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Hydrogeological Report including Dewatering Management Plan, Groundwater Modelling & Seepage Assessment

13-17 Oxford Street and 2 Verona Street, Paddington NSW

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1. INTRODUCTION

1.1 Background

EI Australia (EI) was engaged by 17 Oxford St Pty Ltd ('the client') to prepare a Hydrogeological Report including Dewatering Management Plan, Groundwater Modelling and Groundwater Seepage Analysis for 13 to 17 Oxford Street and 2 Verona Street, Paddington NSW ('the site').

The site is located 1.6 km south-west of the Sydney central business district, within the Local Government Area of City of Sydney Council (**Figure 1**, **Appendix A**). The site is further identified as Lot 1 in Deposited Plan (DP) 137013, Lot 1 in DP 75105 and Strata Plan (SP)22113 and covers an approximate total area of 2,533 m^2 (**Figure 2, Appendix A**).

The site is proposed for redevelopment (described in more detail below), which will involve the construction of a three-level basement, requiring bulk excavation works that will intersect the groundwater system, triggering the need for site dewatering. Any extracted groundwater will require appropriate treatment to comply with relevant water quality criteria before being discharged into the local municipal stormwater system, subject to Council approval.

Baseline groundwater quality monitoring data is presented in **Appendix B** and discussed in detail in **Section 3.4**.

Due to the low hydraulic conductivity characteristics of the local water bearing lithology, a drained basement design is proposed, which will involve long-term dewatering during the operational phase of the project, as detailed in **Section 4**. Cumulative drawdown and water quality effects caused by long-term dewatering were assessed against the NSW Aquifer Interference Policy (AIP) in **Section 7**, to demonstrate that the proposed drained basement would meet the minimal impact considerations, as described in the AIP.

The NSW Government considers this project to be of state-level importance (i.e. a State Significant Development, or SSD), which warrants a State Significant Development Application (SSDA) submitted for assessment and determination under the SSD provisions of the Environmental Planning and Assessment Act 1979 (EP&A Act). The purposes of this report are as follows:

1) To address the Secretary's Environmental Assessment Requirements (SEARs), which are listed in **Table 1-1**, in support of the SSDA (SSD-87245208);
2) To provide a dewatering management plan, which describes baseline groundwater conditions, quantifies construction groundwater take volumes and provides strategies for mitigating potential adverse impacts on neighbouring properties and infrastructure, local groundwater users and the environment; and
3) To address the NSW DCCEE Water Group comments listed in **Table 1-2.**

Table 1-1 Secretary's Environmental Assessment Requirements

SEARS Requirement	Relevant Section of Report
11. Water Management - *Detail the proposed drainage design and servicing infrastructure to be incorporated as part of the development (stormwater and wastewater).* - *Demonstrate how the development complies with council's drainage requirements and identify proposed stormwater treatment and water quality*	Dewatering Methodology – **Section 4** Water Quality Management – **Section 5** Minimal Harm Assessment – **Section 7**

SEARS Requirement	Relevant Section of Report
management measures to minimise adverse environmental impacts.	
12. Ground and Groundwater Conditions - *Assess the potential impacts on soil resources and related infrastructure and riparian land on and near the site and including soil erosion.* - *Where required provide a Groundwater Impact Assessment in accordance with relevant Groundwater Guidelines. If the proposed development is on land identified as having high salinity or acid sulfate soil potential in an EPI provide a Salinity Management Plan or Acid Sulfate Soil Management Plan that includes appropriate management measures and strategies.*	Groundwater resource use – **Section 2.4** Downstream surface water receptors – **Section 2.5** Groundwater dependent ecosystems – **Section 2.6** Soil salinity – **Section 2.8** Acid sulfate soils – **Sections 2.3** and **2.9** Soil erosion – **Section 2.10** Construction dewatering groundwater take in ML/year – **Section 4.2** Potential impact to any surrounding properties via drawdown induced ground settling – **Section 4.6** Discharge water quality for temporary disposal to municipal stormwater system during construction dewatering phase – **Section 5.2** Consideration of the Aquifer Interference Policy and minimal harm assessment – **Section 7.1**

