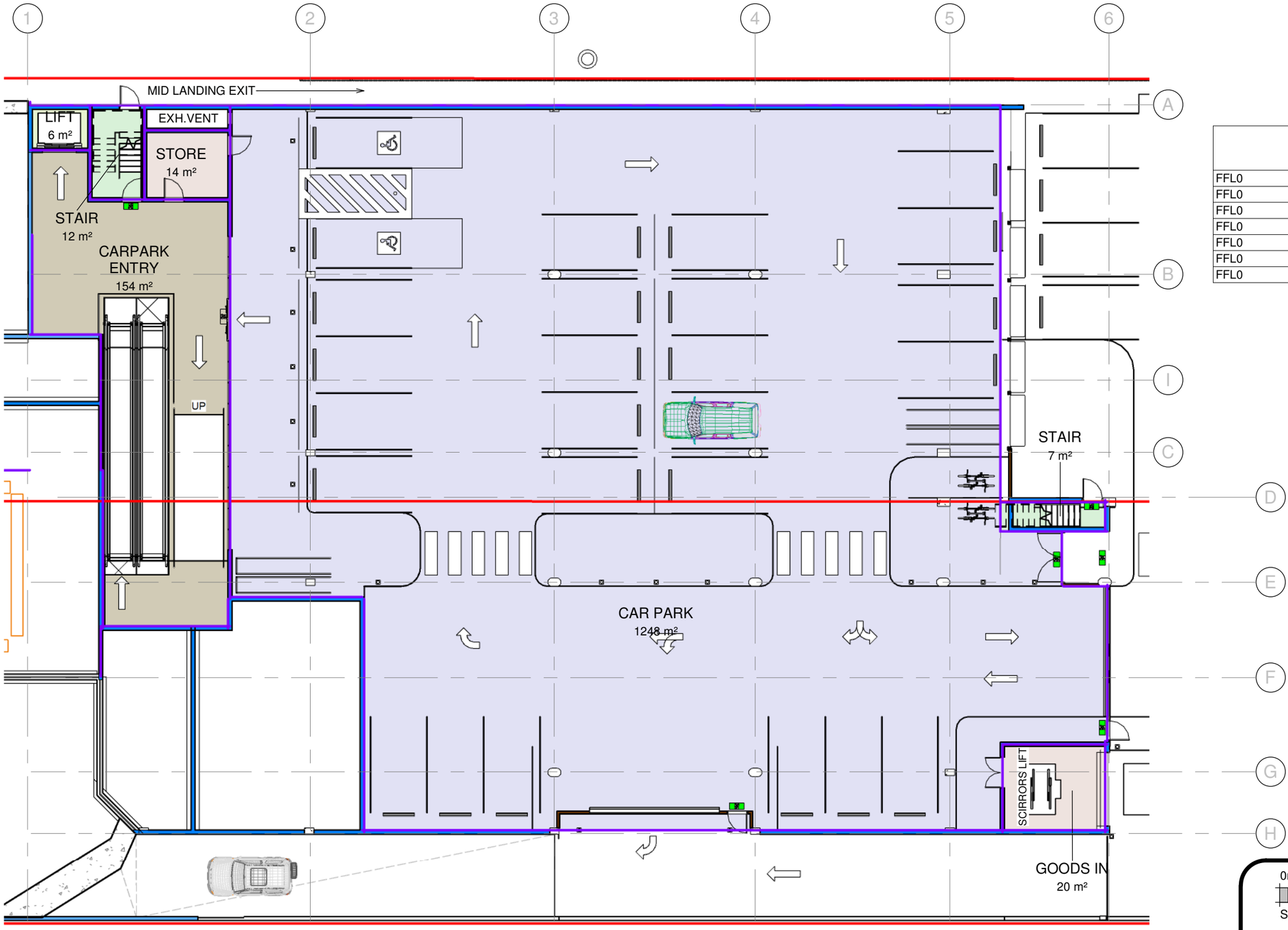
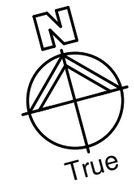
UPPER FLOOR AREAS			
07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-120

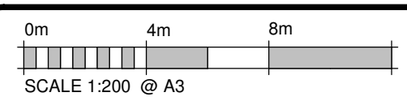


1 : 200

LOWER FLOOR AREAS

GFA FFL0		
FFL0	STORE	13.6 m²
FFL0	CARPARK ENTRY	153.6 m²
FFL0	GOODS IN	20.0 m²
FFL0	STAIR	11.7 m²
FFL0	CAR PARK	1248.2 m²
FFL0	LIFT	6.1 m²
FFL0	STAIR	7.0 m²
		1460.2 m²





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LOWER FLOOR AREAS

07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-121

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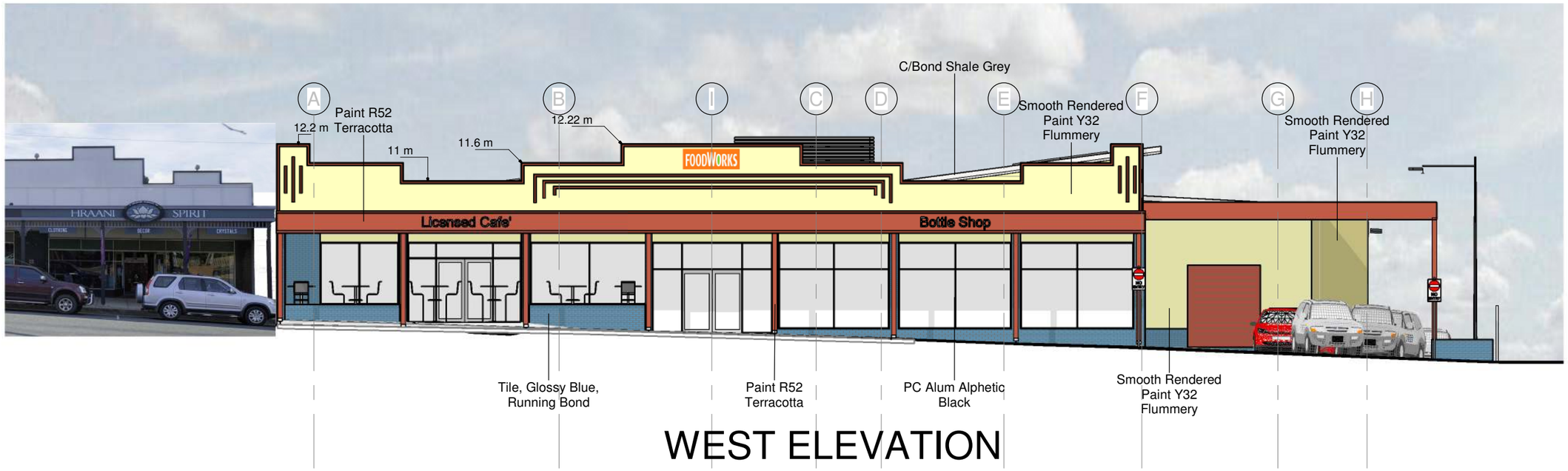
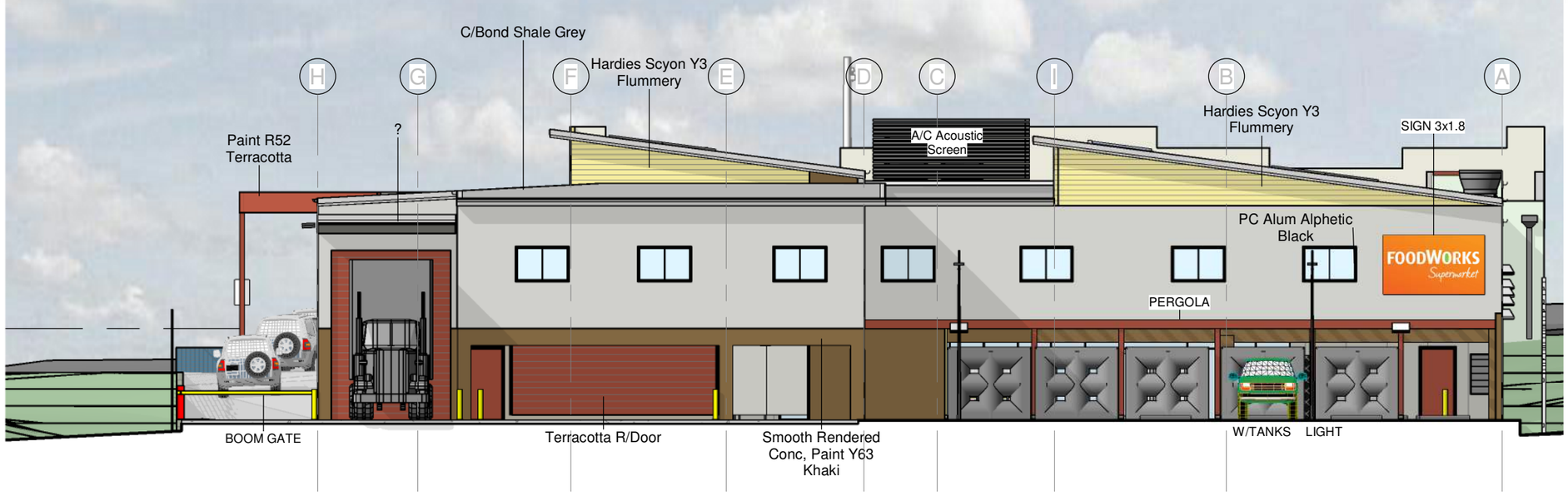


WEST ELEVATION



EAST ELEVATION

0m 3m 6m

SCALE 1:150 @ A3

DA APPROVALS 20211117

ELEVATIONS 1

07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-201

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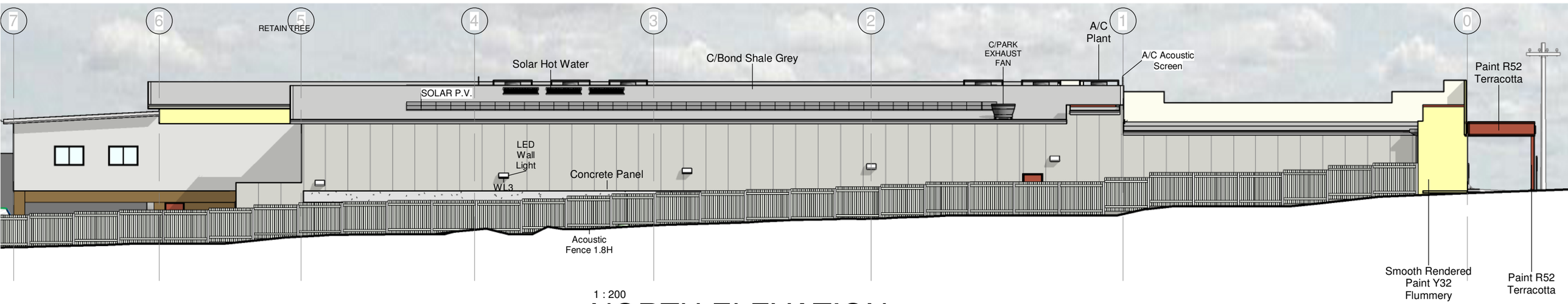
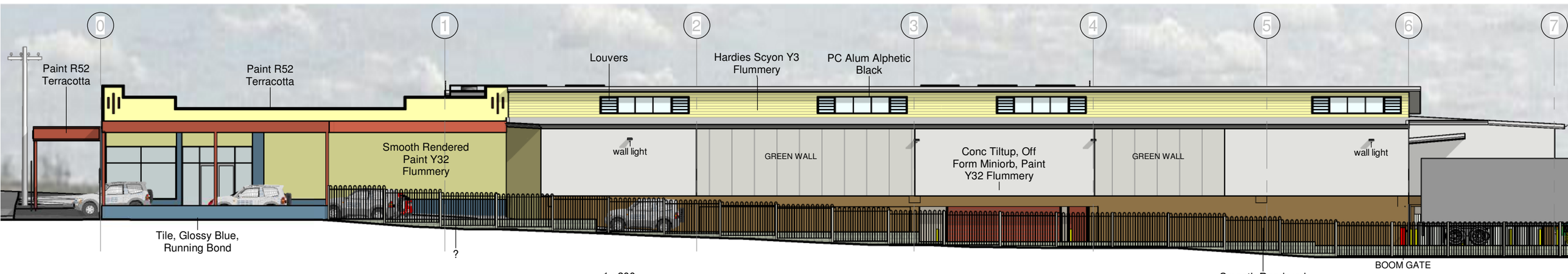


1 : 200

NORTH ELEVATION



1 : 200

SOUTH ELEVATION

GORDON BUILDING DESIGN P/L

bdaa **BUILDING DESIGNERS** ASSOCIATION OF AUSTRALIA

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0m 4m 8m

SCALE 1:200 @ A3

DA APPROVALS 20211117

ELEVATIONS 2	
07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-202

EXTERNAL CLADDING
HARDIES SCYON CLADDING
LINEAR – WEATHERBOARD STYLE
FIBRE CEMENT SHEET
TO MANUFACTURERS SPEC.

POWDER COATED, ALUMINIUM FRAMED WINDOWS & SHOPFRONT
REFER TO SECTION 'J' REPORT FOR SPECIAL REQUIREMENTS
HORIZONTAL SLIDING, LOUVRES & AUTO DOORS
FLOORS
CONCRETE SLABS WHERE SHOWN

HANDRAIL TO COMPLY WITH CURRENT BCA REQUIREMENTS
WHERE OVER 1 M ABOVE FINISHED GROUND LEVEL PROVIDE
POWDER COATED METAL

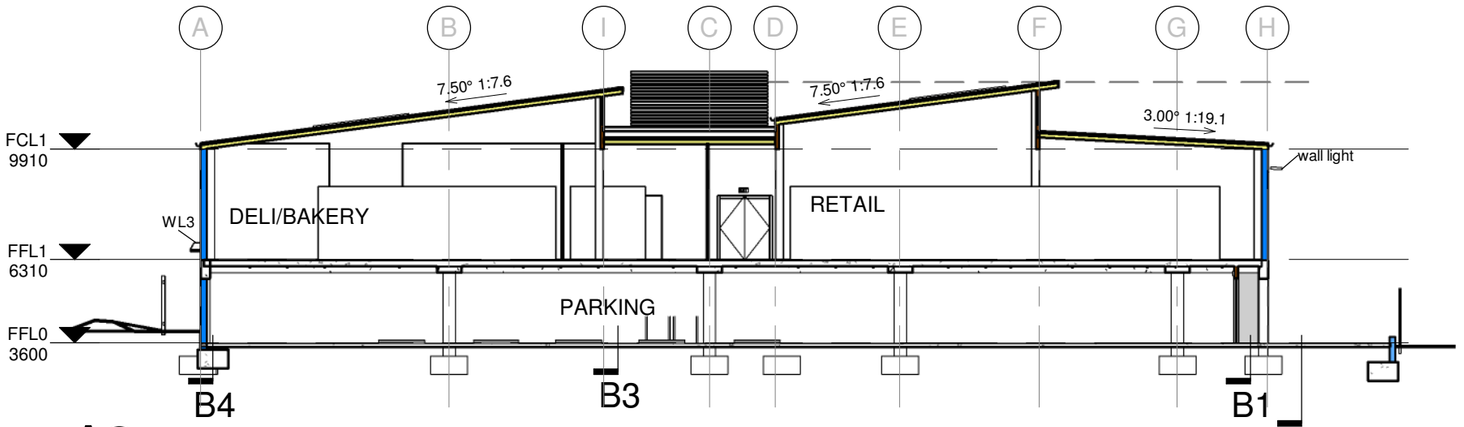
MASONRY WALLS
TILT-UP CONCRETE PANEL (VERT MINI ORB PROFILE)
EXTERNAL TREATMENT TO BE TEXTURE COATED WITH 2 COAT EXTERIOR GRADE PAINTWORK

ALL WORK TO COMPLY WITH MANUFACTURERS SPECIFICATION

PROVIDE SUB-FLOOR ACCESS DOOR

TERMITE TREATMENT TO BE :
USE OF CONCRETE FLOOR SLAB DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS 3660 AND AS 2870 ALL TO STRUCTURAL ENGINEERS DETAIL AND CLEAR 100 EDGE EXPOSURE ALL AROUND AND MECHANICAL SEPARATION FOR SLAB PENETRATIONS AND CONTROL JOINTS CARRIED OUT IN ACCORDANCE WITH AS3660.1 AND THE MANUFACTURER'S SPECIFICATION.
CERTIFICATION REQUIRED ON COMPLETION.

AGRICULTURAL DRAIN TO PERIMETER OF CONCRETE SLAB.



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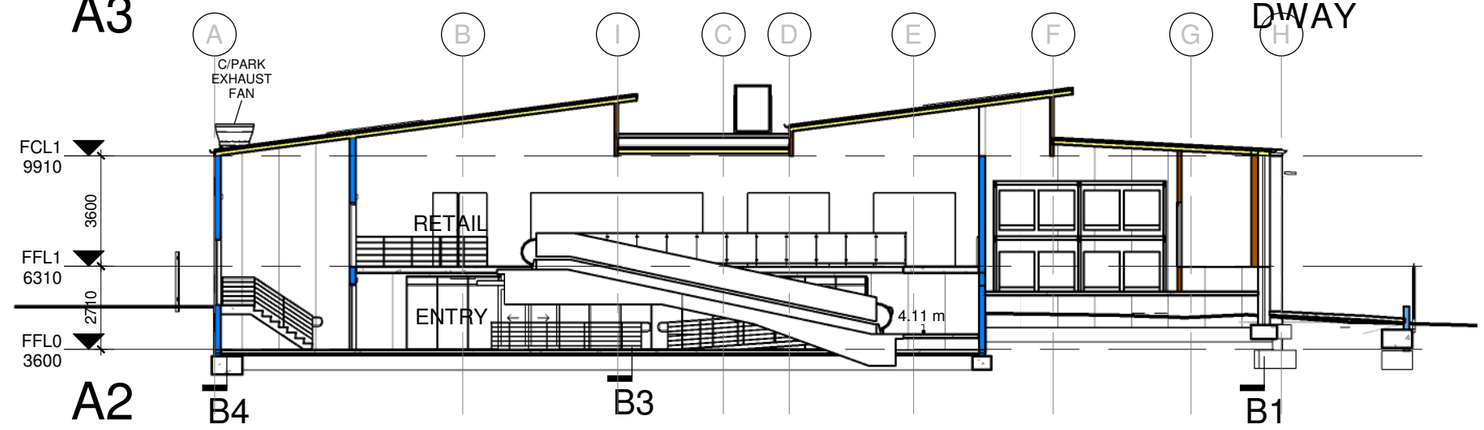

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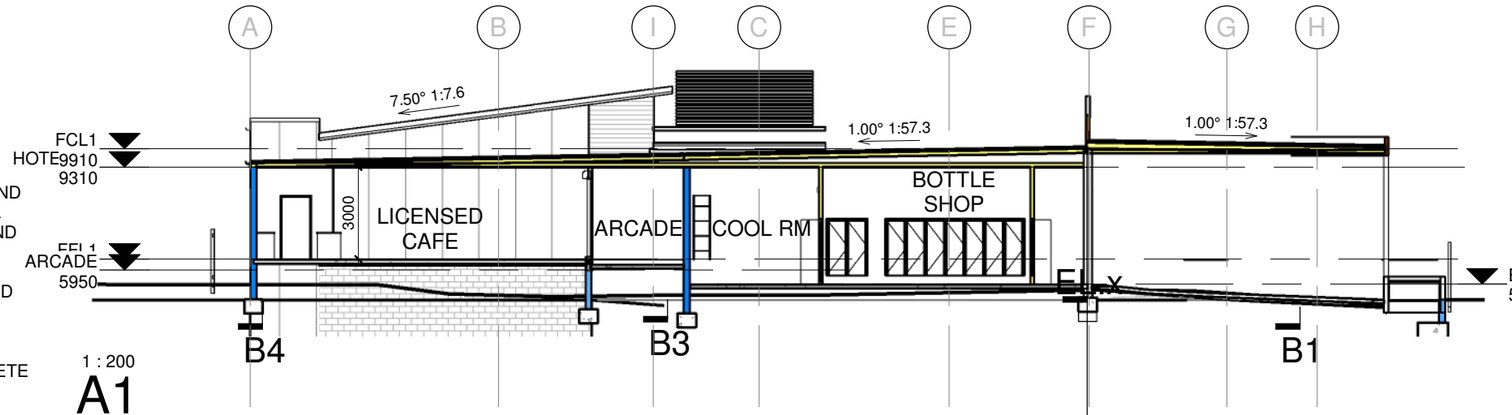

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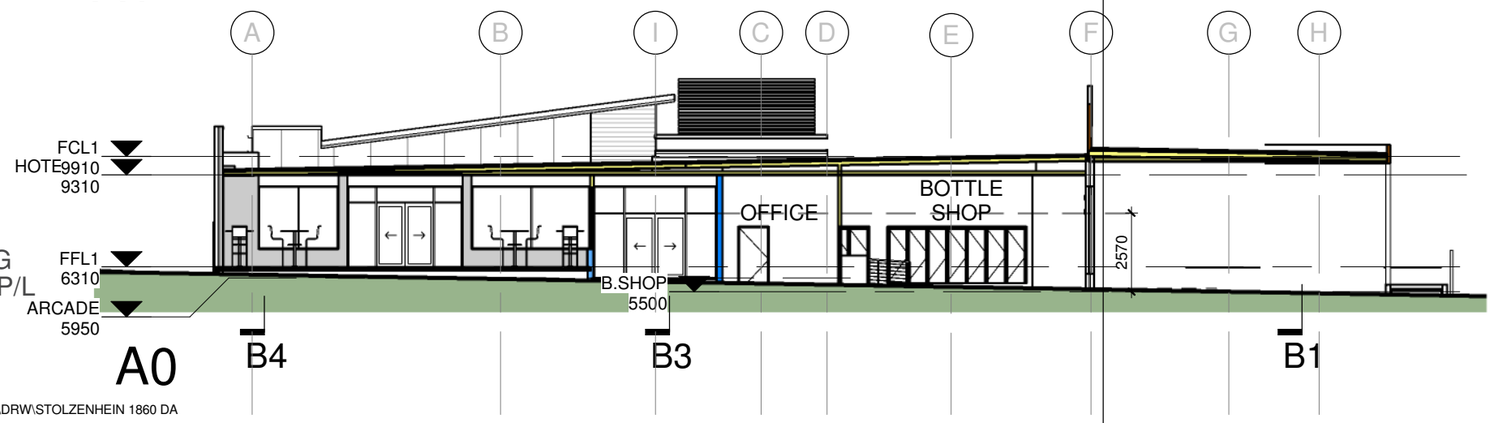
A1



A0

GENERAL NOTES

ALL MATERIALS TO BE DELIVERED STORED AND FIXED IN
ACCORDANCE WITH THE CURRENT MANUFACTURERS
SPECIFICATION AND CERTIFIED WITH THE CURRENT NATIONAL CONSTRUCTION CODE OF AUSTRALIA AND MANUFACTURERS SPECIFICATION

INSTALL A SMOKE DETECTION AND ALARM SYSTEM IN ACCORDANCE WITH CURRENT B.C.A.REQUIRMENTS

NOTE: EXTERNAL WALL DOOR THRESHOLDS SHALL BE SET DOWN TO ALLOW DOOR SILLS TO BE FLUSH WITH FLOOR LEVEL. IN ACCORDANCE WITH CURRENT AS1428

REFER TO ENGINEER'S DETAILS FOR:
REINFORCED CONCRETE SLAB FLOORS, CONCRETE FOOTINGS, RETAINING WALLS,
CONCRETE COLUMNS, STEEL BEAMS & COLUMNS
LINTELS, TIMBER BEAMS, FIXING, FRAMING,
BRACING & HOLDING DOWN

INSULATION
REFER TO SECTION 'J' REPORT BY OTHERS

ALL RMB MATERIAL TO HAVE A MAXIMUM FLAMMABILITY INDEX OF 5
AND A MAXIMUM SMOKE DEVELOPED INDEX OF 5

ROOF CONSTRUCTION COLORBOND METAL
FIXED TO MANUFACTURERS SPECIFICATION
METAL BATTENS @ 900c/c

PRE-FABRICATED STEEL PORTAL FRAMES
TO ENGINEERS DETAIL

PITCH AS SHOWN
T2 HYSPAN TIMBER RAFTERS TO MANUFACTURERS SPECIFICATION

COLORBOND METAL GUTTERS
COLORBOND FASCIA AND DOWNPIPES.
CONNECT TO TANKS OVERFLOW TO COUNCIL S/WATER

INTERNAL LININGS
BATTENED CEILING
PLASTERBOARD INTERNAL LININGS INCLUDING WET AREAS TO MANUFACTURERS SPECIFICATION.

C/BOND MINI-ORB LINING
TO UNDER SIDE OF VERANDA

SCALE 1:200 @ A3

DA APPROVALS 20211117

SECTIONS

07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-301

GORDON BUILDING DESIGN P/L

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

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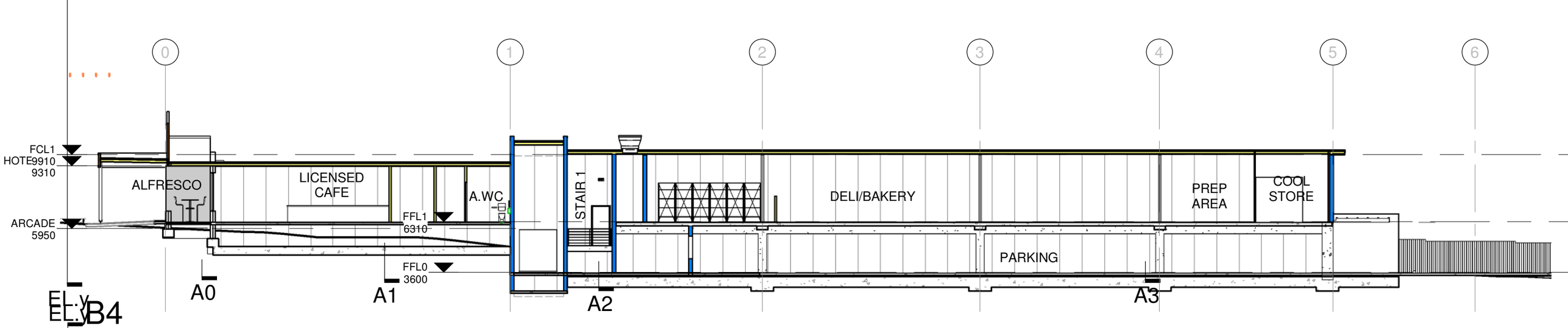

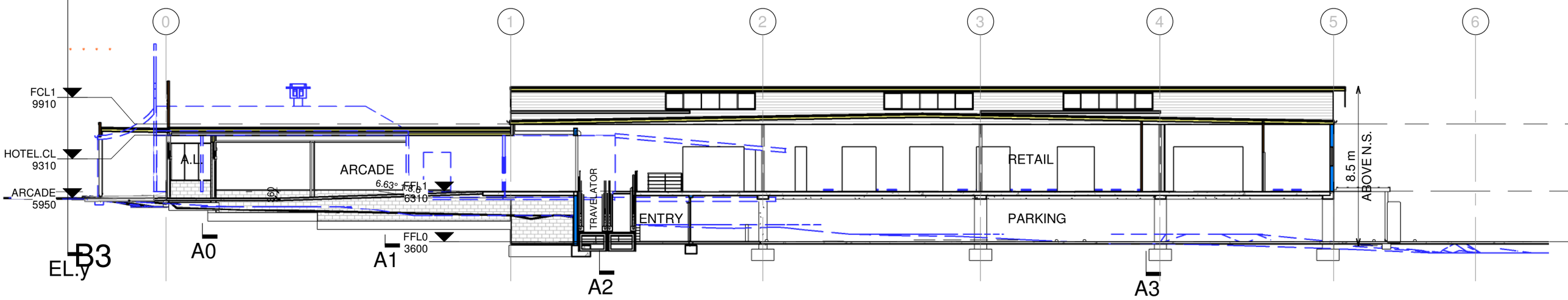

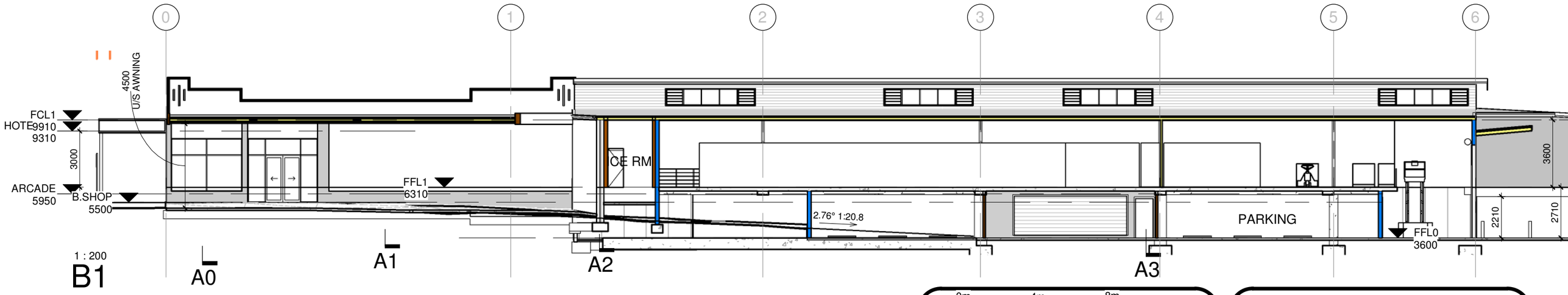

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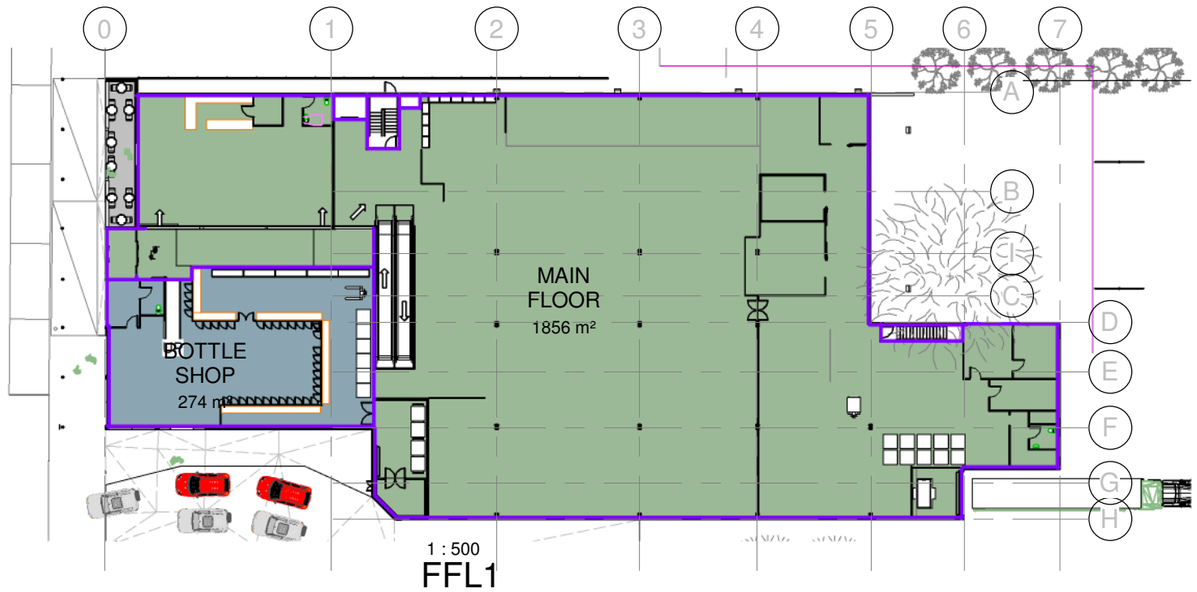
0m 4m 8m

SCALE 1:200 @ A3

DA APPROVALS 20211117

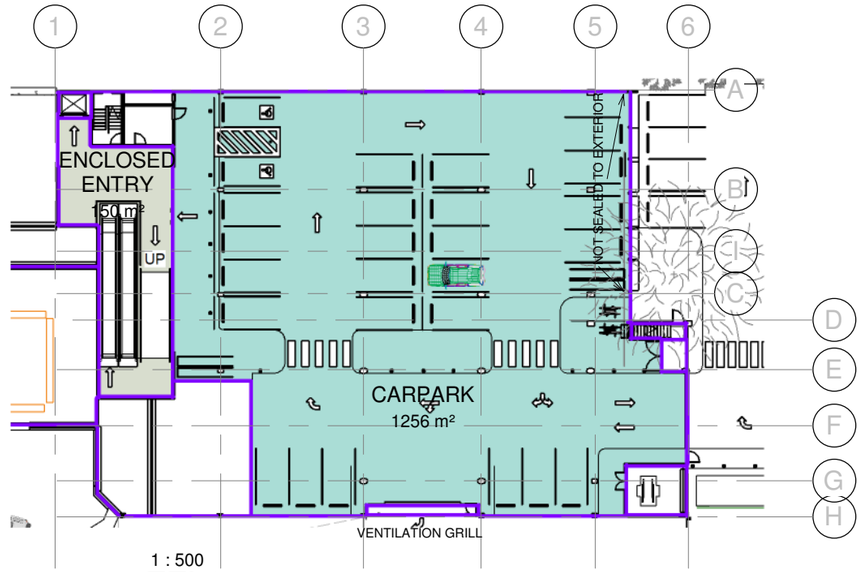
SECTIONS

07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-302



1 : 500

FFL1



1 : 500

FFL0

Area Schedule (FIRE COMPARTMENT)					
1	FFL0	ENCLOSED ENTRY	149.9 m²	6	
1	FFL1	MAIN FLOOR	1855.6 m²	6	
			2005.5 m²		
2	FFL1	BOTTLE SHOP	273.6 m²	6	
			273.6 m²		
3	FFL0	CARPARK	1255.6 m²	7(a)	
			1255.6 m²		
Grand total: 4			3534.7 m²		

Building Properties

Rise In Storeys	2
Building Class	MIXED
Construction Type	C

A6.7 Class 7 buildings
A Class 7 building is a storage-type building that includes one or more of the following sub-classifications:
(1)Class 7a — a *carpark*.

A6.6 Class 6 buildings
A Class 6 building is a shop or other building used for the sale of goods by retail or the supply of services direct to the public, including—
(1)an eating room, café, restaurant, milk or soft-drink bar; or
(2)a dining room, bar area that is not an *assembly building*, shop or kiosk part of a hotel or motel; or
(3)a hairdresser's or barber's shop, public laundry, or undertaker's establishment; or
(4)a market or sale room, showroom, or *service station*.

Table C2.2 Maximum size of fire compartments or atria

Classification	Type A construction	Type B construction	Type C construction
5, 9b or 9c	Max *floor area*—8000 m²	Max *floor area*—5500 m²	Max *floor area*—3000 m²
	Max volume—48000 m³	Max volume—33000 m³	max volume—18000 m³
6, 7, 8 or 9a (except for *patient care areas*)	Max *floor area*—5000 m²	Max *floor area*—3500 m²	Max *floor area*—2000 m²
	Max volume—30000 m³	Max volume—21000 m³	Max volume—12000 m³

N

True

0m 8m 16m

SCALE 1:400 @ A3

DA APPROVALS 20211117

BUILDING CODE INFO

07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-601

GORDON BUILDING DESIGN P/L

bdaa BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

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Parking Requirments - DCP

S.MARKET	896.0 m²	25	36
B.SHOP	143.0 m²	25	6
CAFE	172.5 m²	25	7
ALFRESCO	31.9 m²	25	2
B.SHOP STORE	115.8 m²	40	3
GOODS IN	52.5 m²	40	2
STORE	13.6 m²	40	1
CARPARK ENTRY	153.6 m²	25	7
GOODS IN	20.0 m²	40	1
STAIR	11.7 m²	0	
OFFICE / STAFF	66.9 m²	25	3
CAR PARK	1248.2 m²	0	
LIFT	6.1 m²	0	
EGRESS	172.6 m²	40	5
PREP	97.1 m²	40	3
LIFT	5.8 m²	0	
STAIR	8.7 m²	0	
COOL RMS	58.0 m²	40	2
S.MARKET STORE	209.8 m²	40	6
STAIR	7.0 m²	0	
COOL RMS	16.4 m²	40	1
EGRESS	65.5 m²	40	2
LIFT	14.9 m²	0	
STAIR	11.4 m²	0	
OFFICE / STAFF	16.9 m²	25	1
COOL RMS	40.5 m²	40	2
	3656.4 m²		90

Parking Provided

CULVERT
50
FFL0
40

Grand total: 90

Existing Hotel/Motel Onsite Parking Schedule

	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
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	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		
	Car Space 2890 - 90	FFL1	DCP10		

Grand total: 29

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PARKING SCHEDULE

07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-602

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PHOTO RENDERING VIEW FROM SW

07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-901

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NORTHWEST PERSPECTIVE

07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-910

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SOUTHWEST PERSPECTIVE

07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-911

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NORTHEAST PERSPECTIVE

07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-912

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DA APPROVALS 20211117

SOUTHEAST PERSPECTIVE

07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-913

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DA APPROVALS 20211117

RENDERED WEST ELEVATION

07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-921

GORDON BUILDING DESIGN P/L

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DA APPROVALS 20211117

RENDERED EAST ELEVATION

07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-922

GORDON BUILDING DESIGN P/L

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

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DA APPROVALS 20211117

RENDERED NORTH ELEVATION

07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-923

GORDON BUILDING DESIGN P/L

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

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DA APPROVALS 20211117

RENDERED SOUTH ELEVATION

07/20		DWG NO.	1860
Design & Drawn by:	S.L.G	SHEET	A-924

SAFETY NOTES.

THESE NOTES MUST BE READ AND UNDERSTOOD BY ALL INVOLVED IN THE PROJECT. THIS INCLUDES (but is not excluded to): OWNER, BUILDER, SUB-CONTRACTORS, CONSULTANTS, RENOVATORS, OPERATORS, MAINTAINERS, DEMOLISHERS.

1. FALLS, SLIPS, TRIPS

a) WORKING AT HEIGHTS DURING CONSTRUCTION

Wherever possible, components for this building should be prefabricated off-site or at ground level to minimise the risk of workers falling more than two metres. However, construction of this building will require workers to be working at heights where a fall in excess of two metres is possible and injury is likely to result from such a fall. The builder should provide a suitable barrier wherever a person is required to work in a situation where falling more than two metres is a possibility.

DURING OPERATION OR MAINTENANCE

For houses or other low-rise buildings where scaffolding is appropriate: Cleaning and maintenance of windows, walls, roof or other components of this building will require persons to be situated where a fall from a height in excess of two metres is possible. Where this type of activity is required, scaffolding, ladders or trestles should be used in accordance with relevant codes of practice, regulations or legislation. For buildings where scaffold, ladders, trestles are not appropriate: Cleaning and maintenance of windows, walls, roof or other components of this building will require persons to be situated where a fall from a height in excess of two metres is possible. Where this type of activity is required, scaffolding, fall barriers or Personal Protective Equipment (PPE) should be used in accordance with relevant codes of practice, regulations or legislation.

ANCHORAGE POINTS

Anchorage points for portable scaffold or fall arrest devices may have been included in the design for use by maintenance workers. Any persons engaged to work on the building after completion of construction work should be informed about the anchorage points.

b) SLIPPERY OR UNEVEN SURFACES FLOOR FINISHES

Specified If finishes have been specified by designer, these have been selected to minimise the risk of floors and paved areas becoming slippery when wet or when walked on with wet shoes/feet. Any changes to the specified finish should be made in consultation with the designer or, if this is not practical, surfaces with an equivalent or better slip resistance should be chosen.

FLOOR FINISHES

By Owner If designer has not been involved in the selection of surface finishes, the owner is responsible for the selection of surface finishes in the pedestrian trafficable areas of this building. Surfaces should be selected in accordance with AS HB 197:1999 and AS/NZ 4586:2004.

STEPS, LOOSE OBJECTS AND UNEVEN SURFACES

Due to design restrictions for this building, steps and/or ramps are included in the building which may be a hazard to workers carrying objects or otherwise occupied. Steps should be clearly marked with both visual and tactile warning during construction, maintenance, demolition and at all times when the building operates as a workplace. Building owners and occupiers should monitor the pedestrian access ways and in particular access to areas where maintenance is routinely carried out to ensure that surfaces have not moved or cracked so that they become uneven and present a trip hazard. Spills, loose material, stray objects or any other matter that may cause a slip or trip hazard should be cleaned or removed from access ways. Contractors should be required to maintain a tidy work site during construction, maintenance or demolition to reduce the risk of trips and falls in the workplace. Materials for construction or maintenance should be stored in designated areas away from access ways and work areas.

2. FALLING OBJECTS

LOOSE MATERIALS OR SMALL OBJECTS

Construction, maintenance or demolition work on or around this building is likely to involve persons working above ground level or above floor levels. Where this occurs one or more of the following measures should be taken to avoid objects falling from the area where the work is being carried out onto persons below.

1. Prevent or restrict access to areas below where the work is being carried out.
2. Provide toeboards to scaffolding or work platforms.
3. Provide protective structure below the work area.
4. Ensure that all persons below the work area have Personal Protective Equipment (PPE).

BUILDING COMPONENTS

During construction, renovation or demolition of this building, parts of the structure including fabricated steelwork, heavy panels and many other components will remain standing prior to or after supporting parts are in place. Contractors should ensure that temporary bracing or other required support is in place at all times when collapse which may injure persons in the area is a possibility. Mechanical lifting of materials and components during construction, maintenance or demolition presents a risk of falling objects. Contractors should ensure that appropriate lifting devices are used, that loads are properly secured and that access to areas below the load is prevented or restricted.

3. TRAFFIC MANAGEMENT

For building on a major road, narrow road or steeply sloping road: Parking of vehicles or loading/unloading of vehicles on this roadway may cause a traffic hazard. During construction, maintenance or demolition of this building designated parking for workers and loading areas should be provided. Trained traffic management personnel should be responsible for the supervision of these areas. For building where on-site loading/unloading is restricted: Construction of this building will require loading and unloading of materials on the roadway. Deliveries should be well planned to avoid congestion of loading areas and trained traffic management personnel should be used to supervise loading/unloading areas. For all buildings: Busy construction and demolition sites present a risk of collision where deliveries and other traffic are moving within the site. A traffic management plan supervised by trained traffic management personnel should be adopted for the work site.

4. SERVICES GENERAL

Rupture of services during excavation or other activity creates a variety of risks including release of hazardous material. Existing services are located on or around this site. Where known, these are identified on the plans but the exact location and extent of services may vary from that indicated. Services should be located using an appropriate service (such as Dial Before You Dig), appropriate excavation practice should be used and, where necessary, specialist contractors should be used. Locations with underground power: Underground power lines MAY be located in or around this site. All underground power lines must be disconnected or carefully located and adequate warning signs used prior to any construction, maintenance or demolition commencing. Locations with overhead power lines: Overhead power lines MAY be near or on this site. These pose a risk of electrocution if struck or approached by lifting devices or other plant and persons working above ground level. Where there is a danger of this occurring, power lines should be, where practical, disconnected or relocated. Where this is not practical adequate warning in the form of bright coloured tape or signage should be used or a protective barrier provided.

5. MANUAL TASKS

Components within this design with a mass in excess of 25kg should be lifted by two or more workers or by mechanical lifting device. Where this is not practical, suppliers or fabricators should be required to limit the component mass. All material packaging, building and maintenance components should clearly show the total mass of packages and where practical all items should be stored on site in a way which minimises bending before lifting. Advice should be provided on safe lifting methods in all areas where lifting may occur. Construction, maintenance and demolition of this building will require the use of portable tools and equipment. These should be fully maintained in accordance with manufacturer's specifications and not used where faulty or (in the case of electrical equipment) not carrying a current electrical safety tag. All safety guards or devices should be regularly checked and Personal Protective Equipment should be used in accordance with manufacturer's specification.

6. HAZARDOUS SUBSTANCES

ASBESTOS

For alterations to a building constructed prior to 1990: If this existing building was constructed prior to: 1990 - it therefore may contain or prior to: 1986 - it therefore is likely to contain asbestos either in cladding material or in fire retardant insulation material. In either case, the builder should check and, if necessary, take asbestos appropriate action before demolishing, cutting, sanding, drilling or otherwise disturbing the existing structure.

POWDERED MATERIALS

Many materials used in the construction of this building can cause harm if inhaled in powdered form. Persons working on or in the building during construction, operational maintenance or demolition should ensure good ventilation and wear Personal Protective Equipment including protection against inhalation while using powdered material or when sanding, drilling, cutting or otherwise disturbing or creating powdered material.

TREATED TIMBER

The design of this building may include provision for the inclusion of treated timber within the structure. Dust or fumes from this material can be harmful. Persons working on or in the building during construction, operational maintenance or demolition should ensure good ventilation and wear Personal Protective Equipment including protection against inhalation of harmful material when sanding, drilling, cutting or using treated timber in any way that may cause harmful material to be released. Do not burn treated timber.

VOLATILE ORGANIC COMPOUNDS

Many types of glue, solvents, spray packs, paints, varnishes and some cleaning materials and disinfectants have dangerous emissions. Areas where these are used should be kept well ventilated while the material is being used and for a period after installation. Personal Protective Equipment may also be required. The manufacturer's recommendations for use must be carefully considered at all times.

SYNTHETIC MINERAL FIBRE

Fibreglass, rockwool, ceramic and other material used for thermal or sound insulation may contain synthetic mineral fibre which may be harmful if inhaled or if it comes in contact with the skin, eyes or other sensitive parts or the body. Personal Protective Equipment including protection against inhalation of harmful material should be used when installing, removing or working near bulk insulation material.

TIMBER FLOORS

This building may contain timber floors which have an applied finish. Areas where finishes are applied should be kept well ventilated during sanding and application and for a period after installation. Personal Protective Equipment may also be required. The manufacturer's recommendations for use must be carefully considered at all times.

7. CONFINED SPACES

EXCAVATION

Construction of this building and some maintenance on the building will require excavation and installation of items within excavations. Where practical, installation should be carried out using methods which do not require workers to enter the excavation. Where this is not practical, adequate support for the excavated area should be provided to prevent collapse. Warning signs and barriers to prevent accidental or unauthorised access to all excavations should be provided.

ENCLOSED SPACES

For buildings with enclosed spaces where maintenance or other access may be required: Enclosed spaces within this building may present a risk to persons entering for construction, maintenance or any other purpose. The design documentation calls for warning signs and barriers to unauthorised access. These should be maintained throughout the life of the building. Where workers are required to enter enclosed spaces, air testing equipment and Personal Protective Equipment should be provided.

SMALL SPACES

For buildings with small spaces where maintenance or other access may be required: Some small spaces within this building will require access by construction or maintenance workers. The design documentation calls for warning signs and barriers to unauthorised access. These should be maintained throughout the life of the building. Where workers are required to enter small spaces they should be scheduled so that access is for short periods. Manual lifting and other manual activity should be restricted in small spaces.