Table 1-2 Response to NSW DCCEE Water Group

RFI No/ Authority/ Matter	Comments	EI Australia Response
1.1 NSW DCCEE Water Group Recommendation pre-determination	• Quantify the maximum annual volume of water take due to aquifer interference activities and demonstrate the ability to acquire sufficient water entitlement unless an exemption applies. • Confirm the dewatering infrastructure required. Identify and assess the proposed water supply works to facilitate dewatering.	Please refer to sections 4.2, 7.1 and GSA (Appendix D) of the report. Please refer to section 4.6 of the report. The annual groundwater seepage flow draining through the shored walls into the excavation is predicted to be between 5.4 and 8.8 ML. The requirement to demonstrate the ability to acquire sufficient water entitlement is addressed through the applicable licence exemption. The site is located within a designated coastal water sharing plan area and qualifies for the dewatering licence exemption for construction activities.
1.2 NSW DCCEE Water Group Recommendation pre-determination	If the take of groundwater is found to be greater than 3 ML per year, DPHI should request the proponent to assess impacts due to aquifer	Please Refer to section 7.1 of the report for Consideration of NSW Aquifer Interference Policy.

RFI No/ Authority/ Matter	Comments	EI Australia Response
	interference activities in accordance with the NSW Aquifer Interference Policy and framework (2012).	
1.3 NSW DCCEE Water Group Recommendation pre-determination	Obtain a water access licence (WAL) to account for the maximum predicted water take for construction and operation activities - unless an exemption applies under the Water Management (General) Regulation 2025.	Based on the NSW Government (2025), a dewatering licence exemption applies to any volume of groundwater taken in connection with the construction (but not ongoing maintenance) of buildings and infrastructure in designated coastal areas. The licence exemption applies only for water taken within specified coastal water sharing plan areas (generally to the east of the Great Dividing Range) and is valid until 30 June 2029.

1.2 Proposed Development

The development concept is detailed in the provided architectural design plans (**Appendix C**) and it will involve the demolition of the existing site structures (with the exception of the existing basement shoring wall of 17 Oxford St), followed by the construction of a seven-storey mixed-use building, overlying a three-level stepped basement.

The Finished Floor Levels (FFLs) of the basement are proposed to range between 36.56 and 37.81 metres Australian Height Datum (mAHD). Therefore, the Bulk Excavation Level (BEL) is assumed to range between 36.26 and 37.51 mAHD, to allow for the construction of the basement slab. To achieve this BEL, estimated excavation depths between 9.0 and 14.0 metres below ground level (mBGL) are expected.

Locally deeper excavations may be required for footings, service trenches, crane pads and lift overrun pits.

1.3 Report Objectives

The objectives of this report are to:

- Describe the conceptual hydrogeological model for the site and summarise baseline groundwater conditions, including pre-dewatering groundwater depth and groundwater quality;
- Summarise relevant hydrogeological and groundwater modelling information, with reference to the groundwater seepage analysis (GSA) report, attached as **Appendix D**;
- Describe the dewatering methodology, groundwater treatment requirements, monitoring and reporting procedures to be employed during the dewatering activities;
- Provide effective management and contingency procedures, to ensure that the discharge of extracted groundwater does not pose unacceptable risks to the receiving environment, in compliance with the *Protection of the Environment Operations Act 1997*;
- Detail post-construction seepage control measures and dewatering management procedures; and
- Provide relevant information on anticipated groundwater impacts, with reference to the NSW Aquifer Interference policy to properly inform the regulatory approval process.

It is understood that this report will also form the basis for a Council permit application for connection and discharge to the municipal stormwater system and a water supply works (dewatering licence) application to WaterNSW.

1.4 Scope of Work

The following works were undertaken during the preparation of this DMP:

- A desktop study including:
  - Review DA consent conditions, as well as WaterNSW and the Department of Climate Change, Energy, the Environment and Water (DCCEEW) requirements to determine generic and site specific conditions applicable to the development in relation to dewatering;
  - Review of the development proposal and proposed shoring/dewatering designs;
  - Review of hydrogeological, landscape and acid sulfate soil (ASS) risk maps for the area;
  - Review of previous investigation reports and plans prepared for the area, which included:
    - A search of registered bores located within a 500 m radius of the site, to review local groundwater usage;
    - On-site drilling data, including sub-surface stratigraphic data and depth to water bearing zones; and
    - Potential on-site and offsite sources of contamination that may impact the dewatering discharge water quality.
- Review of existing reports and laboratory analytical data obtained during previous groundwater monitoring events (GME) to characterise baseline groundwater quality; and
- Data analysis and report preparation.

This report also relies on information provided in a Groundwater Seepage Analysis (GSA) report, which is attached as **Appendix D**. The GSA includes the findings from field-based hydraulic testing and computer-based groundwater modelling, used to determine total groundwater extraction volume and provide estimates for associated water level drawdown effects. GSA details and findings are incorporated into various parts of this report.

1.5 Regulatory Framework

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

Table 1-2 Regulatory Framework

NSW Legislation, Regulatory Instruments and Guidelines	Requirements
Contaminated Land Management Act 1997 (CLM Act)	Promotes the effective management of contaminated land in NSW by setting out the roles and responsibilities of the NSW EPA and its rules.
Environmental Planning and Assessment Act 1979 (EP&A Act)	The EP&A Act stipulates the regulations and gives rise to state environmental planning policy (SEPP) to assist regulators with the protection of human and environmental health.
Protection of the Environment Operations Act 1997 (POEO Act)	The objective of the *POEO Act* is to achieve the protection, restoration and enhancement of the quality of the environment.

NSW Legislation, Regulatory Instruments and Guidelines	Requirements
NSW Water Management (General) Regulation 2018.	Details relating to Water Access License requirements, if relevant.
Water Management Act 2000 and *Water Act 1912* (WM Act)	Protects the health of rivers, streams and groundwater systems and gives rise to Water Sharing Plans and quality objectives for catchments within the state of NSW. Manages aquifer interference activities which involve: ▪ The penetration of an aquifer; ▪ The interference of water in an aquifer; ▪ The obstruction of water flow or taking of water from an aquifer when carrying out prescribed activities; and ▪ The disposal of water taken from an aquifer.
NSW Aquifer Interference Policy (2012)	Details the scope of aquifer interference activities, provides guidance on minimal impact assessments and on the licensing and approval requirements for activities that interfere with aquifers.
City of Sydney Council Plans and Policies	Provides controls and guidelines for development in the area. ▪ *Sydney Development Control Plan 2012*; and ▪ *Sydney Local Environmental Plan 2012*.
Guidelines	▪ ANZG (2018) *Guidelines for Fresh and Marine Water Quality;* ▪ ANZECC & ARMCANZ (2000) *Guidelines for Fresh and Marine Water Quality*, Vol. 1, Chapter 3, Aquatic Ecosystems; ▪ DPIE (2022) *Minimum requirements for building site groundwater investigations and reporting;* and ▪ NHMRC (2008) *Guidelines for Managing Risks in Recreational Water.*

2. SITE DESCRIPTION

2.1 Property Identification, Location and Zoning

Site identification details and associated information are summarised in **Table 2-1**. Site location and the proposed development are shown in **Figures 1** and **2**, in **Appendix A**.

Table 2-1 Site Identification, Location and Zoning

Information	Detail
Site Address	13-17 Oxford Street and 2 Verona Street, Paddington NSW
Location Description	1.6 km south-east of Sydney CBD, bound by residences (north), commercial properties (west), Verona Street (south) and Oxford Street (east).
Lots and DP	Strata Plan (SP) 22113 (13-15 Oxford Street) Lot 1 in Deposited Plan (DP) 75105 (2 Verona Street) Lot 1 in DP 137013 (17 Oxford Street)
Local Government Area	City of Sydney Council
Current Zoning	E1: Local Centre (13-17 Oxford Street) R1- General Residential (2 Verona Street) (*Sydney Local Environmental Plan 2012*)
Current Site Use	At the time of writing this report, the land was occupied by: ▪ Three-storey commercial building (17 Oxford Street); ▪ Two storey commercial property (2 Verona Street); and ▪ A residential apartment complex (13-15 Oxford Street).
Location Coordinates	Eastern corner of site (GDA2020-MGA56): ▪ Easting: 335395.175; ▪ Northing: 6249441.352. (Source: http://maps.six.nsw.gov.au)
Site Area	Approximately 2,533 m^2 (**Appendix C**)
Typical Soil Profile	Based on previous investigations (EI, 2022a and 2025d) the soil profile was generalised as: ▪ Fill: sand (down to 3.3 mBGL), overlying ▪ Natural (marine) sand (down to 9.3 mBGL); overlying ▪ Sandstone bedrock: 1.8 mBGL and deeper.

2.2 Surrounding Land Use

Surrounding land uses within close proximity (within 250 m) to the site are described in **Table 2-2**.