8. PUBLIC ACCESS

Public access to construction and demolition sites and to areas under maintenance causes risk to workers and public. Warning signs and secure barriers to unauthorised access should be provided. Where electrical installations, excavations, plant or loose materials are present they should be secured when not fully supervised.

9. OPERATIONAL USE OF BUILDING RESIDENTIAL BUILDINGS

If this building has been designed as a residential building and if at a later date, it is used or intended to be used as a workplace, the provisions of the Work Health and Safety Act 2011 or subsequent replacement Act should be applied to the new use.

OR

NON-RESIDENTIAL BUILDINGS

For non-residential buildings where the end-use has not been identified: This building has been designed to requirements of the classification identified on the drawings. The specific use of the building is not known at the time of the design and a further assessment of the workplace health and safety issues should be undertaken at the time of fit-out for the end-user. For non-residential buildings where the end-use is known: This building has been designed for the specific use as identified on the drawings. Where a change of use occurs at a later date a further assessment of the workplace health and safety issues should be undertaken.

10.OTHER HIGH RISK ACTIVITY

All electrical work should be carried out in accordance with of Practice: Managing Electrical Risks at the Workplace, AS/NZ 3012 and all licensing requirements Code. All work using Plant should be carried out in accordance with Code of Practice: Managing Risks of Plant at the Workplace. All work should be carried out in accordance with Practice: Managing Noise and Preventing Hearing Loss at Work Code. Due to the history of serious incidents it is recommended that particular care be exercised when undertaking work involving steel construction and concrete placement. All the above applies.

GORDON BUILDING DESIGN P/L

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

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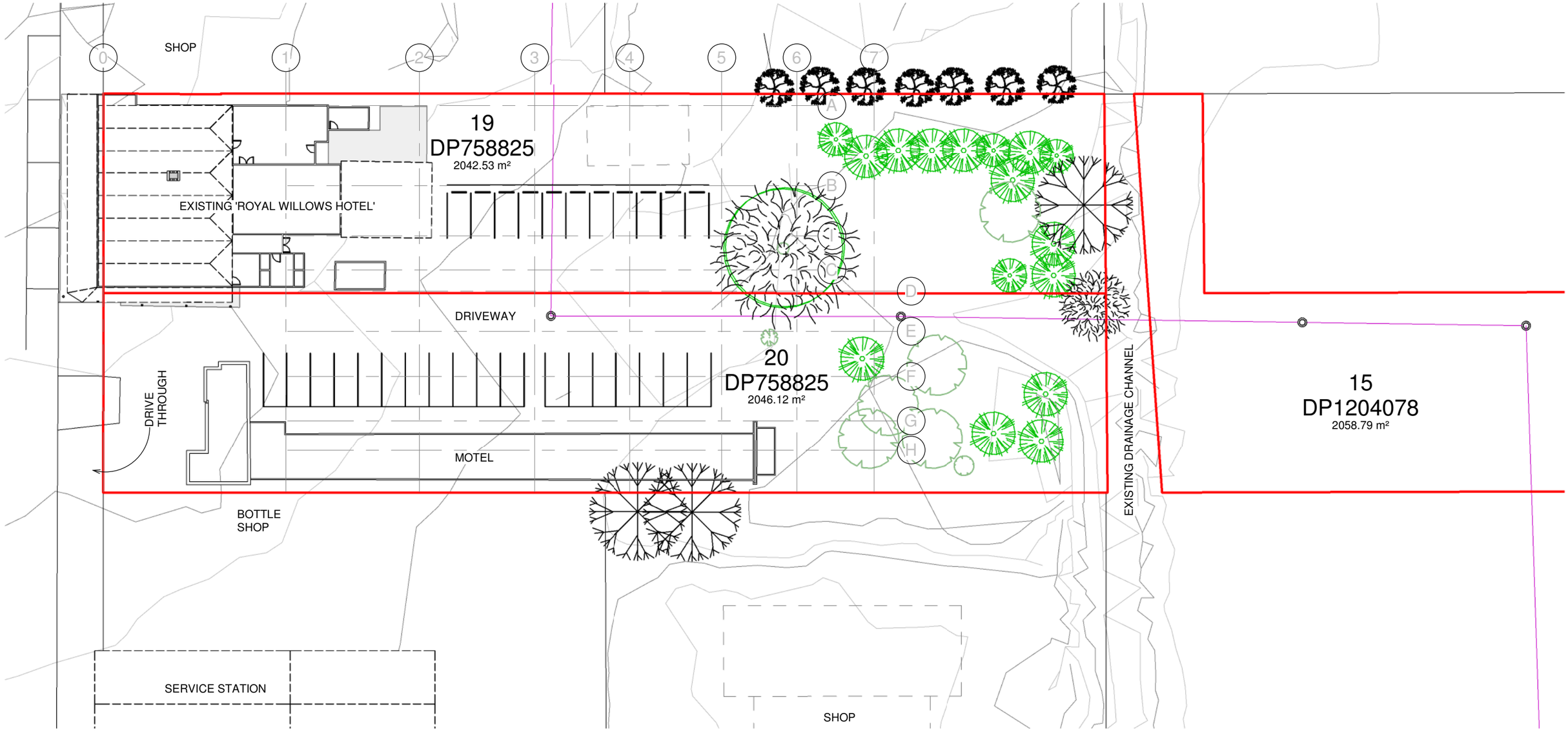
A3

DA APPROVALS 20211117

SAFETY NOTES

07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-990



1 : 400

SITE PLAN

LOT AREAS NOTE: AREAS ARE APPROX ONLY.	
19 DP758825	2042.5 m²
20 DP758825	2046.1 m²
15 DP1204078	2058.8 m²

0m 8m 16m

SCALE 1:400 @ A3

DA APPROVALS 20211117

N True

SITE EXISTING		
07/20	DWG NO.	1860
Design & Drawn by: S.L.G	SHEET	RA101

GORDON BUILDING DESIGN P/L
BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

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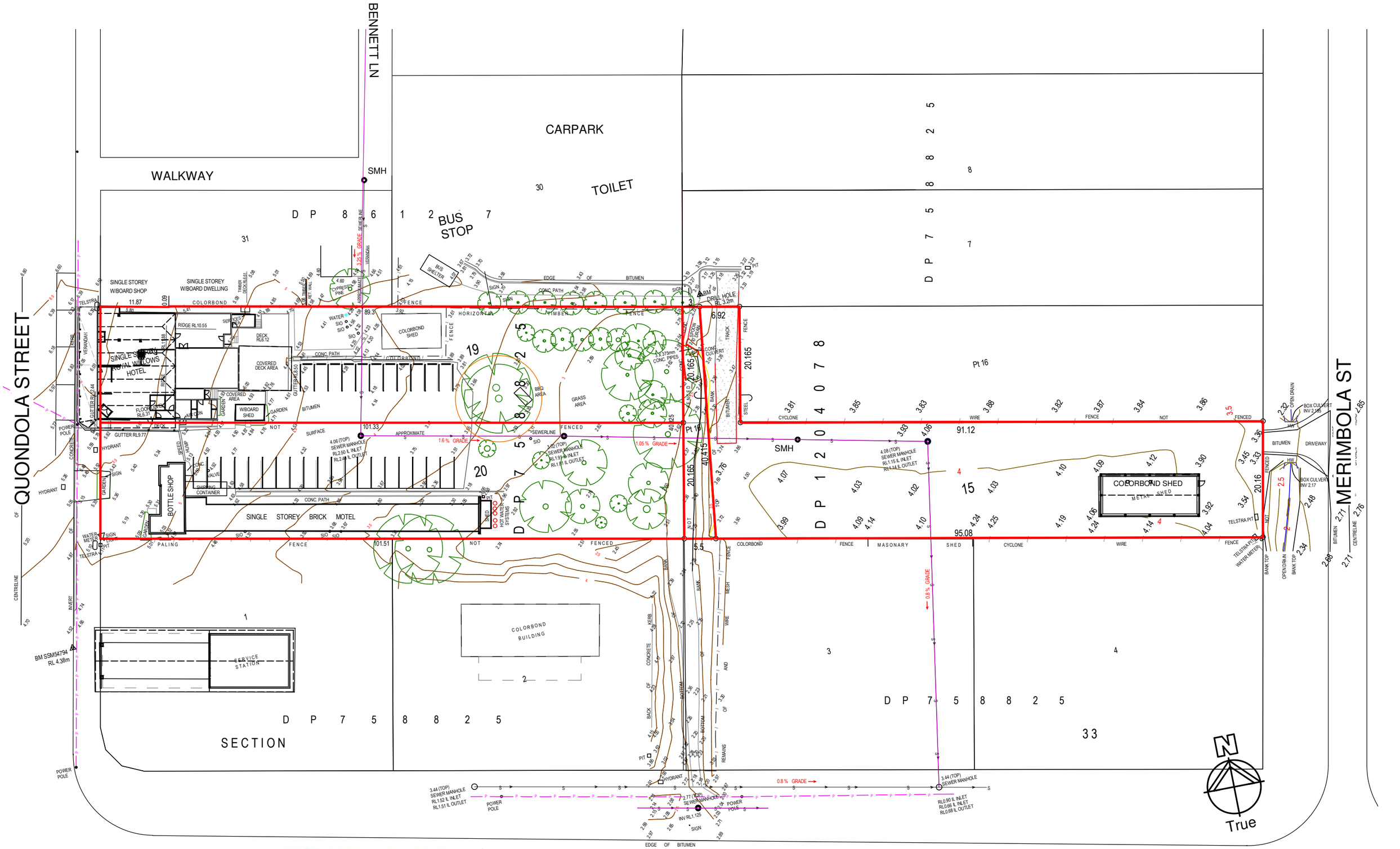

Caddey Searl & Jarman SURVEYORS

GORDON BUILDING DESIGN P/L

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

1 : 600

EXISTING SITE PLAN

0m 12m 24m

SCALE 1:600 @ A3

DA APPROVALS 20211117

SITE SURVEY	
07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET V-101

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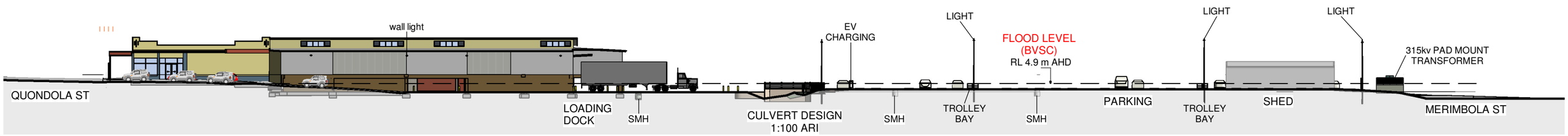

SITE LONG SECTION

GORDON BUILDING DESIGN P/L

bdaa BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

1 : 600

SITE PLAN

N

True

0m 12m 24m

SCALE 1:600 @ A3

DA APPROVALS 20211102

SITE PLAN	
07/20	DWG NO. 1860
Design & Drawn by: S.L.G	SHEET A-003

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Appendix D – Site Photographs

Photograph 1: View looking east across the western portion of the site, towards the vegetated area, from Quondola Street.

Photograph 2: View looking north across the western half of the site. Vegetated area to the east (right),and liquor store and Quondola Street to the west (left).

Photograph 3: View looking east from western portion of the site, towards the central vegetated area.

Photograph 4: View looking south along Quondola Street from outside liquor store, towards service station adjacent to site. Historic fill point thought to be in foreground.

Photograph 5: Potential historic UST fill point located in western portion of site.

Photograph 6: View of central vegetated portion of the site, with heavily waterlogged soils present.

Photograph 7: View of central drainage line of the site, which was heavily vegetated and full of debris at time of vegetation.

Photograph 8: View looking east across the eastern portion of the site. Merimbola Street is further to the east. Adjacent property with a playground and community garden to the north (left) and commercial industrial properties to the south (right).

Photograph 9: View looking west across the eastern portion of the site, with the heavily vegetated drainage line in the distance.

Photograph 10: View of community garden on adjacent property e north of the eastern portion of the site.

Photograph 11: Sandy clay fill followed by residual silty clays, which was found at the eastern portion of the site.

Photograph 12: Silty/sandy clay, followed by the natural silty clay found at parts of the western portion of the site .

Appendix E – Borehole Logs

BOREHOLE: BH01

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	26/10/22
Position	Refer to Figure 2			Date Completed	26/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH01_0.1-0.2 0.10-0.20 m			-	FILL: Sandy CLAY; low plasticity, pale brown, with coarse grained sand, no odour.	M	-	FILL
			0.5									
				0.80				-	FILL:Silty CLAY, low to medium plasticity, dark brown to dark grey, organic odour.			
					BH01_0.9-1 0.90-1.00 m							
			1.0	*1.00*				CH	Silty CLAY; high plasticity, grey to brown, with trace sands, no odour.			NATURAL
			1.5	*1.50*					Hole Terminated at 1.50 mBGL Target Depth reached			
			2.0									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 MW1-2 & BH1-14 LOGS.GPJ <<DrawingFile>> 04/11/2022 16:32 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BH02M

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	PIEZOMETER DETAILS ID / Static Water Level
AD	-	GWNE	0	0.20	BH02M_0.1-0.2 0.10-0.20 m PID=2.36ppm			-	FILL: Gravelly SAND; low plasticity, dark grey to dark brown, with sub-angular gravel, hydrocarbon odour.			BH02M
								CI	Sandy CLAY; medium plasticity, dark grey to dark brown, with trace sand, hydrocarbon odour.			Grout
					BH02M_0.5-0.6 0.50-0.60 m PID=170ppm							uPVC 50 mm Casing
			1	1.00				CH	Silty CLAY; high plasticity, grey to pale brown, with trace sand, hydrocarbon odour.			
					BH02M_1.3-1.4 1.30-1.40 m PID=330ppm							Bentonite
			2		BH02M_2-2.1 2.00-2.10 m PID=56ppm							
				2.50					From 2.5 m colour change to dark red/grey			
					BH02M_2.5-2.6 2.50-2.60 m PID=74ppm							
			3		BH02M_3-3.1 3.00-3.10 m PID=171ppm							
					BH02M_3.5-3.6 3.50-3.60 m PID=101ppm					D	-	
			4		BH02M_4-4.1 4.00-4.10 m PID=57ppm							uPVC 50 mm Screen
				4.50					From 4.5 m minimal odour.			Sand
					BH02M_4.5-4.6 4.50-4.60 m PID=4.3ppm							
			5									
			6									
			7	7.20								
									Hole Terminated at 7.20 mBGL Target Depth reached			
			8									

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

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BOREHOLE: BH03

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH03_0.1-0.2 0.10-0.20 m			-	FILL: Sandy CLAY; low plasticity, grey/brown/red, with angular gravel, no odour.			FILL
				0.40								
			0.5		BH03_0.5-0.6 0.50-0.60 m			CI	Silty CLAY; medium plasticity, dark grey, with trace sand, no odour.	M	-	NATURAL
			1.0	*1.00*				CH	Silty CLAY; high plasticity, grey to brown, with trace sand, no odour.			
				1.10					Hole Terminated at 1.10 mBGL Target Depth reached			
			1.5									
			2.0									

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

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BOREHOLE: BH04

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH04_0.1-0.2 0.10-0.20 m			-	FILL: Sandy CLAY; low plasticity, pale brown to dark grey, with sub-angular to angular gravel, no odour.			FILL
				0.40								
					BH04_0.5-0.6 0.50-0.60 m			CI-CH	Silty CLAY; medium to high plasticity, dark grey, with trace sand, no odour.	M	-	NATURAL
			0.5									
			1.0	*1.00*				CH	Silty CLAY; high plasticity, grey to pale brown, with trace sand, no odour.			
				1.20					Hole Terminated at 1.20 mBGL Target Depth reached			
			1.5									
			2.0									

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

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BOREHOLE: BH05

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	FILL: Sandy CLAY; low to medium plasticity, grey to pale brown, with sub-angular gravel, no odour.			FILL
					BH05_0.1-0.2 0.10-0.20 m							
				0.50								
AD	-	GWNE	0.5		BH05_0.5-0.6 0.50-0.60 m			CI-CH	Silty CLAY; medium to high plasticity, dark grey, with sub-angular gravel, no odour.	D	-	NATURAL
				1.00								
			1.0					CH	Silty CLAY; high plasticity, grey to pale brown, with trace sand, no odour.			
				1.20								
									Hole Terminated at 1.20 mBGL Target Depth reached			
			1.5									
			2.0									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 MW1-2 & BH1-14 LOGS.GPJ <<DrawingFile>> 04/11/2022 11:51 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BH06

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH06_0.1-0.2 0.10-0.20 m			-	FILL: Sandy CLAY; low to medium plasticity, grey to pale brown, with sub-angular gravel, no odour.	M	-	FILL
			0.5	*0.50*	BH06_0.7-0.8 0.70-0.80 m			CI-CH	Silty CLAY; medium to high plasticity, dark grey, with sub-angular gravel, no odour.			NATURAL
			1.0	*1.00*				CH	Silty CLAY; high plasticity, grey to pale brown, with trace sand, no odour.			
				1.20					Hole Terminated at 1.20 mBGL Target Depth reached			
			1.5									
			2.0									

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

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BOREHOLE: BH07

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	TOPSOIL; 100 mm thickness			TOPSOIL
				0.10								
					BH07_0.1-0.2 0.10-0.20 m			-	FILL: Sandy CLAY; medium plasticity, grey to pale brown, with trace sand, no odour.			FILL
				0.30								
AD	-	GWNE	0.5		BH07_0.5-0.6 0.50-0.60 m			CH	Silty CLAY; high plasticity, grey to brown, with trace sand, no odour.	M	-	NATURAL
			1.0									
				1.20					Hole Terminated at 1.20 mBGL Target Depth reached			
			1.5									
			2.0									

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

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BOREHOLE: BH08

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	TOPSOIL; 100 mm thickness			TOPSOIL
				0.10								
					BH08_0.1-0.2 0.10-0.20 m			-	FILL: Sandy CLAY; medium plasticity, light brown to light grey, with sub-angular sand, no odour.			FILL
				0.30								
AD	-	GWNE	0.5		BH08_0.5-0.6 0.50-0.60 m			CH	Silty CLAY; high plasticity, grey to brown, with trace sand, no odour.	M	-	NATURAL
				0.70				CH	Silty CLAY; high plasticity, grey to pale brown, with trace sand, no odour.			
			1.0	1.00					Hole Terminated at 1.00 mBGL Target Depth reached			
			1.5									
			2.0									

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

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BOREHOLE: BH09

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	TOPSOIL; 100 mm thickness			TOPSOIL
				0.10								
					BH09_0.1-0.2 0.10-0.20 m			-	FILL: Sandy CLAY; medium plasticity, light brown to light grey, with sub-angular sand, no odour.			FILL
				0.20								
AD	-	GWNE						CH	Silty CLAY; high plasticity, grey to brown, with trace sand, no odour.	M	-	NATURAL
			0.5		BH09_0.5-0.6 0.50-0.60 m							
				0.65				CH	Silty CLAY; high palsticity, grey to pale brown, with trace sand, no odour.			
			1.0									
				1.20					Hole Terminated at 1.20 mBGL Target Depth reached			
			1.5									
			2.0									

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

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BOREHOLE: BH10

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	TOPSOIL; Silty CLAY; low plasticity, dark grey, with sand, no odour.			TOPSOIL
				0.10				-	FILL: Sandy CLAY; low to medium plasticity, light brown to orange, with sub-angular gravel, no odour.			FILL
AD	-	GWNE	0.5		BH10_0.2-0.3 0.20-0.30 m					D	-	
			1.0									
				1.30	BH10_1.3-1.4 1.30-1.40 m			CI-CH	Silty CLAY; medium to high plasticity, light brown to light red, with trace sand, no odour.			NATURAL
				1.40					Hole Terminated at 1.40 mBGL Target Depth reached			
			1.5									
			2.0									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 MW1-2 & BH1-14 LOGS.GPJ <<DrawingFile>> 04/11/2022 11:51 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BH11

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0					-	FILL: Sandy CLAY; low to medium plasticity, light brown to orange, with sub-angular gravel, no odour.	D	-	FILL
					BH11_0.4-0.5 0.40-0.50 m							
			0.5									
			1.0									
				1.10								
					BH11_1.1-1.2 1.10-1.20 m			CI-CH	Silty CLAY; medium to high plasticity, light brown to light red, with trace sand, no odour.			NATURAL
			1.5	1.50								
									Hole Terminated at 1.50 mBGL Target Depth reached			
			2.0									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 MW1-2 & BH1-14 LOGS.GPJ <<DrawingFile>> 04/11/2022 11:51 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BH12

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0					-	FILL: Sandy CLAY; low plasticity, red/orange/grey, with sub-angular gravel, no odour.	D	-	FILL
				0.30	BH12_0.3-0.4 0.30-0.40 m				From 0.3 m colour change to yellow with mottled orange			
			0.5									
			1.0									
				1.20	BH12_1.2-1.3 1.20-1.30 m			CI-CH	Silty CLAY; medium to high plasticity, light brown to light red, with trace sand, no odour.			NATURAL
				1.40					Hole Terminated at 1.40 mBGL Target Depth reached			
			1.5									
			2.0									

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

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BOREHOLE: BH13

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0					-	FILL: Sandy CLAY; low plasticity, red/orange/grey, with sub-angular gravel, no odour.	D	-	FILL
				0.30	BH13_0.3-0.4 0.30-0.40 m				from 0.3 m colour change to yellow with mottled orange			
			0.5									
			1.0									
				1.40	BH13_1.4-1.5 1.40-1.50 m			CI-CH	Silty CLAY; medium to high plasticity, light brown to light red, with trace sand, no odour.			NATURAL
			1.5	1.50					Hole Terminated at 1.50 mBGL Target Depth reached			
			2.0									

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

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BOREHOLE: BH14

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	27/10/22
Position	Refer to Figure 2			Date Completed	27/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0					-	FILL: Sandy CLAY; low plasticity, red/orange/grey, with sub-angular gravel, no odour.	D	-	FILL
				0.20					from 0.3 m colour change to yellow with mottled orange			
			0.5		BH14_0.3-0.4 0.30-0.40 m							
			1.0									
				1.40								
					BH14_1.4-1.5 1.40-1.50 m			CI-CH	Silty CLAY; medium to high plasticity, light brown to light red, with trace sand, no odour.			NATURAL
			1.5	1.50					Hole Terminated at 1.50 mBGL Target Depth reached			
			2.0									

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

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TEST: BH16M

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	26/10/22
Position	Refer to Figure 2			Date Completed	26/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	PIEZOMETER DETAILS ID Static Water Level BH16M
AD	-	▽	0	0.10				-	ASPHALT; 100mm thickness			BH16M
				0.30	BH16M_0.1-0.2 0.10-0.20 m			-	FILL: Silty SAND; low plasticity, light brown to dark grey, with sub-angular gravel, no odour.			
					BH16M_0.4-0.5 0.40-0.50 m			CL-CI	Sandy CLAY; low to medium plasticity, dark grey, with angular gravel, no odour.			
			1	1.00	BH16M_1-1.1 1.00-1.10 m			CH	Silty CLAY; high plasticity, brown/red/grey, extremely hard, with trace sand, no odour.			
			2									Grout
			3									
			4									uPVC 50 mm Casing
				4.50					From 4.5m colour change to light brown/grey	M	-	Bentonite
			5									
			6									uPVC 50 mm Screen
			7									Sand
			8									
			9	9.00					Hole Terminated at 9.00 mBGL Target Depth reached			

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

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TEST: BH15M

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	35-37 Quondolo St, Pambula			Date Started	26/10/22
Position	Refer to Figure 2			Date Completed	26/10/22
Job No.	E25846	Contractor		Logged JM	Date:
Client	Pambula Foodworks	Drill Rig	Ute Mounted Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	PIEZOMETER DETAILS ID Static Water Level BH15M
AD	-	▽	0	0.20	BH15M_0.1-0.2 0.10-0.20 m			-	FILL: Silty SAND; low plasticity, light brown to dark grey, with sub-angular gravel, no odour.			BH15M
								CI-CH	Sandy CLAY; medium to high plasticity, red to brown, with trace sand, no odour.			
			1		BH15M_0.5-0.6 0.50-0.60 m							Grout
			2									
			3									uPVC 50 mm Casing
												Bentonite
			4	4.50						M	-	
								CH	Silty CLAY; high palsticity, grey, with trace sand, no odour.			uPVC 50 mm Screen
			5									
												Sand
			6	6.00				CI-CH	Silty CLAY; medium to high plasitcity, light grey, with sub-angular gravel, no odour.			
		▽		7.50					Hole Terminated at 7.50 mBGL Target Depth reached			
			7									
			8									

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

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EXPLANATION OF NOTES, ABBREVIATIONS & TERMS USED ON BOREHOLE AND TEST PIT LOGS

DRILLING/EXCAVATION METHOD

HA	Hand Auger	**RD**	Rotary blade or drag bit	**NQ**	Diamond Core - 47 mm
DT	Diatube Coring	**RT**	Rotary Tricone bit	**NMLC**	Diamond Core - 52 mm
NDD	Non-destructive digging	**RAB**	Rotary Air Blast	**HQ**	Diamond Core - 63 mm
AS*	Auger Screwing	**RC**	Reverse Circulation	**HMLC**	Diamond Core - 63 mm
AD*	Auger Drilling	**PT**	Push Tube	**BH**	Tractor Mounted Backhoe
***V**	V-Bit	**CT**	Cable Tool Rig	**EX**	Tracked Hydraulic Excavator
***T**	TC-Bit, e.g. AD/T	**JET**	Jetting	**EE**	Existing Excavation
ADH	Hollow Auger	**WB**	Washbore or Bailer	**HAND**	Excavated by Hand Methods

PENETRATION RESISTANCE

L	**Low Resistance**	Rapid penetration/ excavation possible with little effort from equipment used.
M	**Medium Resistance**	Penetration/ excavation possible at an acceptable rate with moderate effort from equipment used.
H	**High Resistance**	Penetration/ excavation is possible but at a slow rate and requires significant effort from equipment used.
R	**Refusal/Practical Refusal**	No further progress possible without risk of damage or unacceptable wear to equipment used.

These assessments are subjective and are dependent on many factors, including equipment power and weight, condition of excavation or drilling tools and experience of the operator.

WATER

Standing Water Level

Partial water loss

Water Seepage

Complete Water Loss

GWNO	GROUNDWATER NOT OBSERVED - Observation of groundwater, whether present or not, was not possible due to drilling water, surface seepage or cave-in of the borehole/ test pit.
GWNE	GROUNDWATER NOT ENCOUNTERED - Borehole/ test pit was dry soon after excavation. However, groundwater could be present in less permeable strata. Inflow may have been observed had the borehole/ test pit been left open for a longer period.

SAMPLING AND TESTING

SPT	Standard Penetration Test to AS1289.6.3.1-2004
4,7,11 N=18	4,7,11 = Blows per 150mm. N = Blows per 300mm penetration following a 150mm seating drive
30/80mm	Where practical refusal occurs, the blows and penetration for that interval are reported
RW	Penetration occurred under the rod weight only
HW	Penetration occurred under the hammer and rod weight only
HB	Hammer double bouncing on anvil
Sampling	
DS	Disturbed Sample
ES	Sample for environmental testing
BDS	Bulk disturbed Sample
GS	Gas Sample
WS	Water Sample
U50	Thin walled tube sample - number indicates nominal sample diameter in millimetres
Testing	
FP	Field Permeability test over section noted
FVS	Field Vane Shear test expressed as uncorrected shear strength (sv= peak value, sr= residual value)
PID	Photoionisation Detector reading in ppm
PM	Pressuremeter test over section noted
PP	Pocket Penetrometer test expressed as instrument reading in kPa
WPT	Water Pressure tests
DCP	Dynamic Cone Penetrometer test
CPT	Static Cone Penetration test
CPTu	Static Cone Penetration test with pore pressure (u) measurement

ROCK CORE RECOVERY

TCR=Total Core Recovery (%)

$$= \frac{Length\ of\ core\ recovered}{Length\ of\ core\ run} \times 100$$

SCR=Solid Core Recovery (%)

$$= \frac{\sum Length\ of\ cylindrical\ core\ recovered}{Length\ of\ core\ run} \times 100$$

RQD = Rock Quality Designation (%)

$$= \frac{\sum Axial\ lengths\ of\ core > 100mm}{Length\ of\ core\ run} \times 100$$

GEOLOGICAL BOUNDARIES

———— = Observed Boundary (position known)

– – – – – – – – – – = Observed Boundary (position approximate)

– –?– –?– –?– – = Boundary (interpreted or inferred)

METHOD OF SOIL DESCRIPTION USED ON BOREHOLE AND TEST PIT LOGS

	FILL		ORGANIC SOILS (OL, OH or Pt)		CLAY (CL, CI or CH)
	COUBLES or BOULDERS		SILT (ML or MH)		SAND (SP or SW)
	GRAVEL (GP or GW)	Combinations of these basic symbols may be used to indicate mixed materials such as sandy clay			

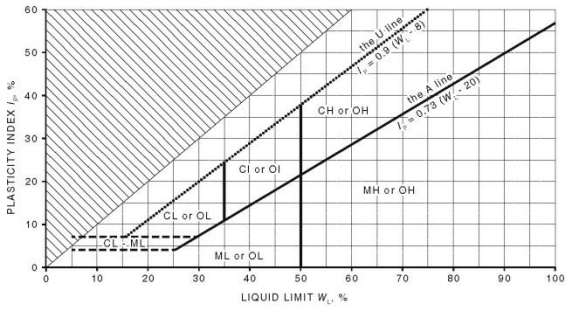
CLASSIFICATION AND INFERRED STRATIGRAPHY

Soil is broadly classified and described in Borehole and Test Pit Logs using the preferred method given in AS 1726:2017, Section 6.1 – Soil description and classification.

PARTICLE SIZE CHARACTERISTICS

Fraction	Components	Sub Division	Size mm
Oversize	BOULDERS		>200
	COBBLES		63 to 200
Coarse grained soil	GRAVEL	Coarse	19 to 63
		Medium	6.7 to 19
		Fine	2.36 to 6.7
	SAND	Coarse	0.6 to 2.36
		Medium	0.21 to 0.6
		Fine	0.075 to 0.21
Fine grained soil	SILT		0.002 to 0.075
	CLAY		<0.002

PLASTICITY PROPERTIES



GROUP SYMBOLS

Major Divisions		Symbol	Description
COARSE GRAINED SOILS More than 65% of soil excluding oversize fraction is greater than 0.075mm	**GRAVEL** More than 50% of coarse fraction is >2.36mm	GW	Well graded gravel and gravel-sand mixtures, little or no fines.
		GP	Poorly graded gravel and gravel-sand mixtures, little or no fines.
		GM	Silty gravel, gravel-sand-silt mixtures.
		GC	Clayey gravel, gravel-sand-clay mixtures.
	SAND More than 50% of coarse fraction is <2.36 mm	SW	Well graded sand and gravelly sand, little or no fines.
		SP	Poorly graded sand and gravelly sand, little or no fines.
		SM	Silty sand, sand-silt mixtures.
		SC	Clayey sand, sandy-clay mixtures.
FINE GRAINED SOILS More than 35% of soil excluding oversized fraction is less than 0.075mm	Liquid Limit less < 50%	ML	Inorganic silts of low plasticity, very fine sands, rock flour, silty or clayey fine sands.
		CL, CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays.
		OL	Organic silts and organic silty clays of low plasticity.
	Liquid Limit > than 50%	MH	Inorganic silts of high plasticity.
		CH	Inorganic clays of high plasticity.
		OH	Organic clays of medium to high plasticity.
	Highly Organic soil	PT	Peat muck and other highly organic soils.

MOISTURE CONDITION

Symbol	Term	Description
D	Dry	Non- cohesive and free-running.
M	Moist	Soils feel cool, darkened in colour. Soil tends to stick together.
W	Wet	Soils feel cool, darkened in colour. Soil tends to stick together, free water forms when handling.

Moisture content of cohesive soils shall be described in relation to plastic limit (PL) or liquid limit (LL) for soils with higher moisture content as follows: Moist, dry of plastic limit (w < PL); Moist, near plastic limit (w ≈ PL); Moist, wet of plastic limit (w < PL); Wet, near liquid limit (w ≈ LL), Wet, wet of liquid limit (w > LL),

CONSISTENCY

Symbol	Term	Undrained Shear Strength (kPa)	SPT "N" #
VS	Very Soft	≤ 12	≤ 2
S	Soft	>12 to ≤ 25	>2 to ≤ 4
F	Firm	>25 to ≤ 50	>4 to 8
St	Stiff	>50 to ≤ 100	>8 to 15
VSt	Very Stiff	>100 to ≤ 200	>15 to 30
H	Hard	>200	>30
Fr	Friable	-	

DENSITY

Symbol	Term	Density Index %	SPT "N" #
VL	Very Loose	≤ 15	0 to 4
L	Loose	>15 to ≤ 35	4 to 10
MD	Medium Dense	>35 to ≤ 65	10 to 30
D	Dense	>65 to ≤ 85	30 to 50
VD	Very Dense	>85	Above 50

In the absence of test results, consistency and density may be assessed from correlations with the observed behaviour of the material.
SPT correlations are not stated in AS1726:2017, and may be subject to corrections for overburden pressure and equipment type.

MINOR COMPONENTS

Term	Assessment Guide	Proportion by Mass
Trace	Presence just detectable by feel or eye but soil properties little or no different to general properties of primary component	Coarse grained soils: ≤ 5% Fine grained soil: ≤ 15%
With	Presence easily detectable by feel or eye but soil properties little or no different to general properties of primary component	Coarse grained soils: 5 - 12% Fine grained soil: 15 - 30%
Prefix	Presence easily detectable by feel or eye in conjunction with the general properties of primary component	Coarse grained soils: >12% Fine grained soil: >30%

TERMS FOR ROCK MATERIAL STRENGTH AND WEATHERING

CLASSIFICATION AND INFERRED STRATIGRAPHY

Rock is broadly classified and described in Borehole and Test Pit Logs using the preferred method given in AS1726 – 2017, Section 6.2 – Rock identification, description and classification.

ROCK MATERIAL STRENGTH CLASSIFICATION

Symbol	Term	Point Load Index, $Is_{(50)}$ (MPa) #	Field Guide
VL	Very Low	0.03 to 0.1	Material crumbles under firm blows with sharp end of pick; can be peeled with knife; too hard to cut a triaxial sample by hand. Pieces up to 30 mm can be broken by finger pressure.
L	Low	0.1 to 0.3	Easily scored with a knife; indentations 1 mm to 3 mm show in the specimen with firm blows of pick point; has dull sound under hammer. A piece of core 150 mm long by 50 mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
M	Medium	0.3 to 1	Readily scored with a knife; a piece of core 150 mm long by 50 mm diameter can be broken by hand with difficulty.
H	High	1 to 3	A piece of core 150 mm long by 50 mm diameter cannot be broken by hand but can be broken with pick with a single firm blow; rock rings under hammer.
VH	Very High	3 to 10	Hand specimen breaks with pick after more than one blow; rock rings under hammer.
EH	Extremely High	>10	Specimen requires many blows with geological pick to break through intact material; rock rings under hammer.

 # Rock Strength Test Results

▼ Point Load Strength Index, $Is_{(50)}$, Axial test (MPa)

● Point Load Strength Index, $Is_{(50)}$, Diametral test (MPa)

Relationship between rock strength test result ($Is_{(50)}$) and unconfined compressive strength (UCS) will vary with rock type and strength, and should be determined on a site-specific basis. However UCS is typically 20 x $Is_{(50)}$.

ROCK MATERIAL WEATHERING CLASSIFICATION

Symbol		Term	Field Guide
RS		Residual Soil	Soil developed on extremely weathered rock; the mass structure and substance fabric are no longer evident; there is a large change in volume but the soil has not been significantly transported.
XW		Extremely Weathered	Rock is weathered to such an extent that it has soil properties - i.e. it either disintegrates or can be remoulded, in water.
DW	HW	Distinctly Weathered	Rock strength usually changed by weathering. The rock may be highly discoloured, usually by iron staining. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores. In some environments it is convenient to subdivide into Highly Weathered and Moderately Weathered, with the degree of alteration typically less for MW.
	MW		
SW		Slightly Weathered	Rock slightly discoloured but shows little or no change of strength relative to fresh rock.
FR		Fresh	Rock shows no sign of decomposition or staining.

ABBREVIATIONS AND DESCRIPTIONS FOR ROCK MATERIAL AND DEFECTS

CLASSIFICATION AND INFERRED STRATIGRAPHY
Rock is broadly classified and described in Borehole and Test Pit Logs using the preferred method given in AS1726 – 2017, Section 6.2 – Rock identification, description and classification.

ROCK MATERIAL DESCRIPTION

Layering	
Term	**Description**
Massive	No layering apparent
Indistinct	Layering just visible; little effect on properties
Distinct	Layering (bedding, foliation, cleavage) distinct; rock breaks more easily parallel to layering

Structure	
Term	**Spacing (mm)**
Thinly laminated	<6
Laminated	6 – 20
Very thinly bedded	20 – 60
Thinly bedded	60 – 200
Medium bedded	200 – 600
Thickly bedded	600 – 2,000
Very thickly bedded	> 2,000

ABBREVIATIONS AND DESCRIPTIONS FOR DEFECT TYPES

Defect Type	Abbr.	Description
Joint	JT	Surface of a fracture or parting, formed without displacement, across which the rock has little or no tensile strength. May be closed or filled by air, water or soil or rock substance, which acts as cement.
Bedding Parting	BP	Surface of fracture or parting, across which the rock has little or no tensile strength, parallel or sub-parallel to layering/ bedding. Bedding refers to the layering or stratification of a rock, indicating orientation during deposition, resulting in planar anisotropy in the rock material.
Foliation	FL	Repetitive planar structure parallel to the shear direction or perpendicular to the direction of higher pressure, especially in metamorphic rock, e.g. Schistosity (SH) and Gneissosity.
Contact	CO	The surface between two types or ages of rock.
Cleavage	CL	Cleavage planes appear as parallel, closely spaced and planar surfaces resulting from mechanical fracturing of rock through deformation or metamorphism, independent of bedding.
Sheared Surface	SSU	A near planar, curved or undulating surface which is usually smooth, polished or slickensided.
Sheared Seam/ Zone (Fault)	SS/SZ	Seam or zone with roughly parallel almost planar boundaries of rock substance cut by closely spaced (often <50 mm) parallel and usually smooth or slickensided joints or cleavage planes.
Crushed Seam/ Zone (Fault)	CS/CZ	Seam or zone composed of disoriented usually angular fragments of the host rock substance, with roughly parallel near-planar boundaries. The brecciated fragments may be of clay, silt, sand or gravel sizes or mixtures of these.
Extremely Weathered Seam/ Zone	XWS/ XWZ	Seam of soil substance, often with gradational boundaries, formed by weathering of the rock material in places.
Infilled Seam	IS	Seam of soil substance, usually clay or clayey, with very distinct roughly parallel boundaries, formed by soil migrating into joint or open cavity.
Schistocity	SH	The foliation in schist or other coarse grained crystalline rock due to the parallel arrangement of platy or prismatic mineral grains, such as mica.
Vein	VN	Distinct sheet-like body of minerals crystallised within rock through typically open-space filling or crack-seal growth.

ABBREVIATIONS AND DESCRIPTIONS FOR DEFECT SHAPE AND ROUGHNESS

Shape	Abbr.	Description	Roughness	Abbr.	Description
Planar	PR	Consistent orientation	Polished	POL	Shiny smooth surface
Curved	CU	Gradual change in orientation	Slickensided	SL	Grooved or striated surface, usually polished
Undulating	UN	Wavy surface	Smooth	SM	Smooth to touch. Few or no surface irregularities
Stepped	ST	One or more well defined steps	Rough	RO	Many small surface irregularities (amplitude generally <1mm). Feels like fine to coarse sandpaper
Irregular	IR	Many sharp changes in orientation	Very Rough	VR	Many large surface irregularities, amplitude generally >1mm. Feels like very coarse sandpaper

Orientation: **Vertical Boreholes –** The dip (inclination from horizontal) of the defect.
Inclined Boreholes – The inclination is measured as the acute angle to the core axis.

ABBREVIATIONS AND DESCRIPTIONS FOR DEFECT COATING

Coating	Abbr.	Description
Clean	CN	No visible coating or infilling
Stain	SN	No visible coating but surfaces are discoloured by staining, often limonite (orange-brown)
Veneer	VNR	A visible coating of soil or mineral substance, usually too thin to measure (< 1 mm); may be patchy

DEFECT APERTURE

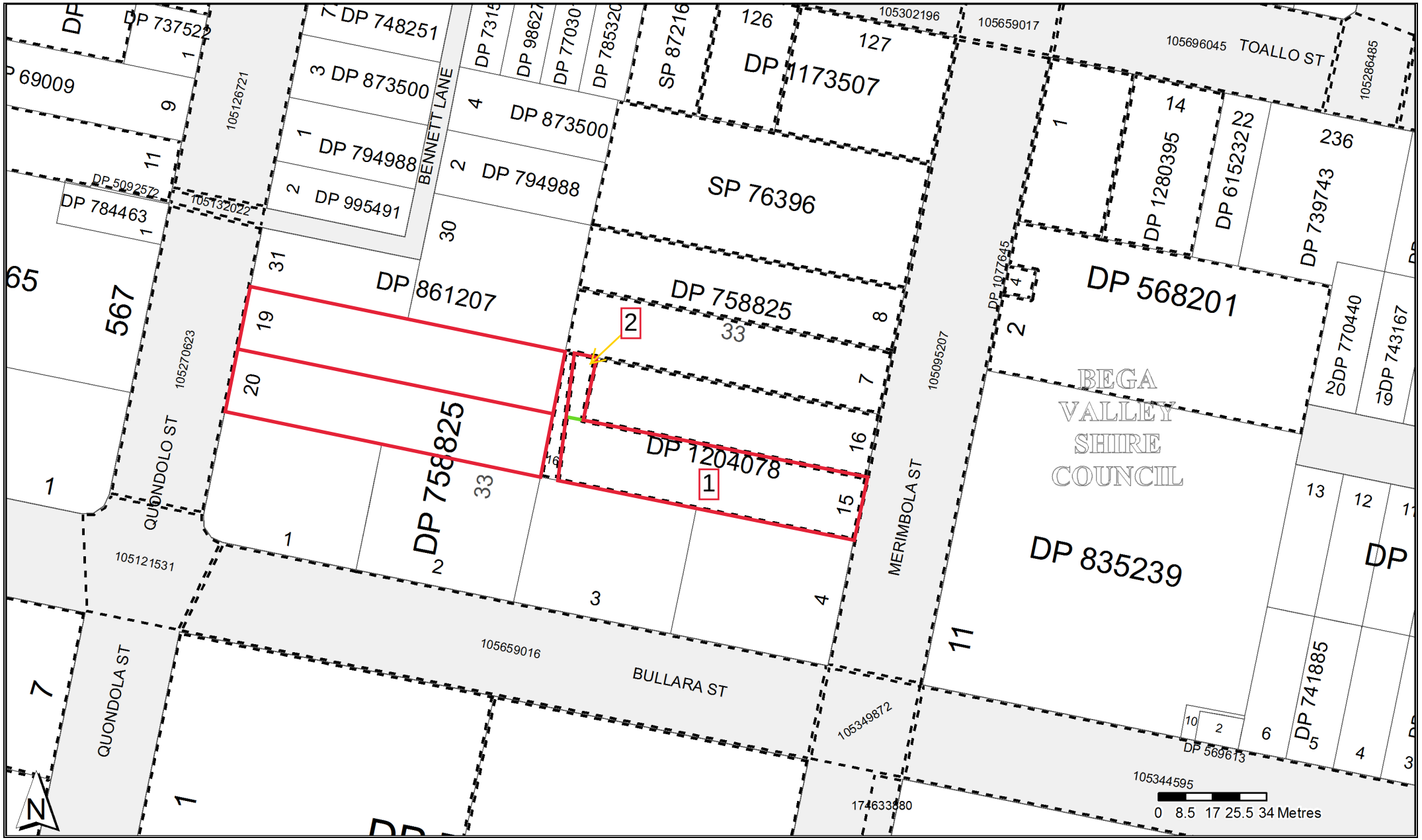
Aperture	Abbr.	Description
Closed	-	Closed.
Open	OP	Without any infill material.
Infilled	-	Soil or rock i.e. clay, talc, pyrite, quartz, etc.

Appendix F – Land Title Documentation

Cadastral Records Enquiry Report : Lot 16 DP 1204078

Ref : 35-37 Quondolo Street, Pambula

Locality : PAMBULA
Parish : PAMBULA
LGA : BEGA VALLEY
County : AUCKLAND



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

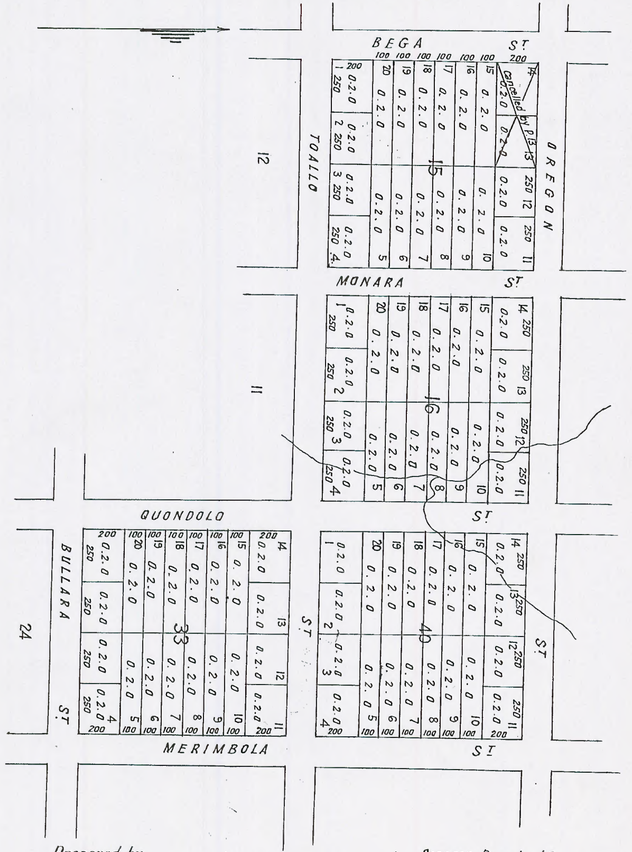
TRACING A.306

showing Secs 15.16.33 & 40 Town of Panbula (DP 758825)

Parish of Panbula County of Auckland

Land District of Eden

Scale 4 Chains to an Inch



Prepared by .....

Date .....

Spencer Bransby LS.
1855

P.6 1351 (E)

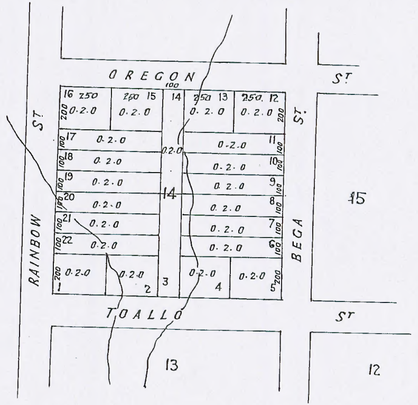
TRACING A.306

showing Section 14 Town of Panbula (DP 758825)

Parish of Panbula County of Auckland

Land District of Eden

Scale 4 Chains to an Inch.



Spencer Bransby Sur.
1855

Prepared by.....

Data.....

P. 6 - 1351 (E)

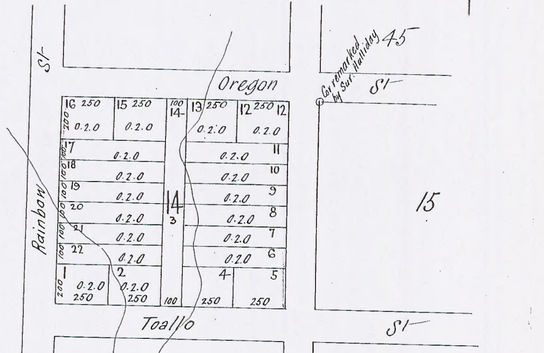
Tracing showing Section 14 Village Panbula (DP 758825) Prepared by

Parish of Panbula County of Auckland

L.G.A. BEGA VALLEY Land District of Date

Scale 4 Chains to an inch.

NOTE :—

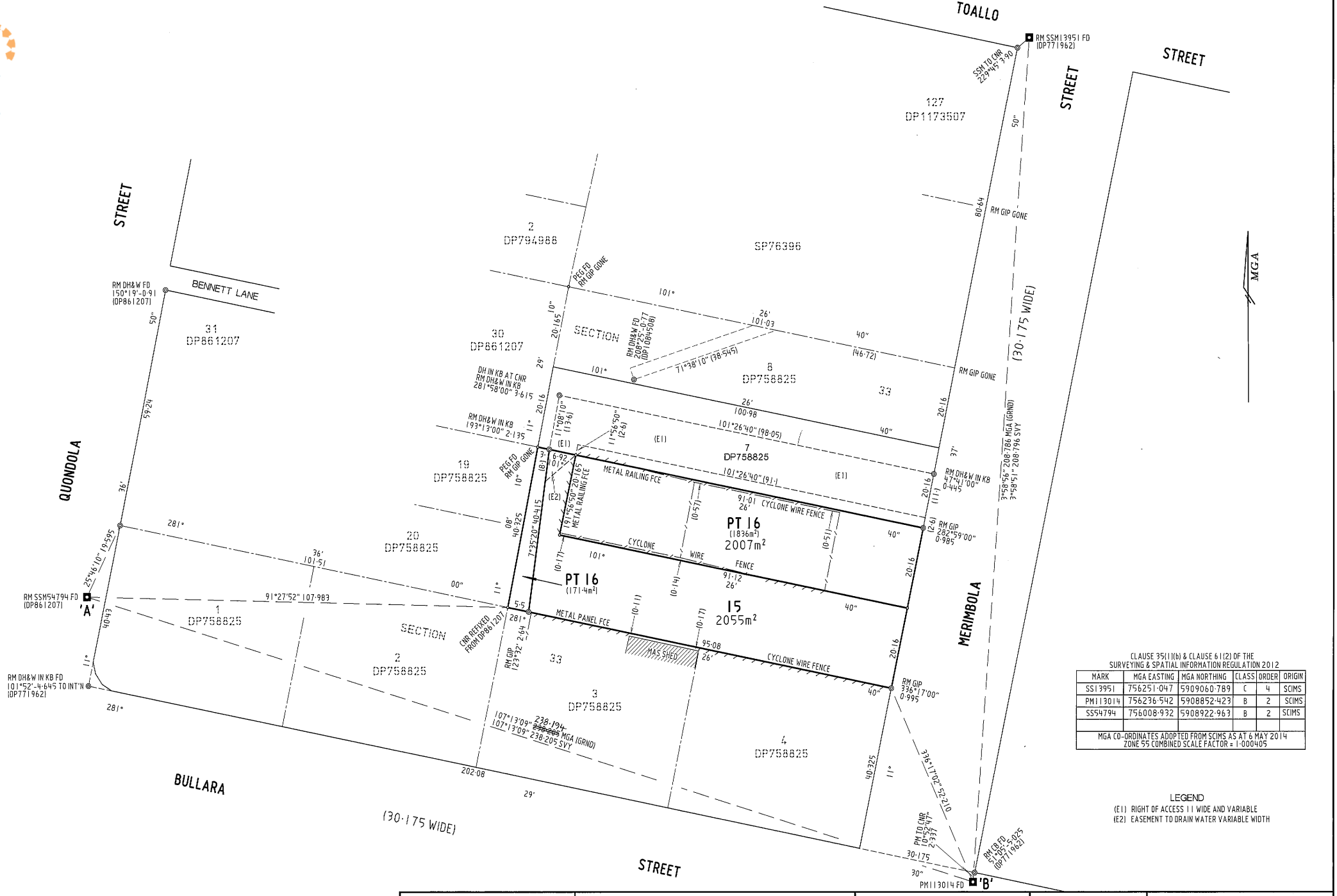


(Sgd) Spencer L. Bransby
1855

P. 6 - 1351 (E)

Req:R708741 /Doc:CP 00006-1351 P /Rev:26-Nov-2012 /NSW LRS /Prt:07-Nov-2022 08:50 /Seq:1 of 1
© Office of the Registrar-General /Src:InfoTrack /Ref:35-37 Quondolo Street, Pambula

InfoTrack
Req:R708740 /Doc:DP 1204078 P /Rev:16-Jan-2015 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 08:50 /Seq:1 of 3
© Office of the Registrar-General /Src:InfoTrack /Ref:35-37 Quondolo Street, Pambula



CLAUSE 35(11(b) & CLAUSE 61(2) OF THE SURVEYING & SPATIAL INFORMATION REGULATION 2012

MARK	MGA EASTING	MGA NORTHING	CLASS	ORDER	ORIGIN
SS13951	756251·047	5909060·789	C	4	SCIMS
PM113014	756236·542	5908852·423	B	2	SCIMS
SS54794	756008·932	5908922·963	B	2	SCIMS

MGA CO-ORDINATES ADOPTED FROM SCIMS AS AT 6 MAY 2014
ZONE 55 COMBINED SCALE FACTOR = 1·000405

LEGEND
(E1) RIGHT OF ACCESS 11 WIDE AND VARIABLE
(E2) EASEMENT TO DRAIN WATER VARIABLE WIDTH

Surveyor: JOHN DOUGLAS HEALEY
Date of Survey: 20/05/2014
Surveyor's Ref: 6388NF

PLAN OF SUBDIVISION OF LOTS 5 AND 6 OF SECTION 33 IN DP758825 AND RIGHT OF ACCESS OVER PART OF LOT 7 OF SECTION 33 IN DP758825

L.G.A.: BEGA VALLEY
Locality: PAMBULA
Subdivision No: 609/14
Lengths are in metres. Reduction Ratio 1:600

Registered
16.1.2015

DP1204078 P

Req:R708740 /Doc:DP 1204078 P /Rev:16-Jan-2015 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 08:50 /Seq:2 of 3
© Office of the Registrar-General /Src:InfoTrack /Ref:35-37 Quondolo Street, Pambula

PLAN FORM 6 (2012) WARNING: Creasing or folding will lead to rejection

DEPOSITED PLAN ADMINISTRATION SHEET

Registered: 16.1.2015 Office Use Only

Title System: TORRENS

Purpose: SUBDIVISION

Office Use Only

DP1204078 S

PLAN OF SUBDIVISION OF LOTS 5 AND 6 OF SECTION 33 IN DP758825 AND RIGHT OF ACCESS OVER PART OF LOT 7 OF SECTION 33 IN DP758825

LGA: BEGA VALLEY

Locality: PAMBULA

Parish: PAMBULA

County: AUCKLAND

Crown Lands NSW/Western Lands Office Approval

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

Signature: .....

Date: .....

File Number: .....

Office: .....

Subdivision Certificate

I, Robert Maxwell Slapp

Authorised Person/~~General Manager~~/*~~Accredited Certifier~~, certify that the provisions of s.109J of the *Environmental Planning and Assessment Act 1979* have been satisfied in relation to the proposed subdivision, new road or reserve set out herein.

Signature: RMSlapp

Accreditation number: -

Consent Authority: Bega Valley Shire Council

Date of endorsement: 26.11.14

Subdivision Certificate number: 609/14

File number: 575.1.71

*Strike through if inapplicable.

Survey Certificate

I, JOHN DOUGLAS HEALEY .....

of 114 WAGONGA STREET NAROOMA NSW 2546.....

a surveyor registered under the *Surveying and Spatial Information Act 2002*, certify that:

*(a) The land shown in the plan was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on 20/05/2014

*~~(b) The part of the land shown in the plan as ..... was surveyed in accordance with the *Surveying and Spatial Information Regulation 2012*, is accurate and the survey was completed on ....., the part not surveyed was compiled in accordance with that Regulation.~~

*~~(c) The land shown in this plan was compiled in accordance with the *Surveying and Spatial Information Regulation 2012*.~~

Signature: ..... Dated: 20/5/14

Surveyor ID: 1277

Datum Line: 'A' – 'B'

Type: *Urban/*~~Rural~~

The terrain is *Level-Undulating / *~~Steep-Mountainous~~.

*Strike through if inapplicable.

^Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.

Statements of intention to dedicate public roads, public reserves and drainage reserves.

Plans used in the preparation of survey/compilation.

DP1173507 P6-1351 DP771962 DP861207 DP1084508

If space is insufficient continue on PLAN FORM 6A

Signatures, Seals and Section 88B Statements should appear on PLAN FORM 6A

Surveyor's Reference: 6388NF

Req:R708740 /Doc:DP 1204078 P /Rev:16-Jan-2015 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 08:50 /Seq:3 of 3
© Office of the Registrar-General /Src:InfoTrack /Ref:35-37 Quondolo Street, Pambula

PLAN FORM 6A (2012) WARNING: Creasing or folding will lead to rejection

DEPOSITED PLAN ADMINISTRATION SHEET

Office Use Only

Registered: 16.1.2015

Office Use Only

DP1204078

PLAN OF SUBDIVISION OF LOTS 5 AND 6 OF SECTION 33 IN DP758825 AND RIGHT OF ACCESS OVER PART OF LOT 7 OF SECTION 33 IN DP758825

Subdivision Certificate number: 609/14

Date of Endorsement: 26.11.14

This sheet is for the provision of the following information as required:

- A schedule of lots and addresses - See 60(c) *SSI Regulation 2012*
- Statements of intention to create and release affecting interests in accordance with section 88B *Conveyancing Act 1919*
- Signatures and seals- see 195D *Conveyancing Act 1919*
- Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.

Lots	Street number	Street name	Street type	Locality
16	34	Merimbola	Street	Pambula
15	36	Merimbola	Street	Pambula

PURSUANT TO SEC 88B OF THE CONVEYANCING ACT 1919, AS AMENDED, IT IS INTENDED TO CREATE:

1 RIGHT OF ACCESS 11 WIDE AND VARIABLE

2 EASEMENT TO DRAIN WATER VARIABLE WIDTH

M G Sinclair

A. C. Sinclair

RPN 51666.

Leanne Barnes

General Manager

The Council of the Shire of Bega Valley

If space is insufficient use additional annexure sheet

Surveyor's Reference: 6388NF

Req:R708759 /Doc:CT 15487-004 CT /Rev:16-Dec-2010 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 08:53 /Seq:1 of 2
© Office of the Registrar-General /Src:InfoTrack /Ref:35-37 Quondolo Street, Pambula

[redacted]ICATE OF TITLE

15487004

NEW SOUTH WALES

PROPERTY ACT, 1900

Vol. 15487 Fol. 4

First Title Old System

EDITION ISSUED

Prior Title CA 17466

24 3 1987

I certify that the person named in the First Schedule is the registered proprietor of an estate in fee simple (or such other estate or interest as is set out below) in the land described subject to the recordings appearing in the Second Schedule and to the provisions of the Real Property Act, 1900.

CANCELLED

Registrar General.

SEE AUTO FOLIO

LAND REFERRED TO

Allotments 19 and 20 of Section 33 at Pambula in the Shire of Bega Valley Parish of Pambula County of Auckland.

Title Diagram: See Crown Plan 6.1351

FIRST SCHEDULE

KIZIE PTY. LIMITED.

SECOND SCHEDULE

1. Reservations and conditions in the Crown grant.
2. QUALIFIED TITLE. Caution pursuant to s.28J Real Property Act, 1900. 24-3-1987
3. ~~Book 3691 No 495 Mortgage to Esanda Finance Corporation Limited.~~ X357225

(Page 1) Vol. 15487 Fol. 4

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

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

LT 2/64

Vol 15487 Fol 4

L.O. 55

FIRST SCHEDULE (continued)

REGISTERED PROPRIETOR

Registrar General

SECOND SCHEDULE (continued)

ATV

PARTICULARS

Registrar General

CANCELLATION

X357226 Mortgage to Australia and New Zealand Banking Group Limited. Registered 16-2-1988.

CANCELLED

SEE AUTO FOLIO

NOTATIONS AND UNREGISTERED DEALINGS

X357225 9/88 m -226

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

Req:R708759 /Doc:CT 15487-004 CT /Rev:16-Dec-2010 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 08:53 /Seq:2 of 2
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LAND REGISTRY SERVICES Historical Search

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
7/11/2022 8:51AM

FOLIO: AUTO CONSOL 15487-4

Recorded	Number	Type of Instrument	C.T. Issue
16/3/1992		CONSOL HISTORY RECORD CREATED FOR AUTO CONSOL 15487-4 PARCELS IN CONSOL ARE: 19-20/33/758825.	
6/2/1998	3778407	DISCHARGE OF MORTGAGE	
6/2/1998	3778408	TRANSFER	
6/2/1998	3778409	REQUEST	
6/2/1998	3778410	MORTGAGE	EDITION 1
18/3/2002	8436834	LEASE	EDITION 2
3/4/2004	AA545290	TRANSFER OF LEASE	
19/1/2005	AB229945	VARIATION OF LEASE	
21/4/2005	AB426670	TRANSFER OF LEASE	
2/5/2005	AB446225	DISCHARGE OF MORTGAGE	
2/5/2005	AB446226	TRANSFER	
2/5/2005	AB446227	MORTGAGE	EDITION 3
10/11/2009	AF101989	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 4
16/11/2009	AF118298	DISCHARGE OF MORTGAGE	
16/11/2009	AF118299	TRANSFER	
16/11/2009	AF118300	MORTGAGE	EDITION 5
~~16/1/2014~~	~~AI304088~~	~~NOTICE OF DEATH~~	Does not affect
28/4/2014	AI534423	TRANSFER OF LEASE	
28/4/2014	AI534424	DISCHARGE OF MORTGAGE	
28/4/2014	AI534425	TRANSFER	
28/4/2014	AI534426	MORTGAGE	EDITION 6
11/7/2018	AN492107	DISCHARGE OF MORTGAGE	EDITION 7
19/12/2018	AN951504	TRANSFER	EDITION 8

*** END OF SEARCH ***

35-37 Quondolo Street, Pambula PRINTED ON 7/11/2022

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Received: 07/11/2022 08:51:02

Req:R708752 /Doc:DL 3778408 /Rev:10-Feb-1998 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 08:51 /Seq:1 of 1
© Office of the Registrar-General /Src:InfoTrack /Ref:35-37 Quondolo Street, Pambula

97-01T

TRANSFER

Real Property Act, 1900

3778408 W

Office of

42.

$2.00

(A) **LAND TRANSFERRED**

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

Folio Identifier
Auto Consol 15487-4

(B) **LODGED BY**

L.T.O. Box	Name, Address or DX and Telephone
20s	ANZ
	REFERENCE (max. 15 characters): Hussey / Griffith

(C) **TRANSFEROR** KIZIE PTY LIMITED
A.C.N. 003 186 221

(D) acknowledges receipt of the consideration of $300,000.00
and as regards the land specified above transfers to the Transferee an estate in fee simple

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

(F) **TRANSFEREE**

T TS (s713 LGA) TW (Sheriff)	JOHN ANTHONY HUSSEY & GINA MARIELLA HUSSEY
(G)	**TENANCY:** JOINT

(H) We certify this dealing correct for the purposes of the Real Property Act, 1900. **DATED** 10 SEPTEMBER 1997.

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

THE COMMON SEAL OF KIZIE PTY LIMITED
ACN 003 186 221 was affixed hereto
in the presence of:

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

KIZIE PTY LTD A.C.N. 003 186 221 The Common Seal of

Common Seal KIZIE PTY. LIMITED

Signature of Transferor

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

Nicholas Damian Wordsworth,
Solicitor for

~~Signature of~~ Transferee

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

CHECKED BY (office use only)

AUSDOC Office Pty. Ltd.

Req:R708753 /Doc:DL AF118299 /Rev:17-Nov-2009 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 08:51 /Seq:1 of 1
© Office of the Registrar-General /Src:InfoTrack /Ref:35-37 Quondolo Street, Pambula

Release: 3.4
www.lands.nsw.gov.au

New South Wales
Real Property Act 1900

AF118299J

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

STAMP DUTY Office of State Revenue use only

NSW Treasury
Client No: 1411509 1272
Duty: $ 10 Trans No: 5642329
Asst details:
10/11/09

(A) **FOLIO OF THE REGISTER** AUTO CONSOL 15487-4

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and LLPN if any	CODES
285D ~~446F~~	~~SHANAHAN TUDHOPE LAWYERS~~ ~~LEVEL 7, 60 CARRINGTON STREET~~ ~~SYDNEY NSW 2000~~ 285D M J ARMSTRONG LLP: 127955Y REF: Reference: ~~ELJ: 90100~~ 29603827	T TW (Sheriff)

(C) **TRANSFEROR** NATHAN ANDREW WILSON AND JOANNE KATHERINE WILSON

(D) **CONSIDERATION** The transferor acknowledges receipt of the consideration of $ 1,700,000.00 and as regards

(E) **ESTATE** the above folio of the Register transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** ANTHONY PAUL HARMEY AND ANGELA JANE HARMEY

(I) **TENANCY:** Joint Tenants

DATE 10/11/09

(J) I certify that the person(s) signing opposite, with whom I am personally acquainted or as to whose identity I am otherwise satisfied, signed this instrument in my presence.

Signature of witness:

Name of witness: Stuart Cairns
Address of witness: Cairns
41 Boondooma Cct.
Albany Creek 4035.
Qld.

Jon Martin
Level 5 / Castlereagh St
Sydney (Witness to Nathan Wilson's signature)

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of transferor:

Joanne Wilson

Certified correct for the purposes of the Real Property Act 1900 by the person whose signature appears below.

Signature:

Signatory's name: SEAN GALLAGHER
Signatory's capacity: transferee's solicitor

Req:R714591 /Doc:DL AI304088 /Rev:20-Jan-2014 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 17:35 /Seq:1 of 1
© Office of the Registrar-General /Src:InfoTrack /Ref:35-37 Quondolo Street, Pambula

Form: 02ND
Release: 5·1

NOTICE OF DEATH

New South Wales
Section 101 Real Property Act 19

AI304088L

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

(A) **TORRENS TITLE**

AUTO CONSOL 15487-4

(B) **REGISTERED DEALING**

Number	Torrens Title
~~AB426670~~ 8436834 IM.	AUTO CONSOL 15487-4

(C) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODE
IW	SHANAHAN TUDHOPE LAWYERS LEVEL 7, 60 CARRINGTON STREET SYDNEY NSW 2000 9262 2888. Reference: SLG:ELI:110934	ND

(D) **DECEASED JOINT TENANT**

See Instructions for Completion: Instruction (D) regarding discrepancies in the name
LAWRENCE PAUL HARMEY

(E) **SURVIVING JOINT TENANT**

ANTHONY PAUL HARMEY AND ANGELA JANE HARMEY

(F) I, the abovementioned surviving joint tenant, apply to be registered as proprietor of the interest of the deceased joint tenant (who died on 28 October 2012 as stated in the copy of death certificate No. 14724/2012 accompanying this application) in the above registered dealing.

DATE 15 January 2014

(G) Certified correct for the purposes of the Real Property Act 1900 on behalf of the applicant by the person signing below.

Signature:

Signatory's name: ERIN IRELAND

Signatory's capacity: Surviving joint tenants' solicitor

(H) *This section is to be completed where a notice of sale is required and the relevant data has been forwarded to LPI through eNOS.*

The applicant certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 554623 Full name: ERIN IRELAND Signature:

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

ALL HANDWRITING MUST BE IN BLOCK CAPITALS.

1209

Office use only—
Evidence sighted and returned:

Req:R708754 /Doc:DL AI534425 /Rev:30-Apr-2014 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 08:51 /Seq:1 of 1
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Form: 07T
Licence: 05-11-638
Licensee: Softdocs
[FirmName]

TRANSFER

New South Wales
Real Property Act 1900

AI534425K

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

STAMP DUTY	Office of State Revenue use only	Office of State Revenue NSW Treasury Client No: 1411509 1485 Duty: $10 Trans No: 76748 Asst details:
(A) TORRENS TITLE	FOLIO IDENTIFIER AUTO CONSOL 15487-4	
(B) LODGED BY	Document Collection Box: 24J Name, Address or DX, Telephone, and Customer Account Number if any: LLPN: 123836E CTB Reference (optional): 1389 70914	CODES: T TW
(C) TRANSFEROR	ANTHONY PAUL HARMEY and ANGELA JANE HARMEY	
(D) CONSIDERATION	The transferor acknowledges receipt of the consideration of $ 1,250,000.00 and as regards the land	
(E) ESTATE	specified above transfers to the transferee an estate in fee simple.	
(F) SHARE TRANSFERRED		
(G)	Encumbrances (if applicable):	
(H) TRANSFEREE	KELVIN JOHN STOLZENHEIN & JEANETTE MAY STOLZENHEIN AS JOINT TENANTS AS TO 70/100 SHARE, SEAN STOLZENHEIN AS TO 10/100 SHARE, NATHAN STOLZENHEIN AS TO 10/100 SHARE and KURT STOLZENHEIN AS TO 10/100 SHARE	
(I)	TENANCY: AS TENANTS IN COMMON	
DATE	12 / 02 / 2014	

(J) I certify I am an eligible witness and that the transferor signed this dealing in my presence. [See note* below]

WITNESS FOR ANTHONY PAUL HARMEY

Signature of witness:

Name of witness: SEAN HOLLIS

Address of witness: 4A HOLLIS CRT, MERIMBULA N.S.W. 2548.

FOR ANGELA JANE HARMEY
SIGNATURE OF WITNESS
NAME OF WITNESS: MARCO PANIZZOTTI
ADDRESS OF WITNESS: 238 OLD ARGYLE ROAD EXETER NSW 2579

Certified correct for the purposes of the Real Property Act 1900 by the transferor.

Signature of transferor:

ANTHONY PAUL HARMEY

ANGELA JANE HARMEY

Certified correct for the purposes of the Real Property Act 1900 by the person whose signature appears below.

Signature:

Signatory's name: MICHAEL CHARLES MOORE
Capacity: Solicitor for the transferee

(K) The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. 562548 Full Name: MICHAEL CHARLES MOORE Signature: .....

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

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: AUTO CONSOL 15487-4

SEARCH DATE	TIME	EDITION NO	DATE
7/11/2022	8:49 AM	8	19/12/2018

LAND

LAND DESCRIBED IN SCHEDULE OF PARCELS
AT PAMBULA
LOCAL GOVERNMENT AREA BEGA VALLEY
PARISH OF PAMBULA COUNTY OF AUCKLAND
TITLE DIAGRAM CROWN PLAN 6.1351

FIRST SCHEDULE

KELVIN JOHN STOLZENHEIN
JEANETTE MAY STOLZENHEIN
AS JOINT TENANTS (T AN951504)

SECOND SCHEDULE (1 NOTIFICATION)

---

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

SCHEDULE OF PARCELS

LOTS 19-20 SEC. 33 IN DP758825.

*** END OF SEARCH ***

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

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Received: 07/11/2022 08:49:51

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
7/11/2022 8:53AM

FOLIO: 5/33/758825

First Title(s): OLD SYSTEM
Prior Title(s): VOL 712 FOL 76

Recorded	Number	Type of Instrument	C.T. Issue
6/2/1991		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
24/5/1991		AMENDMENT: TITLE DIAGRAM	
16/1/2015	DP1204078	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

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Received: 07/11/2022 08:53:04

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

7/11/2022 8:53AM

FOLIO: 6/33/758825

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 712 FOL 86

Recorded	Number	Type of Instrument	C.T. Issue
23/3/1990		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
23/1/1991		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
24/5/1991		AMENDMENT: TITLE DIAGRAM	
26/3/1992	E341656	DISCHARGE OF MORTGAGE	
26/3/1992	E341657	TRANSFER	EDITION 1
16/1/2015	DP1204078	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

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Received: 07/11/2022 08:53:05

Req:R708765 /Doc:DL E341657 /Rev:07-Jun-2010 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 08:55 /Seq:1 of 1
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RP 13

STAMP DUTY

OFFICE USE ONLY

E 341657 M

TRANSFER

REAL PROPERTY ACT, 1900

T | 3 of 3 | $ | R

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Certificate of Title Volume 15520 Folio 226 NOW 8070 CONSOL 15520-226 and Identifier 6/33/758825	WHOLE	At Pambula

DESCRIPTION OF LAND Note (a)

TRANSFEROR Note (b)

DJ's Food (Wholesale) Pty Limited (ACN 802 139 791)

ESTATE Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of $200,000—
and transfers an estate in fee simple
in the land above described to the TRANSFEREE

TRANSFEREE Note (d)

THE COUNCIL OF THE SHIRE OF BEGA VALLEY of Council Chambers, Zingel Place, Bega

OFFICE USE ONLY

TENANCY Note (e)

as joint tenants/tenants in common

PRIOR ENCUMBRANCES Note (f)

subject to the following PRIOR ENCUMBRANCES 1. ..... 2. ..... 3. .....

DATE [illegible]

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.

EXECUTION Note (g)

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

THE COMMON SEAL OF D.J.'S FOOD (WHOLESALE)
Signature of Witness

PTY. LIMITED was By Order of the Board
Name of Witness (BLOCK LETTERS)

hereunto affixed in the presence of:-
Address and occupation of Witness

COMMON SEAL D.J.'S FOOD WHOLESALE PTY. LIMITED A.C.N. 802 139 791

Director: .....

Secretary: B. Knowles

Signature of Transferor

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

Note (g)

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness

D.K.A. Button

SOLICITOR FOR Signature of Transferee

TO BE COMPLETED BY LODGING PARTY Notes (h) and (i)

LODGED BY [illegible] & CO.

Phone: 233-1011 Fax: [illegible]
DX 340, L.T.O. [illegible]

Ref:
Delivery Box Number BEGACN - DJ'S FOOD

LOCATION OF DOCUMENTS		
CT	OTHER	
✓		Herewith.
		In L.T.O. with
		Produced by

OFFICE USE ONLY

Checked	Passed	REGISTERED - -19	Secondary Directions	
0134				
Signed	Extra Fee		Delivery Directions	

BEGA

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

7/11/2022 8:51AM

FOLIO: 15/1204078

First Title(s): OLD SYSTEM
Prior Title(s): 5-6/33/758825

Recorded	Number	Type of Instrument	C.T. Issue
16/1/2015	DP1204078	DEPOSITED PLAN	FOLIO CREATED EDITION 1
6/5/2015	AJ459997	TRANSFER WITHOUT MONETARY CONSIDERATION	EDITION 2
16/4/2019	AP193704	TRANSFER	EDITION 3
21/10/2021	AR542386	MORTGAGE	EDITION 4

*** END OF SEARCH ***

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Received: 07/11/2022 08:51:03

Req:R708766 /Doc:DL AJ459997 /Rev:13-May-2015 /NSW LRS /Pgs:ALL /Prt:07-Nov-2022 08:55 /Seq:1 of 1
© Office of the Registrar-General /Src:InfoTrack /Ref:35-37 Quondolo Street, Pambula

Form: 01TWC
Licence: 01-05-127
Licensee: LEAP Legal Software Pty Limited
Firm name: Clark Rideaux

TRANSFER

without monetary consideral

New South Wales
Real Property Act 1900

AJ459997D

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

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY
27-02-2015 0008012127-002
TRANSFER
DUTIABLE AMOUNT $ **********2,271.00
DUTY $ **********28.75

(A) **TORRENS TITLE** 15/1204078 of the part formerly in 6/33/758825

(B) **LODGED BY**

Document Collection Box	Name, Address or DX, Telephone, and Customer Account Number if any	CODES
268D	SYDNEY LEGAL AGENTS - INFOTRACK LLP: 132579W Reference: K+C/184624	TZ

(C) **TRANSFEROR** Bega Valley Shire Council

(D) **CONSIDERATION** Nil

(E) **ESTATE** and as regards the land specified above transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEREE** Maxwell Gregory Sinclair and Ailsa Catherine Sinclair

TENANCY: Joint Tenants

(I) **DATE** 1 April 2015

(J) I certify that I am an eligible witness and that an authorised officer of the transferor signed this dealing in my presence. [See note* below]

Signature of witness:

Name of witness: Heidi Fletcher
Address of witness: Zingal Place BEGA 2550.

Certified correct for the purposes of the Real Property Act 1900 by the authorised officer named below.

Signature of authorised officer:

Authorised officer's name: LEANNE BARNES
Authority of officer: GENERAL MANAGER
Signing on behalf of: Bega Valley Shire Council

Certified correct for the purposes of the Real Property Act 1900 on behalf of the transferee by the person whose signature appears below.

Signature:

Signatory's name: John Harding
Signatory's capacity: Solicitor for transferee

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

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

ALL HANDWRITING MUST BE IN BLOCK CAPITALS

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 15/1204078

SEARCH DATE	TIME	EDITION NO	DATE
7/11/2022	8:49 AM	4	21/10/2021

LAND

LOT 15 IN DEPOSITED PLAN 1204078
AT PAMBULA
LOCAL GOVERNMENT AREA BEGA VALLEY
PARISH OF PAMBULA COUNTY OF AUCKLAND
TITLE DIAGRAM DP1204078

FIRST SCHEDULE

JEANETTE MAY STOLZENHEIN
KELVIN JOHN STOLZENHEIN
AS JOINT TENANTS (T AP193704)

SECOND SCHEDULE (4 NOTIFICATIONS)

---

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 DP1204078 RIGHT OF ACCESS 11 METRE(S) WIDE AND VARIABLE APPURTENANT TO THE LAND ABOVE DESCRIBED
3 DP1204078 EASEMENT TO DRAIN WATER VARIABLE WIDTH AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
4 AR542386 MORTGAGE TO BENDIGO AND ADELAIDE BANK LIMITED

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

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

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Received: 07/11/2022 08:49:52

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

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

Summary of Owners Report

Address: - 35-37 Quondolo Street, Pambula, NSW 2549

Description: - Lots 19 & 20 Section 33 D.P. 758825 (Auto Consol 15487-4) & Lot 15 D.P. 1204078

As regards to Lots 19 & 2 Section 33 D.P. 758825 (Auto Consol 15487-4): -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
10.08.1928 (1928 to 1929)	Michael McDonough (Hotelkeeper)	Book 1532 No. 235
14.05.1929 (1929 to 1930)	Alexander Parsell (Licensed Publican) Evelyn Parsell (Married Woman)	Book 1573 No. 873
14.10.1930 (1930 to 1937)	Daniel Grant (Ex-Licensed Publican Now Hotelkeeper)	Book 1614 No. 692
01.05.1937 (1937 to 1937)	John Bernard McTiernan (Hotelkeeper)	Book 1780 No. 492
07.09.1937 (1937 to 1939)	Albert John Grant (Licensed Publican)	Book 1796 No. 930
05.08.1939 (1939 to 1951)	Egbert Dunkerton Francis (Gentleman) George Charles Boulton (Gentleman) David Benjamin Bertram (Freeholder)	Book 1852 No. 651
12.12.1951 (1951 to 1954)	Athol James Stubbs (Hotelkeeper)	Book 2198 No. 609
06.05.1954 (1954 to 1954)	Charles Milsom (Hotelkeeper)	Book 2300 No. 147
06.10.1954 (1954 to 1969)	Inland Hotels Pty. Limited	Book 2316 No. 718
20.05.1969 (!969 to 1980)	Jack Christian Hansen (Farmer) Mervyn Lewis Hansen (Clerk)	Book 2929 No. 584
27.08.1980 (1980 to 1982)	Sylpa Pty. Limited	Book 3461 No. 493
28.07.1982 (1982 to 1985)	Klestate Management Pty Limited	Book 3522 No. 691
15.05.1985 (1985 to 1987)	Rogsan Pty Ltd	Book 3624 No. 993
27.01.1987 (1987 to 1998)	Kizie Pty Limited	Book 3708 No. 279 Then Volume 15487 Folio 4 Now Auto Consol 15487-4
06.02.1998 (1998 to 2005)	John Anthony Hussey Gina Mariella Hussey	Auto Consol 15487-4
02.05.2005 (2005 to 2009)	Nathan Andrew Wilson Joanne Katherine Wilson	Auto Consol 15487-4

Continued Over.

Email: mark.groll@infotrack.com.au
Email: taylor.wilson@infotrack.com.au

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

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

Date of Acquisition and term held	**Registered Proprietor(s) & Occupations where available**	**Reference to Title at Acquisition and sale**
16.11.2009 (2009 to 2014)	Anthony Paul Harmey Angela Jane Harmey	Auto Consol 15487-4
28.04.2014 (2014 to 2018)	Jeanette May Stolzenhein Kelvin John Stolzenhein Sean Stolzenhein Nathan Stolzenhein Kurt Stolzenhein	Auto Consol 15487-4
19.12.2018 (2018 to Date)	# Jeanette May Stolzenhein # Kelvin John Stolzenhein	Auto Consol 15487-4

 # Denotes current registered proprietor

Leases: -

- 18.03.2002 (8436834): Lease. Surrendered or expired by effluxion of time – not investigated.

Easements: - NIL

Email: mark.groll@infotrack.com.au
Email: taylor.wilson@infotrack.com.au

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

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

As regards to the part numbered 1 on attached Cadastral Records Enquiry Report: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
20.09.1921 (1921 to 1932)	Rosina Behl (Married Woman)	Volume 712 Folio 76
26.04.1932 (1932 to 1956)	Mary Jane Bennett (Married Woman)	Volume 712 Folio 76
16.11.1956 (1956 to 1980)	John Edward Bennett (Farmer)	Volume 712 Folio 76
06.11.1980 (1980 to 1986)	Sylpa Pty. Limited	Volume 712 Folio 76
18.11.1986 (1986 to 2019)	Maxwell Gregory Sinclair Ailsa Catherine Sinclair	Volume 712 Folio 76 Then 5/33/758825 Now 15/1204078

As regards to the part numbered 2 on attached Cadastral Records Enquiry Report: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
09.11.1909 (1909 to 1956)	Robert William Bray (Farmer)	Volume 712 Folio 86
11.07.1956 (1956 to 1963)	William Melville Bray (Farmer) (Section 94 Application not investigated)	Volume 712 Folio 86
15.03.1963 (1963 to 1963)	Hedley James Ballantyne (Mail Contractor)	Volume 712 Folio 86
15.03.1963 (1963 to 1987)	John Edward Bennett (Farmer)	Volume 712 Folio 86
24.09.1987 (1987 to 1992)	DJ's Food (Wholesale) Pty Limited	Volume 712 Folio 86 Now 6/33/758825
26.03.1992 (1992 to 2015)	The Council of The Shire of Bega Valley Now Bega Valley Shire Council	6/33/758825
06.05.2015 (2015 to 2019)	Maxwell Gregory Sinclair Ailsa Catherine Sinclair	6/33/758825 Now 15/1204078

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

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

Continued as regards to the whole of Lot 15 D.P. 1204078: -

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
16.04.2019 (2019 to Date)	# Jeanette May Stolzenhein # Kelvin John Stolzenhein	15/1204078

 # Denotes current registered proprietor

Leases: - NIL

Easements: -

- 16.01.2015 (D.P. 1204078): Easement to drain water variable widith affecting the part(s) shown so burdened in the title diagram.

Yours Sincerely
Taylor Wilson
7th November 2022

Appendix G – Council Documentation

MUNICIPALITY
SHIRE of IMLAY

Sir,–

I, the undersigned, hereby make application for the approval of the Council to plans and specifications (two copies supplied herewith) of a building which I propose to erect and complete within twelve months from date of approval.

Particulars are as follow:–

Class of Building Hotel additions
Here state whether detached, semi-detached, dwelling, flats, shop and dwelling, garage, stable, additions, or as the case may be.

State whether new or second-hand materials are to be used new.

HOTEL ROYAL

Location of Building.

Portion Lot 19 & 20 Section 33 Street or road Quondola Estate

Town or locality PAMBULA Area Frontage Depth

NAME OF OWNER INLAND HOTELS PTY LTD Address 171 GREENWICH RD GREENWICH

NAME OF BUILDER To be Erected Address

SUMMARY OF SPECIFICATION.
Note: Sizes must be given.

Number and particulars of all rooms and outhouses 15 new motel Rooms New ladies & Gents toilets, remodel saloon bar & dining room Provide licenses suite

Foundation Concrete No. of Stories 1 Damp Proof Course Material aluminium

Material of Outer Walls Brick Partition Walls Brick Material of Roofs – Main gal iron

Roofs – Subsidiary gal iron Verandah gal iron Floor Joists 4×2

Ceiling Joists 4×2 Wall Plates 4×3 Rafters 4×2 Bearers 4×4

Corner Studs 4×2 Other Studs 4×2 Height of Rooms, floor to ceiling 9' 0"

Proposed Method of Ventilation natural

Proposed Method of Lighting electricity & natural

Proposed Method of Drainage absorption trenches Is Sewer Available? no.

Particulars of Closet Accommodation see plans Is Bathroom or Laundry Detached?

(Closet must be strictly in accordance with Local Government Ordinance 44.)

Strike out any of the following not included in Cost of Building:–~~Stove~~, Bath, Copper, Tubs, Water Supply, Sewerage, Lighting, Fencing. NEW WORK

Total Value of Buildings £ 13,000.

Cost of Fencing £ / / Value of Allotment £ / /

Height and Description of Fencing

Note.–Block Plan, showing Building and all Outhouses must be shown on next leaf.

Applicant to state whether builder, owner or architect Architect

Signature of Applicant [redacted]

NOTE.–The form below this line is for the use of Council only.

REPORT on Application

Assessment No.
Application No. 60/60
Fees:–No. 4454 Amount 26.0.0
Paid on 27/7/60

[redacted]

Building Surveyor or Vice-Chairman of Committee

Dealt with by Council 26/8/ 1960 Result approved

Plans and Specifications returned on 3/8/ 1960 to Mr Mathews, Licensee Royal Hotel, Pambula

Date 16/I/62 Application No. [illegible] also 25/62

The Shire Clerk,
Imlay Shire Council,
EDEN, N.S.W.

Sir,

I, the undersigned, hereby make application for the approval of the Council to Plans and Specifications of a Building which I propose to erect and complete within TWELVE MONTHS from the date of approval.

Particulars are as follows:

Class of Building Erection I5 Motel Units, and re-Modelling of Royal Hotel.
(Here state Dwelling, Shop, Garage, Additions to Dwelling, or as the case may be).

Total Value of Buildings to be erected £I5,000 Value of Land £800/0/0d

LOCATION OF BUILDING

Portion ..... Sub Lot ..... Lot I9/20 Section 33 Street Quondola.

Town or Locality Pambula Frontage I32Ft. Depth 375Ft. (Area .....)

Name of Owner Inland Hotels Pty. Ltd. Address 'Royal Hotel'.

Name of Builder P. Robinson. Address Pambula.

Number and description of existing buildings on allotment Stables. 4. Toilets 4.

Purpose for which the building is to be used Accommodation and meals, and sale of Liquors.

SUMMARY OF SPECIFICATIONS

State whether new or second-hand materials are to be used New.

Materials used for Foundations Concrete & Steel. External Walls Glass & Fibro End walls Brick Cavity.

Internal Linings Cement &Canite Roof Corrugated Fibro Style .....

Height of Rooms (Floor to Ceiling) I0' 3 '' Damp Proof Course Material Visqueen Sisalkraft ''Hesheen''.

Proposed Method of Disposal of Roof Water Absobtion trenches

	Size	Spaced		Size	Spaced
Bearers			Corner Studs	4 X 2""	2' Centres
Floor Joints	Concrete		Studs	4 X 3"	3' Centres
Bottom Plates			Ceiling Joists		
Top Plates			Rafters	6 X 2""	

Is Septic Tank to be installed Yes Is Water available Yes.

Applicant to state whether owner, builder or architect Owner.

Number of sets of plans and specifications lodged (minimum 2 sets) Lodged 2 sets.

INLAND HOTELS PTY. LIMITED

[redacted]

THIS APPLICATION IS NOT ACCEPTABLE IF COMPLETED, INCLUDING PAGE 2.

OFFICE USE ONLY

FEES PAID

Building Fee 33 : - : -

Septic Tank Fee : :

Deposit : :

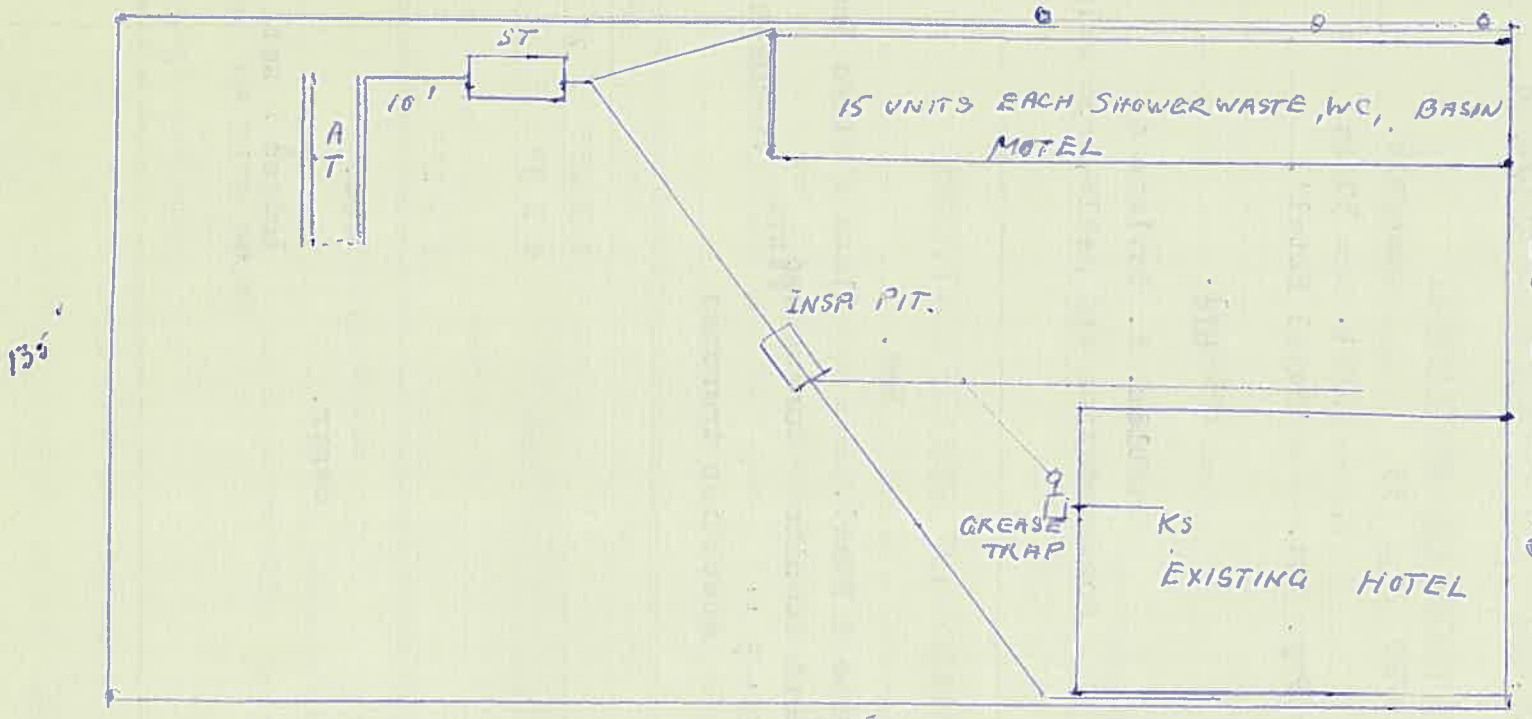
..... : :

TOTAL : :

Receipt No. 3134 3204

Date 16. 1. 62

MOTEL UNIT NOW TO BE 50' BACK FROM STREET



BAR WASTE NOT TO ENTER SEPTIC TANK

BUILDING APPLICATION

(Local Government Act, 1919, Ordinance 71, as amended)

REQUIREMENTS—

TWO PLANS (in ink) each showing Floor Plans, Elevation and Section to scale, TWO BLOCK PLANS, TWO SPECIFICATIONS (typewritten), AND THE PRESCRIBED FEE MUST ACCOMPANY THIS APPLICATION.
(For instructions as to particulars required regarding Application, Plans, Notices, etc., see Council's Inspector.)

THE SHIRE CLERK,
IMLAY SHIRE COUNCIL,
EDEN, N.S.W.

I HEREBY GIVE NOTICE that it is my intention, subject to the approval of the Council, to erect on the property described hereunder, the building set out in the plans and specifications herewith. Structure to be substantially commenced within a period of twelve (12) months.

†NOTE—Where the applicant is not the owner, written consent of the owner to the proposed building must be obtained and submitted with this application.

USE BLOCK LETTERS

OWNER† JACK CHRISTAIN & MERVYN LEWIS HANSEN
(NAMES IN FULL)

POSTAL ADDRESS ROYAL WILLOWS HOTEL. MOTEL. PAMBULA.

BUILDER OWNER. (P. ROBINSON.)

POSTAL ADDRESS AS. ABOVE.

STREET or ROAD QUONDOLA ST. TOWN PAMBULA.
(of Building Block)

DESIGNATION OF LAND
(This information MUST be supplied by the Applicant)

Section No. 33 Lot. No 19+20 Portion No.

Deposited Plan No.: Estate

Frontage 132' 5¾" Depth 331' - 7¾" Area Sq.ft.

CLASS OF BUILDING Dwelling
(State whether detached, semi-detached dwelling, flats, shop and dwelling, garage, etc.)

State whether new or second-hand materials are to be used

Materials used for Foundations Concrete Size 21"×12" External Walls Brick Studs 4"×1½"

Internal Linings Hard Board. Roof ~~C.G.IRON.~~ clip lock Rafters 8×1½ Style ~~Skillion~~ Flat

Height of Rooms (Floor to Ceiling) 8' Damp Proof Course Material Malthoid

Proposed Method of Disposal of Roof Water (Note: To street if possible) To street if Possable

Is Septic Tank to be installed? INSTALLED. Is water available? Yes.