Table 2-2 Surrounding Land Uses

Direction	Land Use Description (and distance from site)	Sensitive Receptor

Direction	Land Use Description (and distance from site)	Sensitive Receptor
North	Oxford Street and commercial premises (immediately adjacent) Residential properties (immediately adjacent) St Vincent Private Hospital Sydney (approximately 200 m north and north-east) Comber Street Reserve (approximately 160 m north-east) Barcom Avenue Park (approximately 173 m north-east)	Commercial users Residents Hospital users Recreational users Ecological communities
South	Verona Street Residential properties (approximately 25 m south) Chisholm Street Reserve (approximately 160 m south-west)	Residents Recreational users Ecological communities
East	Oxford Street (immediately adjacent) and commercial premises (approximately 27 m east) Residential properties (approximately 65 m east)	Commercial users Residents
West	Marshall Street; and Residential properties (immediately adjacent)	Residents

2.3 Regional Setting

The regional setting is briefly outlined in **Table 2-3**.

Table 2-3 Regional Setting Information

Attribute	Description
Topography	Based on EI (2022b), the site is located on the high west side of Oxford Street, within a gently (0° to 10°) east dipping topography. Locally, the site is relatively flat, with the existing loading dock within its western area at an approximate elevation of 50.2 mAHD and the ground floor retail areas within the central and eastern portions of the site at elevations ranging from approximately 47.92 to 47.45 mAHD.
Site Drainage	Likely to be consistent with the general slope of the site (to the east). Any runoff would be expected to flow into either the municipal stormwater system or surface flow, consistently with the site topography, into the drainage pathways.
Regional Geology	According to the Department of Mineral Resources Sydney 1:100,000 Geological Series Sheet 9130 (DMR, 1983), the site is situated within the transition from Ashfield Shale (Rwa) to Hawkesbury Sandstone (Rh). Ashfield Shale consists of black to dark-grey shale and laminite and Hawkesbury Sandstone consists of medium to coarse-grained quartz sandstone, very minor shale and laminate lenses. The previous Geotechnical Investigation (EI, 2022a) has encountered sandstone bedrock at a depth of 6.2 mBGL.
Soil Landscape	Based on EI (2023), the site overlies the transition from Blacktown (bt) residual landscape to Gymea (gy) erosional landscape. Blacktown (bt) residual landscape is characterised by gently undulating rises on Wianamatta Group shales and Gymea (gy) erosional landscape is characterised by undulating to rolling rises and low hills on Hawkesbury Sandstone.
Acid Sulfate Soil (ASS) Risk	The Sydney Local Environmental Plan 2012 Acid Sulfate Soils Map shows the site to be within a Class 5 area with respect to ASS. In such cases, Council consent is required prior to commencing only at any works within 500 m of adjacent Class 1, 2, 3 or 4 land that is below 5 mAHD and where the water table is likely to be lowered below 1 mAHD on adjacent Class 1, 2, 3 or 4 land. With reference to the Botany Bay Acid Sulfate Soil Risk Map (1:25,000 scale; Murphy, 1997), the site lies within the class description of 'No Known Occurrence'.

Attribute	Description
	In such cases, ASS are not known or expected to occur and "land management activities are not likely to be affected by ASS materials." Based on the information above, the potential for ASS to be present on site was considered to be low and further assessments are unwarranted.
Nearest Water Features	Rushcutters Creek approximately 1.1 km east of the site which flows to Rushcutters Bay, approximately 1.3 km north-east of the site.
Groundwater Flow Direction	Groundwater flow direction is anticipated to be easterly, towards Rushcutters Creek which flows to Rushcutters Bay. Groundwater contour analysis based on water level monitoring data obtained during this assessment (**Figure 3**, **Appendix A**) agree with that hypothesis.

2.4 Local Groundwater Use

An online search for groundwater bores registered with WaterNSW was conducted on 31 March 2026 (https://realtimedata.waternsw.com.au/water.stm). The search revealed nine registered bores within a 500 m radius of the site, the closest five summarised in **Table 2-4**. Detailed information is attached in **Appendix F**.