AREA OF ROOMS: Sleeping 1 126, 2 108, 3 144, 4 ....., Living 252., Kitchen 108, Bathroom 72, Laundry 52.,

Combined Bathroom/Laundry ....., Verandahs 45, W.C./E.C. .....

TOTAL FLOOR PLAN AREA (including all walls and verandahs) 1045 sq. ft.

ESTIMATED VALUE OF BUILDING (including all materials and fencing, new and second-hand, plus labour, including value of any work done by the owner or voluntary labour). $8000.00

NOTE: 1.—No building is to be commenced until an official permit is received.
2.—No building is to be occupied until permission has been granted by the Council.

Owner's Initials J. J.H.

FEE HEREWITH: $22.00

SIGNED [redacted]
(Applicant)

NOTE: Fee $1 per $200 to $2,000 and 40c. per $200 there after—Min. fee $1; Max. $800. Septic Tank fee $6.

DATE 15/7/1969

STATE WHETHER OWNER†, BUILDER or ARCHITECT OWNER

OFFICE USE ONLY

LODGED: Date .....

By .....

FEES PAID

Building Fee	22:00.	
Septic Tank Fee	:	Date .....
Other Plan Printing	1:50.	
TOTAL	$:	Receipt No. 3204

THE BLOCK PLAN TO BE DRAWN ON THE INSIDE (Scale: 20' equals 1")

(Note Special Conditions on the back page).

All communications to be addressed to the Shire Clerk.

SHIRE OF IMLAY

Council Chambers
Imlay Street,
Eden. 2551

BUILDING PERMIT

Reference:
J.C. & ML. HANSEN
ROYAL WILLOWS HOTEL-MOTEL
PAMBULA

22.8.69

THIS IS TO CERTIFY that the Plans and Specifications numbered 134/69
submitted by Mr. ML. HANSEN of PAMBULA.
for the erection of PETROL PUMP, for ROYAL WILLOWS HOTEL-MOTEL
on Lot 19/20 Port/Section 33 of QUONDOLA ST PAMBULA
have been approved by the above Council subject to the special conditions set out in this form hereunder, this approval shall not extend to or affect the rights of the Council in respect of any matter appearing in or arising out of such plans and Specifications which is not in conformity with Ord. Nos. 44, 45, 46, 71 and all requirements of the Local Government Act, 1919, particularly in relation to PART XII of the Act.

OWNER: J.C. & M.L. HANSEN

BUILDER: NOT KNOWN

.....
(SHIRE CLERK)

SPECIAL CONDITIONS

(a) This permit is issued subject to the conditions and/or alterations marked by Council on the stamped approved plans and specifications.

(b) All construction of accesses shall be in accordance with the requirements of this Council. Council's Engineer to be consulted before any work commences.

(c) The builder shall provide a temporary sanitary service, and in all Scavanging areas the pan shall be serviced by Council's Contractor.

(d) The builder SHALL GIVE COUNCIL'S OFFICERS not less than 48 HOURS NOTICE of works construction in accordance with the attached FORM, OR at any other stage required and listed below.

(e) SPECIAL CONDITIONS IMPOSED BY TOWN PLANNING REGULATIONS shall be met during construction under this Permit.

(f) Provided the pump installation complies in all respects to the requirements of the mines dept.

(g) Provided the pump is not within 12' of the street alignment or other boundary.

(h) Provided no laws or regulation precludes the installation as proposed.

Council Chambers,
EDEN. 2551

DEVELOPMENT CONSENT No.

I hereby make application for Development Consent and approval of the Council to plans and specifications of a building which I propose to erect within twelve months from date of approval.

Name of Owner J C & M L. HANSEN Phone No. 5
Address HOTEL. MOTEL. PAMBULA.

Name of Builder - Phone No. -
Address -

Lot No. 19 & 20 House No. - Street QUONDOLA
Section 33 Town PAMBULA.
Frontage 132 Depth 338 Area

Type of Building
New or Second Hand Materials
Materials of Outer Walls
Materials of Roof
Closet Accommodation
Floor Area of Proposed Building
Is Road Kerbed and Guttered and Footpath Constructed
TOTAL VALUE OF PROPOSED BUILDING $ NO COST

Full description of building and existing use of land. including plant, machinery, manufacturing works and processes (if applicable) PETROL PUMP.

Was the land in the present ownership on 12.3.65 NO
If not, when acquired 15 - 5 - 69
Present use of the land HOTEL MOTEL
Was it so used prior to 12.3.65 YES
Does the proposal involve the extension of use onto adjoining land NO
If previous Interim Development or Development Consent was granted state date of approval and Application No. NO -
Application is hereby made to extend that approval to coincide with any Building Approval in respect of this application

NOTE: ALL THE ABOVE INFORMATION SHOULD BE SUBMITTED.

I declare that to the best of my knowledge and belief, the particulars set out in this application are correct in every detail and that if this application is approved, the building will be erected in strict conformity with the plans and specifications submitted and any conditions imposed in the approval and in compliance with the Local Government Act.

Date 13 - 8 - 69

Signature of Owner [redacted]
(or Representative appointed in writing)

IMPORTANT: If applicant is not owner of property the following must be completed:

I hereby appoint J. L. Hansen as my representative to apply for development consent for premises described above.

Signature of Owner [redacted]

FEES:

Building	$	**Receipt No.**	**Date Paid:**
Road Alignment Levels	$		
Septic Tank	$		
Sewerage Diagram	$		
Builder's Sanitary	$		
TOTAL	$	**Valuation No.**	

Two copies of plans and specifications shall be submitted but where the application is a combined building and development (Town Planning) application plans shall be in triplicate.

The plans of the building shall consist of a general plan and a block plan.

The general plan of the building shall show a plan of each floor section and elevation of the building which shall indicate the height, design, construction and provision for fire prevention and fire escapes, if any, the levels of the lowest floor and of any yard or open space belonging thereto and levels of adjacent ground.

The block plan shall be drawn to a scale of 40ft. to 1 inch.

The specification of the building shall describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply.

THE BUILDING FEE IS CALCULATED ON THE FOLLOWING SCALE:

Fee is $1.00 for each $200.00 or part thereof up to $2000.00 then 40c. for each $200 up to $100,000.00; for fees in excess of $100,000.00 refer to Council or clause [redacted]. 4¾(a) of Ord. 71.

Minimum fee $1.00; Maximum fee $2,000.00

Septic tank fee $6.00; sewerage connection diagram fee $6.00

Development application $2.00; Alignment Levels fee $4.00 (applicable on all new buildings or major alterations on land fronting a road without kerbing and guttering).

CLOSET ACCOMMODATION:

Closet accommodation is to be the first provision made in the erection of the building.
The closet must be placed in a position approved by Council and must be fitted with a movable box seat.
The closet must be erected and application for a service made 48 hours before commencement.

NOTICE ON COMMENCEMENT OF BUILDING:

Written notice must be forwarded to the Shire Clerk, 48 hours prior to the covering of any or all of the following works in order that they may be inspected:

(a) Trenches, when steel is in position and before footings are poured.

(b) Drains before they are covered in.

(c) Framework.

NOTICE ON COMPLETION OF BUILDING:

On completion of building written notice shall be forwarded to the Shire Clerk notifying that such building is ready for final inspection and no premises shall be permitted to be occupied before this inspection has been made.

LAPSE OF APPROVAL:

Any approval given to erect a building shall be void if the building work to which it refers is not substantially commenced within twelve months after the date of the approval.

COMPLIANCE WITH APPROVAL:

All work must be carried out:

(a) In conformity with the Local Government Act, 1919 (as amended) and the Ordinances made thereunder.

(b) In conformity with the application, plans and specifications in respect of which Council has given its approval, including all conditions attached thereto.

addressed to the Shire Clerk SHIRE OF IMLAY Imlay Street,

Reference: Eden. 2551

BUILDING PERMIT

Peter Robinson Constructions,
Box 85 P.O.,
PAMBULA. 2549

10th November, 1969.

THIS IS TO CERTIFY that the plans and specifications numbered 207/69 .....
submitted by Mr.J. & M. Hansen of Quondola Street, Pambula
for the erection of Hotel Alterations ,for self
on Lot Port/Sect. of Quondola Street, Pambula.
have been approved by the above Council subject to the special conditions set out in this form hereunder, this approval shall not extend to or affect the rights of the Council in respect of any matter appearing in or arising out of such Plans and Specifications which is not in conformity with Ord. Nos. 44, 45, 46, 71 and all requirements of the Local Government Act, 1919, particularly in relation to PART XII of the Act.

OWNER: J. & M. HANSEN

BUILDER: PETER ROBINSON CONSTRUCTION.

.....[redacted].
(SHIRE CLERK)

SPECIAL CONDITIONS

(a) This permit is issued subject to the conditions and/or alterations marked by Council on the stamped approved plans and specifications.

(b) All construction of accesses shall be in accordance with the requirements of this Council. Council's Engineer to be consulted before any work commences.

(c) The builder shall provide a temporary sanitary service, and in all Scavanging areas the pan shall be serviced by Council's Contractor.

(d) The builder SHALL GIVE COUNCIL'S OFFICERS not less than 48 HOURS NOTICE of works construction in accordance with the attached FORM, OR at any other stage required and listed below.

(e) SPECIAL CONDITIONS IMPOSED BY TOWN PLANNING REGULATIONS shall be met during construction under this Permit.

(f) Sizes of steel are subject to Engineer's detail.

(g) Fall of roof to be minimum 1" in 1 foot.

(h) All posts supporting beams to be on adequate footings.

(i) Plan is approved subject to Engineer's Detail.being submitted to Council of all steel before erection,

(j) Open area at rear of hotel must not be closed in.

The Shire Clerk,
Council Chambers,
EDEN. 2551

DEVELOPMENT CONSENT No.

I hereby make application for Development Consent and approval of the Council to plans and specifications of a building which I propose to erect within twelve months from date of approval.

Name of Owner J. & M. HANSEN Phone No. 5
Address ROYAL WILLOWS HOTEL MOTEL.

Name of Builder PETER ROBINSON CONSTRUCTIONS Phone No. 121
Address P.O. BOX 85 PAMBULA.

Lot No. House No. Street QUONDOLA ST.
Section Town PAMBULA.
Frontage Depth Area

Type of Building ALTERATION & ADDITIONS
New or Second Hand Materials NEW.
Materials of Outer Walls AS PER. SPEC.
Materials of Roof CUSTOM ORB.
Closet Accommodation EXISTING.
Floor Area of Proposed Building
Is Road Kerbed and Guttered and Footpath Constructed YES.
TOTAL VALUE OF PROPOSED BUILDING $ 3000.00.

Full description of building and existing use of land. including plant, machinery, manufacturing works and processes (if applicable) HOTEL - MOTEL
THIS IS ENTIRE USE OF LAND.

Was the land in the present ownership on 12.3.65 NO.
If not, when acquired APPROX 6 MONTHS AGO.
Present use of the land AS ABOVE.
Was it so used prior to 12.3.65 YES.
Does the proposal involve the extension of use onto adjoining land NO.
If previous Interim Development or Development Consent was granted state date of approval and Application No.
Application is hereby made to extend that approval to coincide with any Building Approval in respect of this application

NOTE: ALL THE ABOVE INFORMATION SHOULD BE SUBMITTED.

I declare that to the best of my knowledge and belief, the particulars set out in this application are correct in every detail and that if this application is approved, the building will be erected in strict conformity with the plans and specifications submitted and any conditions imposed in the approval and in compliance with the Local Government Act.

Date 3/10/69.

Signature of Owner [redacted]
(or Representative appointed in writing) J & M. Hansen

IMPORTANT: If applicant is not owner of property the following must be completed:

I hereby appoint PETER ROBINSON. as my representative to apply for development consent for premises described above.

Signature of Owner [redacted]

FEES:

Building	$ 12-00	**Receipt No.**	**Date Paid:**
Road Alignment Levels	$	2084	3-11-69.
Septic Tank	$		
Sewerage Diagram	$		
Builder's Sanitary	$		
TOTAL	$ 12.00	**Valuation No.**	3182

Two copies of plans and specifications shall be submitted but where the application is a combined building and development (Town Planning) application plans shall be in triplicate.

The plans of the building shall consist of a general plan and a block plan.

The general plan of the building shall show a plan of each floor section and elevation of the building which shall indicate the height, design, construction and provision for fire prevention and fire escapes, if any, the levels of the lowest floor and of any yard or open space belonging thereto and levels of adjacent ground.

The block plan shall be drawn to a scale of 40ft. to 1 inch.

The specification of the building shall describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply.

THE BUILDING FEE IS CALCULATED ON THE FOLLOWING SCALE:

Fee is $1.00 for each $200.00 or part thereof up to $2000.00 then 40c. for each $200 up to $100,000.00; for fees in excess of $100,000.00 refer to Council or clause [redacted]. 4¾(a) of Ord. 71.

Minimum fee $1.00; Maximum fee $2,000.00

Septic tank fee $6.00; sewerage connection diagram fee $6.00

Development application $2.00; Alignment Levels fee $4.00 (applicable on all new buildings or major alterations on land fronting a road without kerbing and guttering).

CLOSET ACCOMMODATION:

Closet accommodation is to be the first provision made in the erection of the building.
The closet must be placed in a position approved by Council and must be fitted with a movable box seat.
The closet must be erected and application for a service made 48 hours before commencement.

NOTICE ON COMMENCEMENT OF BUILDING:

Written notice must be forwarded to the Shire Clerk, 48 hours prior to the covering of any or all of the following works in order that they may be inspected:

(a) Trenches, when steel is in position and before footings are poured.

(b) Drains before they are covered in.

(c) Framework.

NOTICE ON COMPLETION OF BUILDING:

On completion of building written notice shall be forwarded to the Shire Clerk notifying that such building is ready for final inspection and no premises shall be permitted to be occupied before this inspection has been made.

LAPSE OF APPROVAL:

Any approval given to erect a building shall be void if the building work to which it refers is not substantially commenced within twelve months after the date of the approval.

COMPLIANCE WITH APPROVAL:

All work must be carried out:

(a) In conformity with the Local Government Act, 1919 (as amended) and the Ordinances made thereunder.

(b) In conformity with the application, plans and specifications in respect of which Council has given its approval, including all conditions attached thereto.

The Shire Clerk,
Council Chambers,
EDEN. 2551

DEVELOPMENT CONSENT No.

I hereby make application for Development Consent and approval of the Council to plans and specifications of a building which I propose to erect within twelve months from date of approval.

Name of Owner J. & M. HANSEN Phone No. 5-
Address ROYAL WILLOWS HOTEL MOTEL.

Name of Builder PETER ROBINSON CONSTRUCTION Phone No. 121
Address P.O. BOX 85 PAMBULA.

Lot No. House No. Street QUONDOLA ST.
Section Town PAMBULA.
Frontage Depth Area

Type of Building ALTERATION & ADDITIONS
New or Second Hand Materials NEW.
Materials of Outer Walls AS PER. SPEC.
Materials of Roof CUSTOM ORB.
Closet Accommodation EXISTING.
Floor Area of Proposed Building
Is Road Kerbed and Guttered and Footpath Constructed YES.
TOTAL VALUE OF PROPOSED BUILDING $ 3000.00.

Full description of building and existing use of land. including plant, machinery, manufacturing works and processes (if applicable) HOTEL - MOTEL
THIS IS ENTIRE USE OF LAND.
Was the land in the present ownership on 12.3.65 NO.
If not, when acquired APPROX 6 MONTHS AGO.
Present use of the land AS ABOVE.
Was it so used prior to 12.3.65 YES.
Does the proposal involve the extension of use onto adjoining land NO.
If previous Interim Development or Development Consent was granted state date of approval and Application No.
Application is hereby made to extend that approval to coincide with any Building Approval in respect of this application

NOTE: ALL THE ABOVE INFORMATION SHOULD BE SUBMITTED.

I declare that to the best of my knowledge and belief, the particulars set out in this application are correct in every detail and that if this application is approved, the building will be erected in strict conformity with the plans and specifications submitted and any conditions imposed in the approval and in compliance with the Local Government Act.

Date 3/10/69.

Signature of Owner [redacted]
(or Representative appointed in writing) J & M. Hansen

IMPORTANT: If applicant is not owner of property the following must be completed:

I hereby appoint PETER ROBINSON. as my representative to apply for development consent for premises described above.

Signature of Owner [redacted]

FEES:

Building	$ 12-00	Receipt No.	Date Paid:
Road Alignment Levels	$	2084	3-11-69.
Septic Tank	$		
Sewerage Diagram	$		
Builder's Sanitary	$		
TOTAL	$ 12.00	Valuation No.	318

APPLICATION No. 207/69

SHIRE OF IMLAY

APPLICATION FOR DEVELOPMENT CONSENT AND BUILDING APPROVAL

The Shire Clerk,
Council Chambers,
EDEN. 2551

DEVELOPMENT CONSENT No.

I hereby make application for Development Consent and approval of the Council to plans and specifications of a building which I propose to erect within twelve months from date of approval.

Name of Owner J. & M. HANSEN Phone No. 6-
Address ROYAL WILLOWS HOTEL MOTEL.

Name of Builder PETER ROBINSON CONSTRUCTIONS Phone No. 121
Address P.O. BOX 85 PAMBULA.

Lot No. House No. Street QUONDOLA ST.
Section Town PAMBULA.
Frontage Depth Area

Type of Building ALTERATION & ADDITIONS
New or Second Hand Materials NEW.
Materials of Outer Walls AS PER. SPEC.
Materials of Roof CUSTOM ORB.
Closet Accommodation EXISTING.
Floor Area of Proposed Building
Is Road Kerbed and Guttered and Footpath Constructed YES.
TOTAL VALUE OF PROPOSED BUILDING $ 3000.00.

Full description of building and existing use of land. including plant, machinery, manufacturing works and processes (if applicable) HOTEL - MOTEL
THIS IS ENTIRE USE OF LAND.
Was the land in the present ownership on 12.3.65 NO.
If not, when acquired APPROX 6 MONTHS AGO.
Present use of the land AS ABOVE.
Was it so used prior to 12.3.65 YES.
Does the proposal involve the extension of use onto adjoining land NO.
If previous Interim Development or Development Consent was granted state date of approval and Application No.
Application is hereby made to extend that approval to coincide with any Building Approval in respect of this application

NOTE: ALL THE ABOVE INFORMATION SHOULD BE SUBMITTED.

I declare that to the best of my knowledge and belief, the particulars set out in this application are correct in every detail and that if this application is approved, the building will be erected in strict conformity with the plans and specifications submitted and any conditions imposed in the approval and in compliance with the Local Government Act.

Date 3/12/69.

Signature of Owner [redacted]
(or Representative appointed in writing) per J & M. Hansen

IMPORTANT: If applicant is not owner of property the following must be completed:

I hereby appoint PETER ROBINSON. as my representative to apply for development consent for premises described above.

Signature of Owner [redacted]

INSTRUCTIONS TO APPLICANTS

DETAILS OF PLANS AND SPECIFICATIONS WHICH MUST ACCOMPANY THIS APPLICATION

Two copies of plans and specifications shall be submitted but where the application is a combined building and development (Town Planning) application plans shall be in triplicate.

The plans of the building shall consist of a general plan and a block plan.

The general plan of the building shall show a plan of each floor section and elevation of the building which shall indicate the height, design, construction and provision for fire prevention and fire escapes, if any, the levels of the lowest floor and of any yard or open space belonging thereto and levels of adjacent ground.

The block plan shall be drawn to a scale of 40ft. to 1 inch.

The specification of the building shall describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply.

THE BUILDING FEE IS CALCULATED ON THE FOLLOWING SCALE:

Fee is $1.00 for each $200.00 or part thereof up to $2000.00 then 40c. for each $200 up to $100,000.00; for fees in excess of $100,000.00 refer to Council or clause [redacted]. 4¾(a) of Ord. 71.

Minimum fee $1.00; Maximum fee $2,000.00

Septic tank fee $6.00; sewerage connection diagram fee $6.00

Development application $2.00; Alignment Levels fee $4.00 (applicable on all new buildings or major alterations on land fronting a road without kerbing and guttering).

CLOSET ACCOMMODATION:

Closet accommodation is to be the first provision made in the erection of the building.
The closet must be placed in a position approved by Council and must be fitted with a movable box seat.
The closet must be erected and application for a service made 48 hours before commencement.

NOTICE ON COMMENCEMENT OF BUILDING:

Written notice must be forwarded to the Shire Clerk, 48 hours prior to the covering of any or all of the following works in order that they may be inspected:

(a) Trenches, when steel is in position and before footings are poured.

(b) Drains before they are covered in.

(c) Framework.

NOTICE ON COMPLETION OF BUILDING:

On completion of building written notice shall be forwarded to the Shire Clerk notifying that such building is ready for final inspection and no premises shall be permitted to be occupied before this inspection has been made.

LAPSE OF APPROVAL:

Any approval given to erect a building shall be void if the building work to which it refers is not substantially commenced within twelve months after the date of the approval.

APPLICATION No. 332/75

SHIRE OF IMLAY

APPLICATION FOR BUILDING APPROVAL

The Shire Clerk,
Council Chambers,
EDEN. 2551

I hereby make application for Development Consent and approval of the Council to plans and specifications of a building which I propose to erect within twelve months from date of approval.

Name of Owner LOUIS ALEXANDER GEITZELL Phone No. 5
Address ROYAL WILLOWS HOTEL - MOTEL - PAMBULA 2549

Name of Builder KEITH YOUNG P/L STEEL GARAGES Phone No. 146
Address TOALLA ST PAMBULA

Lot No. 19-20. Section No. 33. Street QUONDOLLA
House No. 35-37. Town PAMBULA
Frontage ..... Depth ..... Area .....

Type of Building STEEL GARAGE
(Dwelling, Shop, Flat, Additions to Dwelling etc.)

PROPOSED USE OF BUILDING

IMPORTANT. This section must be completed for all buildings except dwellings. Please read * NOTE over page. Failure to properly complete this section will result in rejection of the application.

GARAGE CAR & GARDENING TOOLS.

New or Second Hand Materials NEW Materials of Roof 26 GAUGE C.G.I
Materials of Outer Walls 26 GAUGE V'CRIMP Floor Area of Proposed Building .....
If previous Interim Development or Development Consent was granted state date of approval and Application No. .....

TOTAL VALUE OF PROPOSED BUILDING $ 1500-00

NOTE: ALL THE ABOVE INFORMATION SHOULD BE SUBMITTED.

I declare that to the best of my knowledge and belief, the particulars set out in this application are correct in every detail and that if this application is approved, the building will be erected in strict conformity with the plans and specifications submitted and any conditions imposed in the approval and in compliance with the Local Government Act.

Date 1-12-75

Signature of Owner [redacted]
(or Representative appoin[redacted])

IMPORTANT: If applicant is not owner of property the following must be completed:

I hereby appoint ..... as my representative to apply for development consent for premises described above.

Signature of Owner .....

FEES: Building ..... $ ..... **Receipt No.** 55565.

INSTRUCTIONS TO APPLICANTS

DETAILS OF PLANS AND SPECIFICATIONS WHICH MUST ACCOMPANY THIS APPLICATION

At least two copies of plans and specifications shall be submitted.

The plans of the building shall consist of a general plan and block plan, and shall be drawn in ink.

Tracing paper plans will not be accepted.

The general plan of the building shall show a plan of each floor section and EACH elevation of the building which shall indicate the height, design, construction and provision for fire prevention and fire escapes, if any, the levels of the lowest floor and of any yard or open space belonging thereto and levels of adjacent ground. Minimum Scale 1 : 100.

The block plan shall be drawn to a scale of 1 : 400 minimum, and must clearly show all buildings on the site, all driveways, car parking spaces, and all building-to-boundary dimensions.

Plans for additions must be coloured to clearly distinguish between existing and proposed building work.

The specification of the building shall describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply.

THE BUILDING FEE IS CALCULATED ON THE FOLLOWING SCALE:

Fee is $1.00 for each $200.00 or part thereof up to $2000.00 then 40c. for each $200 up to $100,000.00; then 6.5c. for each $200 over $100,000.00.

Minimum fee $1.00.

Alignment Levels fee $4.00 (applicable on all new buildings or major alterations on land fronting a road).

Certificate of Classification fee $10.00. This fee must be paid on submission of Building Application.
Does NOT apply to dwellings and outbuildings.

Septic Tank and Sewerage Connection Fees. (To be paid only when accompanied by the relevant Septic Tank Application Form or House Drainage (sewerage connection) Application Form).

Septic Tank Fee (plans in triplicate): $8.00

Application for plan of House Drainage, Sewerage Connection Fee: $8.00.
PLUS Plan Fee $2.00 for first W.C. connected;
PLUS 50c. for each additional W.C. connected.

CLOSET ACCOMMODATION:

Closet accommodation is to be the first provision made in the erection of the building.
The closet must be placed in a position approved by Council and must be fitted with a movable box seat.
The closet must be erected and application for a service made 48 hours before commencement.

NOTICE ON COMMENCEMENT OF BUILDING:

Written notice must be forwarded to the Shire Clerk, 48 hours prior to the covering of any or all of the following works in order that they may be inspected:

(a) Trenches, when steel is in position and before footings are poured.

(b) Dampcourse and antcaps with bearers and joists in place.

(c) Drains before they are covered in.

(d) Framework.

NOTICE ON COMPLETION OF BUILDING:

On completion of building written notice shall be forwarded to the Shire Clerk notifying that such building is ready for final inspection and no premises shall be permitted to be occupied before this inspection has been made. For buildings other than dwellings and outbuildings, a Certificate of Classification will be issued.

LAPSE OF APPROVAL:

Any approval given to erect a building shall be void if the building work to which it refers is not substantially commenced within twelve months after the date of the approval.

COMPLIANCE WITH APPROVAL:

All work must be carried out:
(a) In conformity with the Local Government Act, 1919 (as amended) and the Ordinances made thereunder.
(b) In conformity with the application, plans and specifications in respect of which Council has given its approval, including all conditions attached thereto.

*** NOTE. PROPOSED USE OF BUILDING:**

It is imperative that this section of the application form is correctly completed. If it is intended that different

Council Chambers,
EDEN. 2551

I hereby make application for Development Consent and approval of the Council to plans and specifications of a building which I propose to erect within twelve months from date of approval.

Name of Owner LOUIS ALEXANDER GEITZELL Phone No. 5
Address ROYAL WILLIAMS HOTEL - MOTEL - PAMBULA 2549

Name of Builder KEITH YOUNG P/L STEEL GARAGES Phone No. 146
Address TOALLA ST PAMBULA

Lot No. 19-20 Section No. 33 Street QUONDOLLA
House No. 35-37 Town PAMBULA
Frontage Depth Area

Type of Building STEEL GARAGE
(Dwelling, Shop, Flat, Additions to Dwelling etc.)

PROPOSED USE OF BUILDING
IMPORTANT. This section must be completed for all buildings except dwellings. Please read * NOTE over page. Failure to properly complete this section will result in rejection of the application.
GARAGE CAR & GARDENING TOOLS.

New or Second Hand Materials NEW Materials of Roof 26 GAUGE C.G.I
Materials of Outer Walls 26 GAUGE V'CRIMP Floor Area of Proposed Building
If previous Interim Development or Development Consent was granted state date of approval and Application No.

TOTAL VALUE OF PROPOSED BUILDING $ 1500-00

NOTE: ALL THE ABOVE INFORMATION SHOULD BE SUBMITTED.
I declare that to the best of my knowledge and belief, the particulars set out in this application are correct in every detail and that if this application is approved, the building will be erected in strict conformity with the plans and specifications submitted and any conditions imposed in the approval and in compliance with the Local Government Act.

Date 1-12-75

Signature of Owner [redacted]
(or Representative appointed in writing)

IMPORTANT: If applicant is not owner of property the following must be completed:

I hereby appoint as my representative to apply for development consent for premises described above.

Signature of Owner

FEES: Building $
Certificate of Classification $
Road Alignment Levels $
TOTAL $

Receipt No. 55565.
Amount $ 7-50
Valuation No.
Date Paid 2-12-75

NOTE: See over for further details as to requirements and fees payable.

Tracing paper plans will not be accepted.

The general plan of the building shall show a plan of each floor section and EACH elevation of the building which shall indicate the height, design, construction and provision for fire prevention and fire escapes, if any, the levels of the lowest floor and of any yard or open space belonging thereto and levels of adjacent ground. Minimum Scale 1 : 100.

The block plan shall be drawn to a scale of 1 : 400 minimum, and must clearly show all buildings on the site, all driveways, car parking spaces, and all building-to-boundary dimensions.

Plans for additions must be coloured to clearly distinguish between existing and proposed building work.

The specification of the building shall describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply.

THE BUILDING FEE IS CALCULATED ON THE FOLLOWING SCALE:

Fee is $1.00 for each $200.00 or part thereof up to $2000.00 then 40c. for each $200 up to $100,000.00; then 6.5c. for each $200 over $100,000.00.

Minimum fee $1.00.

Alignment Levels fee $4.00 (applicable on all new buildings or major alterations on land fronting a road).

Certificate of Classification fee $10.00. This fee must be paid on submission of Building Application.
Does NOT apply to dwellings and outbuildings.

Septic Tank and Sewerage Connection Fees. (To be paid only when accompanied by the relevant Septic Tank Application Form or House Drainage (sewerage connection) Application Form).

Septic Tank Fee (plans in triplicate): $8.00

Application for plan of House Drainage, Sewerage Connection Fee: $8.00.
PLUS Plan Fee $2.00 for first W.C. connected;
PLUS 50c. for each additional W.C. connected.

CLOSET ACCOMMODATION:

Closet accommodation is to be the first provision made in the erection of the building.
The closet must be placed in a position approved by Council and must be fitted with a movable box seat.
The closet must be erected and application for a service made 48 hours before commencement.

NOTICE ON COMMENCEMENT OF BUILDING:

Written notice must be forwarded to the Shire Clerk, 48 hours prior to the covering of any or all of the following works in order that they may be inspected:

(a) Trenches, when steel is in position and before footings are poured.

(b) Dampcourse and antcaps with bearers and joists in place.

(c) Drains before they are covered in.

(d) Framework.

NOTICE ON COMPLETION OF BUILDING:

On completion of building written notice shall be forwarded to the Shire Clerk notifying that such building is ready for final inspection and no premises shall be permitted to be occupied before this inspection has been made. For buildings other than dwellings and outbuildings, a Certificate of Classification will be issued.

LAPSE OF APPROVAL:

Any approval given to erect a building shall be void if the building work to which it refers is not substantially commenced within twelve months after the date of the approval.

COMPLIANCE WITH APPROVAL:

All work must be carried out:
(a) In conformity with the Local Government Act, 1919 (as amended) and the Ordinances made thereunder.
(b) In conformity with the application, plans and specifications in respect of which Council has given its approval, including all conditions attached thereto.

*** NOTE. PROPOSED USE OF BUILDING:**

It is imperative that this section of the application form is correctly completed. If it is intended that different parts of the building shall have different uses, then each separate use must be clearly described and the part of the building in which that use is to take place must be clearly defined.
The use and area of use must be clearly shown on the plans as well as described on the application form.

TELEPHONE NOS.
EDEN 61603 & 61744
P.O BOX 96

NOTE: ALL COMMUNICATIONS
TO BE ADDRESSED TO
SHIRE CLERK

SHIRE OF IMLAY
IMLAY SHIRE No 101 N.S.W.

COUNCIL CHAMBERS.
IMLAY STREET.
EDEN. N.S.W.. 2551.

REFERENCE NO.
JB:MS
YOURS:
Mr. Barnard

9th December, 1980.

Sylpa Pty. Ltd.,
C/- Royal Willows Hotel,
Quondola Street,
PAMBULA, N.S.W., 2549.

House No.
Lot. 19 & 20 Section. 33
Street. Quondolo Street
Town. Pambula
Building Permit No. 487/80

Dear Sir / Madam,

Please find attached copy of the Building Permit for the Building Application recently submitted.

The Approved plans with a copy of the above permit attached to the back of the floor plans has been forwarded to the

Owner
XXXXXXXXX
Builder

Please ensure that the Conditions of Approval are adhered to in the construction of the building.

PLEASE NOTE. The Building must not be occupied without the PRIOR approval of Council.

Yours faithfully,

W. C. FRIPP.
Shire Clerk.

Per [redacted]

Enc.

APPLICATION No. 489/80

SHIRE OF IMLAY

APPLICATION FOR BUILDING APPROVAL

The Shire Clerk,
Council Chambers,
EDEN. 2551

I hereby make application for Building Approval of the Council to plans and specifications of a building which I propose to erect within twelve months from date of approval.

Name of Owner SYLPA PTY. LTD. Phone No. 56005
Address C/- ROYAL WILLOWS HOTEL - PAMBULA

Name of Builder ..... Phone No. .....
Address .....

House No. ..... Street QUONDRO ST Town PAMBULA
Lot No. 19 & 20 Section No. 33 Deposited Plan .....
Frontage 40.23 Depth 100.58 M Area 4046

Type of Building INTERNAL ALTERATIONS TO HOTEL.
(Dwelling, Shop, Flat, Additions to Dwelling etc.)

PROPOSED USE OF BUILDING
IMPORTANT. This section must be completed for all buildings except dwellings. Please read • NOTE over page. Failure to properly complete this section will result in rejection of the application.

REMOVAL OF WALLS TO PROVIDE LARGER LOUNGE AREA, AND CHARCOAL GRILL ROOM.

New or Second Hand Materials NEW Materials of Roof GAL IRON
Materials of Outer Walls BRICK & W'BOARD. Floor Area of Proposed Building UNCHANGED m²
If previous Interim Development Consent was granted state date of approval and Application No. .....

TOTAL VALUE OF PROPOSED BUILDING $ 5000

NOTE: ALL THE ABOVE INFORMATION SHOULD BE SUBMITTED.

I declare that to the best of my knowledge and belief, the particulars set out in this application are correct in every detail and that if this application is approved, the building will be erected in strict conformity with the plans and specifications submitted and any conditions imposed in the approval and in compliance with the Local Government Act.

Date 1-12-80 Signature of Owner [redacted]
(or Representative appointed in writing)

IMPORTANT: If applicant is not owner of property the following must be completed:

I hereby appoint ..... as my representative to apply for consent for the works described above.

Signature of Owner .....

FEES: Building ..... $ 25-00

INSTRUCTIONS TO APPLICANTS

DETAILS OF PLANS AND SPECIFICATIONS WHICH MUST ACCOMPANY THIS APPLICATION

All plans and specifications must be in Metric terms.

At least two copies of plans and specifications shall be submitted.

The plans of the building shall consist of a general plan and block plan, and shall be drawn in ink.

Tracing paper plans will not be accepted.

The general plan of the building shall show a plan of each floor section and EACH elevation of the building which shall indicate the height, design, construction and provision for fire prevention and fire escapes, if any, the levels of the lowest floor and of any yard or open space belonging thereto and levels of adjacent ground. Minimum Scale 1 : 100.

The block plan shall be drawn to a scale of 1 : 400 minimum, and must clearly show all buildings on the site, all driveways, car parking spaces, and all building-to-boundary dimensions.

Plans for additions must be coloured to clearly distinguish between existing and proposed building work.

The specification of the building shall describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply.

THE BUILDING FEE IS CALCULATED ON THE FOLLOWING SCALE:

Fee is $1.00 for each $200.00 or part thereof up to $2000.00 then 40c. for each $200 up to $100,000.00; then 6.5c. for each $200 over $100,000.00.

Minimum fee $1.00.

OTHER FEES:

Road Alignment Level Fees.
Applicable on all new buildings or major alterations on land fronting a road.

Certificate of Classification Fee:
This fee must be paid on submission of Building Application.
Does NOT apply to dwellings and outbuildings.

Septic Tank and Sewerage Connection Fees.
To be paid only when accompanied by the relevant Septic Tank Application Form or House Drainage (Sewerage Connection) Application Form.

} See attached Schedule of Fees

CLOSET ACCOMMODATION:

Closet accommodation is to be the first provision made in the erection of the building.
The closet must be placed in a position approved by Council and must be fitted with a movable box seat.
The closet must be erected and application for a service made 48 hours before commencement.

NOTICE ON COMMENCEMENT OF BUILDING:

Written notice must be forwarded to the Shire Clerk, 48 hours prior to the covering of any or all of the following works in order that they may be inspected:

(a) Trenches, when steel is in position and before footings are poured.
(b) Dampcourse and antcaps with bearers and joists in place.
(c) Drains before they are covered in.
(d) Framework.
(e) Framework on completion of brickwork.

NOTICE ON COMPLETION OF BUILDING:

On completion of building written notice shall be forwarded to the Shire Clerk notifying that such building is ready for final inspection and no premises shall be permitted to be occupied before this inspection has been made. For buildings other than dwellings and outbuildings, a Certificate of Classification will be issued.

LAPSE OF APPROVAL:

Any approval given to erect a building shall be void if the building work to which it refers is not substantially commenced within twelve months after the date of the approval.

COMPLIANCE WITH APPROVAL:

All work must be carried out:

(a) In conformity with the Local Government Act, 1919 (as amended) and the Ordinances made thereunder.
(b) In conformity with the application, plans and specifications in respect of which Council has given its approval, including all conditions attached thereto.

EDEN. 2551

I hereby make application for Building Approval of the Council to plans and specifications of a building which I propose to erect within twelve months from date of approval.

Name of Owner SYLPA PTY. LTD. Phone No. 56005
Address C/- ROYAL WILLOWS HOTEL - PAMBULA

Name of Builder ..... Phone No. .....
Address .....

House No. ..... Street QUONDOLO ST Town PAMBULA
Lot No. 19 & 20 Section No. 33 Deposited Plan .....
Frontage 40·23 Depth 100·58 M Area 4044·6

Type of Building INTERNAL ALTERATIONS TO HOTEL.
(Dwelling, Shop, Flat, Additions to Dwelling etc.)

PROPOSED USE OF BUILDING
IMPORTANT. This section must be completed for all buildings except dwellings. Please read • NOTE over page. Failure to properly complete this section will result in rejection of the application.

REMOVAL OF WALLS TO PROVIDE LARGER LOUNGE AREA, AND CHARCOAL GRILL ROOM.

New or Second Hand Materials NEW Materials of Roof GAL IRON
Materials of Outer Walls BRICK & W'BOARD. Floor Area of Proposed Building UNCHANGED m²
If previous Interim Development Consent was granted state date of approval and Application No. .....

TOTAL VALUE OF PROPOSED BUILDING $ 5000

NOTE: ALL THE ABOVE INFORMATION SHOULD BE SUBMITTED.

I declare that to the best of my knowledge and belief, the particulars set out in this application are correct in every detail and that if this application is approved, the building will be erected in strict conformity with the plans and specifications submitted and any conditions imposed in the approval and in compliance with the Local Government Act.

Date 1-12-80

Signature of Owner [redacted]
(or Representative appointed in writing)

IMPORTANT: If applicant is not owner of property the following must be completed:

I hereby appoint ..... as my representative to apply for consent for the works described above.

Signature of Owner .....

FEES: Building $ 25·00
Builders Deposit $ —
Certificate of Classification $ —
Road Alignment Levels $ —
Contribution P.Rec/Bond/Carparking $ —
Insurance Premium $ —
TOTAL $ 25·00

Insurance/O.B. Permit sighted ☐
Amount $ 25·00
Date Paid 3/12/80 Receipt No. 141899

NOTE: See over for further details as to requirements, fees payable and Locality Sketch.

At least two copies of plans and specifications shall be submitted.

The plans of the building shall consist of a general plan and block plan, and shall be drawn in ink.

Tracing paper plans will not be accepted.

The general plan of the building shall show a plan of each floor section and EACH elevation of the building which shall indicate the height, design, construction and provision for fire prevention and fire escapes, if any, the levels of the lowest floor and of any yard or open space belonging thereto and levels of adjacent ground. Minimum Scale 1 : 100.

The block plan shall be drawn to a scale of 1 : 400 minimum, and must clearly show all buildings on the site, all driveways, car parking spaces, and all building-to-boundary dimensions.

Plans for additions must be coloured to clearly distinguish between existing and proposed building work.

The specification of the building shall describe the construction and materials of which the building is to be built and the method of drainage, sewerage and water supply.

THE BUILDING FEE IS CALCULATED ON THE FOLLOWING SCALE:

Fee is $1.00 for each $200.00 or part thereof up to $2000.00 then 40c. for each $200 up to $100,000.00; then 6.5c. for each $200 over $100,000.00.

Minimum fee $1.00.

OTHER FEES:

Road Alignment Level Fees.
Applicable on all new buildings or major alterations on land fronting a road.

Certificate of Classification Fee:
This fee must be paid on submission of Building Application.
Does NOT apply to dwellings and outbuildings.

Septic Tank and Sewerage Connection Fees.
To be paid only when accompanied by the relevant Septic Tank Application Form or House Drainage (Sewerage Connection) Application Form.

} See attached Schedule of Fees

CLOSET ACCOMMODATION:

Closet accommodation is to be the first provision made in the erection of the building.
The closet must be placed in a position approved by Council and must be fitted with a movable box seat.
The closet must be erected and application for a service made 48 hours before commencement.

NOTICE ON COMMENCEMENT OF BUILDING:

Written notice must be forwarded to the Shire Clerk, 48 hours prior to the covering of any or all of the following works in order that they may be inspected:

(a) Trenches, when steel is in position and before footings are poured.
(b) Dampcourse and antcaps with bearers and joists in place.
(c) Drains before they are covered in.
(d) Framework.
(e) Framework on completion of brickwork.

NOTICE ON COMPLETION OF BUILDING:

On completion of building written notice shall be forwarded to the Shire Clerk notifying that such building is ready for final inspection and no premises shall be permitted to be occupied before this inspection has been made. For buildings other than dwellings and outbuildings, a Certificate of Classification will be issued.

LAPSE OF APPROVAL:

Any approval given to erect a building shall be void if the building work to which it refers is not substantially commenced within twelve months after the date of the approval.

COMPLIANCE WITH APPROVAL:

All work must be carried out:

(a) In conformity with the Local Government Act, 1919 (as amended) and the Ordinances made thereunder.
(b) In conformity with the application, plans and specifications in respect of which Council has given its approval, including all conditions attached thereto.

*** NOTE. PROPOSED USE OF BUILDING:**

It is imperative that this section of the application form is correctly completed. If it is intended that different parts of the building shall have different uses, then each separate use must be clearly described and the part of the building in which that use is to take place must be clearly defined.
The use and area of use must be clearly shown on the plans as well as described on the application form.

Appendix H – Chain of Custody + Sample Receipt Forms

Sheet 1 of

Site: 35-37 Quondola Street Pambula NSW

Project No: E25846

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Phenols	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM [A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
MW1 - 1		J, P, VC	28-10-22	AM/PM		X	X			X			X	X														
MW2 - 1		↓				↓	X			X			X	X														
Bi102 - M1							X			X			X	X														
QD 281022							X				X																	
QT 281022	(1)										X																	
QR 281022		↓									X																	
QTS 281022	(1)	VC	lab prepared	↓								X																
QTB 281022		VC	↓	↓		↓						X																

Comments

HM [A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

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

Job No: 309482
Date Received: 1-11-22
Time Received: 17:30
Received By: AO - ELSSYD
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

LABORATORY TURNAROUND
- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other

Container Type:
J = solvent washed, acid rinsed, Tefton sealed glass jar
S = solvent washed, acid rinsed glass bottle
P = natural HDPE plastic bottle
VC = glass vial, Tefton Septum
ZLB = Zip-Lock Bag BB = Bulk Bag

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (SGS):
Print: Jack McNaughton	Print:
Signature:	Signature:
Date: 31-10-22	Date:

Sampler's Comments:

Please send to envirolab:
- QTZ81022
- ~~QTS81022~~

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

eiaustralia
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

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

SAMPLE RECEIPT ADVICE

Client Details

Client	EI Australia
Attention	Lab Email

Sample Login Details

Your reference	E25846, 35-37 Quondola Street Pambula NSW
Envirolab Reference	309482
Date Sample Received	01/11/2022
Date Instructions Received	01/11/2022
Date Results Expected to be Reported	08/11/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	16
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

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

Sample ID	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	HM in water - dissolved
QT281022	✓	✓	✓

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

Additional Info

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

Sheet 4 of 4

Site: 8 Ovondola Street 35-37 Pambula NSW

Project No: E25846

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	SOIL	WATER	0.45 µm field filtered	OTHER	HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM [A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
BH13_0.3-0.4		J, ZLB	27-10-22	AM/PM	X				X																		
BH13_1.4-1.5		↓	↓	↓	↓					X																	
BH14_0.3-0.4									X																		
BH14_1.4-1.5																											
QD271022		J	27-10-22	AM/PM	X						X																
QT271022	(1)	J	27.10.22	AM/PM	X						X																
QTS271022		VC			X							X															
QTB271022		VC	↓		X							X															
[redacted]2271022		S, P, VC.	↓			X					X																

Container Type:
J = solvent washed, acid rinsed, Teflon sealed glass jar
S = solvent washed, acid rinsed glass bottle
P = natural HDPE plastic bottle
VC = glass vial, Teflon Septum.
ZLB = Zip-Lock Bag BB = Bulk Bag

eiaustralia
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

COC June 2021 FORM v.5 - SGS

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Sampler's Name (EI):	Received by (SGS):
Print: Joel McNaughton	Print:
Signature:	Signature:
Date: 31-10-22	Date:

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

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

Job No: 309485

Date Received: 1-11-22

Time Received: 1830

Received By: AP

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

LABORATORY TURNAROUND
- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other____

Report with EI Waste Classification Table ☐

Sampler's Comments:
Please send the following to EnviroLab:
- QT271022.

Comments
HM [A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM [A]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

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

SAMPLE RECEIPT ADVICE

Client Details

Client	EI Australia
Attention	Lab Email

Sample Login Details

Your reference	E25846, Quondola Street, 35-37 Pambula NSW
Envirolab Reference	309483
Date Sample Received	01/11/2022
Date Instructions Received	01/11/2022
Date Results Expected to be Reported	08/11/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	16
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

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

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	Acid Extractable metalsin soil
QT271022	✓	✓	✓

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

Additional Info

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

Sheet 1 of

Site: 35-37 Quondola Street Pambula NSW

Project No: E25846

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER
MW1 - 1	1	S, P, VC	28-10-22	AM/PM		X	X	
MW2 - 1	2						X	
BH02 - M1	3						X	
QD 281022	4						X	
QT281022	5							
QR281022	6							
QTS 281022		VC	lab prepared					
QTB281022		VC						

Analysis

HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM A /TRH/BTEX/PAHs	HM A /TRH/BTEX	BTEX	VOCs	Phenols	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM A /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM B / PAH
	X			X	X														
	X			X	X														
	X			X	X														
		X		X	X														
		X																	
		X																	
		X	X																
		X	X																

Comments

HM A
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM B
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

SGS EHS Sydney COC
SE238475

LABORATORY TURNAROUND
- [X] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other ____

Container Type:
J = solvent washed, acid rinsed, Tefton sealed glass jar
S = solvent washed, acid rinsed glass bottle
P = natural HDPE plastic bottle
VC = glass vial, Tefton Septum
ZLB = Zip-Lock Bag BB = Bulk Bag

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Sampler's Name (EI):	Received by (SGS):
Print: Jack McNaughton	Print: M Basem
Signature:	Signature:
Date: 31-10-22	Date: 31.10.22 4.5°

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

Report with EI Waste Classification Table ☐

Sampler's Comments:
Please send to enviolab:
- QT281022
- ~~QTS281022~~

eiaustralia
Contamination | Remediation | Geotechnical
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

source: SE_Addroom.pdf page: 1 SDG Ref: SE238475_COC

Yin, Emily (Sydney)

From: Jock McNaughton - EIAustralia <jock.mcnaughton@eiaustralia.com.au>
Sent: Wednesday, 9 November 2022 9:17 AM
To: AU.SampleReceipt.Sydney, AU (Sydney); Laboratory Results - EIAustralia
Cc: Joel Heininger - EIAustralia
Subject: [EXTERNAL] RE: Report Job SE238475, your reference E25846 35-37 Quondola Street Pambula NSW, order number E25846

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

Hi SGS

There has been a change in naming for these samples, and I was wondering if was possible for the results to be reissued with the following name changes:

Previous Name	New Name
MW1-1	BH16M-1
MW2-1	BH15M-1

Also FYI, I will be requesting the soil samples for this project to have name changes as well.

If there are any further questions please let me know.

Kind Regards

Jock McNaughton
Environmental Scientist

T (02) 4254 1004 M 0458 466 738
E jock.mcnaughton@eiaustralia.com.au

Suite 101, Level 1
1 Burelli Street
Wollongong, NSW 2500

www.eiaustralia.com.au

Environmental | Geotechnical | Structural | Civil | Hazardous Materials

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

CONFIDENTIALITY - This email contains confidential and privileged information.
If you are not the intended recipient, our apologies - please destroy it and notify us so that we can appropriately re-address it.
Disclosure, copying, distribution or use of the cont ents of this email is strictly prohibited.

Please consider the environment before printing this email.

From: AU.Samplereceipt.Sydney@SGS.com [mailto:AU.Samplereceipt.Sydney@SGS.com]
Sent: Monday, 7 November 2022 5:17 PM
To: Jock McNaughton - EIAustralia; Laboratory Results - EIAustralia
Subject: Report Job SE238475, your reference E25846 35-37 Quondola Street Pambula NSW, order number E25846

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

SAMPLE RECEIPT ADVICE

SE238475

CLIENT DETAILS

Contact	Jock Mcnaughton
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	jock.mcnaughton@eiaustralia.com.au
Project	**E25846 35-37 Quondola Street Pambula NSW**
Order Number	**E25846**
Samples	5

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Mon 31/10/2022
Report Due	Mon 7/11/2022
SGS Reference	**SE238475**

SUBMISSION DETAILS

This is to confirm that 5 samples were received on Monday 31/10/2022. Results are expected to be ready by COB Monday 7/ 11/2022. Please quote SGS reference SE238475 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	5 Water
Date documentation received	31/10/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	**No**
Sample temperature upon receipt	15.6C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

COMMENTS

TS/TB sample not received

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

SAMPLE RECEIPT ADVICE

SE238475

CLIENT DETAILS

Client EI AUSTRALIA

Project E25846 35-37 Quondola Street Pambula NSW

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	PAH (Polynuclear Aromatic Hydrocarbons) in Water	Total Phenolics in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
001	BH16M-1	1	22	1	7	9	78	7
002	BH15M-1	1	22	1	7	9	78	7
003	BH02-M	1	22	1	7	9	78	7
004	QD281022	1	-	-	7	9	11	7
005	QR281022	1	-	-	7	9	11	7

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

Sheet 1 of 4

Site: 35-37 Quondola Street Pambula NSW

Project No: E25846

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM A /TRH/BTEX/PAHs	HM A /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM A /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM B / PAH
MW1_0.1-0.2	1	J, ZLB	26-10-22	PM	X				X																		
MW1_0.4-0.5		↓	↓	↓	↓																						
MW1_1.0-1.1	2									X																	
MW2_0.1-0.2	3								X																		
MW2_0.5-0.6	4				4					X																	
BH01_0.1-0.2	5	J, ZLB	27-10-22	AM/PM	X				X																		
BH01_0.9-1.0	6									X																	
BH02_0.1-0.2	7								X																		
BH02_0.5-0.6	8									X																	
BH02_1.3-1.4	9									X																	
BH02_2.0-2.1																											
BH02_2.5-2.6		↓	↓	↓	↓																						

Container Type:
J = solvent washed, acid rinsed, Tefton sealed glass jar
S = solvent washed, acid rinsed glass bottle
P = natural HDPE plastic bottle
VC = glass vial, Tefton Septum
ZLB = Zip-Lock Bag BB = Bulk Bag

Comments

HM A
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM B
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

SGS EHS Sydney COC
SE238476

LABORATORY TURNAROUND
- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other____

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Sampler's Name (EI):	Received by (SGS):
Print: Jack McNaughton	Print:
Signature:	Signature:
Date: 31-10-22	Date: 31.10.22 4.5

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

Report with EI Waste Classification Table ☐

Sampler's Comments:

eiaustralia
Contamination | Remediation | Geotechnical
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

source:SE_Ashmore.pdf page:4 SGS Ref:SE238476_COC

Sheet 2 of 4

Site: 35-37 Gwendola Street Rambula NSW

Project No: E25846

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM [A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
BH02_3.0-3.1	10	J, ZLB	27-10-22	AM/PM	X					X																		
BH02_3.5-3.6																												
BH02_4.0-4.1																												
BH02_4.5-4.6	11									X																		
BH03_0.1-0.2	12								X																			
BH03_0.5-0.6	13									X																		
BH04_0.1-0.2	14								X																			
BH04_0.5-0.6																												
BH05_0.1-0.2	15								X																			
BH05_0.5-0.6	16									X																		
BH06_0.1-0.2	17								X																			
BH06_0.7-0.8		↓	↓	↓	↓																							

Comments

HM [A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

LABORATORY TURNAROUND
- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other ____

Container Type:
J = solvent washed, acid rinsed, Tefton sealed glass jar
S = solvent washed, acid rinsed glass botlle
P = natural HDPE plastic bottle
VC = glass vial, Tefton Septum
ZLB = Zip-Lock Bag BB = Bulk Bag

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (SGS):
Print: Jock McNaughton	Print: M Barkley
Signature:	Signature:
Date: 31-10-22	Date: 31/10/22 4.50

Sampler's Comments:

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

eiaustralia
Contamination | Remediation | Geotechnical
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

Sheet 3 of 4

Site: 35-37 Quondola Street Pambula NSW.

Project No: E25846

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM [A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
BH07_0.1-0.2	18	J, ZLB	27.10.22	AM/PM	X				X																		
BH07_0.5-0.6		↓	↓	↓	↓																						
BH08_0.1-0.2	19								X																		
BH08_0.5-0.6	20									X																	
BH09_0.1-0.2	21								X																		
BH09_0.5-0.6																											
BH10_0.2-0.3	22								X																		
BH10_1.3-1.4																											
BH11_0.4-0.5	23								X																		
BH11_1.1-1.2																											
BH12_0.3-0.4	24								X																		
BH12_1.2-1.3		↓	↓	↓	↓																						

Container Type:
J = solvent washed, acid rinsed, Tefton sealed glass jar
S = solvent washed, acid rinsed glass bottle
P = natural HDPE plastic bottle
VC = glass vial, Tefton Septum
ZLB = Zip-Lock Bag BB = Bulk Bag

Comments

HM [A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

LABORATORY TURNAROUND
- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other____

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (SGS):
Print: Jock McNaughton	Print: MIROSLAV
Signature:	Signature:
Date: 31.10.22	Date: 3.11.22 9:50

Sampler's Comments:

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

eiaustralia
Contamination · Remediation · Geotechnical
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

Sheet 1 of 4

Site: 8 Ovondola Street 35-37 Pambula NSW

Project No: E25846

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM[A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM[A] /TRH/BTEX/PAHs	HM[A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM[A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM[B] / PAH
BH13_0.3-0.4	25	J, ZLB	27.10.22	AM/PM	X				X																		
BH13_1.4-1.5	26	↓	↓	↓	↓					X																	
BH14_0.3-0.4	27								X																		
BH14_1.4-1.5		↓	↓	↓	↓																						
QD271022	28	J	27.10.22	AM/PM	X						X																
QT271022		J	27.10.22	AM/PM	X						X																
QTS271022	29	VC			X							X															
QTB271022	30	VC			X							X															
[redacted]R271022	31	S,P,VL.				X					X																

Comments

HM[A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM[B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH
Total Phenol

LABORATORY TURNAROUND
- [X] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other_____

Container Type:
J = solvent washed, acid rinsed, Tefton sealed glass jar
S = solvent washed, acid rinsed glass bottle
P = natural HDPE plastic bottle
VC = glass vial, Tefton Septum
ZLB = Zip-Lock Bag BB = Bulk Bag

eiaustralia
Contamination | Remediation | Geotechnical
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

COC June 2021 FORM v.5 - SGS

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Sampler's Name (EI):	Received by (SGS):
Print: Jack McNaughton	Print: M Borsato
Signature:	Signature:
Date: 31-10-22	Date: 31.10.22 4:50

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

Report with EI Waste Classification Table ☐

Sampler's Comments:
Please send the following to EnviroLab:
- QT271022.

Yin, Emily (Sydney)

From: Jock McNaughton - EIAustralia <jock.mcnaughton@eiaustralia.com.au>
Sent: Wednesday, 9 November 2022 9:20 AM
To: AU.SampleReceipt.Sydney, AU (Sydney); AU.Environmental.Sydney, AU (Sydney)
Cc: Joel Heininger - EIAustralia
Subject: [EXTERNAL] RE: Report Job SE238476, your reference E25846 35-37 Quondola Street Pambula NSW, order number E25846

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

Hi SGS

As per my previous email, there have been a few name changes to the samples for this project E25846. For samples beginning with the following prefixes, can they please have the following changes:

Previous Name Prefix	New Name Prefix
MW1-1	BH16M-1
MW2-1	BH15M-1

If there are any further questions please let me know.

Kind Regards

Jock McNaughton
Environmental Scientist

T (02) 4254 1004 M 0458 466 738
E jock.mcnaughton@eiaustralia.com.au

Suite 101, Level 1
1 Burelli Street
Wollongong, NSW 2500

www.eiaustralia.com.au

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Please consider the environment before printing this email.

From: AU.Samplereceipt.Sydney@SGS.com [mailto:AU.Samplereceipt.Sydney@SGS.com]
Sent: Monday, 7 November 2022 5:12 PM
To: Jock McNaughton - EIAustralia; Laboratory Results - EIAustralia
Subject: Report Job SE238476, your reference E25846 35-37 Quondola Street Pambula NSW, order number E25846

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Dear Valued Customer,

SAMPLE RECEIPT ADVICE

SE238476

CLIENT DETAILS

Contact	Jock Mcnaughton
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	jock.mcnaughton@eiaustralia.com.au
Project	**E25846 35-37 Quondola Street Pambula NSW**
Order Number	**E25846**
Samples	31

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Mon 31/10/2022
Report Due	Mon 7/11/2022
SGS Reference	**SE238476**

SUBMISSION DETAILS

This is to confirm that 31 samples were received on Monday 31/10/2022. Results are expected to be ready by COB Monday 7/ 11/2022. Please quote SGS reference SE238476 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	30 Soil, 1 Water
Date documentation received	31/10/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.1C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

COMMENTS

13 soil samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.

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

SAMPLE RECEIPT ADVICE

SE238476

CLIENT DETAILS

Client EI AUSTRALIA

Project E25846 35-37 Quondola Street Pambula NSW

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BH16M_0.1-0.2	30	14	26	11	7	10	11	7
002	BH16M_1.0-1.1	-	-	26	-	7	10	11	7
003	BH15M_0.1-0.2	30	14	26	11	7	10	11	7
004	BH15M_0.5-0.6	-	-	26	-	7	10	11	7
005	BH01_0.1-0.2	30	14	26	11	7	10	11	7
006	BH01_0.9-1.0	-	-	26	-	7	10	11	7
007	BH02_0.1-0.2	30	14	26	11	7	10	11	7
008	BH02_0.5-0.6	-	-	26	-	7	10	11	7
009	BH02_1.3-1.4	-	-	26	-	7	10	11	7
010	BH02_3.0-3.1	-	-	26	-	7	10	11	7
011	BH02_4.5-4.6	-	-	26	-	7	10	11	7
012	BH03_0.1-0.2	30	14	26	11	7	10	11	7
013	BH03_0.5-0.6	-	-	26	-	7	10	11	7
014	BH04_0.1-0.2	30	14	26	11	7	10	11	7
015	BH05_0.1-0.2	30	14	26	11	7	10	11	7
016	BH05_0.5-0.6	-	-	26	-	7	10	11	7
017	BH06_0.1-0.2	30	14	26	11	7	10	11	7
018	BH07_0.1-0.2	30	14	26	11	7	10	11	7
019	BH08_0.1-0.2	30	14	26	11	7	10	11	7
020	BH08_0.5-0.6	-	-	26	-	7	10	11	7
021	BH09_0.1-0.2	30	14	26	11	7	10	11	7
022	BH10_0.2-0.3	30	14	26	11	7	10	11	7
023	BH11_0.4-0.5	30	14	26	11	7	10	11	7
024	BH12_0.3-0.4	30	14	26	11	7	10	11	7

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE238476

CLIENT DETAILS

Client EI AUSTRALIA

Project E25846 35-37 Quondola Street Pambula NSW

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	BH13_0.3-0.4	30	14	26	11	7	10	11	7
026	BH13_1.4-1.5	-	-	26	-	7	10	11	7
027	BH14_0.3-0.4	30	14	26	11	7	10	11	7
028	QD271022	-	-	-	-	7	10	11	7
029	QTS271022	-	-	-	-	-	-	8	-
030	QTB271022	-	-	-	-	-	-	11	-

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE238476

CLIENT DETAILS

Client EI AUSTRALIA

Project E25846 35-37 Quondola Street Pambula NSW

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
001	BH16M_0.1-0.2	2	1	1
002	BH16M_1.0-1.1	-	1	1
003	BH15M_0.1-0.2	2	1	1
004	BH15M_0.5-0.6	-	1	1
005	BH01_0.1-0.2	2	1	1
006	BH01_0.9-1.0	-	1	1
007	BH02_0.1-0.2	2	1	1
008	BH02_0.5-0.6	-	1	1
009	BH02_1.3-1.4	-	1	1
010	BH02_3.0-3.1	-	1	1
011	BH02_4.5-4.6	-	1	1
012	BH03_0.1-0.2	2	1	1
013	BH03_0.5-0.6	-	1	1
014	BH04_0.1-0.2	2	1	1
015	BH05_0.1-0.2	2	1	1
016	BH05_0.5-0.6	-	1	1
017	BH06_0.1-0.2	2	1	1
018	BH07_0.1-0.2	2	1	1
019	BH08_0.1-0.2	2	1	1
020	BH08_0.5-0.6	-	1	1
021	BH09_0.1-0.2	2	1	1
022	BH10_0.2-0.3	2	1	1
023	BH11_0.4-0.5	2	1	1
024	BH12_0.3-0.4	2	1	1

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE238476

CLIENT DETAILS

Client EI AUSTRALIA

Project E25846 35-37 Quondola Street Pambula NSW

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
025	BH13_0.3-0.4	2	1	1
026	BH13_1.4-1.5	-	1	1
027	BH14_0.3-0.4	2	1	1
028	QD271022	-	1	1
030	QTB271022	-	-	1

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE238476

CLIENT DETAILS

Client EI AUSTRALIA

Project E25846 35-37 Quondola Street Pambula NSW

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
031	QR271022	1	7	9	11	7

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

Appendix I – Laboratory Analytical Reports + DQOs

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

CERTIFICATE OF ANALYSIS 309482

Client Details

Client	EI Australia
Attention	Lab Email
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details

Your Reference	**E25846, 35-37 Quondola Street Pambula NSW**
Number of Samples	1 Water
Date samples received	01/11/2022
Date completed instructions received	01/11/2022

Analysis Details

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

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

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

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

Report Details

Date results requested by	08/11/2022
Date of Issue	08/11/2022

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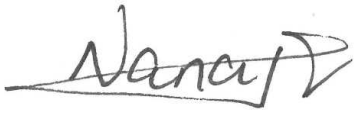
Results Approved By
Giovanni Agosti, Group Technical Manager
Steven Luong, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Water		
Our Reference		309482-1
Your Reference	UNITS	QT281022
Date Sampled		28/10/2022
Type of sample		Water
Date extracted	-	04/11/2022
Date analysed	-	07/11/2022
TRH C_6 - C_9	µg/L	<10
TRH C_6 - C_{10}	µg/L	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	103
Surrogate toluene-d8	%	103
Surrogate 4-BFB	%	106

svTRH (C10-C40) in Water		
Our Reference	UNITS	309482-1
Your Reference		QT281022
Date Sampled		28/10/2022
Type of sample		Water
Date extracted	-	03/11/2022
Date analysed	-	04/11/2022
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	<100
TRH C_{29} - C_{36}	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	<50
TRH >C_{10} - C_{16}	µg/L	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50
TRH >C_{16} - C_{34}	µg/L	<100
TRH >C_{34} - C_{40}	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	<50
Surrogate o-Terphenyl	%	89

HM in water - dissolved		
Our Reference	UNITS	309482-1
Your Reference		QT281022
Date Sampled		28/10/2022
Type of sample		Water
Date prepared	-	04/11/2022
Date analysed	-	04/11/2022
Arsenic-Dissolved	µg/L	<1
Cadmium-Dissolved	µg/L	<0.1
Chromium-Dissolved	µg/L	<1
Copper-Dissolved	µg/L	<1
Lead-Dissolved	µg/L	<1
Mercury-Dissolved	µg/L	<0.05
Nickel-Dissolved	µg/L	1
Zinc-Dissolved	µg/L	19

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			04/11/2022	[NT]	[NT]	[NT]	[NT]	04/11/2022	[NT]
Date analysed	-			07/11/2022	[NT]	[NT]	[NT]	[NT]	07/11/2022	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	95	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	104	[NT]	[NT]	[NT]	[NT]	103	[NT]
Surrogate toluene-d8	%		Org-023	103	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate 4-BFB	%		Org-023	103	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			03/11/2022	[NT]	[NT]	[NT]	[NT]	03/11/2022	[NT]
Date analysed	-			03/11/2022	[NT]	[NT]	[NT]	[NT]	04/11/2022	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	82	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	82	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	[NT]
Surrogate o-Terphenyl	%		Org-020	104	[NT]	[NT]	[NT]	[NT]	82	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Date prepared	-			04/11/2022	[NT]	[NT]	[NT]	[NT]	04/11/2022	[NT]
Date analysed	-			04/11/2022	[NT]	[NT]	[NT]	[NT]	04/11/2022	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	99	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

vTRH & BTEXN in Water NEPM - The PQL has been raised as sample/s 309482-2 was/were foamy and therefore required a dilution.

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CERTIFICATE OF ANALYSIS 309483

Client Details

Client	EI Australia
Attention	Lab Email
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details

Your Reference	**E25846, Quondola Street, 35-37 Pambula NSW**
Number of Samples	1 Soil
Date samples received	01/11/2022
Date completed instructions received	01/11/2022

Analysis Details

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

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

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

Report Details

Date results requested by	08/11/2022
Date of Issue	08/11/2022

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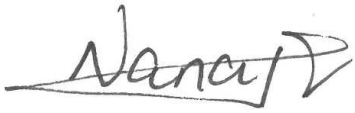
Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Giovanni Agosti, Group Technical Manager
Kyle Gavrily, Senior Chemist
Liam Timmins, Organic Instruments Team Leader

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		309483-1
Your Reference	UNITS	QT271022
Date Sampled		27/10/2022
Type of sample		Soil
Date extracted	-	02/11/2022
Date analysed	-	08/11/2022
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	93

svTRH (C10-C40) in Soil		
Our Reference		309483-1
Your Reference	UNITS	QT271022
Date Sampled		27/10/2022
Type of sample		Soil
Date extracted	-	03/11/2022
Date analysed	-	05/11/2022
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	84

Acid Extractable metals in soil		
Our Reference		309483-1
Your Reference	UNITS	QT271022
Date Sampled		27/10/2022
Type of sample		Soil
Date prepared	-	07/11/2022
Date analysed	-	07/11/2022
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	3
Copper	mg/kg	<1
Lead	mg/kg	5
Mercury	mg/kg	<0.1
Nickel	mg/kg	<1
Zinc	mg/kg	3

Moisture		
Our Reference		309483-1
Your Reference	UNITS	QT271022
Date Sampled		27/10/2022
Type of sample		Soil
Date prepared	-	03/11/2022
Date analysed	-	04/11/2022
Moisture	%	11

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			02/11/2022	[NT]	[NT]	[NT]	[NT]	02/11/2022	[NT]
Date analysed	-			08/11/2022	[NT]	[NT]	[NT]	[NT]	08/11/2022	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	77	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	77	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	88	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	78	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	75	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	72	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	93	[NT]	[NT]	[NT]	[NT]	88	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date extracted	-			03/11/2022	[NT]	[NT]	[NT]	[NT]	03/11/2022	[NT]
Date analysed	-			05/11/2022	[NT]	[NT]	[NT]	[NT]	05/11/2022	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	71	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	71	[NT]
Surrogate o-Terphenyl	%		Org-020	86	[NT]	[NT]	[NT]	[NT]	89	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			07/11/2022	[NT]	[NT]	[NT]	[NT]	07/11/2022	[NT]
Date analysed	-			07/11/2022	[NT]	[NT]	[NT]	[NT]	07/11/2022	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	98	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	102	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

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Project	**E25846 35-37 Quondola Street Pambula NSW**
Order Number	**E25846**
Samples	7

LABORATORY DETAILS

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SGS Reference	**SE238475 R2**
Date Received	31/10/2022
Date Reported	15/11/2022

COMMENTS

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

This report cancels and supersedes the report No.SE238475 R1 dated 09/11/22 issued by SGS Environment, Health and Safety due to the inclusion of TB/TS as requested.

SIGNATORIES

Dong LIANG
Metals/Inorganics Team Leader

Huong CRAWFORD
Production Manager

Ly Kim HA
Organic Section Head

Teresa NGUYEN
Organic Chemist

VOCs in Water [AN433] Tested: 4/11/2022

PARAMETER	UOM	LOR	BH16M-1 WATER - 28/10/2022 SE238475.001	BH15M-1 WATER - 28/10/2022 SE238475.002	BH02-M WATER - 28/10/2022 SE238475.003	QD281022 WATER - 28/10/2022 SE238475.004	QR281022 WATER - 28/10/2022 SE238475.005
Benzene	µg/L	0.5	<0.5	<0.5	**12**	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5	**1.2**	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	**5.9**	<0.5	<0.5
m/p-xylene	µg/L	1	<1	<1	**29**	<1	<1
o-xylene	µg/L	0.5	<0.5	<0.5	**2.4**	<0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5	<1.5	**32**	<1.5	<1.5
Total BTEX	µg/L	3	<3	<3	**51**	<3	<3
Naphthalene (VOC)	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane (CFC-12)	µg/L	5	<5	<5	<5	-	-
Chloromethane	µg/L	5	<5	<5	<5	-	-
Vinyl chloride (Chloroethene)	µg/L	0.3	<0.3	<0.3	<0.3	-	-
Bromomethane	µg/L	10	<10	<10	<10	-	-
Chloroethane	µg/L	5	<5	<5	<5	-	-
Trichlorofluoromethane	µg/L	1	<1	<1	<1	-	-
Acetone (2-propanone)	µg/L	10	<10	<10	<10	-	-
Iodomethane	µg/L	5	<5	<5	<5	-	-
1,1-dichloroethene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Acrylonitrile	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Dichloromethane (Methylene chloride)	µg/L	5	<5	<5	<5	-	-
Allyl chloride	µg/L	2	<2	<2	<2	-	-
Carbon disulfide	µg/L	2	<2	<2	<2	-	-
trans-1,2-dichloroethene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
MtBE (Methyl-tert-butyl ether)	µg/L	2	<2	<2	<2	-	-
1,1-dichloroethane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Vinyl acetate	µg/L	10	<10	<10	<10	-	-
MEK (2-butanone)	µg/L	10	<10	<10	<10	-	-
cis-1,2-dichloroethene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Bromochloromethane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Chloroform (THM)	µg/L	0.5	<0.5	<0.5	<0.5	-	-
2,2-dichloropropane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2-dichloroethane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,1,1-trichloroethane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,1-dichloropropene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Carbon tetrachloride	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Dibromomethane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2-dichloropropane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	<0.5	<0.5	<0.5	-	-
2-nitropropane	µg/L	100	<100	<100	<100	-	-
Bromodichloromethane (THM)	µg/L	0.5	<0.5	<0.5	<0.5	-	-
MIBK (4-methyl-2-pentanone)	µg/L	5	<5	<5	<5	-	-
cis-1,3-dichloropropene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
trans-1,3-dichloropropene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,1,2-trichloroethane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,3-dichloropropane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Dibromochloromethane (THM)	µg/L	0.5	<0.5	<0.5	<0.5	-	-
2-hexanone (MBK)	µg/L	5	<5	<5	<5	-	-
1,2-dibromoethane (EDB)	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Tetrachloroethene (Perchloroethylene,PCE)	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,1,1,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Chlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Bromoform (THM)	µg/L	0.5	<0.5	<0.5	<0.5	-	-
cis-1,4-dichloro-2-butene	µg/L	1	<1	<1	<1	-	-
Styrene (Vinyl benzene)	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2,3-trichloropropane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
trans-1,4-dichloro-2-butene	µg/L	1	<1	<1	<1	-	-

VOCs in Water [AN433] Tested: 4/11/2022 (continued)

PARAMETER	UOM	LOR	BH16M-1 WATER - 28/10/2022 SE238475.001	BH15M-1 WATER - 28/10/2022 SE238475.002	BH02-M WATER - 28/10/2022 SE238475.003	QD281022 WATER - 28/10/2022 SE238475.004	QR281022 WATER - 28/10/2022 SE238475.005
Isopropylbenzene (Cumene)	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Bromobenzene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
n-propylbenzene	µg/L	0.5	<0.5	<0.5	**1.2**	-	-
2-chlorotoluene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
4-chlorotoluene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,3,5-trimethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
tert-butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2,4-trimethylbenzene	µg/L	0.5	<0.5	<0.5	**3.8**	-	-
sec-butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,3-dichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,4-dichlorobenzene	µg/L	0.3	<0.3	<0.3	<0.3	-	-
p-isopropyltoluene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2-dichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
n-butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2-dibromo-3-chloropropane	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2,4-trichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Hexachlorobutadiene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
1,2,3-trichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	-	-
Total VOC	µg/L	10	<10	<10	**56**	-	-

VOCs in Water [AN433] Tested: 4/11/2022 (continued)

PARAMETER	UOM	LOR	QTS281022 WATER - 28/10/2022 SE238475.006	QTB281022 WATER - 28/10/2022 SE238475.007
Benzene	µg/L	0.5	[97%]	<0.5
Toluene	µg/L	0.5	[96%]	<0.5
Ethylbenzene	µg/L	0.5	[95%]	<0.5
m/p-xylene	µg/L	1	[93%]	<1
o-xylene	µg/L	0.5	[93%]	<0.5
Total Xylenes	µg/L	1.5	-	<1.5
Total BTEX	µg/L	3	-	<3
Naphthalene (VOC)	µg/L	0.5	[93%]	<0.5
Dichlorodifluoromethane (CFC-12)	µg/L	5	-	-
Chloromethane	µg/L	5	-	-
Vinyl chloride (Chloroethene)	µg/L	0.3	-	-
Bromomethane	µg/L	10	-	-
Chloroethane	µg/L	5	-	-
Trichlorofluoromethane	µg/L	1	-	-
Acetone (2-propanone)	µg/L	10	-	-
Iodomethane	µg/L	5	-	-
1,1-dichloroethene	µg/L	0.5	-	-
Acrylonitrile	µg/L	0.5	-	-
Dichloromethane (Methylene chloride)	µg/L	5	-	-
Allyl chloride	µg/L	2	-	-
Carbon disulfide	µg/L	2	-	-
trans-1,2-dichloroethene	µg/L	0.5	-	-
MtBE (Methyl-tert-butyl ether)	µg/L	2	-	-
1,1-dichloroethane	µg/L	0.5	-	-
Vinyl acetate	µg/L	10	-	-
MEK (2-butanone)	µg/L	10	-	-
cis-1,2-dichloroethene	µg/L	0.5	-	-
Bromochloromethane	µg/L	0.5	-	-
Chloroform (THM)	µg/L	0.5	-	-
2,2-dichloropropane	µg/L	0.5	-	-
1,2-dichloroethane	µg/L	0.5	-	-
1,1,1-trichloroethane	µg/L	0.5	-	-
1,1-dichloropropene	µg/L	0.5	-	-
Carbon tetrachloride	µg/L	0.5	-	-
Dibromomethane	µg/L	0.5	-	-
1,2-dichloropropane	µg/L	0.5	-	-
Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	-	-
2-nitropropane	µg/L	100	-	-
Bromodichloromethane (THM)	µg/L	0.5	-	-
MIBK (4-methyl-2-pentanone)	µg/L	5	-	-
cis-1,3-dichloropropene	µg/L	0.5	-	-
trans-1,3-dichloropropene	µg/L	0.5	-	-
1,1,2-trichloroethane	µg/L	0.5	-	-
1,3-dichloropropane	µg/L	0.5	-	-
Dibromochloromethane (THM)	µg/L	0.5	-	-
2-hexanone (MBK)	µg/L	5	-	-
1,2-dibromoethane (EDB)	µg/L	0.5	-	-
Tetrachloroethene (Perchloroethylene,PCE)	µg/L	0.5	-	-
1,1,1,2-tetrachloroethane	µg/L	0.5	-	-
Chlorobenzene	µg/L	0.5	-	-
Bromoform (THM)	µg/L	0.5	-	-
cis-1,4-dichloro-2-butene	µg/L	1	-	-
Styrene (Vinyl benzene)	µg/L	0.5	-	-
1,1,2,2-tetrachloroethane	µg/L	0.5	-	-
1,2,3-trichloropropane	µg/L	0.5	-	-
trans-1,4-dichloro-2-butene	µg/L	1	-	-

VOCs in Water [AN433] Tested: 4/11/2022 (continued)

PARAMETER	UOM	LOR	QTS281022 WATER - 28/10/2022 SE238475.006	QTB281022 WATER - 28/10/2022 SE238475.007
Isopropylbenzene (Cumene)	µg/L	0.5	-	-
Bromobenzene	µg/L	0.5	-	-
n-propylbenzene	µg/L	0.5	-	-
2-chlorotoluene	µg/L	0.5	-	-
4-chlorotoluene	µg/L	0.5	-	-
1,3,5-trimethylbenzene	µg/L	0.5	-	-
tert-butylbenzene	µg/L	0.5	-	-
1,2,4-trimethylbenzene	µg/L	0.5	-	-
sec-butylbenzene	µg/L	0.5	-	-
1,3-dichlorobenzene	µg/L	0.5	-	-
1,4-dichlorobenzene	µg/L	0.3	-	-
p-isopropyltoluene	µg/L	0.5	-	-
1,2-dichlorobenzene	µg/L	0.5	-	-
n-butylbenzene	µg/L	0.5	-	-
1,2-dibromo-3-chloropropane	µg/L	0.5	-	-
1,2,4-trichlorobenzene	µg/L	0.5	-	-
Hexachlorobutadiene	µg/L	0.5	-	-
1,2,3-trichlorobenzene	µg/L	0.5	-	-
Total VOC	µg/L	10	-	-

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 4/11/2022

PARAMETER	UOM	LOR	BH16M-1 WATER - 28/10/2022 SE238475.001	BH15M-1 WATER - 28/10/2022 SE238475.002	BH02-M WATER - 28/10/2022 SE238475.003	QD281022 WATER - 28/10/2022 SE238475.004	QR281022 WATER - 28/10/2022 SE238475.005
TRH C6-C9	µg/L	40	<40	<40	**72**	<40	<40
Benzene (F0)	µg/L	0.5	<0.5	<0.5	**12**	<0.5	<0.5
TRH C6-C10	µg/L	50	<50	<50	**86**	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	<50	<50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 2/11/2022

PARAMETER	UOM	LOR	BH16M-1 WATER - 28/10/2022 SE238475.001	BH15M-1 WATER - 28/10/2022 SE238475.002	BH02-M WATER - 28/10/2022 SE238475.003	QD281022 WATER - 28/10/2022 SE238475.004	QR281022 WATER - 28/10/2022 SE238475.005
TRH C10-C14	µg/L	50	<50	<50	<50	<50	<50
TRH C15-C28	µg/L	200	<200	<200	<200	<200	<200
TRH C29-C36	µg/L	200	<200	<200	<200	<200	<200
TRH C37-C40	µg/L	200	<200	<200	<200	<200	<200
TRH >C10-C16	µg/L	60	<60	<60	<60	<60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	<60	<60	<60
TRH >C16-C34 (F3)	µg/L	500	<500	<500	<500	<500	<500
TRH >C34-C40 (F4)	µg/L	500	<500	<500	<500	<500	<500
TRH C10-C40	µg/L	320	<320	<320	<320	<320	<320

PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 2/11/2022

PARAMETER	UOM	LOR	BH16M-1 WATER - 28/10/2022 SE238475.001	BH15M-1 WATER - 28/10/2022 SE238475.002	BH02-M WATER - 28/10/2022 SE238475.003
Naphthalene	µg/L	0.1	<0.1	<0.1	**0.1**
2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1	<0.1
Total PAH (18)	µg/L	1	<1	<1	<1

Total Phenolics in Water [AN295] Tested: 1/11/2022

PARAMETER	UOM	LOR	BH16M-1 WATER - 28/10/2022 SE238475.001	BH15M-1 WATER - 28/10/2022 SE238475.002	BH02-M WATER - 28/10/2022 SE238475.003
Total Phenols	mg/L	0.05	<0.05	<0.05	<0.05

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 1/11/2022

PARAMETER	UOM	LOR	BH16M-1 WATER - 28/10/2022 SE238475.001	BH15M-1 WATER - 28/10/2022 SE238475.002	BH02-M WATER - 28/10/2022 SE238475.003	QD281022 WATER - 28/10/2022 SE238475.004	QR281022 WATER - 28/10/2022 SE238475.005
Arsenic	µg/L	1	<1	<1	<1	<1	<1
Cadmium	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	µg/L	1	<1	<1	1	<1	<1
Copper	µg/L	1	2	1	3	<1	<1
Lead	µg/L	1	<1	<1	<1	<1	<1
Nickel	µg/L	1	5	2	5	1	<1
Zinc	µg/L	5	80	27	56	20	<5

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 1/11/2022

PARAMETER	UOM	LOR	BH16M-1 WATER - 28/10/2022 SE238475.001	BH15M-1 WATER - 28/10/2022 SE238475.002	BH02-M WATER - 28/10/2022 SE238475.003	QD281022 WATER - 28/10/2022 SE238475.004	QR281022 WATER - 28/10/2022 SE238475.005
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN295	The water sample or extract of sample is distilled in a phosphoric acid stream. Phenolic compounds in the distillate react with a reagent stream of potassium hexacyanoferrate(III) and 4-Amino-2,3-dimethyl-3-pryazolin-5-one in an alkaline medium to form a coloured complex which is analysed spectrophotometrically onboard a continuous flow analyser.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). Where F2 is corrected for Naphthalene, the VOC data for Naphthalene is used.
AN403	Additionally, the volatile C6-C9/C6-C10 fractions may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoveerable Hydrocarbons - Silica (TRH-Silica) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

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

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

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

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

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

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

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE238475 R2

CLIENT DETAILS

Contact	Jock Mcnaughton
Client	EI AUSTRALIA
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Telephone	61 2 95160722
Facsimile	(Not specified)
Email	jock.mcnaughton@eiaustralia.com.au
Project	**E25846 35-37 Quondola Street Pambula NSW**
Order Number	**E25846**
Samples	7

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
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Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE238475 R2**
Date Received	31 Oct 2022
Date Reported	15 Nov 2022

COMMENTS

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

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	7 Water
Date documentation received	31/10/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	**No**
Sample temperature upon receipt	15.6C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE238475 R2

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury (dissolved) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M-1	SE238475.001	LB262342	28 Oct 2022	31 Oct 2022	25 Nov 2022	01 Nov 2022	25 Nov 2022	01 Nov 2022
BH15M-1	SE238475.002	LB262342	28 Oct 2022	31 Oct 2022	25 Nov 2022	01 Nov 2022	25 Nov 2022	01 Nov 2022
BH02-M	SE238475.003	LB262342	28 Oct 2022	31 Oct 2022	25 Nov 2022	01 Nov 2022	25 Nov 2022	01 Nov 2022
QD281022	SE238475.004	LB262342	28 Oct 2022	31 Oct 2022	25 Nov 2022	01 Nov 2022	25 Nov 2022	01 Nov 2022
QR281022	SE238475.005	LB262342	28 Oct 2022	31 Oct 2022	25 Nov 2022	01 Nov 2022	25 Nov 2022	01 Nov 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M-1	SE238475.001	LB262453	28 Oct 2022	31 Oct 2022	04 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH15M-1	SE238475.002	LB262453	28 Oct 2022	31 Oct 2022	04 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02-M	SE238475.003	LB262453	28 Oct 2022	31 Oct 2022	04 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
QD281022	SE238475.004	LB262453	28 Oct 2022	31 Oct 2022	04 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
QR281022	SE238475.005	LB262453	28 Oct 2022	31 Oct 2022	04 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN295

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M-1	SE238475.001	LB262151	28 Oct 2022	31 Oct 2022	11 Nov 2022	01 Nov 2022	11 Nov 2022	02 Nov 2022
BH15M-1	SE238475.002	LB262151	28 Oct 2022	31 Oct 2022	11 Nov 2022	01 Nov 2022	11 Nov 2022	02 Nov 2022
BH02-M	SE238475.003	LB262151	28 Oct 2022	31 Oct 2022	11 Nov 2022	01 Nov 2022	11 Nov 2022	02 Nov 2022

Trace Metals (Dissolved) in Water by ICPMS

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M-1	SE238475.001	LB262336	28 Oct 2022	31 Oct 2022	26 Apr 2023	01 Nov 2022	26 Apr 2023	01 Nov 2022
BH15M-1	SE238475.002	LB262336	28 Oct 2022	31 Oct 2022	26 Apr 2023	01 Nov 2022	26 Apr 2023	01 Nov 2022
BH02-M	SE238475.003	LB262336	28 Oct 2022	31 Oct 2022	26 Apr 2023	01 Nov 2022	26 Apr 2023	01 Nov 2022
QD281022	SE238475.004	LB262336	28 Oct 2022	31 Oct 2022	26 Apr 2023	01 Nov 2022	26 Apr 2023	01 Nov 2022
QR281022	SE238475.005	LB262336	28 Oct 2022	31 Oct 2022	26 Apr 2023	01 Nov 2022	26 Apr 2023	01 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M-1	SE238475.001	LB262453	28 Oct 2022	31 Oct 2022	04 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH15M-1	SE238475.002	LB262453	28 Oct 2022	31 Oct 2022	04 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02-M	SE238475.003	LB262453	28 Oct 2022	31 Oct 2022	04 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
QD281022	SE238475.004	LB262453	28 Oct 2022	31 Oct 2022	04 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
QR281022	SE238475.005	LB262453	28 Oct 2022	31 Oct 2022	04 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022

VOCs in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M-1	SE238475.001	LB262801	28 Oct 2022	31 Oct 2022	11 Nov 2022	04 Nov 2022	11 Nov 2022	07 Nov 2022
BH15M-1	SE238475.002	LB262801	28 Oct 2022	31 Oct 2022	11 Nov 2022	04 Nov 2022	11 Nov 2022	07 Nov 2022
BH02-M	SE238475.003	LB262801	28 Oct 2022	31 Oct 2022	11 Nov 2022	04 Nov 2022	11 Nov 2022	07 Nov 2022
QD281022	SE238475.004	LB262801	28 Oct 2022	31 Oct 2022	11 Nov 2022	04 Nov 2022	11 Nov 2022	07 Nov 2022
QR281022	SE238475.005	LB262801	28 Oct 2022	31 Oct 2022	11 Nov 2022	04 Nov 2022	11 Nov 2022	07 Nov 2022
QTS281022	SE238475.006	LB263828	28 Oct 2022	31 Oct 2022	11 Nov 2022	15 Nov 2022†	11 Nov 2022	15 Nov 2022†
QTB281022	SE238475.007	LB263828	28 Oct 2022	31 Oct 2022	11 Nov 2022	15 Nov 2022†	11 Nov 2022	15 Nov 2022†

Volatile Petroleum Hydrocarbons in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M-1	SE238475.001	LB262801	28 Oct 2022	31 Oct 2022	11 Nov 2022	04 Nov 2022	11 Nov 2022	07 Nov 2022
BH15M-1	SE238475.002	LB262801	28 Oct 2022	31 Oct 2022	11 Nov 2022	04 Nov 2022	11 Nov 2022	07 Nov 2022
BH02-M	SE238475.003	LB262801	28 Oct 2022	31 Oct 2022	11 Nov 2022	04 Nov 2022	11 Nov 2022	07 Nov 2022
QD281022	SE238475.004	LB262801	28 Oct 2022	31 Oct 2022	11 Nov 2022	04 Nov 2022	11 Nov 2022	07 Nov 2022
QR281022	SE238475.005	LB262801	28 Oct 2022	31 Oct 2022	11 Nov 2022	04 Nov 2022	11 Nov 2022	07 Nov 2022
QTS281022	SE238475.006	LB263828	28 Oct 2022	31 Oct 2022	11 Nov 2022	15 Nov 2022†	11 Nov 2022	15 Nov 2022†
QTB281022	SE238475.007	LB263828	28 Oct 2022	31 Oct 2022	11 Nov 2022	15 Nov 2022†	11 Nov 2022	15 Nov 2022†

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH16M-1	SE238475.001	%	40 - 130%	62
	BH15M-1	SE238475.002	%	40 - 130%	62
	BH02-M	SE238475.003	%	40 - 130%	64
d14-p-terphenyl (Surrogate)	BH16M-1	SE238475.001	%	40 - 130%	92
	BH15M-1	SE238475.002	%	40 - 130%	80
	BH02-M	SE238475.003	%	40 - 130%	86
d5-nitrobenzene (Surrogate)	BH16M-1	SE238475.001	%	40 - 130%	56
	BH15M-1	SE238475.002	%	40 - 130%	56
	BH02-M	SE238475.003	%	40 - 130%	54

VOCs in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH16M-1	SE238475.001	%	40 - 130%	108
	BH15M-1	SE238475.002	%	40 - 130%	103
	BH02-M	SE238475.003	%	40 - 130%	101
	QD281022	SE238475.004	%	40 - 130%	104
	QR281022	SE238475.005	%	40 - 130%	103
	QTS281022	SE238475.006	%	40 - 130%	109
	QTB281022	SE238475.007	%	40 - 130%	99
d4-1,2-dichloroethane (Surrogate)	BH16M-1	SE238475.001	%	40 - 130%	91
	BH15M-1	SE238475.002	%	40 - 130%	94
	BH02-M	SE238475.003	%	40 - 130%	102
	QD281022	SE238475.004	%	40 - 130%	90
	QR281022	SE238475.005	%	40 - 130%	95
	QTS281022	SE238475.006	%	40 - 130%	110
	QTB281022	SE238475.007	%	40 - 130%	101
d8-toluene (Surrogate)	BH16M-1	SE238475.001	%	40 - 130%	99
	BH15M-1	SE238475.002	%	40 - 130%	97
	BH02-M	SE238475.003	%	40 - 130%	102
	QD281022	SE238475.004	%	40 - 130%	97
	QR281022	SE238475.005	%	40 - 130%	98
	QTS281022	SE238475.006	%	40 - 130%	112
	QTB281022	SE238475.007	%	40 - 130%	107

Volatile Petroleum Hydrocarbons in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH16M-1	SE238475.001	%	40 - 130%	108
	BH15M-1	SE238475.002	%	40 - 130%	103
	BH02-M	SE238475.003	%	40 - 130%	101
	QD281022	SE238475.004	%	40 - 130%	104
	QR281022	SE238475.005	%	40 - 130%	103
d4-1,2-dichloroethane (Surrogate)	BH16M-1	SE238475.001	%	60 - 130%	91
	BH15M-1	SE238475.002	%	60 - 130%	94
	BH02-M	SE238475.003	%	60 - 130%	102
	QD281022	SE238475.004	%	60 - 130%	90
	QR281022	SE238475.005	%	60 - 130%	95
d8-toluene (Surrogate)	BH16M-1	SE238475.001	%	40 - 130%	99
	BH15M-1	SE238475.002	%	40 - 130%	97
	BH02-M	SE238475.003	%	40 - 130%	102
	QD281022	SE238475.004	%	40 - 130%	97
	QR281022	SE238475.005	%	40 - 130%	98

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

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

Mercury (dissolved) in Water

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

Sample Number	Parameter	Units	LOR	Result
LB262342.001	Mercury	mg/L	0.0001	<0.0001

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result
LB262453.001		Naphthalene	µg/L	0.1	<0.1
		2-methylnaphthalene	µg/L	0.1	<0.1
		1-methylnaphthalene	µg/L	0.1	<0.1
		Acenaphthylene	µg/L	0.1	<0.1
		Acenaphthene	µg/L	0.1	<0.1
		Fluorene	µg/L	0.1	<0.1
		Phenanthrene	µg/L	0.1	<0.1
		Anthracene	µg/L	0.1	<0.1
		Fluoranthene	µg/L	0.1	<0.1
		Pyrene	µg/L	0.1	<0.1
		Benzo(a)anthracene	µg/L	0.1	<0.1
		Chrysene	µg/L	0.1	<0.1
		Benzo(a)pyrene	µg/L	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
		Dibenzo(ah)anthracene	µg/L	0.1	<0.1
		Benzo(ghi)perylene	µg/L	0.1	<0.1
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	56
		2-fluorobiphenyl (Surrogate)	%	-	70
		d14-p-terphenyl (Surrogate)	%	-	86

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN295

Sample Number	Parameter	Units	LOR	Result
LB262151.001	Total Phenols	mg/L	0.05	<0.05

Trace Metals (Dissolved) in Water by ICPMS

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

Sample Number	Parameter	Units	LOR	Result
LB262336.001	Arsenic	µg/L	1	<1
	Cadmium	µg/L	0.1	<0.1
	Chromium	µg/L	1	<1
	Copper	µg/L	1	<1
	Lead	µg/L	1	<1
	Nickel	µg/L	1	<1
	Zinc	µg/L	5	<5