Table 2-4 Summary of Closest Registered Water Bores within 500 m of the site

Bore ID	Date Drilled	Drilled Depth (mBGL)	SWL (mBGL) / Salinity (µS/cm) / Yield (L/s)	Purpose	Distance and Direction in relation to Site
GW112180	01/03/1999	30.0	NA / NA / NA	Monitoring Bore	220 m south-west
GW112179	01/03/1999	30.0	NA / NA / NA	Monitoring Bore	240 m north-west
GW109239	19/08/2008	7.45	4.570 / Fresh/ NA	Monitoring Bore	261 m west
GW109240	20/08/2008	7.50	5.670 / Fresh/ NA	Monitoring Bore	269 m west
GW109238	19/08/2008	7.50	4.590 / Fresh/ NA	Monitoring Bore	301 m west

As presented in **Table 2-4**, all of the registered bores are authorised for monitoring use only. The drilled bore depths ranged between 7.5 and 30.0 mBGL. Water table (as indicated by the standing water levels (SWLs)) ranged between 4.57 and 5.67 mBGL. Salinity was classified as fresh. No yield information was available.

Given the registered purpose and distance/location of the bores in relation to the site, the risk of water loss due to potential drawdown effects as a result of site dewatering was considered to be low. Potential dewatering impacts are assessed further, with reference to the NSW Aquifer Interference Policy, in **Section 7**.

2.5 Potential Environmental Receptors

It is recommended that, during construction, extracted groundwater be pumped through a water treatment system (**Section 5.5**) and then discharged into the local municipal stormwater system, which is expected to eventually drain into Rushcutters Bay.

Rushcutters Bay is subject to tidal influences and, therefore, considered to be a marine water ecosystem for discharge water quality purposes. This formed the basis for the selection of the relevant discharge water criteria (DWC), detailed in **Section 5.2**.

2.6 Groundwater Dependent Ecosystems (GDEs)

A search of the *NSW Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2023 – Schedule 4* was conducted on 10 September 2024. Rushcutters Bay was not listed as a high priority groundwater dependent ecosystem (GDE) and there are no other listed high priority GDEs in the general vicinity of the site.

This information was used in the minimal harm assessment considerations under the NSW Aquifer Interference Policy, as described in **Section 7.1** of this report.

2.7 Potential Sources of Contamination

Potential contamination sources noted from the previous environmental Detailed Site Investigation (EI, 2025b) were:

- Former and current on-site light industrial and commercial activities, including from historical petrol station which existed at 13-15 Oxford Street, between approximately 1940 and 1981;
- Imported fill materials of unknown origin and quality (used to grade the site at 2 Verona Street during building construction in the 1930s);
- Weathering of exposed building fabrics containing hazardous substances (asbestos containing materials (ACM), lead-based paints and metallic surfaces);
- Application of pesticides around building (footing) perimeters; and
- On-site migration from neighbouring historical commercial/industrial activities (motor service stations, petrol service stations and dry cleaners).

2.7.1 On-site Sources

Findings from the previous investigation stages are as follows:

- The property at 13-15 Oxford Street existed was used for commercial purposes including use as a fuel service station, until 1981 or 1982, after which it was redeveloped between 1982 and 1984 for the current use as residential apartments including a 2-level basement carpark, which occupies the majority of the site footprint. Excavation at that time for construction of the 2-level basement car park likely removed all UPSS infrastructure and impacted soil (if present) previously associated with the service station.
- With reference to the previous preliminary site investigation for 2 Verona Street (EI, 2024), the building at 2 Verona Street was constructed between 1930 and 1943 (based on title records, construction likely by 1934) and used for light industrial and warehousing purposes. The property was refurbished for commercial use in 1982 and appeared unchanged since.
- The building at 17 Oxford Street was constructed in the 1940s and used for light industrial and warehousing purposes before being refurbished for current retail/commercial use as a local entertainment premises. The property appeared unchanged since.
- Friable asbestos was detected in fill at boreholes BH103_1.8-1.9 (greater than the limit of reporting (LOR) of 0.01 %w/w) and BH105_1.3-1.4 (less than LOR of 0.01 %w/w). Laboratory descriptions reported asbestos as fibrous;

Concentrations of potential contaminants in groundwater were found to be below the adopted ecological criteria (ANZG, 2018), with the exception of:

- Zinc (Zn) at BH201M, BH208M and B101M-2 and BH101M;
- Copper (Cu) at BH201M, BH208M and B101M-2;
- TRH F1 at BH208M (reported above LOR); and
- TRH F2 at BH201M and BH208M (reported above LOR).