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number	Parameter	Units	LOR	Result
LB262453.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result
LB262801.001	Fumigants	2,2-dichloropropane	µg/L	0.5	<0.5
		1,2-dichloropropane	µg/L	0.5	<0.5
		cis-1,3-dichloropropene	µg/L	0.5	<0.5
		trans-1,3-dichloropropene	µg/L	0.5	<0.5
		1,2-dibromoethane (EDB)	µg/L	0.5	<0.5
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	µg/L	5	<5
		Chloromethane	µg/L	5	<5
		Vinyl chloride (Chloroethene)	µg/L	0.3	<0.3
		Bromomethane	µg/L	10	<10
		Chloroethane	µg/L	5	<5
		Trichlorofluoromethane	µg/L	1	<1
		Iodomethane	µg/L	5	<5

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

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

VOCs in Water (continued) — **Method: ME-(AU)-[ENV]AN433**

Sample Number		Parameter	Units	LOR	Result
LB262801.001	Halogenated Aliphatics	1,1-dichloroethene	µg/L	0.5	<0.5
		Dichloromethane (Methylene chloride)	µg/L	5	<5
		Allyl chloride	µg/L	2	<2
		trans-1,2-dichloroethene	µg/L	0.5	<0.5
		1,1-dichloroethane	µg/L	0.5	<0.5
		cis-1,2-dichloroethene	µg/L	0.5	<0.5
		Bromochloromethane	µg/L	0.5	<0.5
		1,2-dichloroethane	µg/L	0.5	<0.5
		1,1,1-trichloroethane	µg/L	0.5	<0.5
		1,1-dichloropropene	µg/L	0.5	<0.5
		Carbon tetrachloride	µg/L	0.5	<0.5
		Dibromomethane	µg/L	0.5	<0.5
		Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	<0.5
		1,1,2-trichloroethane	µg/L	0.5	<0.5
		1,3-dichloropropane	µg/L	0.5	<0.5
		Tetrachloroethene (Perchloroethylene,PCE)	µg/L	0.5	<0.5
		1,1,1,2-tetrachloroethane	µg/L	0.5	<0.5
		cis-1,4-dichloro-2-butene	µg/L	1	<1
		1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5
		1,2,3-trichloropropane	µg/L	0.5	<0.5
		trans-1,4-dichloro-2-butene	µg/L	1	<1
		1,2-dibromo-3-chloropropane	µg/L	0.5	<0.5
		Hexachlorobutadiene	µg/L	0.5	<0.5
	Halogenated Aromatics	Chlorobenzene	µg/L	0.5	<0.5
		Bromobenzene	µg/L	0.5	<0.5
		2-chlorotoluene	µg/L	0.5	<0.5
		4-chlorotoluene	µg/L	0.5	<0.5
		1,3-dichlorobenzene	µg/L	0.5	<0.5
		1,4-dichlorobenzene	µg/L	0.3	<0.3
		1,2-dichlorobenzene	µg/L	0.5	<0.5
		1,2,4-trichlorobenzene	µg/L	0.5	<0.5
		1,2,3-trichlorobenzene	µg/L	0.5	<0.5
	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	<0.5
		Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		o-xylene	µg/L	0.5	<0.5
		Styrene (Vinyl benzene)	µg/L	0.5	<0.5
		Isopropylbenzene (Cumene)	µg/L	0.5	<0.5
		n-propylbenzene	µg/L	0.5	<0.5
		1,3,5-trimethylbenzene	µg/L	0.5	<0.5
		tert-butylbenzene	µg/L	0.5	<0.5
		1,2,4-trimethylbenzene	µg/L	0.5	<0.5
		sec-butylbenzene	µg/L	0.5	<0.5
		p-isopropyltoluene	µg/L	0.5	<0.5
		n-butylbenzene	µg/L	0.5	<0.5
	Nitrogenous Compounds	Acrylonitrile	µg/L	0.5	<0.5
	Oxygenated Compounds	Acetone (2-propanone)	µg/L	10	<10
		MtBE (Methyl-tert-butyl ether)	µg/L	2	<1
		Vinyl acetate	µg/L	10	<10
		MEK (2-butanone)	µg/L	10	<10
		MIBK (4-methyl-2-pentanone)	µg/L	5	<5
		2-hexanone (MBK)	µg/L	5	<5
	Polycyclic VOCs	Naphthalene (VOC)	µg/L	0.5	<0.5
	Sulphonated	Carbon disulfide	µg/L	2	<2
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	92
		d8-toluene (Surrogate)	%	-	95
		Bromofluorobenzene (Surrogate)	%	-	102
	Trihalomethanes	Chloroform (THM)	µg/L	0.5	<0.5
		Bromodichloromethane (THM)	µg/L	0.5	<0.5
		Dibromochloromethane (THM)	µg/L	0.5	<0.5

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

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

VOCs in Water (continued) — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB262801.001	Trihalomethanes	Bromoform (THM)	µg/L	0.5	<0.5

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

Sample Number		Parameter	Units	LOR	Result
LB262801.001		TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	92
		d8-toluene (Surrogate)	%	-	95
		Bromofluorobenzene (Surrogate)	%	-	102

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

Mercury (dissolved) in Water

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.031	LB262342.012	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	133

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238475.003	LB262453.023		Naphthalene	µg/L	0.1	0.1	0.1	113	0
			2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
			Acenaphthylene	µg/L	0.1	<0.1	<0.1	200	0
			Acenaphthene	µg/L	0.1	<0.1	<0.1	200	0
			Fluorene	µg/L	0.1	<0.1	<0.1	200	0
			Phenanthrene	µg/L	0.1	<0.1	<0.1	200	0
			Anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Chrysene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.3	0.3	30	7
			2-fluorobiphenyl (Surrogate)	µg/L	-	0.3	0.3	30	3
			d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.5	30	5
SE238493.005	LB262453.025		Naphthalene	µg/L	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
			Acenaphthylene	µg/L	0.1	<0.1	<0.1	200	0
			Acenaphthene	µg/L	0.1	<0.1	<0.1	200	0
			Fluorene	µg/L	0.1	<0.1	<0.1	200	0
			Phenanthrene	µg/L	0.1	<0.1	<0.1	200	0
			Anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Chrysene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.3	0.3	30	4
			2-fluorobiphenyl (Surrogate)	µg/L	-	0.3	0.3	30	7
			d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.4	30	0

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN295

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238365.001	LB262151.012	Total Phenols	mg/L	0.05	<0.05	<0.05	200	0

Trace Metals (Dissolved) in Water by ICPMS

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238461.022	LB262336.014	Arsenic	µg/L	1	<1	<1	200	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	200	0
		Copper	µg/L	1	<1	<1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

Trace Metals (Dissolved) in Water by ICPMS (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238461.022	LB262336.014	Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	<1	<1	200	0
		Zinc	µg/L	5	<5	<5	200	0
SE238476.031	LB262336.022	Arsenic	µg/L	1	<1	<1	200	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	200	0
		Copper	µg/L	1	<1	<1	200	0
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	<1	<1	200	0
		Zinc	µg/L	5	<5	<5	200	0

TRH (Total Recoverable Hydrocarbons) in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238475.003	LB262453.023		TRH C10-C14	µg/L	50	<50	<50	200	0
			TRH C15-C28	µg/L	200	<200	<200	200	0
			TRH C29-C36	µg/L	200	<200	<200	200	0
			TRH C37-C40	µg/L	200	<200	<200	200	0
			TRH C10-C40	µg/L	320	<320	<320	200	0
		TRH F Bands	TRH >C10-C16	µg/L	60	<60	<60	200	0
			TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	200	0
			TRH >C16-C34 (F3)	µg/L	500	<500	<500	200	0
			TRH >C34-C40 (F4)	µg/L	500	<500	<500	200	0

VOCs in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238661.001	LB262801.025	Fumigants	2,2-dichloropropane	µg/L	0.5	<0.5	<0.5	200	0
			1,2-dichloropropane	µg/L	0.5	<0.5	<0.5	200	0
			cis-1,3-dichloropropene	µg/L	0.5	<0.5	<0.5	200	0
			trans-1,3-dichloropropene	µg/L	0.5	<0.5	<0.5	200	0
			1,2-dibromoethane (EDB)	µg/L	0.5	<0.5	<0.5	200	0
		Halogenated	Dichlorodifluoromethane (CFC-12)	µg/L	5	<5	<5	200	0
		Aliphatics	Chloromethane	µg/L	5	<5	<5	200	0
			Vinyl chloride (Chloroethene)	µg/L	0.3	<0.3	<0.3	200	0
			Bromomethane	µg/L	10	<10	<10	200	0
			Chloroethane	µg/L	5	<5	<5	200	0
			Trichlorofluoromethane	µg/L	1	<1	<1	200	0
			Iodomethane	µg/L	5	<5	<5	200	0
			1,1-dichloroethene	µg/L	0.5	<0.5	<0.5	200	0
			Dichloromethane (Methylene chloride)	µg/L	5	<5	<5	200	0
			Allyl chloride	µg/L	2	<2	<2	200	0
			trans-1,2-dichloroethene	µg/L	0.5	<0.5	<0.5	200	0
			1,1-dichloroethane	µg/L	0.5	<0.5	<0.5	200	0
			cis-1,2-dichloroethene	µg/L	0.5	<0.5	<0.5	200	0
			Bromochloromethane	µg/L	0.5	<0.5	<0.5	200	0
			1,2-dichloroethane	µg/L	0.5	<0.5	<0.5	200	0
			1,1,1-trichloroethane	µg/L	0.5	<0.5	<0.5	200	0
			1,1-dichloropropene	µg/L	0.5	<0.5	<0.5	200	0
			Carbon tetrachloride	µg/L	0.5	<0.5	<0.5	200	0
			Dibromomethane	µg/L	0.5	<0.5	<0.5	200	0
			Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	<0.5	<0.5	200	0
			1,1,2-trichloroethane	µg/L	0.5	<0.5	<0.5	200	0
			1,3-dichloropropane	µg/L	0.5	<0.5	<0.5	200	0
			Tetrachloroethene (Perchloroethylene,PCE)	µg/L	0.5	<0.5	<0.5	200	0
			1,1,1,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	200	0
			cis-1,4-dichloro-2-butene	µg/L	1	<1	<1	200	0
			1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	200	0
			1,2,3-trichloropropane	µg/L	0.5	<0.5	<0.5	200	0
			trans-1,4-dichloro-2-butene	µg/L	1	<1	<1	200	0
			1,2-dibromo-3-chloropropane	µg/L	0.5	<0.5	<0.5	200	0
			Hexachlorobutadiene	µg/L	0.5	<0.5	<0.5	200	0
		Halogenated	Chlorobenzene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatics	Bromobenzene	µg/L	0.5	<0.5	<0.5	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

VOCs in Water (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238661.001	LB262801.025	Halogenated	2-chlorotoluene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatics	4-chlorotoluene	µg/L	0.5	<0.5	<0.5	200	0
			1,3-dichlorobenzene	µg/L	0.5	<0.5	<0.5	200	0
			1,4-dichlorobenzene	µg/L	0.3	<0.3	<0.3	200	0
			1,2-dichlorobenzene	µg/L	0.5	<0.5	<0.5	200	0
			1,2,4-trichlorobenzene	µg/L	0.5	<0.5	<0.5	200	0
			1,2,3-trichlorobenzene	µg/L	0.5	<0.5	<0.5	200	0
		Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200	0
		Hydrocarbons	Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
			Styrene (Vinyl benzene)	µg/L	0.5	<0.5	<0.5	200	0
			Isopropylbenzene (Cumene)	µg/L	0.5	<0.5	<0.5	200	0
			n-propylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			1,3,5-trimethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			tert-butylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			1,2,4-trimethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			sec-butylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			p-isopropyltoluene	µg/L	0.5	<0.5	<0.5	200	0
			n-butylbenzene	µg/L	0.5	<0.5	<0.5	200	0
		Nitrogenous	Acrylonitrile	µg/L	0.5	<0.5	<0.5	200	0
		Oxygenated	Acetone (2-propanone)	µg/L	10	<10	<10	200	0
		Compounds	MtBE (Methyl-tert-butyl ether)	µg/L	2	<2	<2	200	0
			Vinyl acetate	µg/L	10	<10	<10	200	0
			MEK (2-butanone)	µg/L	10	<10	<10	200	0
			MIBK (4-methyl-2-pentanone)	µg/L	5	<5	<5	200	0
			2-hexanone (MBK)	µg/L	5	<5	<5	200	0
		Polycyclic	Naphthalene (VOC)	µg/L	0.5	<0.5	<0.5	200	0
		Sulphonated	Carbon disulfide	µg/L	2	<2	<2	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.3	11.1	30	7
			d8-toluene (Surrogate)	µg/L	-	10.3	10.8	30	5
			Bromofluorobenzene (Surrogate)	µg/L	-	10.8	9.9	30	9
		Trihalomethan	Chloroform (THM)	µg/L	0.5	1.4	1.7	62	19
		es	Bromodichloromethane (THM)	µg/L	0.5	<0.5	<0.5	200	0
			Dibromochloromethane (THM)	µg/L	0.5	<0.5	<0.5	200	0
			Bromoform (THM)	µg/L	0.5	<0.5	<0.5	200	0

Volatile Petroleum Hydrocarbons in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238661.001	LB262801.025		TRH C6-C10	µg/L	50	<50	<50	200	0
			TRH C6-C9	µg/L	40	<40	<40	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.3	11.1	30	7
			d8-toluene (Surrogate)	µg/L	-	10.3	10.8	30	5
			Bromofluorobenzene (Surrogate)	µg/L	-	10.8	9.9	30	9
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262453.002		Naphthalene	µg/L	0.1	30	40	60 - 140	75
		Acenaphthylene	µg/L	0.1	34	40	60 - 140	85
		Acenaphthene	µg/L	0.1	35	40	60 - 140	88
		Phenanthrene	µg/L	0.1	37	40	60 - 140	93
		Anthracene	µg/L	0.1	36	40	60 - 140	90
		Fluoranthene	µg/L	0.1	36	40	60 - 140	90
		Pyrene	µg/L	0.1	35	40	60 - 140	88
		Benzo(a)pyrene	µg/L	0.1	40	40	60 - 140	100
	Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.3	0.5	40 - 130	50
		2-fluorobiphenyl (Surrogate)	µg/L	-	0.3	0.5	40 - 130	62
		d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	74

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN295

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262151.002	Total Phenols	mg/L	0.05	0.19	0.2	80 - 120	96

Trace Metals (Dissolved) in Water by ICPMS

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262336.002	Arsenic	µg/L	1	19	20	80 - 120	94
	Cadmium	µg/L	0.1	21	20	80 - 120	103
	Chromium	µg/L	1	20	20	80 - 120	99
	Copper	µg/L	1	21	20	80 - 120	106
	Lead	µg/L	1	20	20	80 - 120	98
	Nickel	µg/L	1	21	20	80 - 120	103
	Zinc	µg/L	5	21	20	80 - 120	105

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262453.002		TRH C10-C14	µg/L	50	940	1200	60 - 140	78
		TRH C15-C28	µg/L	200	1300	1200	60 - 140	108
		TRH C29-C36	µg/L	200	1400	1200	60 - 140	120
	TRH F Bands	TRH >C10-C16	µg/L	60	1100	1200	60 - 140	93
		TRH >C16-C34 (F3)	µg/L	500	1500	1200	60 - 140	122
		TRH >C34-C40 (F4)	µg/L	500	660	600	60 - 140	110

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262801.002	Halogenated	1,1-dichloroethene	µg/L	0.5	54	45.45	60 - 140	119
	Aliphatics	1,2-dichloroethane	µg/L	0.5	52	45.45	60 - 140	115
		Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	52	45.45	60 - 140	114
	Halogenated	Chlorobenzene	µg/L	0.5	47	45.45	60 - 140	104
	Monocyclic	Benzene	µg/L	0.5	59	45.45	60 - 140	130
	Aromatic	Toluene	µg/L	0.5	56	45.45	60 - 140	123
	Hydrocarbons	Ethylbenzene	µg/L	0.5	53	45.45	60 - 140	116
		m/p-xylene	µg/L	1	110	90.9	60 - 140	116
		o-xylene	µg/L	0.5	53	45.45	60 - 140	116
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.9	10	60 - 140	109
		d8-toluene (Surrogate)	µg/L	-	10.7	10	70 - 130	107
		Bromofluorobenzene (Surrogate)	µg/L	-	10.1	10	70 - 130	101
	Trihalomethan	Chloroform (THM)	µg/L	0.5	60	45.45	60 - 140	132

Volatile Petroleum Hydrocarbons in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262801.002		TRH C6-C10	µg/L	50	790	946.63	60 - 140	84
		TRH C6-C9	µg/L	40	680	818.71	60 - 140	83
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.9	10	60 - 140	109
		d8-toluene (Surrogate)	µg/L	-	10.7	10	70 - 130	107
		Bromofluorobenzene (Surrogate)	µg/L	-	10.1	10	70 - 130	101
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	470	639.67	60 - 140	73

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

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

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN295

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238298.001	LB262151.004	Total Phenols	mg/L	0.05	0.19	<0.05	0.2	95

Trace Metals (Dissolved) in Water by ICPMS

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238453.031	LB262336.004	Arsenic	µg/L	1	19	<1	20	96
		Cadmium	µg/L	0.1	20	<0.1	20	101
		Chromium	µg/L	1	20	<1	20	100
		Copper	µg/L	1	22	<1	20	107
		Lead	µg/L	1	20	<1	20	99
		Nickel	µg/L	1	21	<1	20	105
		Zinc	µg/L	5	22	<5	20	109

VOCs in Water

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238663.001	LB262801.026	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	57	<0.5	45.45	125
			Toluene	µg/L	0.5	60	<0.5	45.45	132
			Ethylbenzene	µg/L	0.5	51	<0.5	45.45	111
			m/p-xylene	µg/L	1	100	<1	90.9	113
			o-xylene	µg/L	0.5	51	<0.5	45.45	112
		Polycyclic	Naphthalene (VOC)	µg/L	0.5	54	<0.5	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.8	11.0	-	118
			d8-toluene (Surrogate)	µg/L	-	11.4	10.1	-	114
			Bromofluorobenzene (Surrogate)	µg/L	-	9.7	10.2	-	97

Volatile Petroleum Hydrocarbons in Water

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238663.001	LB262801.026		TRH C6-C10	µg/L	50	810	<50	946.63	85
			TRH C6-C9	µg/L	40	740	<40	818.71	91
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.8	11.0	-	118
			d8-toluene (Surrogate)	µg/L	-	11.4	10.1	-	114
			Bromofluorobenzene (Surrogate)	µg/L	-	9.7	10.2	-	97
		VPH F Bands	Benzene (F0)	µg/L	0.5		<0.5	-	-
			TRH C6-C10 minus BTEX (F1)	µg/L	50	490	<50	639.67	76

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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ANALYTICAL REPORT

Accreditation No. 2562

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Project	**E25846 35-37 Quondola Street Pambula NSW**
Order Number	**E25846**
Samples	31

LABORATORY DETAILS

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SGS Reference	**SE238476 R1**
Date Received	31/10/2022
Date Reported	9/11/2022

COMMENTS

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

This report cancels and supersedes the report No.SE238476 R0 dated 07/11/22 issued by SGS Environment, Health and Safety due to amended sample IDs as requested.

No respirable fibres detected in all soil samples using trace analysis technique.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

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VOC's in Soil [AN433] Tested: 2/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH16M_1.0-1.1 SOIL - 26/10/2022 SE238476.002	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH15M_0.5-0.6 SOIL - 26/10/2022 SE238476.004	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH01_0.9-1.0 SOIL - 27/10/2022 SE238476.006	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH02_0.5-0.6 SOIL - 27/10/2022 SE238476.008	BH02_1.3-1.4 SOIL - 27/10/2022 SE238476.009	BH02_3.0-3.1 SOIL - 27/10/2022 SE238476.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	**0.3**	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	**2.0**	**2.4**	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	**15**	**9.7**	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	**4.7**	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	**20**	**9.7**	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	**22**	**12**	<0.6
Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	**1.8**	**1.3**	<0.1

PARAMETER	UOM	LOR	BH02_4.5-4.6 SOIL - 27/10/2022 SE238476.011	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012	BH03_0.5-0.6 SOIL - 27/10/2022 SE238476.013	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH05_0.5-0.6 SOIL - 27/10/2022 SE238476.016	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019	BH08_0.5-0.6 SOIL - 27/10/2022 SE238476.020
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

VOC's in Soil [AN433] Tested: 2/11/2022 (continued)

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH13_1.4-1.5 SOIL - 27/10/2022 SE238476.026	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027	QD271022 SOIL - 27/10/2022 SE238476.028	QTS271022 SOIL - 27/10/2022 SE238476.029	QTB271022 SOIL - 27/10/2022 SE238476.030
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	[96%]	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	[94%]	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	[94%]	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	[97%]	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	[94%]	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	-	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	-	<0.6
Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	<0.1	-	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 2/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH16M_1.0-1.1 SOIL - 26/10/2022 SE238476.002	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH15M_0.5-0.6 SOIL - 26/10/2022 SE238476.004	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH01_0.9-1.0 SOIL - 27/10/2022 SE238476.006	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH02_0.5-0.6 SOIL - 27/10/2022 SE238476.008	BH02_1.3-1.4 SOIL - 27/10/2022 SE238476.009	BH02_3.0-3.1 SOIL - 27/10/2022 SE238476.010
TRH C6-C9	mg/kg	20	<20	<20	**43**	**100**	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	**73**	**140**	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	**51**	**130**	<25

PARAMETER	UOM	LOR	BH02_4.5-4.6 SOIL - 27/10/2022 SE238476.011	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012	BH03_0.5-0.6 SOIL - 27/10/2022 SE238476.013	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH05_0.5-0.6 SOIL - 27/10/2022 SE238476.016	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019	BH08_0.5-0.6 SOIL - 27/10/2022 SE238476.020
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH13_1.4-1.5 SOIL - 27/10/2022 SE238476.026	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027	QD271022 SOIL - 27/10/2022 SE238476.028
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 2/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH16M_1.0-1.1 SOIL - 26/10/2022 SE238476.002	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH15M_0.5-0.6 SOIL - 26/10/2022 SE238476.004	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH01_0.9-1.0 SOIL - 27/10/2022 SE238476.006	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH02_0.5-0.6 SOIL - 27/10/2022 SE238476.008	BH02_1.3-1.4 SOIL - 27/10/2022 SE238476.009	BH02_3.0-3.1 SOIL - 27/10/2022 SE238476.010
TRH C10-C14	mg/kg	20	<20	<20	**73**	**90**	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	**50**	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	**72**	**87**	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	**70**	**86**	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH02_4.5-4.6 SOIL - 27/10/2022 SE238476.011	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012	BH03_0.5-0.6 SOIL - 27/10/2022 SE238476.013	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 2/11/2022 (continued)

PARAMETER	UOM	LOR	BH05_0.5-0.6 SOIL - 27/10/2022 SE238476.016	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019	BH08_0.5-0.6 SOIL - 27/10/2022 SE238476.020
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH13_1.4-1.5 SOIL - 27/10/2022 SE238476.026	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027	QD271022 SOIL - 27/10/2022 SE238476.028
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 2/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH16M_1.0-1.1 SOIL - 26/10/2022 SE238476.002	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH15M_0.5-0.6 SOIL - 26/10/2022 SE238476.004	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH01_0.9-1.0 SOIL - 27/10/2022 SE238476.006	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH02_0.5-0.6 SOIL - 27/10/2022 SE238476.008	BH02_1.3-1.4 SOIL - 27/10/2022 SE238476.009	BH02_3.0-3.1 SOIL - 27/10/2022 SE238476.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	**1.3**	**0.9**	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	**0.2**	**0.6**	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.3**	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	**1.5**	**1.8**	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	**1.3**	**0.9**	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 2/11/2022 (continued)

PARAMETER	UOM	LOR	BH02_4.5-4.6 SOIL - 27/10/2022 SE238476.011	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012	BH03_0.5-0.6 SOIL - 27/10/2022 SE238476.013	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH05_0.5-0.6 SOIL - 27/10/2022 SE238476.016	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019	BH08_0.5-0.6 SOIL - 27/10/2022 SE238476.020
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 2/11/2022 (continued)

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH13_1.4-1.5 SOIL - 27/10/2022 SE238476.026	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027
Naphthalene	mg/kg	0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 2/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 2/11/2022 (continued)

PARAMETER	UOM	LOR	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 2/11/2022 (continued)

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 2/11/2022 (continued)

PARAMETER	UOM	LOR	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2
Endrin	mg/kg	0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1
Total OC VIC EPA	mg/kg	1	<1

OP Pesticides in Soil [AN420] Tested: 2/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

OP Pesticides in Soil [AN420] Tested: 2/11/2022 (continued)

PARAMETER	UOM	LOR	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027
Dichlorvos	mg/kg	0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2
Malathion	mg/kg	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2
Methidathion	mg/kg	0.5	<0.5
Ethion	mg/kg	0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7

PCBs in Soil [AN420] Tested: 2/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PCBs in Soil [AN420] Tested: 2/11/2022 (continued)

PARAMETER	UOM	LOR	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027
Arochlor 1016	mg/kg	0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 3/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH16M_1.0-1.1 SOIL - 26/10/2022 SE238476.002	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH15M_0.5-0.6 SOIL - 26/10/2022 SE238476.004	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005
Arsenic, As	mg/kg	1	3	2	2	4	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	9.6	15	9.7	20	5.4
Copper, Cu	mg/kg	0.5	5.8	1.2	2.6	2.8	2.7
Lead, Pb	mg/kg	1	9	10	3	10	99
Nickel, Ni	mg/kg	0.5	1.3	4.9	1.8	0.6	1.6
Zinc, Zn	mg/kg	2	28	4.4	9.6	11	18

PARAMETER	UOM	LOR	BH01_0.9-1.0 SOIL - 27/10/2022 SE238476.006	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH02_0.5-0.6 SOIL - 27/10/2022 SE238476.008	BH02_1.3-1.4 SOIL - 27/10/2022 SE238476.009	BH02_3.0-3.1 SOIL - 27/10/2022 SE238476.010
Arsenic, As	mg/kg	1	<1	3	7	2	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	1.9	3.8	7.7	12	7.6
Copper, Cu	mg/kg	0.5	1.0	1.7	30	1.0	1.2
Lead, Pb	mg/kg	1	6	20	470	11	7
Nickel, Ni	mg/kg	0.5	<0.5	2.5	6.8	2.8	1.3
Zinc, Zn	mg/kg	2	2.7	12	270	5.8	2.2

PARAMETER	UOM	LOR	BH02_4.5-4.6 SOIL - 27/10/2022 SE238476.011	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012	BH03_0.5-0.6 SOIL - 27/10/2022 SE238476.013	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015
Arsenic, As	mg/kg	1	3	2	<1	5	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	19	7.5	1.7	14	3.8
Copper, Cu	mg/kg	0.5	6.7	5.8	0.9	4.3	2.3
Lead, Pb	mg/kg	1	15	31	4	100	72
Nickel, Ni	mg/kg	0.5	3.3	1.7	0.5	3.8	1.5
Zinc, Zn	mg/kg	2	9.0	44	<2.0	6.1	36

PARAMETER	UOM	LOR	BH05_0.5-0.6 SOIL - 27/10/2022 SE238476.016	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019	BH08_0.5-0.6 SOIL - 27/10/2022 SE238476.020
Arsenic, As	mg/kg	1	3	4	5	4	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	5.1	12	8.1	8.2	5.3
Copper, Cu	mg/kg	0.5	9.9	10	7.0	6.6	11
Lead, Pb	mg/kg	1	180	32	170	430	260
Nickel, Ni	mg/kg	0.5	2.5	2.7	3.5	1.5	1.6
Zinc, Zn	mg/kg	2	180	31	96	210	130

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 3/11/2022

(continued)

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
Arsenic, As	mg/kg	1	11	1	2	1	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	11	5.5	4.6	4.5	5.3
Copper, Cu	mg/kg	0.5	9.0	1.0	1.6	1.1	1.1
Lead, Pb	mg/kg	1	98	2	2	2	2
Nickel, Ni	mg/kg	0.5	2.3	<0.5	<0.5	<0.5	<0.5
Zinc, Zn	mg/kg	2	150	<2.0	2.1	<2.0	<2.0

PARAMETER	UOM	LOR	BH13_1.4-1.5 SOIL - 27/10/2022 SE238476.026	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027	QD271022 SOIL - 27/10/2022 SE238476.028
Arsenic, As	mg/kg	1	2	1	<1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	12	1.9
Copper, Cu	mg/kg	0.5	0.8	1.9	1.6
Lead, Pb	mg/kg	1	5	2	10
Nickel, Ni	mg/kg	0.5	3.7	<0.5	0.5
Zinc, Zn	mg/kg	2	12	2.6	3.1

Mercury in Soil [AN312] Tested: 3/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH16M_1.0-1.1 SOIL - 26/10/2022 SE238476.002	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH15M_0.5-0.6 SOIL - 26/10/2022 SE238476.004	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005
Mercury	mg/kg	0.05	<0.05	0.06	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH01_0.9-1.0 SOIL - 27/10/2022 SE238476.006	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH02_0.5-0.6 SOIL - 27/10/2022 SE238476.008	BH02_1.3-1.4 SOIL - 27/10/2022 SE238476.009	BH02_3.0-3.1 SOIL - 27/10/2022 SE238476.010
Mercury	mg/kg	0.05	<0.05	<0.05	0.79	<0.05	0.06

PARAMETER	UOM	LOR	BH02_4.5-4.6 SOIL - 27/10/2022 SE238476.011	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012	BH03_0.5-0.6 SOIL - 27/10/2022 SE238476.013	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015
Mercury	mg/kg	0.05	<0.05	0.06	<0.05	<0.05	0.08

PARAMETER	UOM	LOR	BH05_0.5-0.6 SOIL - 27/10/2022 SE238476.016	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019	BH08_0.5-0.6 SOIL - 27/10/2022 SE238476.020
Mercury	mg/kg	0.05	0.16	<0.05	0.08	0.06	0.25

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
Mercury	mg/kg	0.05	0.13	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH13_1.4-1.5 SOIL - 27/10/2022 SE238476.026	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027	QD271022 SOIL - 27/10/2022 SE238476.028
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 2/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH16M_1.0-1.1 SOIL - 26/10/2022 SE238476.002	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH15M_0.5-0.6 SOIL - 26/10/2022 SE238476.004	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005
% Moisture	%w/w	1	9.2	16.6	17.0	17.8	9.7

PARAMETER	UOM	LOR	BH01_0.9-1.0 SOIL - 27/10/2022 SE238476.006	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH02_0.5-0.6 SOIL - 27/10/2022 SE238476.008	BH02_1.3-1.4 SOIL - 27/10/2022 SE238476.009	BH02_3.0-3.1 SOIL - 27/10/2022 SE238476.010
% Moisture	%w/w	1	12.0	8.9	20.8	16.6	13.5

PARAMETER	UOM	LOR	BH02_4.5-4.6 SOIL - 27/10/2022 SE238476.011	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012	BH03_0.5-0.6 SOIL - 27/10/2022 SE238476.013	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015
% Moisture	%w/w	1	22.2	10.8	13.1	7.8	9.8

PARAMETER	UOM	LOR	BH05_0.5-0.6 SOIL - 27/10/2022 SE238476.016	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019	BH08_0.5-0.6 SOIL - 27/10/2022 SE238476.020
% Moisture	%w/w	1	16.4	13.2	26.4	16.6	16.2

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
% Moisture	%w/w	1	16.3	9.4	9.9	8.7	12.0

PARAMETER	UOM	LOR	BH13_1.4-1.5 SOIL - 27/10/2022 SE238476.026	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027	QD271022 SOIL - 27/10/2022 SE238476.028	QTB271022 SOIL - 27/10/2022 SE238476.030
% Moisture	%w/w	1	10.2	11.2	13.0	<1.0

Fibre Identification in soil [AN602] Tested: 3/11/2022

PARAMETER	UOM	LOR	BH16M_0.1-0.2 SOIL - 26/10/2022 SE238476.001	BH15M_0.1-0.2 SOIL - 26/10/2022 SE238476.003	BH01_0.1-0.2 SOIL - 27/10/2022 SE238476.005	BH02_0.1-0.2 SOIL - 27/10/2022 SE238476.007	BH03_0.1-0.2 SOIL - 27/10/2022 SE238476.012
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH04_0.1-0.2 SOIL - 27/10/2022 SE238476.014	BH05_0.1-0.2 SOIL - 27/10/2022 SE238476.015	BH06_0.1-0.2 SOIL - 27/10/2022 SE238476.017	BH07_0.1-0.2 SOIL - 27/10/2022 SE238476.018	BH08_0.1-0.2 SOIL - 27/10/2022 SE238476.019
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH09_0.1-0.2 SOIL - 27/10/2022 SE238476.021	BH10_0.2-0.3 SOIL - 27/10/2022 SE238476.022	BH11_0.4-0.5 SOIL - 27/10/2022 SE238476.023	BH12_0.3-0.4 SOIL - 27/10/2022 SE238476.024	BH13_0.3-0.4 SOIL - 27/10/2022 SE238476.025
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH14_0.3-0.4 SOIL - 27/10/2022 SE238476.027
Asbestos Detected	No unit	-	No
Estimated Fibres*	%w/w	0.01	<0.01

VOCs in Water [AN433] Tested: 2/11/2022

PARAMETER	UOM	LOR	QR271022 WATER - 27/10/2022 SE238476.031
Benzene	µg/L	0.5	<0.5
Toluene	µg/L	0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5
m/p-xylene	µg/L	1	<1
o-xylene	µg/L	0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5
Total BTEX	µg/L	3	<3
Naphthalene (VOC)	µg/L	0.5	<0.5

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 2/11/2022

PARAMETER	UOM	LOR	QR271022 WATER - 27/10/2022 SE238476.031
TRH C6-C9	µg/L	40	<40
Benzene (F0)	µg/L	0.5	<0.5
TRH C6-C10	µg/L	50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 2/11/2022

PARAMETER	UOM	LOR	QR271022 WATER - 27/10/2022 SE238476.031
TRH C10-C14	µg/L	50	<50
TRH C15-C28	µg/L	200	<200
TRH C29-C36	µg/L	200	<200
TRH C37-C40	µg/L	200	<200
TRH >C10-C16	µg/L	60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60
TRH >C16-C34 (F3)	µg/L	500	<500
TRH >C34-C40 (F4)	µg/L	500	<500
TRH C10-C40	µg/L	320	<320

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 1/11/2022

PARAMETER	UOM	LOR	QR271022 WATER - 27/10/2022 SE238476.031
Arsenic	µg/L	1	<1
Cadmium	µg/L	0.1	<0.1
Chromium	µg/L	1	<1
Copper	µg/L	1	<1
Lead	µg/L	1	<1
Nickel	µg/L	1	<1
Zinc	µg/L	5	<5

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 1/11/2022

PARAMETER	UOM	LOR	QR271022 WATER - 27/10/2022 SE238476.031
Mercury	mg/L	0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS /ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

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

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

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

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

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

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

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE238476 R1

CLIENT DETAILS

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Order Number	**E25846**
Samples	31

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE238476 R1**
Date Received	31 Oct 2022
Date Reported	11 Nov 2022

COMMENTS

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

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	30 Soil, 1 Water
Date documentation received	31/10/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.1C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE238476 R1

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262673	26 Oct 2022	31 Oct 2022	26 Oct 2023	03 Nov 2022	26 Oct 2023	07 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262673	26 Oct 2022	31 Oct 2022	26 Oct 2023	03 Nov 2022	26 Oct 2023	07 Nov 2022
BH01_0.1-0.2	SE238476.005	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH02_0.1-0.2	SE238476.007	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262673	27 Oct 2022	31 Oct 2022	27 Oct 2023	03 Nov 2022	27 Oct 2023	07 Nov 2022

Mercury (dissolved) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR271022	SE238476.031	LB262342	27 Oct 2022	31 Oct 2022	24 Nov 2022	01 Nov 2022	24 Nov 2022	01 Nov 2022

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262639	26 Oct 2022	31 Oct 2022	23 Nov 2022	03 Nov 2022	23 Nov 2022	07 Nov 2022
BH16M_1.0-1.1	SE238476.002	LB262639	26 Oct 2022	31 Oct 2022	23 Nov 2022	03 Nov 2022	23 Nov 2022	07 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262639	26 Oct 2022	31 Oct 2022	23 Nov 2022	03 Nov 2022	23 Nov 2022	07 Nov 2022
BH15M_0.5-0.6	SE238476.004	LB262639	26 Oct 2022	31 Oct 2022	23 Nov 2022	03 Nov 2022	23 Nov 2022	07 Nov 2022
BH01_0.1-0.2	SE238476.005	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH01_0.9-1.0	SE238476.006	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH02_0.1-0.2	SE238476.007	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH02_0.5-0.6	SE238476.008	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH02_1.3-1.4	SE238476.009	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH02_3.0-3.1	SE238476.010	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH02_4.5-4.6	SE238476.011	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH03_0.5-0.6	SE238476.013	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH05_0.5-0.6	SE238476.016	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262639	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH08_0.5-0.6	SE238476.020	LB262640	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262640	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262640	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262640	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262640	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262640	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH13_1.4-1.5	SE238476.026	LB262640	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262640	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022
QD271022	SE238476.028	LB262640	27 Oct 2022	31 Oct 2022	24 Nov 2022	03 Nov 2022	24 Nov 2022	07 Nov 2022

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262522	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH16M_1.0-1.1	SE238476.002	LB262522	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262522	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH15M_0.5-0.6	SE238476.004	LB262522	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH01_0.1-0.2	SE238476.005	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH01_0.9-1.0	SE238476.006	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022

HOLDING TIME SUMMARY

SE238476 R1

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Moisture Content (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH02_0.1-0.2	SE238476.007	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH02_0.5-0.6	SE238476.008	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH02_1.3-1.4	SE238476.009	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH02_3.0-3.1	SE238476.010	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH02_4.5-4.6	SE238476.011	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH03_0.5-0.6	SE238476.013	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH05_0.5-0.6	SE238476.016	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH08_0.5-0.6	SE238476.020	LB262522	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262546	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262546	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262546	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262546	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262546	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH13_1.4-1.5	SE238476.026	LB262546	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262546	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
QD271022	SE238476.028	LB262546	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022
QTB271022	SE238476.030	LB262546	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	07 Nov 2022	04 Nov 2022

OC Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH16M_1.0-1.1	SE238476.002	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH15M_0.5-0.6	SE238476.004	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH01_0.1-0.2	SE238476.005	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH01_0.9-1.0	SE238476.006	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_0.1-0.2	SE238476.007	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_0.5-0.6	SE238476.008	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_1.3-1.4	SE238476.009	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_3.0-3.1	SE238476.010	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_4.5-4.6	SE238476.011	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH03_0.5-0.6	SE238476.013	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH05_0.5-0.6	SE238476.016	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH08_0.5-0.6	SE238476.020	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH13_1.4-1.5	SE238476.026	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
QD271022	SE238476.028	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022

OP Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH16M_1.0-1.1	SE238476.002	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH15M_0.5-0.6	SE238476.004	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022

HOLDING TIME SUMMARY

SE238476 R1

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OP Pesticides in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.1-0.2	SE238476.005	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH01_0.9-1.0	SE238476.006	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_0.1-0.2	SE238476.007	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH02_0.5-0.6	SE238476.008	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_1.3-1.4	SE238476.009	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_3.0-3.1	SE238476.010	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_4.5-4.6	SE238476.011	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH03_0.5-0.6	SE238476.013	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH05_0.5-0.6	SE238476.016	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH08_0.5-0.6	SE238476.020	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH13_1.4-1.5	SE238476.026	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
QD271022	SE238476.028	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH16M_1.0-1.1	SE238476.002	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH15M_0.5-0.6	SE238476.004	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH01_0.1-0.2	SE238476.005	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH01_0.9-1.0	SE238476.006	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH02_0.1-0.2	SE238476.007	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH02_0.5-0.6	SE238476.008	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH02_1.3-1.4	SE238476.009	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH02_3.0-3.1	SE238476.010	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH02_4.5-4.6	SE238476.011	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH03_0.5-0.6	SE238476.013	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH05_0.5-0.6	SE238476.016	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH08_0.5-0.6	SE238476.020	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	04 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH13_1.4-1.5	SE238476.026	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
QD271022	SE238476.028	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022

PCBs in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH16M_1.0-1.1	SE238476.002	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022

HOLDING TIME SUMMARY

SE238476 R1

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

PCBs in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH15M_0.5-0.6	SE238476.004	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH01_0.1-0.2	SE238476.005	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH01_0.9-1.0	SE238476.006	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_0.1-0.2	SE238476.007	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_0.5-0.6	SE238476.008	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_1.3-1.4	SE238476.009	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_3.0-3.1	SE238476.010	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_4.5-4.6	SE238476.011	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH03_0.5-0.6	SE238476.013	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH05_0.5-0.6	SE238476.016	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH08_0.5-0.6	SE238476.020	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH13_1.4-1.5	SE238476.026	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
QD271022	SE238476.028	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262637	26 Oct 2022	31 Oct 2022	24 Apr 2023	03 Nov 2022	24 Apr 2023	07 Nov 2022
BH16M_1.0-1.1	SE238476.002	LB262637	26 Oct 2022	31 Oct 2022	24 Apr 2023	03 Nov 2022	24 Apr 2023	07 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262637	26 Oct 2022	31 Oct 2022	24 Apr 2023	03 Nov 2022	24 Apr 2023	07 Nov 2022
BH15M_0.5-0.6	SE238476.004	LB262637	26 Oct 2022	31 Oct 2022	24 Apr 2023	03 Nov 2022	24 Apr 2023	07 Nov 2022
BH01_0.1-0.2	SE238476.005	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH01_0.9-1.0	SE238476.006	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH02_0.1-0.2	SE238476.007	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH02_0.5-0.6	SE238476.008	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH02_1.3-1.4	SE238476.009	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH02_3.0-3.1	SE238476.010	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH02_4.5-4.6	SE238476.011	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH03_0.5-0.6	SE238476.013	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH05_0.5-0.6	SE238476.016	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262637	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH08_0.5-0.6	SE238476.020	LB262638	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262638	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262638	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262638	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262638	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262638	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH13_1.4-1.5	SE238476.026	LB262638	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262638	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022
QD271022	SE238476.028	LB262638	27 Oct 2022	31 Oct 2022	25 Apr 2023	03 Nov 2022	25 Apr 2023	07 Nov 2022

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR271022	SE238476.031	LB262336	27 Oct 2022	31 Oct 2022	25 Apr 2023	01 Nov 2022	25 Apr 2023	01 Nov 2022

HOLDING TIME SUMMARY

SE238476 R1

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH16M_1.0-1.1	SE238476.002	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH15M_0.5-0.6	SE238476.004	LB262484	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH01_0.1-0.2	SE238476.005	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH01_0.9-1.0	SE238476.006	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_0.1-0.2	SE238476.007	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_0.5-0.6	SE238476.008	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_1.3-1.4	SE238476.009	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_3.0-3.1	SE238476.010	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH02_4.5-4.6	SE238476.011	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH03_0.5-0.6	SE238476.013	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH05_0.5-0.6	SE238476.016	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH08_0.5-0.6	SE238476.020	LB262484	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH13_1.4-1.5	SE238476.026	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022
QD271022	SE238476.028	LB262533	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR271022	SE238476.031	LB262453	27 Oct 2022	31 Oct 2022	03 Nov 2022	02 Nov 2022	12 Dec 2022	07 Nov 2022

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262517	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	09 Nov 2022	04 Nov 2022
BH16M_1.0-1.1	SE238476.002	LB262517	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	09 Nov 2022	04 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262517	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	09 Nov 2022	04 Nov 2022
BH15M_0.5-0.6	SE238476.004	LB262517	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	09 Nov 2022	04 Nov 2022
BH01_0.1-0.2	SE238476.005	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH01_0.9-1.0	SE238476.006	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH02_0.1-0.2	SE238476.007	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH02_0.5-0.6	SE238476.008	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH02_1.3-1.4	SE238476.009	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH02_3.0-3.1	SE238476.010	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH02_4.5-4.6	SE238476.011	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH03_0.5-0.6	SE238476.013	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH05_0.5-0.6	SE238476.016	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH08_0.5-0.6	SE238476.020	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022

HOLDING TIME SUMMARY

SE238476 R1

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

VOC's in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH13_1.4-1.5	SE238476.026	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
QD271022	SE238476.028	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
QTS271022	SE238476.029	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
QTB271022	SE238476.030	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022

VOCs in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR271022	SE238476.031	LB262576	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	03 Nov 2022

Volatile Petroleum Hydrocarbons in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH16M_0.1-0.2	SE238476.001	LB262517	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	09 Nov 2022	04 Nov 2022
BH16M_1.0-1.1	SE238476.002	LB262517	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	09 Nov 2022	04 Nov 2022
BH15M_0.1-0.2	SE238476.003	LB262517	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	09 Nov 2022	04 Nov 2022
BH15M_0.5-0.6	SE238476.004	LB262517	26 Oct 2022	31 Oct 2022	09 Nov 2022	02 Nov 2022	09 Nov 2022	04 Nov 2022
BH01_0.1-0.2	SE238476.005	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH01_0.9-1.0	SE238476.006	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH02_0.1-0.2	SE238476.007	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH02_0.5-0.6	SE238476.008	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH02_1.3-1.4	SE238476.009	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH02_3.0-3.1	SE238476.010	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH02_4.5-4.6	SE238476.011	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH03_0.1-0.2	SE238476.012	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH03_0.5-0.6	SE238476.013	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH04_0.1-0.2	SE238476.014	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH05_0.1-0.2	SE238476.015	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH05_0.5-0.6	SE238476.016	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH06_0.1-0.2	SE238476.017	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH07_0.1-0.2	SE238476.018	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH08_0.1-0.2	SE238476.019	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH08_0.5-0.6	SE238476.020	LB262517	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH09_0.1-0.2	SE238476.021	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH10_0.2-0.3	SE238476.022	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH11_0.4-0.5	SE238476.023	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH12_0.3-0.4	SE238476.024	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH13_0.3-0.4	SE238476.025	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH13_1.4-1.5	SE238476.026	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
BH14_0.3-0.4	SE238476.027	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
QD271022	SE238476.028	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	04 Nov 2022
QTS271022	SE238476.029	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	07 Nov 2022
QTB271022	SE238476.030	LB262542	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	07 Nov 2022

Volatile Petroleum Hydrocarbons in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR271022	SE238476.031	LB262576	27 Oct 2022	31 Oct 2022	10 Nov 2022	02 Nov 2022	10 Nov 2022	03 Nov 2022

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	60 - 130%	86
	BH15M_0.1-0.2	SE238476.003	%	60 - 130%	90
	BH01_0.1-0.2	SE238476.005	%	60 - 130%	86
	BH02_0.1-0.2	SE238476.007	%	60 - 130%	94
	BH03_0.1-0.2	SE238476.012	%	60 - 130%	98
	BH04_0.1-0.2	SE238476.014	%	60 - 130%	96
	BH05_0.1-0.2	SE238476.015	%	60 - 130%	84
	BH06_0.1-0.2	SE238476.017	%	60 - 130%	104
	BH07_0.1-0.2	SE238476.018	%	60 - 130%	85
	BH08_0.1-0.2	SE238476.019	%	60 - 130%	94
	BH09_0.1-0.2	SE238476.021	%	60 - 130%	95
	BH10_0.2-0.3	SE238476.022	%	60 - 130%	100
	BH11_0.4-0.5	SE238476.023	%	60 - 130%	100
	BH12_0.3-0.4	SE238476.024	%	60 - 130%	96
	BH13_0.3-0.4	SE238476.025	%	60 - 130%	101
	BH14_0.3-0.4	SE238476.027	%	60 - 130%	98

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	60 - 130%	92
	BH15M_0.1-0.2	SE238476.003	%	60 - 130%	88
	BH01_0.1-0.2	SE238476.005	%	60 - 130%	90
	BH02_0.1-0.2	SE238476.007	%	60 - 130%	88
	BH03_0.1-0.2	SE238476.012	%	60 - 130%	86
	BH04_0.1-0.2	SE238476.014	%	60 - 130%	90
	BH05_0.1-0.2	SE238476.015	%	60 - 130%	88
	BH06_0.1-0.2	SE238476.017	%	60 - 130%	88
	BH07_0.1-0.2	SE238476.018	%	60 - 130%	84
	BH08_0.1-0.2	SE238476.019	%	60 - 130%	90
	BH09_0.1-0.2	SE238476.021	%	60 - 130%	96
	BH10_0.2-0.3	SE238476.022	%	60 - 130%	102
	BH11_0.4-0.5	SE238476.023	%	60 - 130%	96
	BH12_0.3-0.4	SE238476.024	%	60 - 130%	96
	BH13_0.3-0.4	SE238476.025	%	60 - 130%	89
	BH14_0.3-0.4	SE238476.027	%	60 - 130%	93
d14-p-terphenyl (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	60 - 130%	102
	BH15M_0.1-0.2	SE238476.003	%	60 - 130%	100
	BH01_0.1-0.2	SE238476.005	%	60 - 130%	104
	BH02_0.1-0.2	SE238476.007	%	60 - 130%	104
	BH03_0.1-0.2	SE238476.012	%	60 - 130%	100
	BH04_0.1-0.2	SE238476.014	%	60 - 130%	104
	BH05_0.1-0.2	SE238476.015	%	60 - 130%	102
	BH06_0.1-0.2	SE238476.017	%	60 - 130%	100
	BH07_0.1-0.2	SE238476.018	%	60 - 130%	98
	BH08_0.1-0.2	SE238476.019	%	60 - 130%	100
	BH09_0.1-0.2	SE238476.021	%	60 - 130%	98
	BH10_0.2-0.3	SE238476.022	%	60 - 130%	106
	BH11_0.4-0.5	SE238476.023	%	60 - 130%	100
	BH12_0.3-0.4	SE238476.024	%	60 - 130%	104
	BH13_0.3-0.4	SE238476.025	%	60 - 130%	96
	BH14_0.3-0.4	SE238476.027	%	60 - 130%	99

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	70 - 130%	92
	BH16M_1.0-1.1	SE238476.002	%	70 - 130%	88
	BH15M_0.1-0.2	SE238476.003	%	70 - 130%	88
	BH15M_0.5-0.6	SE238476.004	%	70 - 130%	90
	BH01_0.1-0.2	SE238476.005	%	70 - 130%	90
	BH01_0.9-1.0	SE238476.006	%	70 - 130%	90
	BH02_0.1-0.2	SE238476.007	%	70 - 130%	88
	BH02_0.5-0.6	SE238476.008	%	70 - 130%	90

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — **Method: ME-(AU)-[ENV]AN420**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH02_1.3-1.4	SE238476.009	%	70 - 130%	90
	BH02_3.0-3.1	SE238476.010	%	70 - 130%	90
	BH02_4.5-4.6	SE238476.011	%	70 - 130%	90
	BH03_0.1-0.2	SE238476.012	%	70 - 130%	86
	BH03_0.5-0.6	SE238476.013	%	70 - 130%	86
	BH04_0.1-0.2	SE238476.014	%	70 - 130%	90
	BH05_0.1-0.2	SE238476.015	%	70 - 130%	88
	BH05_0.5-0.6	SE238476.016	%	70 - 130%	80
	BH06_0.1-0.2	SE238476.017	%	70 - 130%	88
	BH07_0.1-0.2	SE238476.018	%	70 - 130%	84
	BH08_0.1-0.2	SE238476.019	%	70 - 130%	90
	BH08_0.5-0.6	SE238476.020	%	70 - 130%	86
	BH09_0.1-0.2	SE238476.021	%	70 - 130%	96
	BH10_0.2-0.3	SE238476.022	%	70 - 130%	102
	BH11_0.4-0.5	SE238476.023	%	70 - 130%	96
	BH12_0.3-0.4	SE238476.024	%	70 - 130%	96
	BH13_0.3-0.4	SE238476.025	%	70 - 130%	89
	BH13_1.4-1.5	SE238476.026	%	70 - 130%	89
	BH14_0.3-0.4	SE238476.027	%	70 - 130%	93
d14-p-terphenyl (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	70 - 130%	102
	BH16M_1.0-1.1	SE238476.002	%	70 - 130%	104
	BH15M_0.1-0.2	SE238476.003	%	70 - 130%	100
	BH15M_0.5-0.6	SE238476.004	%	70 - 130%	100
	BH01_0.1-0.2	SE238476.005	%	70 - 130%	104
	BH01_0.9-1.0	SE238476.006	%	70 - 130%	100
	BH02_0.1-0.2	SE238476.007	%	70 - 130%	104
	BH02_0.5-0.6	SE238476.008	%	70 - 130%	98
	BH02_1.3-1.4	SE238476.009	%	70 - 130%	100
	BH02_3.0-3.1	SE238476.010	%	70 - 130%	104
	BH02_4.5-4.6	SE238476.011	%	70 - 130%	100
	BH03_0.1-0.2	SE238476.012	%	70 - 130%	100
	BH03_0.5-0.6	SE238476.013	%	70 - 130%	98
	BH04_0.1-0.2	SE238476.014	%	70 - 130%	104
	BH05_0.1-0.2	SE238476.015	%	70 - 130%	102
	BH05_0.5-0.6	SE238476.016	%	70 - 130%	90
	BH06_0.1-0.2	SE238476.017	%	70 - 130%	100
	BH07_0.1-0.2	SE238476.018	%	70 - 130%	98
	BH08_0.1-0.2	SE238476.019	%	70 - 130%	100
	BH08_0.5-0.6	SE238476.020	%	70 - 130%	96
	BH09_0.1-0.2	SE238476.021	%	70 - 130%	98
	BH10_0.2-0.3	SE238476.022	%	70 - 130%	106
	BH11_0.4-0.5	SE238476.023	%	70 - 130%	100
	BH12_0.3-0.4	SE238476.024	%	70 - 130%	104
	BH13_0.3-0.4	SE238476.025	%	70 - 130%	96
	BH13_1.4-1.5	SE238476.026	%	70 - 130%	97
	BH14_0.3-0.4	SE238476.027	%	70 - 130%	99
d5-nitrobenzene (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	70 - 130%	110
	BH16M_1.0-1.1	SE238476.002	%	70 - 130%	108
	BH15M_0.1-0.2	SE238476.003	%	70 - 130%	110
	BH15M_0.5-0.6	SE238476.004	%	70 - 130%	108
	BH01_0.1-0.2	SE238476.005	%	70 - 130%	106
	BH01_0.9-1.0	SE238476.006	%	70 - 130%	106
	BH02_0.1-0.2	SE238476.007	%	70 - 130%	102
	BH02_0.5-0.6	SE238476.008	%	70 - 130%	106
	BH02_1.3-1.4	SE238476.009	%	70 - 130%	106
	BH02_3.0-3.1	SE238476.010	%	70 - 130%	104
	BH02_4.5-4.6	SE238476.011	%	70 - 130%	102
	BH03_0.1-0.2	SE238476.012	%	70 - 130%	102
	BH03_0.5-0.6	SE238476.013	%	70 - 130%	100
	BH04_0.1-0.2	SE238476.014	%	70 - 130%	102
	BH05_0.1-0.2	SE238476.015	%	70 - 130%	98

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d5-nitrobenzene (Surrogate)	BH05_0.5-0.6	SE238476.016	%	70 - 130%	96
	BH06_0.1-0.2	SE238476.017	%	70 - 130%	106
	BH07_0.1-0.2	SE238476.018	%	70 - 130%	98
	BH08_0.1-0.2	SE238476.019	%	70 - 130%	100
	BH08_0.5-0.6	SE238476.020	%	70 - 130%	100
	BH09_0.1-0.2	SE238476.021	%	70 - 130%	104
	BH10_0.2-0.3	SE238476.022	%	70 - 130%	112
	BH11_0.4-0.5	SE238476.023	%	70 - 130%	104
	BH12_0.3-0.4	SE238476.024	%	70 - 130%	110
	BH13_0.3-0.4	SE238476.025	%	70 - 130%	102
	BH13_1.4-1.5	SE238476.026	%	70 - 130%	100
	BH14_0.3-0.4	SE238476.027	%	70 - 130%	105

PCBs in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	60 - 130%	86
	BH15M_0.1-0.2	SE238476.003	%	60 - 130%	90
	BH01_0.1-0.2	SE238476.005	%	60 - 130%	86
	BH02_0.1-0.2	SE238476.007	%	60 - 130%	94
	BH03_0.1-0.2	SE238476.012	%	60 - 130%	98
	BH04_0.1-0.2	SE238476.014	%	60 - 130%	96
	BH05_0.1-0.2	SE238476.015	%	60 - 130%	84
	BH06_0.1-0.2	SE238476.017	%	60 - 130%	104
	BH07_0.1-0.2	SE238476.018	%	60 - 130%	85
	BH08_0.1-0.2	SE238476.019	%	60 - 130%	94
	BH09_0.1-0.2	SE238476.021	%	60 - 130%	95
	BH10_0.2-0.3	SE238476.022	%	60 - 130%	100
	BH11_0.4-0.5	SE238476.023	%	60 - 130%	100
	BH12_0.3-0.4	SE238476.024	%	60 - 130%	96
	BH13_0.3-0.4	SE238476.025	%	60 - 130%	101
	BH14_0.3-0.4	SE238476.027	%	60 - 130%	98

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	60 - 130%	79
	BH16M_1.0-1.1	SE238476.002	%	60 - 130%	76
	BH15M_0.1-0.2	SE238476.003	%	60 - 130%	77
	BH15M_0.5-0.6	SE238476.004	%	60 - 130%	75
	BH01_0.1-0.2	SE238476.005	%	60 - 130%	75
	BH01_0.9-1.0	SE238476.006	%	60 - 130%	76
	BH02_0.1-0.2	SE238476.007	%	60 - 130%	76
	BH02_0.5-0.6	SE238476.008	%	60 - 130%	73
	BH02_1.3-1.4	SE238476.009	%	60 - 130%	86
	BH02_3.0-3.1	SE238476.010	%	60 - 130%	79
	BH02_4.5-4.6	SE238476.011	%	60 - 130%	78
	BH03_0.1-0.2	SE238476.012	%	60 - 130%	78
	BH03_0.5-0.6	SE238476.013	%	60 - 130%	74
	BH04_0.1-0.2	SE238476.014	%	60 - 130%	75
	BH05_0.1-0.2	SE238476.015	%	60 - 130%	77
	BH05_0.5-0.6	SE238476.016	%	60 - 130%	77
	BH06_0.1-0.2	SE238476.017	%	60 - 130%	78
	BH07_0.1-0.2	SE238476.018	%	60 - 130%	91
	BH08_0.1-0.2	SE238476.019	%	60 - 130%	77
	BH08_0.5-0.6	SE238476.020	%	60 - 130%	82
	BH09_0.1-0.2	SE238476.021	%	60 - 130%	83
	BH10_0.2-0.3	SE238476.022	%	60 - 130%	87
	BH11_0.4-0.5	SE238476.023	%	60 - 130%	82
	BH12_0.3-0.4	SE238476.024	%	60 - 130%	79
	BH13_0.3-0.4	SE238476.025	%	60 - 130%	79
	BH13_1.4-1.5	SE238476.026	%	60 - 130%	88
	BH14_0.3-0.4	SE238476.027	%	60 - 130%	78
	QD271022	SE238476.028	%	60 - 130%	83

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

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

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QTS271022	SE238476.029	%	60 - 130%	85
	QTB271022	SE238476.030	%	60 - 130%	89
d4-1,2-dichloroethane (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	60 - 130%	78
	BH16M_1.0-1.1	SE238476.002	%	60 - 130%	75
	BH15M_0.1-0.2	SE238476.003	%	60 - 130%	76
	BH15M_0.5-0.6	SE238476.004	%	60 - 130%	79
	BH01_0.1-0.2	SE238476.005	%	60 - 130%	80
	BH01_0.9-1.0	SE238476.006	%	60 - 130%	80
	BH02_0.1-0.2	SE238476.007	%	60 - 130%	81
	BH02_0.5-0.6	SE238476.008	%	60 - 130%	72
	BH02_1.3-1.4	SE238476.009	%	60 - 130%	77
	BH02_3.0-3.1	SE238476.010	%	60 - 130%	77
	BH02_4.5-4.6	SE238476.011	%	60 - 130%	79
	BH03_0.1-0.2	SE238476.012	%	60 - 130%	82
	BH03_0.5-0.6	SE238476.013	%	60 - 130%	77
	BH04_0.1-0.2	SE238476.014	%	60 - 130%	78
	BH05_0.1-0.2	SE238476.015	%	60 - 130%	82
	BH05_0.5-0.6	SE238476.016	%	60 - 130%	81
	BH06_0.1-0.2	SE238476.017	%	60 - 130%	82
	BH07_0.1-0.2	SE238476.018	%	60 - 130%	96
	BH08_0.1-0.2	SE238476.019	%	60 - 130%	81
	BH08_0.5-0.6	SE238476.020	%	60 - 130%	95
	BH09_0.1-0.2	SE238476.021	%	60 - 130%	78
	BH10_0.2-0.3	SE238476.022	%	60 - 130%	81
	BH11_0.4-0.5	SE238476.023	%	60 - 130%	88
	BH12_0.3-0.4	SE238476.024	%	60 - 130%	81
	BH13_0.3-0.4	SE238476.025	%	60 - 130%	84
	BH13_1.4-1.5	SE238476.026	%	60 - 130%	88
	BH14_0.3-0.4	SE238476.027	%	60 - 130%	78
	QD271022	SE238476.028	%	60 - 130%	82
	QTS271022	SE238476.029	%	60 - 130%	90
	QTB271022	SE238476.030	%	60 - 130%	80
d8-toluene (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	60 - 130%	87
	BH16M_1.0-1.1	SE238476.002	%	60 - 130%	83
	BH15M_0.1-0.2	SE238476.003	%	60 - 130%	81
	BH15M_0.5-0.6	SE238476.004	%	60 - 130%	83
	BH01_0.1-0.2	SE238476.005	%	60 - 130%	82
	BH01_0.9-1.0	SE238476.006	%	60 - 130%	84
	BH02_0.1-0.2	SE238476.007	%	60 - 130%	85
	BH02_0.5-0.6	SE238476.008	%	60 - 130%	79
	BH02_1.3-1.4	SE238476.009	%	60 - 130%	90
	BH02_3.0-3.1	SE238476.010	%	60 - 130%	87
	BH02_4.5-4.6	SE238476.011	%	60 - 130%	85
	BH03_0.1-0.2	SE238476.012	%	60 - 130%	87
	BH03_0.5-0.6	SE238476.013	%	60 - 130%	81
	BH04_0.1-0.2	SE238476.014	%	60 - 130%	81
	BH05_0.1-0.2	SE238476.015	%	60 - 130%	84
	BH05_0.5-0.6	SE238476.016	%	60 - 130%	83
	BH06_0.1-0.2	SE238476.017	%	60 - 130%	84
	BH07_0.1-0.2	SE238476.018	%	60 - 130%	98
	BH08_0.1-0.2	SE238476.019	%	60 - 130%	80
	BH08_0.5-0.6	SE238476.020	%	60 - 130%	85
	BH09_0.1-0.2	SE238476.021	%	60 - 130%	75
	BH10_0.2-0.3	SE238476.022	%	60 - 130%	81
	BH11_0.4-0.5	SE238476.023	%	60 - 130%	84
	BH12_0.3-0.4	SE238476.024	%	60 - 130%	76
	BH13_0.3-0.4	SE238476.025	%	60 - 130%	80
	BH13_1.4-1.5	SE238476.026	%	60 - 130%	86
	BH14_0.3-0.4	SE238476.027	%	60 - 130%	76
	QD271022	SE238476.028	%	60 - 130%	80
	QTS271022	SE238476.029	%	60 - 130%	86

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

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

VOC's in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	QTB271022	SE238476.030	%	60 - 130%	78

VOCs in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QR271022	SE238476.031	%	40 - 130%	101
d4-1,2-dichloroethane (Surrogate)	QR271022	SE238476.031	%	40 - 130%	108
d8-toluene (Surrogate)	QR271022	SE238476.031	%	40 - 130%	104

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	60 - 130%	79
	BH16M_1.0-1.1	SE238476.002	%	60 - 130%	76
	BH15M_0.1-0.2	SE238476.003	%	60 - 130%	77
	BH15M_0.5-0.6	SE238476.004	%	60 - 130%	75
	BH01_0.1-0.2	SE238476.005	%	60 - 130%	75
	BH01_0.9-1.0	SE238476.006	%	60 - 130%	76
	BH02_0.1-0.2	SE238476.007	%	60 - 130%	76
	BH02_0.5-0.6	SE238476.008	%	60 - 130%	73
	BH02_1.3-1.4	SE238476.009	%	60 - 130%	86
	BH02_3.0-3.1	SE238476.010	%	60 - 130%	79
	BH02_4.5-4.6	SE238476.011	%	60 - 130%	78
	BH03_0.1-0.2	SE238476.012	%	60 - 130%	78
	BH03_0.5-0.6	SE238476.013	%	60 - 130%	74
	BH04_0.1-0.2	SE238476.014	%	60 - 130%	75
	BH05_0.1-0.2	SE238476.015	%	60 - 130%	77
	BH05_0.5-0.6	SE238476.016	%	60 - 130%	77
	BH06_0.1-0.2	SE238476.017	%	60 - 130%	78
	BH07_0.1-0.2	SE238476.018	%	60 - 130%	91
	BH08_0.1-0.2	SE238476.019	%	60 - 130%	77
	BH08_0.5-0.6	SE238476.020	%	60 - 130%	82
	BH09_0.1-0.2	SE238476.021	%	60 - 130%	83
	BH10_0.2-0.3	SE238476.022	%	60 - 130%	87
	BH11_0.4-0.5	SE238476.023	%	60 - 130%	82
	BH12_0.3-0.4	SE238476.024	%	60 - 130%	79
	BH13_0.3-0.4	SE238476.025	%	60 - 130%	79
	BH13_1.4-1.5	SE238476.026	%	60 - 130%	88
	BH14_0.3-0.4	SE238476.027	%	60 - 130%	78
	QD271022	SE238476.028	%	60 - 130%	83
d4-1,2-dichloroethane (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	60 - 130%	78
	BH16M_1.0-1.1	SE238476.002	%	60 - 130%	75
	BH15M_0.1-0.2	SE238476.003	%	60 - 130%	76
	BH15M_0.5-0.6	SE238476.004	%	60 - 130%	79
	BH01_0.1-0.2	SE238476.005	%	60 - 130%	80
	BH01_0.9-1.0	SE238476.006	%	60 - 130%	80
	BH02_0.1-0.2	SE238476.007	%	60 - 130%	81
	BH02_0.5-0.6	SE238476.008	%	60 - 130%	72
	BH02_1.3-1.4	SE238476.009	%	60 - 130%	77
	BH02_3.0-3.1	SE238476.010	%	60 - 130%	77
	BH02_4.5-4.6	SE238476.011	%	60 - 130%	79
	BH03_0.1-0.2	SE238476.012	%	60 - 130%	82
	BH03_0.5-0.6	SE238476.013	%	60 - 130%	77
	BH04_0.1-0.2	SE238476.014	%	60 - 130%	78
	BH05_0.1-0.2	SE238476.015	%	60 - 130%	82
	BH05_0.5-0.6	SE238476.016	%	60 - 130%	81
	BH06_0.1-0.2	SE238476.017	%	60 - 130%	82
	BH07_0.1-0.2	SE238476.018	%	60 - 130%	96
	BH08_0.1-0.2	SE238476.019	%	60 - 130%	81
	BH08_0.5-0.6	SE238476.020	%	60 - 130%	95
	BH09_0.1-0.2	SE238476.021	%	60 - 130%	78
	BH10_0.2-0.3	SE238476.022	%	60 - 130%	81
	BH11_0.4-0.5	SE238476.023	%	60 - 130%	88
	BH12_0.3-0.4	SE238476.024	%	60 - 130%	81

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

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

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	BH13_0.3-0.4	SE238476.025	%	60 - 130%	84
	BH13_1.4-1.5	SE238476.026	%	60 - 130%	88
	BH14_0.3-0.4	SE238476.027	%	60 - 130%	78
	QD271022	SE238476.028	%	60 - 130%	82
d8-toluene (Surrogate)	BH16M_0.1-0.2	SE238476.001	%	60 - 130%	87
	BH16M_1.0-1.1	SE238476.002	%	60 - 130%	83
	BH15M_0.1-0.2	SE238476.003	%	60 - 130%	81
	BH15M_0.5-0.6	SE238476.004	%	60 - 130%	83
	BH01_0.1-0.2	SE238476.005	%	60 - 130%	82
	BH01_0.9-1.0	SE238476.006	%	60 - 130%	84
	BH02_0.1-0.2	SE238476.007	%	60 - 130%	85
	BH02_0.5-0.6	SE238476.008	%	60 - 130%	79
	BH02_1.3-1.4	SE238476.009	%	60 - 130%	90
	BH02_3.0-3.1	SE238476.010	%	60 - 130%	87
	BH02_4.5-4.6	SE238476.011	%	60 - 130%	85
	BH03_0.1-0.2	SE238476.012	%	60 - 130%	87
	BH03_0.5-0.6	SE238476.013	%	60 - 130%	81
	BH04_0.1-0.2	SE238476.014	%	60 - 130%	81
	BH05_0.1-0.2	SE238476.015	%	60 - 130%	84
	BH05_0.5-0.6	SE238476.016	%	60 - 130%	83
	BH06_0.1-0.2	SE238476.017	%	60 - 130%	84
	BH07_0.1-0.2	SE238476.018	%	60 - 130%	98
	BH08_0.1-0.2	SE238476.019	%	60 - 130%	80
	BH08_0.5-0.6	SE238476.020	%	60 - 130%	85
	BH09_0.1-0.2	SE238476.021	%	60 - 130%	75
	BH10_0.2-0.3	SE238476.022	%	60 - 130%	81
	BH11_0.4-0.5	SE238476.023	%	60 - 130%	84
	BH12_0.3-0.4	SE238476.024	%	60 - 130%	76
	BH13_0.3-0.4	SE238476.025	%	60 - 130%	80
	BH13_1.4-1.5	SE238476.026	%	60 - 130%	86
	BH14_0.3-0.4	SE238476.027	%	60 - 130%	76
	QD271022	SE238476.028	%	60 - 130%	80

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QR271022	SE238476.031	%	40 - 130%	101
d4-1,2-dichloroethane (Surrogate)	QR271022	SE238476.031	%	60 - 130%	108
d8-toluene (Surrogate)	QR271022	SE238476.031	%	40 - 130%	104

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

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

Mercury (dissolved) in Water

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

Sample Number	Parameter	Units	LOR	Result
LB262342.001	Mercury	mg/L	0.0001	<0.0001

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB262639.001	Mercury	mg/kg	0.05	<0.05
LB262640.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB262484.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	88
LB262533.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	87

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

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

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB262484.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	88
		d14-p-terphenyl (Surrogate)	%	-	96
LB262533.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	96
		d14-p-terphenyl (Surrogate)	%	-	104

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB262484.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	106
		2-fluorobiphenyl (Surrogate)	%	-	88
		d14-p-terphenyl (Surrogate)	%	-	96
LB262533.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB262533.001		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	110
		2-fluorobiphenyl (Surrogate)	%	-	96
		d14-p-terphenyl (Surrogate)	%	-	104

PCBs in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB262484.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	88
LB262533.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	87

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

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

Sample Number	Parameter	Units	LOR	Result
LB262637.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0
LB262638.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

Trace Metals (Dissolved) in Water by ICPMS

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

Sample Number	Parameter	Units	LOR	Result
LB262336.001	Arsenic	µg/L	1	<1
	Cadmium	µg/L	0.1	<0.1
	Chromium	µg/L	1	<1
	Copper	µg/L	1	<1
	Lead	µg/L	1	<1
	Nickel	µg/L	1	<1
	Zinc	µg/L	5	<5

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result
LB262484.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110
LB262533.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number	Parameter	Units	LOR	Result
LB262453.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB262517.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	85
		d8-toluene (Surrogate)	%	-	97
		Bromofluorobenzene (Surrogate)	%	-	90
	Totals	Total BTEX	mg/kg	0.6	<0.6
LB262542.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	88
		d8-toluene (Surrogate)	%	-	83
		Bromofluorobenzene (Surrogate)	%	-	84
	Totals	Total BTEX	mg/kg	0.6	<0.6

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result
LB262576.001	Monocyclic Aromatic	Benzene	µg/L	0.5	<0.5
	Hydrocarbons	Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		o-xylene	µg/L	0.5	<0.5
	Polycyclic VOCs	Naphthalene (VOC)	µg/L	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	105
		d8-toluene (Surrogate)	%	-	103
		Bromofluorobenzene (Surrogate)	%	-	98

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB262517.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	85
LB262542.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	88

Volatile Petroleum Hydrocarbons in Water

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

Sample Number	Parameter	Units	LOR

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

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

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

Sample Number		Parameter	Units	LOR	Result
LB262576.001		TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	105
		d8-toluene (Surrogate)	%	-	103
		Bromofluorobenzene (Surrogate)	%	-	98

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

Mercury (dissolved) in Water

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.031	LB262342.012	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	133

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.010	LB262639.014	Mercury	mg/kg	0.05	0.06	0.06	112	4
SE238476.019	LB262639.024	Mercury	mg/kg	0.05	0.06	0.08	102	33
SE238476.023	LB262640.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE238476.028	LB262640.020	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.010	LB262522.011	% Moisture	%w/w	1	13.5	15.7	37	15
SE238476.020	LB262522.022	% Moisture	%w/w	1	16.2	17.4	36	7
SE238513.021	LB262546.011	% Moisture	%w/w	1	8.9	8.3	42	8
SE238513.027	LB262546.018	% Moisture	%w/w	1	7.4	8.5	43	14

OC Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE236445B.019	LB262533.014		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	30	3
SE238476.019	LB262484.027		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

OC Pesticides in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.019	LB262484.027		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.13	30	11
SE238513.027	LB262533.023		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	30	4

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.019	LB262484.027	Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
		Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
		Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
		Malathion	mg/kg	0.2	<0.2	<0.2	200	0
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
		Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
		Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
		Ethion	mg/kg	0.2	<0.2	<0.2	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

OP Pesticides in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.019	LB262484.027		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.010	LB262484.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	4
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
SE238476.019	LB262484.027		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	0
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
SE238513.027	LB262533.023		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238513.027	LB262533.023		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	5
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	6
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	6

PCBs in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE236445B.019	LB262533.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	3
SE238476.019	LB262484.027		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	11
SE238513.027	LB262533.023		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	4

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

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

Original	Duplicate		Parameter	Units	LOR

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.010	LB262637.014	Arsenic, As	mg/kg	1	1	1	118	5
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	7.6	8.8	36	14
		Copper, Cu	mg/kg	0.5	1.2	1.3	70	11
		Nickel, Ni	mg/kg	0.5	1.3	1.4	66	4
		Lead, Pb	mg/kg	1	7	9	43	21
		Zinc, Zn	mg/kg	2	2.2	2.6	114	16
SE238476.019	LB262637.024	Arsenic, As	mg/kg	1	4	5	52	7
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	143	0
		Chromium, Cr	mg/kg	0.5	8.2	8.8	36	7
		Copper, Cu	mg/kg	0.5	6.6	5.3	38	21
		Nickel, Ni	mg/kg	0.5	1.5	1.3	65	12
		Lead, Pb	mg/kg	1	430	400	30	7
		Zinc, Zn	mg/kg	2	210	180	31	16
SE238476.023	LB262638.014	Arsenic, As	mg/kg	1	2	2	83	6
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	4.6	5.2	40	11
		Copper, Cu	mg/kg	0.5	1.6	1.8	60	12
		Nickel, Ni	mg/kg	0.5	<0.5	<0.5	200	0
		Lead, Pb	mg/kg	1	2	2	74	12
		Zinc, Zn	mg/kg	2	2.1	2.4	120	14
SE238476.028	LB262638.020	Arsenic, As	mg/kg	1	<1	<1	200	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	1.9	2.0	56	4
		Copper, Cu	mg/kg	0.5	1.6	1.4	64	13
		Nickel, Ni	mg/kg	0.5	0.5	0.5	127	1
		Lead, Pb	mg/kg	1	10	9	40	18
		Zinc, Zn	mg/kg	2	3.1	3.9	87	21

Trace Metals (Dissolved) in Water by ICPMS

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238461.022	LB262336.014	Arsenic	µg/L	1	<1	<1	200	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	200	0
		Copper	µg/L	1	<1	<1	200	0
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	<1	<1	200	0
		Zinc	µg/L	5	<5	<5	200	0
SE238476.031	LB262336.022	Arsenic	µg/L	1	<1	<1	200	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	200	0
		Copper	µg/L	1	<1	<1	200	0
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	<1	<1	200	0
		Zinc	µg/L	5	<5	<5	200	0

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.010	LB262484.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE238476.019	LB262484.027		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.019	LB262484.027		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE238513.027	LB262533.023		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

TRH (Total Recoverable Hydrocarbons) in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238475.003	LB262453.023		TRH C10-C14	µg/L	50	<50	<50	200	0
			TRH C15-C28	µg/L	200	<200	<200	200	0
			TRH C29-C36	µg/L	200	<200	<200	200	0
			TRH C37-C40	µg/L	200	<200	<200	200	0
			TRH C10-C40	µg/L	320	<320	<320	200	0
		TRH F Bands	TRH >C10-C16	µg/L	60	<60	<60	200	0
			TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	200	0
			TRH >C16-C34 (F3)	µg/L	500	<500	<500	200	0
			TRH >C34-C40 (F4)	µg/L	500	<500	<500	200	0

VOC's in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.010	LB262517.014	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.7	8.0	50	4
			d8-toluene (Surrogate)	mg/kg	-	8.7	8.8	50	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.9	8.1	50	2
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE238476.020	LB262517.025	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	9.0	50	5
			d8-toluene (Surrogate)	mg/kg	-	8.5	7.9	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.2	8.1	50	1
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE238513.021	LB262542.024	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	7.8	50	9
			d8-toluene (Surrogate)	mg/kg	-	8.4	7.4	50	12
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.2	8.5	50	3

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

VOC's in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238513.021	LB262542.024	Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE238513.027	LB262542.022	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	8.3	50	2
			d8-toluene (Surrogate)	mg/kg	-	7.2	8.0	50	11
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.6	8.4	50	2
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0

VOCs in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238493.003	LB262576.023	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200	0
		Hydrocarbons	Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.9	10.7	30	2
			d8-toluene (Surrogate)	µg/L	-	10.3	10.4	30	0
			Bromofluorobenzene (Surrogate)	µg/L	-	10.1	10.4	30	3
SE238514.001	LB262576.024	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200	0
		Hydrocarbons	Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.9	11.0	30	1
			d8-toluene (Surrogate)	µg/L	-	10.3	10.5	30	1
			Bromofluorobenzene (Surrogate)	µg/L	-	10.0	10.5	30	5

Volatile Petroleum Hydrocarbons in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238476.010	LB262517.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.7	8.0	30	4
			d8-toluene (Surrogate)	mg/kg	-	8.7	8.8	30	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.9	8.1	30	2
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE238476.020	LB262517.025		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	9.0	30	5
			d8-toluene (Surrogate)	mg/kg	-	8.5	7.9	30	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.2	8.1	30	1
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE238513.021	LB262542.024		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	7.8	30	9
			d8-toluene (Surrogate)	mg/kg	-	8.4	7.4	30	12
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.2	8.5	30	3
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE238513.027	LB262542.022		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	8.3	30	2
			d8-toluene (Surrogate)	mg/kg	-	7.2	8.0	30	11

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

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

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

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

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

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238513.027	LB262542.022	Surrogates	Bromofluorobenzene (Surrogate)	mg/kg	-	8.6	8.4	30	2
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE238493.003	LB262576.023		TRH C6-C10	µg/L	50	<50	<50	200	0
			TRH C6-C9	µg/L	40	<40	<40	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.9	10.7	30	2
			d8-toluene (Surrogate)	µg/L	-	10.3	10.4	30	0
			Bromofluorobenzene (Surrogate)	µg/L	-	10.1	10.4	30	3
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0
SE238514.001	LB262576.024		TRH C6-C10	µg/L	50	<50	<50	200	0
			TRH C6-C9	µg/L	40	<40	<40	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.9	11.0	30	1
			d8-toluene (Surrogate)	µg/L	-	10.3	10.5	30	1
			Bromofluorobenzene (Surrogate)	µg/L	-	10.0	10.5	30	5
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262639.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	100
LB262640.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	99

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262484.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	94
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	92
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	86
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	93
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	108
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	86
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	97
LB262533.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	91
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	91
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	90
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	92
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	102
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	79
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	100

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262484.002		Dichlorvos	mg/kg	0.5	1.6	2	60 - 140	79
		Diazinon (Dimpylate)	mg/kg	0.5	2.0	2	60 - 140	98
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	2	60 - 140	93
		Ethion	mg/kg	0.2	1.8	2	60 - 140	91
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94
LB262533.002		Dichlorvos	mg/kg	0.5	1.6	2	60 - 140	80
		Diazinon (Dimpylate)	mg/kg	0.5	1.7	2	60 - 140	85
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.6	2	60 - 140	82
		Ethion	mg/kg	0.2	1.5	2	60 - 140	75
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262484.002		Naphthalene	mg/kg	0.1	4.8	4	60 - 140	119
		Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	111
		Acenaphthene	mg/kg	0.1	4.7	4	60 - 140	118
		Phenanthrene	mg/kg	0.1	4.5	4	60 - 140	112
		Anthracene	mg/kg	0.1	4.4	4	60 - 140	110
		Fluoranthene	mg/kg	0.1	4.6	4	60 - 140	115
		Pyrene	mg/kg	0.1	4.6	4	60 - 140	114
		Benzo(a)pyrene	mg/kg	0.1	4.7	4	60 - 140	119
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	112
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94
LB262533.002		Naphthalene	mg/kg	0.1	4.3	4	60 - 140	108
		Acenaphthylene	mg/kg	0.1	4.0	4	60 - 140	101
		Acenaphthene	mg/kg	0.1	4.2	4	60 - 140	105
		Phenanthrene	mg/kg	0.1	4.0	4	60 - 140	101
		Anthracene	mg/kg	0.1	4.0	4	60 - 140	100
		Fluoranthene	mg/kg	0.1	4.0	4	60 - 140	100
		Pyrene	mg/kg	0.1	4.2	4	60 - 140	105
		Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	102
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	102
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96

PCBs in Soil

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

Sample Number	Parameter	Units	LOR

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

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

PCBs in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262484.002	Arochlor 1260	mg/kg	0.2	0.5	0.4	60 - 140	121
LB262533.002	Arochlor 1260	mg/kg	0.2	0.5	0.4	60 - 140	131

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262637.002	Arsenic, As	mg/kg	1	300	318.22	80 - 120	93
	Cadmium, Cd	mg/kg	0.3	5.3	4.81	70 - 130	109
	Chromium, Cr	mg/kg	0.5	35	38.31	80 - 120	90
	Copper, Cu	mg/kg	0.5	290	290	80 - 120	98
	Nickel, Ni	mg/kg	0.5	170	187	80 - 120	92
	Lead, Pb	mg/kg	1	84	89.9	80 - 120	93
	Zinc, Zn	mg/kg	2	250	273	80 - 120	93
LB262638.002	Arsenic, As	mg/kg	1	300	318.22	80 - 120	94
	Cadmium, Cd	mg/kg	0.3	5.2	4.81	70 - 130	109
	Chromium, Cr	mg/kg	0.5	35	38.31	80 - 120	92
	Copper, Cu	mg/kg	0.5	290	290	80 - 120	99
	Nickel, Ni	mg/kg	0.5	170	187	80 - 120	93
	Lead, Pb	mg/kg	1	84	89.9	80 - 120	94
	Zinc, Zn	mg/kg	2	250	273	80 - 120	93

Trace Metals (Dissolved) in Water by ICPMS

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262336.002	Arsenic	µg/L	1	19	20	80 - 120	94
	Cadmium	µg/L	0.1	21	20	80 - 120	103
	Chromium	µg/L	1	20	20	80 - 120	99
	Copper	µg/L	1	21	20	80 - 120	106
	Lead	µg/L	1	20	20	80 - 120	98
	Nickel	µg/L	1	21	20	80 - 120	103
	Zinc	µg/L	5	21	20	80 - 120	105

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262484.002		TRH C10-C14	mg/kg	20	43	40	60 - 140	108
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	108
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	95
	TRH F Bands	TRH >C10-C16	mg/kg	25	43	40	60 - 140	108
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	108
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	100
LB262533.002		TRH C10-C14	mg/kg	20	48	40	60 - 140	120
		TRH C15-C28	mg/kg	45	49	40	60 - 140	123
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	90
	TRH F Bands	TRH >C10-C16	mg/kg	25	48	40	60 - 140	120
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	113
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262453.002		TRH C10-C14	µg/L	50	940	1200	60 - 140	78
		TRH C15-C28	µg/L	200	1300	1200	60 - 140	108
		TRH C29-C36	µg/L	200	1400	1200	60 - 140	120
	TRH F Bands	TRH >C10-C16	µg/L	60	1100	1200	60 - 140	93
		TRH >C16-C34 (F3)	µg/L	500	1500	1200	60 - 140	122
		TRH >C34-C40 (F4)	µg/L	500	660	600	60 - 140	110

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262517.002	Monocyclic	Benzene	mg/kg	0.1	4.5	5	60 - 140	89
	Aromatic	Toluene	mg/kg	0.1	4.3	5	60 - 140	86
	Hydrocarbons	Ethylbenzene	mg/kg	0.1	4.4	5	60 - 140	88
		m/p-xylene	mg/kg	0.2	8.4	10	60 - 140	84
		o-xylene	mg/kg	0.1	4.5	5	60 - 140	90
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	10	70 - 130	85

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

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

VOC's in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262517.002	Surrogates	d8-toluene (Surrogate)	mg/kg	-	9.5	10	70 - 130	95
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	10	70 - 130	85
LB262542.002	Monocyclic	Benzene	mg/kg	0.1	4.3	5	60 - 140	86
	Aromatic	Toluene	mg/kg	0.1	4.2	5	60 - 140	84
	Hydrocarbons	Ethylbenzene	mg/kg	0.1	4.4	5	60 - 140	87
		m/p-xylene	mg/kg	0.2	8.6	10	60 - 140	86
		o-xylene	mg/kg	0.1	4.5	5	60 - 140	90
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	10	70 - 130	88
		d8-toluene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262576.002	Monocyclic	Benzene	µg/L	0.5	53	45.45	60 - 140	117
	Aromatic	Toluene	µg/L	0.5	48	45.45	60 - 140	105
	Hydrocarbons	Ethylbenzene	µg/L	0.5	51	45.45	60 - 140	113
		m/p-xylene	µg/L	1	100	90.9	60 - 140	113
		o-xylene	µg/L	0.5	52	45.45	60 - 140	113
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.0	10	60 - 140	100
		d8-toluene (Surrogate)	µg/L	-	10.2	10	70 - 130	102
		Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10	70 - 130	107

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262517.002		TRH C6-C10	mg/kg	25	76	92.5	60 - 140	82
		TRH C6-C9	mg/kg	20	67	80	60 - 140	84
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	10	70 - 130	85
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	10	70 - 130	85
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	50	62.5	60 - 140	79
LB262542.002		TRH C6-C10	mg/kg	25	74	92.5	60 - 140	80
		TRH C6-C9	mg/kg	20	56	80	60 - 140	70
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	10	70 - 130	88
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	48	62.5	60 - 140	76

Volatile Petroleum Hydrocarbons in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB262576.002		TRH C6-C10	µg/L	50	930	946.63	60 - 140	98
		TRH C6-C9	µg/L	40	820	818.71	60 - 140	100
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.0	10	60 - 140	100
		d8-toluene (Surrogate)	µg/L	-	10.2	10	70 - 130	102
		Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10	70 - 130	107
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	620	639.67	60 - 140	98

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

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

Mercury in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238457.001	LB262640.004	Mercury	mg/kg	0.05	0.32	0.15	0.2	84
SE238476.001	LB262639.004	Mercury	mg/kg	0.05	0.22	<0.05	0.2	104

OC Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238476.001	LB262484.004		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	105
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	82
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	98
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	0.2	<0.2	0.2	109
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	118
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	94
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.13	-	107
SE238476.021	LB262533.004		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	94
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	94
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	92
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	96
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	107
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	85
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

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

OC Pesticides in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238476.021	LB262533.004		Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.14	-	98

OP Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238476.001	LB262484.004		Dichlorvos	mg/kg	0.5	1.4	<0.5	2	71
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Diazinon (Dimpylate)	mg/kg	0.5	1.9	<0.5	2	94
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.8	<0.2	2	91
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.8	<0.2	2	90
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	6.9	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	88
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	92
SE238476.021	LB262533.004		Dichlorvos	mg/kg	0.5	1.8	<0.5	2	92
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Diazinon (Dimpylate)	mg/kg	0.5	1.8	<0.5	2	91
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	<0.2	2	95
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.8	<0.2	2	88
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	7.3	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	102
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	96

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238476.001	LB262484.004		Naphthalene	mg/kg	0.1	4.5	<0.1	4	111
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.2	<0.1	4	104
			Acenaphthene	mg/kg	0.1	4.6	<0.1	4	115
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.3	<0.1	4	108
			Anthracene	mg/kg	0.1	4.2	<0.1	4	105
			Fluoranthene	mg/kg	0.1	4.5	<0.1	4	113
			Pyrene	mg/kg	0.1	4.5	<0.1	4	112
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.8	<0.1	4	119
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.8	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.9	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.8	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	35	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.6	-	106

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238476.001	LB262484.004	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	88
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	92
SE238476.021	LB262533.004		Naphthalene	mg/kg	0.1	4.9	<0.1	4	122
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.6	<0.1	4	114
			Acenaphthene	mg/kg	0.1	4.8	<0.1	4	120
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.4	<0.1	4	110
			Anthracene	mg/kg	0.1	4.3	<0.1	4	107
			Fluoranthene	mg/kg	0.1	4.4	<0.1	4	109
			Pyrene	mg/kg	0.1	4.5	<0.1	4	113
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.3	<0.1	4	108
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.3	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.5	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.4	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	36	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	-	110
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	102
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	96

PCBs in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238476.001	LB262484.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.5	<0.2	0.4	131
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	-	107
SE238476.021	LB262533.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.5	<0.2	0.4	137
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	-	98

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

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238476.001	LB262637.004	Arsenic, As	mg/kg	1	48	3	50	90
		Cadmium, Cd	mg/kg	0.3	42	<0.3	50	84
		Chromium, Cr	mg/kg	0.5	53	9.6	50	87
		Copper, Cu	mg/kg	0.5	53	5.8	50	94
		Nickel, Ni	mg/kg	0.5	47	1.3	50	91
		Lead, Pb	mg/kg	1	55	9	50	91
		Zinc, Zn	mg/kg	2	70	28	50	84

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

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Trace Metals (Dissolved) in Water by ICPMS

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238453.031	LB262336.004	Arsenic	µg/L	1	19	-0.03	20	96
		Cadmium	µg/L	0.1	20	0.003	20	101
		Chromium	µg/L	1	20	0.102	20	100
		Copper	µg/L	1	22	0.031	20	107
		Lead	µg/L	1	20	-0.013	20	99
		Nickel	µg/L	1	21	-0.008	20	105
		Zinc	µg/L	5	22	0.196	20	109

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238476.001	LB262484.004		TRH C10-C14	mg/kg	20	43	<20	40	108
			TRH C15-C28	mg/kg	45	51	<45	40	115
			TRH C29-C36	mg/kg	45	58	<45	40	113
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	150	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	43	<25	40	108
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	43	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	125
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-
SE238476.021	LB262533.004		TRH C10-C14	mg/kg	20	44	<20	40	110
			TRH C15-C28	mg/kg	45	49	<45	40	123
			TRH C29-C36	mg/kg	45	<45	<45	40	95
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	44	<25	40	110
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	44	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	125
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238476.001	LB262517.004	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	4.4	<0.1	5	87
			Toluene	mg/kg	0.1	4.2	<0.1	5	85
			Ethylbenzene	mg/kg	0.1	4.4	<0.1	5	87
			m/p-xylene	mg/kg	0.2	8.4	<0.2	10	83
			o-xylene	mg/kg	0.1	4.5	<0.1	5	89
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.9	7.8	10	79
			d8-toluene (Surrogate)	mg/kg	-	8.4	8.7	10	84
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	7.9	10	83
		Totals	Total Xylenes	mg/kg	0.3	13	<0.3	-	-
			Total BTEX	mg/kg	0.6	26	<0.6	-	-
SE238476.021	LB262542.004	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	3.9	<0.1	5	79
			Toluene	mg/kg	0.1	3.9	<0.1	5	78
			Ethylbenzene	mg/kg	0.1	4.2	<0.1	5	84
			m/p-xylene	mg/kg	0.2	8.2	<0.2	10	82
			o-xylene	mg/kg	0.1	4.4	<0.1	5	87
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	7.8	10	83
			d8-toluene (Surrogate)	mg/kg	-	8.0	7.5	10	80
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.2	8.3	10	82
		Totals	Total Xylenes	mg/kg	0.3	13	<0.3	-	-
			Total BTEX	mg/kg	0.6	25	<0.6	-	-

VOCs in Water

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238551.001	LB262576.022	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	48	<0.5	45.45	106
			Toluene	µg/L	0.5	46	<0.5	45.45	100
			Ethylbenzene	µg/L	0.5	48	<0.5	45.45	105
			m/p-xylene	µg/L	1	94	<1	90.9	104

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

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

VOCs in Water (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238551.001	LB262576.022	Monocyclic	o-xylene	µg/L	0.5	46	<0.5	45.45	102
		Polycyclic	Naphthalene (VOC)	µg/L	0.5	43	<0.5	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.7	11	-	107
			d8-toluene (Surrogate)	µg/L	-	10.7	10	-	107
			Bromofluorobenzene (Surrogate)	µg/L	-	11.3	10	-	113

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238476.001	LB262517.004		TRH C6-C10	mg/kg	25	65	<25	92.5	71
			TRH C6-C9	mg/kg	20	58	<20	80	72
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.9	7.8	10	79
			d8-toluene (Surrogate)	mg/kg	-	8.4	8.7	10	84
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	7.9	-	83
		VPH F	Benzene (F0)	mg/kg	0.1	4.4	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	39	<25	62.5	63
SE238476.021	LB262542.004		TRH C6-C10	mg/kg	25	71	<25	92.5	76
			TRH C6-C9	mg/kg	20	62	<20	80	76
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	7.8	10	83
			d8-toluene (Surrogate)	mg/kg	-	8.0	7.5	10	80
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.2	8.3	-	82
		VPH F	Benzene (F0)	mg/kg	0.1	3.9	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	47	<25	62.5	73

Volatile Petroleum Hydrocarbons in Water

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE238551.001	LB262576.022		TRH C6-C10	µg/L	50	830	<50	946.63	86
			TRH C6-C9	µg/L	40	750	<40	818.71	90
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.7	11	-	107
			d8-toluene (Surrogate)	µg/L	-	10.7	10	-	107
			Bromofluorobenzene (Surrogate)	µg/L	-	11.3	10	-	113
		VPH F	Benzene (F0)	µg/L	0.5		<0.5	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	540	<50	639.67	83

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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Appendix J – QA/QC Assessment

J1.1 Project QA/QC Protocols

The overall quality assurance comprises an assessment of the reliability of the field procedures and the laboratory results against standard industry practices, documented sampling and analysis plans or remediation action plans. A summary of the project QA/QC protocols to be followed during the investigation works is presented in **Table J-1**.

Table J-1 QA/QC Protocols

Task	Description	Project
Field QA/QC		
General	Work was to be undertaken following standard field procedures which are based on industry accepted standard practice.	Soil samples were collected directly from the drill auger. Soil samples were placed in 250 gram glass jars, which were filled to minimise headspace, and sealed with screwed cap lids. Groundwater samples were obtained using sample bottles/jars/vials provided by the laboratory.
	All fieldwork was supervised by a suitably qualified and experienced scientist or engineer.	Yes
Soil screening with PID	The PID was serviced and calibrated as per manufacturer requirements.	Yes
Equipment decontamination	Sampling equipment to be decontaminated after the collection of each soil sample by washing with phosphate-free detergent (such as Decon 90 or Alconox) and potable water, followed by a final distilled water rinse. One rinsate blank would be collected and analysed for the primary contaminants. All results should be non-detected above laboratory LOR.	Yes One rinsate sample was collected during soil investigations (QR271022), along with one equipment rinsate sample collected during the groundwater investigation (QR281022). All results were non-detected above LOR..
Transport	Samples were stored in a chilled (with ice) cooler box and transported to the laboratories. To ensure the integrity of the samples from collection to receipt by the analytical laboratory, samples were sent by courier to the laboratories under 'chain of custody' describing sample preservation and transport duration.	Yes
Trip Blanks	Trip Blank (TB) samples were to be prepared and analysed by the primary laboratory for BTEX. Analytical results for this sample were below the laboratory LOR, indicating that ideal sample transport and handling conditions were achieved.	Two trip blank (TB) samples (QTB1 and QTB2) were prepared by the primary laboratory, were analysed for BTEX during soil and groundwater testing. TB results were reported below the laboratory LOR, indicating that ideal sample transport and handling conditions were achieved.

Task	Description	Project
Trip Spikes	Trip spike (TS) samples were to be submitted to the primary laboratory for BTEX analysis, the results for which were reported within the RPD acceptance levels for trip spike recovery. It was therefore concluded that satisfactory sample transport and handling conditions were achieved.	Two trip spike (TS) samples (QTS1 and QTS2) from the soil and groundwater investigation were submitted to the primary laboratory for BTEX analysis, the results of which were reported within the RPD acceptance levels for trip spike recovery. It was therefore concluded that satisfactory sample transport and handling conditions were achieved.
QA Samples	Field and laboratory QA samples were analysed as follows: ▪ intra-laboratory duplicate samples at a rate of 1 in 20 primary samples (as per NEPM); and ▪ inter-laboratory duplicate samples at a rate of 1 in 20 primary samples (as per NEPM). Field and laboratory acceptable limits between 30–50% RPD as stated by AS 4482.1–2005. RPDs that exceed this range may be considered acceptable where: ▪ Results are less than 10 times the limits of reporting (LOR); ▪ Results are less than 20 times the LOR and the RPD is less than 50%; or ▪ Heterogeneous materials or volatile compounds are encountered. Non-compliance is to be documented in the report and the sample re-analysed or a higher level conservatively adopted.	The required sampling density of 1 per 20 duplicated primary samples was achieved and sufficient for the investigation. Generally, samples complied with RPD calculations. Results can exhibit wide variations in results due to sample heterogeneity, which can in turn exaggerate RPDs. Additionally, some RPD exceedance calculations can be attributed to low limits of reporting. Field and laboratory QA samples are summarised in **Table J-2** and calculated RPD values are displayed in **Table J-5** and J-**6** at the end of this section. Copies of laboratory reports are included in **Appendix I.**
Laboratory QA/QC		
Laboratory analysis	The laboratories selected are NATA accredited for the analytes selected and perform their own internal QA/QC programs	Yes SGS - primary laboratory Envirolab - secondary laboratory Laboratory QA/QC analysis are included in **Appendix J.**
	Appropriate detection limits were used for the analyses to be undertaken.	Practical Quantitation Limits for all tested parameters during the assessment are presented with the laboratory reports in **Appendix I**.
Holding Times	Holding times are the maximum permissible elapsed time in days from the collection of the sample to its extraction and/or analysis. All extraction and analyses should be completed within standard guidelines.	Assessment of holding times has been undertaken by the laboratory. Holdings times were acceptable.

Task	Description	Project
Method Blanks	The method blank sample is laboratory prepared, containing the reagents used to prepare the sample for final analysis. The purpose of this procedure is to identify contamination in the reagent materials and assess potential bias in the sample analysis due to contaminated reagents. The QC criterion aims to find no detectable contamination in the reagents. Each analysis procedure should be subject to a method blank analysis. The results of each should indicate that contaminants were not detected.	Assessment of method blanks has been undertaken by the laboratory. Acceptable
Laboratory Duplicates	Laboratory duplicates are field samples that are split in the laboratory and subsequently analysed a number of times in the same batch. These sub-samples are selected by the laboratory to assess the accuracy and precision of the analytical method. The selected laboratories should undertake QA/QC procedures such as calibration standards, laboratory control samples, surrogates, reference materials, sample duplicates and matrix spikes. Intra-laboratory duplicates should be performed at a frequency of 1 per 10 samples.	Assessment of laboratory duplicates has been undertaken by the laboratory. RPDs met data quality requirements. Acceptable
Laboratory Control Standard	A laboratory control standard is a standard reference material used in preparing primary standards. The concentration should be equivalent to a mid-range standard to confirm the primary calibration. Laboratory control samples should be performed on a frequency of 1 per 20 samples or at least one per analytical run.	Assessment of laboratory control standards has been undertaken by the laboratory. Recoveries met data quality requirements. Acceptable
Matrix Spikes / Matrix Spike Duplicates (MS/MSD)	MS/MSDs are field samples to which a predetermined stock solution of known concentration has been added. The samples are then analysed for recovery of the known addition. Recoveries should be within the stated laboratory control limits of 70 to 130% and duplicates should have RPDs of less than 50%.	Assessment of matrix spikes has been undertaken by the laboratory. Recoveries met data quality requirements. Acceptable

Task	Description	Project
Surrogate Spikes	Surrogate spikes provide a means of checking, for every analysis that no gross errors have occurred at any stage of the procedure leading to significant analyte loss. Recoveries should be within the stated laboratory control limits of 70 to 130%.	Assessment of surrogate spikes has been undertaken by the laboratory. Recoveries met data quality requirements. Acceptable
QA/QC Conclusion	The QA/QC indicators should either all comply with the required standards or showed no variations that would have no significant effect on the quality of the data.	Assessment of the investigation QA/QC is presented in the following sections.

J1.2 Calculation of Relative Percentage Difference (RPD)

The RPD values were calculated using the following equation:

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

Where: C_O = Concentration obtained for the primary sample; and
C_R = Concentration obtained for the duplicate or triplicate sample.

J2.1 Field QA/QC Program

The field quality assurance/quality control (QA/QC) samples collected during the works are summarised in **Table J-5** and **J-6** at the end of this section. Inter-lab duplicates were analysed by the secondary laboratory (Envirolab).

Table J-2 Field QA Sampling Program

Matrix	Primary QA Sample	Duplicate (Primary Lab)	Triplicate (Secondary Lab)	Total Duplicates	Ratio
Soil	BH03_0.5-0.6	QD271022	QT271022	2	2:15 primary samples duplicated.
Groundwater	BH15M-1	QD281022	QT281022	2	

J2.2 Field data quality indicators

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

Table J-3 Field Data Quality Indicators

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

J2.3 Conclusion for the field QA/QC

All samples, including field QC samples, were transported to the primary and secondary laboratories under strict Chain-of-Custody conditions and appropriate copies of relevant documentation were included in the respective reports.

The overall completeness of documentation produced under the field program was considered to be adequate for the purposes of drawing valid conclusions regarding the environmental condition of the site.

Based on the results of the field QA/QC data, EI considers the field QA/QC program carried out during the investigation to be appropriate and the results to be acceptable.

J2.4 Laboratory QA/QC

Primary and intra-laboratory duplicate samples were analysed by SGS located in Alexandria NSW, and inter-laboratory duplicate samples were analysed by Envirolab located in Chatswood NSW. All laboratories are accredited by NATA for the analyses undertaken.

A discussion of the laboratory DQIs is presented below.

Table J-4 Laboratory Data Quality Indicators

DQI	Item	Conformance/Comments
Completeness (a measure of the amount of useable data (expressed as %) from a data collection activity)	All critical samples analysed according to SAQP and proposal	**Yes**
	All analytes analysed according to SAQP in proposal	**Yes**
	Appropriate methods and PQLs	**Yes**
	Sample documentation complete	**Yes**
	Sample holding times complied with	**Yes**
Comparability (the confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event)	Sample analytical methods used (including clean-up)	**Yes**
	Sample PQLs (justify/ quantify if different)	**Yes**
	Same laboratories (justify/ quantify if different)	**Yes**
	Same units (justify/ quantify if different)	**Yes**
Representativeness (the confidence (expressed qualitatively) that data are representative of each media present on the site)	All key samples analysed according to SAQP in the proposal.	**Yes**
Precision (a quantitative measure of the variability (or reproducibility) of data)	Analysis of laboratory duplicates	**Yes**
	Analysis of field duplicates	**Yes**
	Analysis of laboratory-prepared volatile trip spikes	**Yes**

DQI	Item	Conformance/Comments
Accuracy (bias) (a quantitative measure of the closeness of reported data to the true value)	Analysis of field blanks	**Yes**
	Analysis of rinsate blanks	**Yes**
	Analysis of method blanks	**Yes**
	Analysis of matrix spikes (MS)	**Yes**
	Analysis of surrogate spikes	**Yes**
	Analysis of laboratory control samples	**Yes**

Overall, it is considered that the laboratory data quality objectives for this project have been achieved.

J2.5 Conclusions on Laboratory QA/QC

Based on the laboratory QA/QC results EI considers that the data generally confirms the analytical results for the various phases of laboratory testing were valid and useable for interpretation purposes.

J2.6 Summary of Project QA/QC

The sampling methods (including sample preservation, transport and decontamination procedures) and laboratory methods followed during this investigation works were consistent with EI protocols and were found to meet the DQOs for this project. It is therefore considered that the data is reliable and suitable for interpretation.

Table I-5 **Soil RPD values** **E25846.E02 - Pambula NSW**

Sample identification	Description	Date	TRH				BTEX				Metals							
			F1	F2	F3	F4	Benzene	Toluene	Ethylbenzene	Xylene (total)	Arsenic	Cadmium	Chromium (Total)	Copper	Lead	Mercury	Nickel	Zinc
Intra-laboratory Duplicate - Soil Investigation																		
BH03_0.5-0.6	Soil	28/10/2022	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<1	<0.3	1.7	0.9	4	<0.05	0.5	<2
QD271022	BFD of BH03_0.5-0.6		<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<1	<0.3	1.9	1.6	10	<0.05	0.5	3.1
RPD		-	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*11.11*	**56.00**	**85.71**	*0.00*	*0.00*	*43.14*
Inter-laboratory Duplicate - Soil Investigation																		
BH03_0.5-0.6	Soil	28/10/2022	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	<1	<0.3	1.7	0.9	4	<0.05	0.5	<2
QT271022	BFD of BH03_0.5-0.6		<25	<25	<50	<100	<0.2	<0.5	<1	-	<4	<0.4	3	<1	5	<0.1	<1	3
RPD		-	*0.00*	*0.00*	*NA*	*NA*	*NA*	*NA*	*NA*	-	*NA*	*NA*	**55.32**	*10.53*	*22.22*	*NA*	**66.67**	*40.00*
Rinsate Blanks																		
QR271022	Equipment Rinsate	28/10/2022	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	<0.1	<1	<1	<1	<0.1	<1	<5
Trip Blanks																		
QTB1	Soil Trip Blank	Laboratory Prepared	-				<0.1	<0.1	<0.1	<0.3	-	-	-	-	-	-	-	-
Trip Spikes																		
QTS1	Soil Trip Spike	Laboratory Prepared	-				[96%]	[94%]	[94%]	[94%] [1]	-	-	-	-	-	-	-	-

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

54.55	RPD calculated by halving detection limit exceeds 30-50% range referenced from AS4482.1 (2005)
100.00	RPD exceeds 30-50% range referenced from AS4482.1 (2005)

BFD = Blank Field Duplicate
F1 = TRH C6-C10 less the sum of BTEX
F2 = TRH >C10-C16 less naphthalene
F3 = TRH >C16-C34
F4 = TRH >C34-C40
[1] Value shown is the lowest recovery value reported for xylenes

Table I-6 **Groundwater RPD values** **E25846.E02 - Pambula NSW**

Sample identification	Description	Date	TRH				BTEX				Metals							
			F1	F2	F3	F4	Benzene	Toluene	Ethylbenzene	Xylene (total)	Arsenic	Cadmium	Chromium (Total)	Copper	Lead	Mercury	Nickel	Zinc
Intra-Laboratory Duplicate - Groundwater Investigation																		
BH15M	Primary Sample	28/10/2022	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	<0.1	<1	1	<1	<0.1	2	27
QD281022	BFD of BH15M	28/10/2022	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	<0.1	<1	<1	<1	<0.1	1	20
RPD		-	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	**66.67**	*29.79*
Inter-Laboratory Duplicate - Groundwater Investigation																		
BH15M	Primary Sample	28/10/2022	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	<0.1	<1	1	<1	<0.0001	2	27
QT281022	BFD of BH15M	28/10/2022	<10	<50	<100	<100	<1	<1	<1	-	<1	<0.1	<1	<1	<1	<0.05	1	19
RPD			*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*NA*	**66.67**	*34.78*
Rinsate Blanks																		
QR281022	Equipment Rinsate	28/10/2022	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	<0.1	<1	<1	<1	<0.1	<1	<5
Trip Blanks																		
QTB2	Water trip blank	Laboratory Prepared	-	-	-	-	<0.5	<0.5	<0.5	<1.5	-	-	-	-	-	-	-	-
Trip Spikes																		
QTS2	Water trip spike	Laboratory Prepared	-	-	-	-	[105%]	[108%]	[104%]	[105%] [1]	-	-	-	-	-	-	-	-

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

66.67	RPD calculated by halving detection limit exceeds 30-50% range referenced from AS4482.1 (2005)
52.87	RPD exceeds 30-50% range referenced from AS4482.1 (2005)

BFD = Blank Field Duplicate
F1 = TRH C6-C10 less the sum of BTEX
F2 = TRH >C10-C16 less naphthalene
F3 = TRH >C16-C34
F4 = TRH >C34-C40
[1] Value shown is the lowest recovery value reported for xylenes

SGS Environmental Services is accredited by NATA for Chemical Testing (Reg.No.2562) and Quality System compliance to ISO/IEC 17025. The QC parameters contained within are designed to meet NEPM 1999 requirements.

Quality Control samples included in any analytical run are listed below.

Reagent/Analysis Blank (BLK) **Method Blank (MB)**	Sample free reagents carried through the preparation/extraction/digestion procedure and analysed at the beginning of every sample batch analysis. A reagent blank is prepared and analysed with every batch of samples plus with each new batch of solvent prior to use.
Sample Matrix Spike (MS) & Matrix Spike Duplicate (MSD)	Sample replicates spiked with identical concentrations of target analyte(s). The spiking occurs during the sample preparation and prior to the extraction/digestion procedure. They are used to document the precision and bias of a method in a given sample matrix. Where there is not enough sample available to prepare a spiked sample, another known soil/sand or water may be used. A duplicate spiked sample is analysed at least every 20 samples.
Surrogate Spike (SS)	At least one but up to three surrogate compounds are added to all samples requiring analysis for organics prior to extraction. Used to determine the extraction efficiency. They are organic compounds which are similar to the target analyte(s) in chemical composition and behaviour in the analytical process, but which are not normally found in environmental samples. Where possible they are surrogate compounds recommended by the USEPA.
Control Matrix Spike (CMS)	To ensure spike recoveries can be determined for every batch of samples a control matrix is spiked with identical concentrations of target analyte(s) and then analysed. These results allow recoveries to be determined in the event that the matrix spikes are unusable (eg. matrix spikes performed on heavily contaminated samples). These are analysed at least every 20 samples.
Internal Standard (IS)	Added to all samples requiring analysis for organics (where relevant) after the extraction process; the compounds serve to give a standard of retention time and response, which is invariant from run-to-run with the instruments. Where possible they are standard compounds recommended by the USEPA.
Lab Duplicates (D)	A separate portion of a sample being analysed that is treated the same as the other samples in the batch. One duplicate is processed at least every 10 samples.
Lab Control Standards/Samples (LCS)	Prepared from a source independent of the calibration standards. At least one control standard is included in each run to confirm calibration validity. Thereafter they are analysed at least every one in 20 samples plus at the end of each analytical run. This data is not reported.
Continuous Calibration Verification (CCV) or **Calibration Check Standard & Blank**	A calibration check standard or CCV and blank are run after every 20 samples of an instrumental analysis run to assess analytical drift. Calibration Standards are checked old versus new with a criteria of ±10%

Quality Assurance Programs are listed below:

Statistical analysis of Quality Control data (SQC)	Quality control data is plotted on control charts using the APHA procedure with warning and control limits at 2 and 3 standard deviations respectively. See also QMS Procedure "Statistical Quality Control".
Certified Reference Materials (CRM/SRM)	Certified Reference Materials and Standards are regularly analysed. These materials/standards have certified reference values for various parameters.
Proficiency Testing	Regular proficiency test samples are analysed by our laboratories. SGS Environmental participates in a number of programs. Results and proficiency status are compiled and sent to participating laboratory post data interpretation. Failure to comply with acceptable values result in further investigations.
Inter-laboratory & Intra-laboratory Testing	SGS Environmental Services has schedules in the Quality Systems to participate in Inter/Intra laboratory testing conducted internally and by other parties.
Data Acceptance Criteria Unless otherwise specified in the method or method manual the following general criteria apply to all inorganic tests. All recoveries are to be reported to 3 significant figures.	Failure to meet the internal acceptance criteria will result in sample batch repeats dependent upon investigation outcomes. For data to be accepted: <u>Inorganics (water samples)</u> • For all inorganic analytes the Reagent & Method Blanks must be less than the LOR. • The Calibration Check Standards or Continuous Calibration Verification (CCV) must be within ±15%. • Control Standards must be 80-120% of the accepted value. • The Calibration Check Blanks must be less than the LOR. • Lab Duplicates RPD to be <15%*. Note: If client <u>field</u> duplicates do not meet this criteria it may indicate heterogeneity and shall be noted on the data reports for QC samples. • Sample (and if applicable Control) Matrix Spike♬ Duplicate recovery RPD to be <30%. • Where CRMs are used, results to be within ± 2 standard deviations of the expected value. <u>Inorganics (soil samples)</u> • For all inorganic analytes the Reagent & Method Blanks must be less than the LOR. • The Calibration Check Standards or Continuous Calibration Verification (CCV) must be within ±15%. • Control Standards must be 80-120% of the accepted value. • The Calibration Check Blanks must be less than the LOR. • Lab duplicate RPD to be <30%* for sample results greater than 10 times LOR. • Sample Matrix Spike Duplicate (MS♬/MSD) recovery RPD to be <30%. In the event that the matrix spike has been applied to samples whose matrix or contamination is problematic to the method then these acceptance criteria apply to the Control Matrix Spike (CMS/D). • Where CRMs are used, results to be within ± 2 standard deviations of the expected value.

Data Acceptance Criteria Unless otherwise specified in the method or method manual the following general criteria apply to all organic tests. All recoveries are to be reported to 3 significant figures.	Organics • Volatile & extractable Reagent & Method Blanks must contain levels less than or equal to LOR. • The Calibration Check Standards or Continuous Calibration Verification (CCV) must be within ±25%. Some analytes may have specific criteria. • Control Standards (LCS/CMS) and Certified Reference Materials (CRM) recoveries are to be within established control limits or as a default 60-140% unless compound specific limits apply. • Retention times are to vary by no more than 0.2 min. • **At least two of three** routine level soil sample Surrogate Spike (SS) recoveries are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as acceptance criterion. Any recoveries outside these limits will have comment. • Water sample Surrogates Spike (SS) recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion. Any recoveries outside these limits will have comment. • Lab Duplicates (D) must have a RPD <30%*. • Sample Matrix Spike Duplicate (MS♬/MSD) recovery RPD to be <30%. In the event that the matrix spike has been applied to samples whose matrix or contamination is problematic to the method then these acceptance criteria apply to the Control Matrix Spike (CMS/D).

*Only if results are at least 10 times the LOR otherwise no acceptance criteria for RPD's apply. Application of more stringent criteria shall be applied for clean water sample from water boards and any other nominated client contracts. Nominal 10xLOR criteria are dropped to 5xLOR where specified.
♬Matrix do not readily equate to definitive recovery due to inherent matrix interferences and thus do not have recovery compliance values set. As a guide inorganic recoveries should be between 70-130% and for organics 60-130%

Batch Structure Summary

An analytical batch is nominally considered as 20 samples or smaller. As a standard template the following should be **used as a guide** according to the above Quality Control Types:

1	MB	16	UNK_DUP
2	STD1	17	MS
3	STD2	18	MS_DUP
4	STD3	19	UNK 11
5	LCS	20	UNK 12
6	BLK	21	UNK 13
7	UNK 1	22	UNK 14
8	UNK 2	23	UNK 15
9	UNK 3	24	UNK 16
10	UNK 4	25	UNK 17
11	UNK 5	26	UNK 18
12	UNK 6	27	UNK 19
13	UNK 7	28	UNK 20 (SS if applicable)
14	UNK 8	29	UNK_DUP
15	UNK 9	30	CCV
16	UNK 10 (SS if applicable)	31	CRM / SRM / CMS / LCS

Table QC1 - Containers, Preservation Requirements and Holding Times - Soil			
Parameter	Container	Preservation	Maximum Holding Time
Acid digestible metals and metalloids - Total and TCLP (As,Cd.,Cu,Cr,Ni,Pb,Zn)	Glass with Teflon Lid	Nil	6 months
Mercury	Glass with Teflon Lid	Nil	28 days
TPH / BTEX / VOC / SVOC / CHC	Glass with Teflon Lid	4^oC, zero headspace	14 days
PAHs (total and TCLP)	Glass with Teflon Lid	4^oC [1]	14 days
Phenols	Glass with Teflon Lid	4^oC [1]	14 days
OCPs, OPPs and total PCBs	Glass with Teflon Lid	4^oC [1]	14 days
Asbestos	Sealed Plastic Bag	Nil	N/A

Table QC2 - Containers, Preservation Requirements and Holding Times - Water			
Parameter	Container Volume (mL)	Preservation	Maximum Holding Time
Heavy Metals	125mL Plastic	Field filtration 0.45μm HNO_3 / 4^oC	6 months
Cyanide	125mL Amber Glass	pH > 12 NaOH / 4^oC	6 months
TPH (C6-C9) / BTEX / VOCs SVOCs / CHCs	4 x 43mL Glass	HCl / 4^oC [1]	14 days
TPH (C10-C36) / PAH / Phenolics OCP / OPP / TDS / pH	3 x 1L Amber Glass	None / 4^oC [1]	28 days

Notes: [1] = Extraction within 14 days, Analysis within 40 days.

Table QC3 - Analytical Parameters, PQLs and Methods - Soil			
Parameter	**Unit**	**PQL**	**Method Reference**
Metals in Soil			
Arsenic - As[1]	mg / kg	1	USEPA 200.7
Cadmium - Cd[1]	mg / kg	0.5	USEPA 200.7
Chromium - Cr[1]	mg / kg	1	USEPA 200.7
Copper - Cu[1]	mg / kg	1	USEPA 200.7
Lead - Pb[1]	mg / kg	1	USEPA 200.7
Mercury - Hg[2]	mg / kg	0.1	USEPA 7471A
Nickel - Ni[1]	mg / kg	1	USEPA 200.7
Zinc - Zn[1]	mg / kg	1	USEPA 200.7
Total Petroleum Hydrocarbons (TPHs) in Soil			
C_6-C_9 fraction	mg / kg	25	USEPA 8260
C_{10}-C_{14} fraction	mg / kg	50	USEPA 8000
C_{15}-C_{28} fraction	mg / kg	100	USEPA 8000
C_{29}-C_{36} fraction	mg / kg	100	USEPA 8000
BTEX in Soil			
Benzene	mg / kg	1	USEPA 8260
Toluene	mg / kg	1	USEPA 8260
Ethylbenzene	mg / kg	1	USEPA 8260
m & p Xylene	mg / kg	2	USEPA 8260
o- Xylene	mg / kg	1	USEPA 8260
Other Organic Contaminants in Soil			
PAHs	mg / kg	0.05-0.2	USEPA 8270
CHCs	mg / kg	1	USEPA 8260
VOCs	mg / kg	1	USEPA 8260
SVOCs	mg / kg	1	USEPA 8260
OCPs	mg / kg	0.1	USEPA 8140, 8080
OPPs	mg / kg	0.1	USEPA 8140, 8080
PCBs	mg / kg	0.1	USEPA 8080
Phenolics	mg / kg	5	APHA 5530
Asbestos			
Asbestos	mg / kg	Presence / Absence	AS4964-2004

Notes:

1. Acid Soluble Metals by ICP-AES
2. Total Recoverable Mercury

Table QC4 - Analytical Parameters, PQLs and Methods - Groundwater

Parameter	Unit	PQL	Method
Heavy Metals			
Antimony - Sb	µg/L	1	USEPA 200.8
Arsenic - As	µg/L	1	USEPA 200.8
Beryllium - Be	µg/L	0.5	USEPA 200.8
Cadmium - Cd	µg/L	0.1	USEPA 200.8
Chromium - Cr	µg/L	1	USEPA 200.8
Cobalt - Co	µg/L	1	USEPA 200.8
Copper - Cu	µg/L	1	USEPA 200.8
Lead - Pb	µg/L	1	USEPA 200.8
Mercury - Hg	µg/L	0.5	USEPA 7471A
Molybdenum - Mo	µg/L	1	USEPA 200.8
Nickel - Ni	µg/L	1	USEPA 200.8
Selenium - Se	µg/L	1	USEPA 200.8
Silver - Ag	µg/L	1	USEPA 200.8
Tin (inorg.) - Sn	µg/L	1	USEPA 200.8
Nickel - Ni	µg/L	1	USEPA 200.8
Zinc - Zn	µg/L	1	USEPA 200.8
Total Petroleum Hydrocarbons (TPHs)			
C_6-C_9 fraction	µg/L	10	USEPA 8220A / 8000
C_{10}-C_{14} fraction	µg/L	50	USEPA 8000
C_{15}-C_{28} fraction	µg/L	100	USEPA 8000
C_{29}-C_{36} fraction	µg/L	100	USEPA 8000
BTEX			
Benzene	µg/L	1	USEPA 8220A
Toluene	µg/L	1	USEPA 8220A
Ethylbenzene	µg/L	1	USEPA 8220A
m- & p-Xylene	µg/L	2	USEPA 8220A
o-Xylene	µg/L	1	USEPA 8220A
Polyciclic Aromatic Hydrocarbons (PAHs)			
PAHs	µg/L	0.1	USEPA 8270
Benzo(a)pyrene	µg/L	0.01	USEPA 8270
OrganoChlorine Pesticides (OCPs)			
Aldrin	µg/L	0.001	USEPA 8081
Chlordane	µg/L	0.001	USEPA 8081
DDT	µg/L	0.001	USEPA 8081
Dieldrin	µg/L	0.001	USEPA 8081
Endosulfan	µg/L	0.001	USEPA 8081
Endrin	µg/L	0.001	USEPA 8081
Heptachlor	µg/L	0.001	USEPA 8081
Lindane	µg/L	0.001	USEPA 8081
Toxaphene	µg/L	0.001	USEPA 8081

Parameter	Unit	PQL	Method
Chlorinated Hydrocarbons (CHCs)			
1,2-dichlorobenzene	µg/L	1	USEPA 8260B
1,3-dichlorobenzene	µg/L	1	USEPA 8260B
1,4-dichlorobenzene	µg/L	1	USEPA 8260B
1,2,3-trichlorobenzene	µg/L	1	USEPA 8260B
1,2,4-trichlorobenzene	µg/L	1	USEPA 8260B
Hexachlorobutadeine	µg/L	1	USEPA 8260B
1,1,2-trichloroethane	µg/L	1	USEPA 8260B
Hexachloroethane	µg/L	10	USEPA 8270D
Other CHCs	µg/L	1	USEPA 8260B
Volatile Organic Compounds (VOCs)			
Aniline	µg/L	10	USEPA 8260B
2,4-dichloroaniline	µg/L	10	USEPA 8260B
3,4-dichloroaniline	µg/L	10	USEPA 8260B
Nitrobenzene	µg/L	50	USEPA 8260B
2,4-dinitrotoluene	µg/L	50	USEPA 8260B
2,4,6-trinitrotoluene	µg/L	50	USEPA 8260B
Phenolic Compounds			
Phenol	µg/L	10	USEPA 8041
2-chlorophenol	µg/L	10	USEPA 8041
4-chlorophenol	µg/L	10	USEPA 8041
2, 4-dichlorophenol	µg/L	10	USEPA 8041
2,4,6-trichlorophenol	µg/L	10	USEPA 8041
2,3,4,6-tetrachlorophenol	µg/L	10	USEPA 8041
Pentachlorophenol	µg/L	10	USEPA 8041
2,4-dinitrophenol	µg/L	10	USEPA 8041
Miscellaneous Parameters			
Total Cyanide	µg/L	5	APHA 4500C&E-CN
Fluoride	µg/L	10	APHA 4500 F-C
Salinity (TDS)	mg/L	1	APHA 2510
pH	units	0.1	APHA 4500H+
OrganoPhosphate Pesticides (OPPs)			
Azinphos Methyl	µg/L	0.01	USEPA 8141
Chloropyrifos	µg/L	0.01	USEPA 8141
Diazinon	µg/L	0.01	USEPA 8141
Dimethoate	µg/L	0.01	USEPA 8141
Fenitrothion	µg/L	0.01	USEPA 8141
Malathion	µg/L	0.01	USEPA 8141
Parathion	µg/L	0.01	USEPA 8141
Temephos	µg/L	0.01	USEPA 8141
Polychlorinated Biphenyls (PCBs)			
Individual PCBs	µg/L	0.01	USEPA 8081

Table QC5 - QC Sample Data Acceptance Criteria

QC Sample Type	Method of Assessment	Acceptable Range
Field QC		
Blind Duplicates and Split Samples	The assessment of split duplicate is undertaken by calculating the Relative Percent Difference (RPD) of the duplicate concentration compared with the primary sample concentration. The RPD is defined as: $RPD = 100 \times \frac{\lvert X_1 - X_2 \rvert}{\text{mean}(X1, X2)}$ Where: X_1 and X_2 are the concentrations of the primary and duplicate samples.	The acceptable range depends upon the levels detected: - 0-150% RPD (when the average concentration is <5 times the LOR/PQL) - 0-75% RPD (when the average concentration is 5 to 10 times the LOR/PQL) - 0-50% RPD (when the average concentration is >10 times the LOR/PQL)
Rinsate & Trip Blanks	Each blank is analysed as per the original samples.	Analytical Result <LOR/PQL
Laboratory prepared Trip Spike	The Trip Spike is analysed after returning from the field and the % recovery of the known spike is calculated.	70 - 130%
Laboratory QC		
Laboratory Duplicates	Assessment of Lab Duplicate RPD as per Blind Duplicates and Split Samples.	Lab Duplicate RPD < 15% (Inorganics) Lab Duplicate RPD < 30% (Organics) for sample results > 10 LOR
Surrogates	Assessment is undertaken by determining the percent recovery of the known surrogate spike (SS) or addition to the sample.	at least 2 SS recoveries to be within 70-130% subject to matrix effects (Organics)
Matrix Spikes Laboratory Control Samples	$\%\ Recovery = 100 \times \frac{C - A}{B}$ Where: A = Concentration of analyte determined in the original sample; B = Added Concentration; and C = Calculated Concentration.	80-120% (Inorganics / Metals) 60-140% (Organics) 10-140% (SVOC and Speciated Phenols) If the result is outside the above ranges, the result must be <3x Standard Deviation of the Historical Mean (calculated over the past 12 months).
Sample Matrix Spike Duplicates	Recovery RPD	<30% (Inorganics & Organics)
Calibration Check Standards	Continuous Calibration Verification (CCV)	CCV must be within ±15% (inorganics) CCV must be within ±25% (inorganics)
Reagent, Method & Calibration Check Blanks	Each blank is analysed as per the original samples.	Analytical Result <LOR/PQL

Note: PQL - Laboratory Practical Quantitation Limit (PQL) or the minimum detection limit for a particular analyte.
LOR = Limit of Reporting

Appendix K – Field Data Sheets

WATER SAMPLING FIELD SHEET

eiaustralia

Site Address: 35-37 Avondola Street, Pambula NSW	Job Number: EZ5846
Client: FOODWORKS	Date: 28-10-22
Field Staff: JM	Sampling Location ID MW2-1
Well Location: MW2	Round No: 1
MEDIUM ☑Groundwater ☐Surface Water	☐Stormwater ☐Other:
SAMPLING POINT INFO	
Well Installation Date: 26-10-22	Stick up / down (m): 1m (above ground / below ground)
Initial Well Depth (mBTOC): 7.5m	Screen Interval (mBTOC): 4.5 - 7.5m
Previous Sampling Date: -	Previous SWL (mBTOC): 6.5m
PID READINGS	
PID Headspace (ppm):	PID Background (ppm):
PID Breathing Space (ppm):	
PRE PURGE	
Total Well Depth (mBTOC): 7.613	Well Head Condition:
SWL (mBTOC): 2.284	Water Column (m):
PHASE SEPARATED HYDROCARBONS (PSH)	
Depth to PSH (mBTOC):	PSH Visually Confirmed (Bailer):
PSH Thickness (mm):	
PURGE AND SAMPLE	
Sampling Method ☐Bladder ☑Peristaltic ☐Submersible ☐Other:	
Depth of Pump Inlet (mBTOC):	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer:
Weather Conditions: Clear	Cycle:
Pump on time:	Pump off time:
WATER QUALITY PARAMETERS	
Probe Make and Model: H198914	Bump Test Date and Time:

Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
1005	0.5	2.284	18.8	1030	-172.2	0.25	6.00	Clear, slightly turbid, no odour, no sheen
1008	1.0	2.290	18.7	1045	-183.0	0.29	6.12	Clear, slightly turbid, no odour, no sheen
1011	1.5	2.291	18.8	1059	-181.5	0.33	6.11	Clear, slightly turbid, no odour, no sheen
1014	2.0	2.287	18.8	1060	~~-182.2~~ -182.0	0.33	6.11	Clear, slightly turbid, no odour, no sheen.
Stabilisation range: 3 consecutive readings		±0.2°C	±3%	±20mV	±10%	±0.2		

OTHER COMMENTS/OBSERVATIONS: QD281022 + QT281022 taken @ MW2-1.
Interface probe covered in silty material when pulled up.

SIGNATURE:

WATER SAMPLING FIELD SHEET

eiaustralia

Site Address: 35-37 Overdale St Pambula NSW	Job Number: E25846
Client: FOODWORKS	Date: 28-10-22
Field Staff: JM	Sampling Location ID BH02 - M1
Well Location: BH02	Round No: 1

MEDIUM ☑Groundwater ☐Surface Water ☐Stormwater ☐Other:

SAMPLING POINT INFO

Well Installation Date: 27-10-22	Stick up / down (m): — (+ above ground - below ground)
Initial Well Depth (mBTOC): 7.5m	Screen Interval (mBTOC): 4.5m
Previous Sampling Date: -	Previous SWL (mBTOC):

PID READINGS

PID Headspace (ppm):	PID Background (ppm):
PID Breathing Space (ppm):	

PRE PURGE

Total Well Depth (mBTOC): 7.226	Well Head Condition: Good
SWL (mBTOC): 2.028	Water Column (m):

PHASE SEPARATED HYDROCARBONS (PSH)

Depth to PSH (mBTOC):	PSH Visually Confirmed (Bailer):
PSH Thickness (mm):	

PURGE AND SAMPLE

Sampling Method ☐Bladder ☑Peristaltic ☐Submersible ☐Other:

Depth of Pump Inlet (mBTOC):	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer:
Weather Conditions: Clear	Cycle:
Pump on time:	Pump off time:

WATER QUALITY PARAMETERS

Probe Make and Model: H198914 | Bump Test Date and Time:

Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
1130	0.5	2.028	20.18	2006	-20.2	0.40	5.07	Clear, colourless, odourless no sheen
1135	1.0	2.070	20.40	2032	-25.7	0.32	5.79	Clear, colourless odourless no sheen
1140	1.5	2.120	20.43	2069	-29.3	0.37	5.70	Clear colourless, odourless no sheen
1145	2.0	2.050	20.46	2069	-30.4	0.42	5.64	Clear, colorless, odourless, no sheen
Stabilisation range: 3 consecutive readings			±0.2°C	±3%	±20mV	±10%	±0.2	

OTHER COMMENTS/OBSERVATIONS:

No odour on silty interface probe, or [redacted] in any samples.

SIGNATURE:

WATER SAMPLING FIELD SHEET

eiaustralia

Site Address: 35-37 Quandola Street Pambula NSW	Job Number: E25846
Client: ~~FM~~ FOODWORKS	Date: 28-10-22
Field Staff: JM	Sampling Location ID MW1-1
Well Location: MW1	Round No: 1
MEDIUM ☑Groundwater ☐Surface Water	☐Stormwater ☐Other:

SAMPLING POINT INFO

Well Installation Date: 26-10-22	Stick up / down (m): – (+ above ground - below ground)
Initial Well Depth (mBTOC): 8.085	Screen Interval (mBTOC): 3-8.085
Previous Sampling Date: –	Previous SWL (mBTOC): –

PID READINGS

PID Headspace (ppm):	PID Background (ppm):
PID Breathing Space (ppm):	

PRE PURGE

Total Well Depth (mBTOC): 8.085	Well Head Condition: Good
SWL (mBTOC): 2.420	Water Column (m):

PHASE SEPARATED HYDROCARBONS (PSH)

Depth to PSH (mBTOC):	PSH Visually Confirmed (Bailer):
PSH Thickness (mm):	

PURGE AND SAMPLE

Sampling Method ☐Bladder ☑Peristaltic ☐Submersible ☐Other:

Depth of Pump Inlet (mBTOC):	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer:
Weather Conditions: ~~Clear~~ Overcast	Cycle:
Pump on time:	Pump off time:

WATER QUALITY PARAMETERS

Probe Make and Model: H198914 | Bump Test Date and Time:

Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
1045	0.5	2.420	19.95	1232	-270.2	0.20	6.07	Slightly turbid, colourless, odourless, no sheen
1049	1.0	2.408	20.10	1296	-275.5	0.17	6.06	Slightly turbid, colourless, odourless no sheen
1055	1.5	2.415	20.27	1329	-280.5	0.10	6.09	Slightly turbid, colourless, odourless, no sheen.
11:00	2.0	2.419	20.28	1331	-280.1	0.11	6.10	~~Clear~~, slightly turbid colourless, no odour no sheen.
Stabilisation range: 3 consecutive readings			±0.2°C	±3%	±20mV	±10%	±0.2	

OTHER COMMENTS/OBSERVATIONS:

SIGNATURE:

Appendix L – SafeWork NSW Records

From:	Licensing
To:	Jock McNaughton - EIAustralia
Subject:	SafeWork NSW: 00762140 –Site Search application – Result not found [ref:_00D281hl6J._5004a9ePDP:ref]
Date:	Monday, 14 November 2022 7:46:35 AM

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Security Classification: Sensitive Personal
Please do not amend the subject line of this email

Dear Jock
Re: Site Search for Schedule 11 Hazardous Chemicals on premises
Application – Result not found

I refer to your application for a Site Search for Schedule 11 Hazardous Chemicals on premises, received by SafeWork NSW on 18 October 2022 for the following site: 35-37 Quondolo Street, Pambula NSW

A search of the records held by SafeWork NSW has not located any records pertaining to the above-mentioned premises.

If you have any further information or if you have any questions, please use one of the following options, quoting the SafeWork NSW enquiry reference number: 00762140

- Email: licensing@safework.nsw.gov.au
- Phone: 13 10 50

Kind regards

Kim Brearley
Licensing Representative
SafeWork NSW | Better Regulation Division
Department of Customer Service
p- 13 10 50
e- licensing@safework.nsw.gov.au | www.customerservice.nsw.gov.au
Level 3, 32 Mann Street, Gosford, NSW 2250

<!--[if !vml]-->

We are always looking for ways that we can improve our services. You may be contacted by email in the next few weeks to complete a short survey and provide us with your feedback on what we did well and where we can improve. If you do not wish to participate in our surveys, please email us at: licensingQA@customerservice.nsw.gov.au and we will ensure that you are not contacted.

Tax Invoice.pdf

ref:_00D281hl6J._5004a9ePDP:ref

Appendix M– Groundwater Bore Records Search

WaterNSW
Work Summary

GW028587

Licence: 10WA117626 **Licence Status:** CURRENT

Authorised Purpose(s): DOMESTIC,STOCK
Intended Purpose(s): NOT KNOWN

Work Type: Well
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/12/1968

Final Depth: 5.20 m
Drilled Depth: 5.20 m

Contractor Name: (None)
Driller:
Assistant Driller:

Property: MOFFITT Princes Hwy PAMBULA 2549 NSW
GWMA: -
GW Zone: -

Standing Water Level (m):
Salinity Description: Good
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	AUCKLAND	PANBULA	SEC 9
Licensed:	AUCKLAND	PAMBULA	Whole Lot 4/9/758825

Region: 10 - Sydney South Coast
River Basin: 220 - TOWAMBA RIVER
Area/District:

CMA Map: 8824-2S
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: (Unknown)

Northing: 5908817.000
Easting: 755604.000

Latitude: 36°55'55.4"S
Longitude: 149°52'11.4"E

GS Map: -
MGA Zone: 55
Coordinate Source: GD..ACC.MAP

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Timber	0.00	0.00	1829			

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
1.80	5.20	3.40	Unconsolidated	1.50		4.55			

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.76	0.76	Topsoil Black	Topsoil	
0.76	2.44	1.68	Gravel River Water Supply	Gravel	
2.44	4.27	1.83	Clay Heavy Water Supply	Clay	
4.27	5.18	0.91	Clay Sandy Water Supply	Clay	

Remarks

02/11/1987: LOT 2A SECTION 9 PAMBULA

WaterNSW
Work Summary

GW040587

Licence: | **Licence Status:**

Authorised Purpose(s):
Intended Purpose(s): NOT KNOWN

Work Type: Well
Work Status: Supply Obtained
Construct.Method:
Owner Type: Private

Commenced Date: | **Final Depth:** 2.90 m
Completion Date: | **Drilled Depth:**

Contractor Name: (None)
Driller:
Assistant Driller:

Property: | **Standing Water Level (m):**
GWMA: | **Salinity Description:**
GW Zone: | **Yield (L/s):**

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	AUCKLAND	PANBULA	5
Licensed:			

Region: 10 - Sydney South Coast | **CMA Map:** 8624-2S
River Basin: 220 - TOWAMBA RIVER | **Grid Zone:** | **Scale:**
Area/District:

Elevation: 0.00 m (A.H.D.) | **Northing:** 5909125.000 | **Latitude:** 36°55'45.4"S
Elevation Source: (Unknown) | **Easting:** 755613.000 | **Longitude:** 149°52'11.4"E

GS Map: - | **MGA Zone:** 55 | **Coordinate Source:** GD.,ACC.MAP

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Brick	0.00	0.00	900			

*** End of GW040587 ***

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

WaterNSW
Work Summary

GW040588

Licence: | **Licence Status:**

Authorised Purpose(s):
Intended Purpose(s): PUBLIC/MUNICIPL

Work Type: Well
Work Status:
Construct.Method:
Owner Type:

Commenced Date:
Completion Date: 01/01/1900

Final Depth: 7.30 m
Drilled Depth:

Contractor Name: (None)
Driller:
Assistant Driller:

Property:
GWMA:
GW Zone:

Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:			
Licensed:	AUCKLAND	PANBULA	SEC 33

Region: 10 - Sydney South Coast
River Basin: 220 - TOWAMBA RIVER
Area/District:

CMA Map: 8824-2S
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: (Unknown)

Northing: 5909078.000
Easting: 756156.000

Latitude: 36°55'46.4"S
Longitude: 149°52'33.4"E

GS Map: -

MGA Zone: 55

Coordinate Source: GD.,ACC.MAP

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Brick	0.00	0.00	1500			

*** End of GW040588 ***

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WaterNSW
Work Summary

GW109457

Licence: Licence Status:

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

Work Type: Excavation
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/01/1990

Final Depth: 15.00 m
Drilled Depth:

Contractor Name: (None)
Driller: Unkown Unknown
Assistant Driller:

Property:
GWMA:
GW Zone:

Standing Water Level (m):
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	AUCKLAND	PANBULA	1//717000
Licensed:			

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:

CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown

Northing: 5908918.000
Easting: 755569.000

Latitude: 36°55'52.2"S
Longitude: 149°52'09.9"E

GS Map: -

MGA Zone: 55

Coordinate Source: Unknown

*** End of GW109457 ***

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