The concentrations of the priority metals (Cu and Zn) across the site exceeded the marine water GILs, however there was no evidence of contamination from in-situ soil material. Hence, the concentrations of metals observed can be considered consistent with expected background concentrations of an urban environment.

Concentrations of petroleum hydrocarbons (TRH-F1 and TRH-F2) were reported marginally above their respective LORs at BH208M and BH201M. The risks posed by petroleum hydrocarbons detected in groundwater were considered to be low and acceptable.

Site dewatering may draw-in residual impacts from former contamination sources, thereby producing what is expected to be low-level impacted groundwater. It is therefore essential that water treatment measures be implemented before discharge, to address potential water quality non-compliances.

2.7.2 Offsite Sources

A search of surrounding land indicates that residential, commercial and light industrial land uses have been historically taking place immediately adjacent to the site and the neighbouring parts of the locality, including motor service stations, petrol service stations and dry cleaners. This indicates that any groundwater impacted by residual contaminant levels may potentially be drawn closer to the site by the dewatering works.

Construction dewatering must therefore be mindful of potential contaminants that may be present in the extracted groundwater, which should be pumped through a water treatment system, to ensure that only compliant water quality is discharged to stormwater. Water quality management is addressed in more detail in **Section 5**.

2.8 Soil Salinity

According to EI (2025e):

- The site is located within a transition area of very high to very low salinity potential and a review of soil landscapes indicates that the site is located in a transition between the bt and gy soil landscapes.
- Previous investigations indicated that the site lies on Hawksbury sandstone bedrock, which is of the gy erosional landscape. With reference to the eSPADE portal (DCCEEW, 2024), saline soils are not noted as a concern for dominant soils of the gy soil landscape, consisting of coarse sandy loam, yellow-brown clayey sand to yellow brownish clays.
- Whilst some indicators of saline soils were reported during the DSI (EI, 2025b), based on intrusive investigations, sampled soils were considered non-saline.

It was therefore assumed that the potential for saline soils to be present on the site is low and further assessments in regards to soil salinity were considered unwarranted.

2.9 Acid Sulfate Soils (ASS)

According to EI (2025a):

- The site was situated within relatively elevated terrainn (≥48 mAHD), perched on a Hawkesbury Sandstone / Ashbury Shale formation.

- With reference to the Botany Bay Acid Sulfate Soil Risk Map (1:25,000 scale; Murphy, 1997), the site lies within an area of 'No Known Occurrence'.
- The Sydney Local Environmental Plan 2012 - Acid Sulfate Soil Planning Map, Acid Sulfate Soils Map - Sheet ASS_022, indicates that the site lies within a 'Class 5' area.

Therefore, the potential presence of ASS on site is considered unlikely and further assessments related to ASS were unwarranted.

2.10 Soil Erosion

As the site will largely comprise building structures underlying basement car parking facilities, landscaping pedestrian walkways and drainage control systems, erosive dispersion is not a significant risk for the proposed development.

The following measures are considered relevant however, for minimising erosion in proposed landscaped areas with vegetation:

- Landscaping plans apply to 'waterwise' gardening principles. Additionally to that, procedures designed to encourage excessive infiltration through the soil should be avoided. In certain landscaping situations, infiltration measures to be incorporated may include a sub-surface drains and liners that could control rapid infiltration events.
- Irrigation systems should be properly installed to avoid leakage and smart sprinkler systems should be considered.
- Watering of open space should be kept to a minimum.

3. GROUNDWATER CONDITIONS

3.1 Previous Investigations

The following previous reports were used to gain an understanding of the current hydrogeological conditions at the site:

- EI (2022a) *Geotechnical Investigation* for 17 Oxford Street, Paddington NSW (EI Australia Reference Ref. E25559.G03 _Rev0, dated 24 May 2022);
- EI (2022b) *Preliminary Site Investigation* for 17 Oxford Street, Paddington NSW (EI Australia Reference Ref. E25559.E01 _Rev0, dated 9 December 2022);
- DP (2023a) *Geotechnical Investigation for Proposed Mixed* – Use Development at 17 Oxford Street, Paddington NSW (Douglas Partner Reference Ref. 212062.00 _R.001.Rev0, dated 12 July 2023);
- DP (2023b) *Hydrogeology Report for Proposed Mixed – Use Development* at 17 Oxford Street, Paddington NSW (Douglas Partner Reference Ref. 212062.00 _R.002.Rev1, dated 13 November 2023);
- EI (2024) *Preliminary Site Investigation* for 2 Verona Street, Paddington NSW (EI Australia Reference Ref. E25559.E01.002_Rev1, dated 18 October 2024);
- EI (2025a) *Desktop Acid Sulfate Soil Assessment Letter* for 13-15 Oxford Street, 17 Oxford Street and 2 Verona Street, Paddington NSW (EI Australia Reference E25559.E14_Rev0, dated 18 November 2025);
- EI (2025b) *Detailed Site Investigation* for 13-15 Oxford Street, 17 Oxford Street and 2 Verona Street, Paddington NSW (EI Australia Reference E25559.E02.002_Rev0, dated 18 November 2025);
- EI (2025c) *Remediation Action Plan* for 13-15 Oxford Street, 17 Oxford Street and 2 Verona Street, Paddington NSW (EI Australia Reference E25559.E06._Rev1, dated 18 November 2025);
- EI (2025d) *Additional Geotechnical Investigation* for 13-17 Oxford Street and 2 Verona Street, Paddington NSW (EI Australia Reference Ref. E25559.G04 _Rev0, dated 18 November 2025);
- EI (2025e) *Desktop Salinity Assessment Letter* for 13-15 Oxford Street, 17 Oxford Street and 2 Verona Street, Paddington NSW (EI Australia Reference E25559.G17_Rev0, dated 18 November 2025);
- EI (2026a) *Groundwater Level Monitoring Report No.1*, 17 Oxford Street, Paddington NSW (EI Australia Reference E25559.G11.GW01, dated 14 January 2026); and
- EI (2026b) *Groundwater Seepage Analysis*, 13-17 Oxford Street and 2 Verona Street, Paddington NSW (EI Australia Reference E25559.G12.02_Rev1, dated 16 March 2026) ('the GSA' – **Appendix D**).

This report takes into account all available investigation findings and outlines site-specific measures for the appropriate management of groundwater seepage during the initial (bulk excavation) stage, which is referred to as the "construction dewatering" phase. The information

is also relevant for collection and disposal of low groundwater seepage volumes into the basement post construction, which is referred to as the "operational dewatering" phase.

3.2 Conceptual Hydrogeological Model

The Conceptual Hydrogeological Model for the site is summarised as follows:

- Based on Geotechnical investigations (EI, 2022a and 2025d), subsurface soil profile comprise:
  - Fill: sand (down to 3.3 mBGL), overlying
  - Natural (marine) sand (down to 9.3 mBGL); overlying
  - Sandstone bedrock: 1.8 mBGL and deeper.
- Groundwater elevations ranging between 42.5 mAHD at the western site boundary and 45.4 mAHD at the eastern site boundary were measured within monitoring wells installed previously by DP (2023b).
- Groundwater flow is likely moving through the underlying sandstone bedrock along bedding planes, joints and fractures, resulting in characteristically low hydraulic conductivities and low well yields.
- Groundwater flow direction in the vicinity of the site is inferred to be north-easterly, towards Rushcutters Bay, as detailed in **Section 2.3**.
- The shallow, fractured bedrock is not being currently utilised for water supply purposes, as indicated by the bore search conducted in the area (**Section 2.4**).
- Hydraulic conductivities were detailed in the GSA report for the various strata and summarised in **Table 3-1** below.

Table 3-1 Summary of Pump-out Test Results

Monitoring Well	Test Date	Hydrogeological Unit Tested	Resulting Hydraulic Conductivity (m/s)
BH1	15 August 2023 – Test 1	Highly fractured to unbroken sandstone [1]	2.6×10^{-7}
	15 August 2023 – Test 2	Highly fractured to unbroken sandstone [1]	2.3×10^{-7}
	26 May 2025	Sand [2]	6.6×10^{-5}
BH2A	15 August 2023 – Test 1	Highly fractured to unbroken sandstone [1]	5.5×10^{-7}
	15 August 2023 – Test 2	Highly fractured to unbroken sandstone [1]	4.7×10^{-7}
	26 May 2025	Highly fractured to unbroken sandstone [1]	2.6×10^{-7}
BH4A	15 August 2023 – Test 1	Highly fractured to unbroken sandstone [1]	2.3×10^{-7}
	15 August 2023 – Test 2	Sand [2]	1.0×10^{-5}
	26 May 2025	Highly fractured to unbroken sandstone [1]	1.1×10^{-7}
BH201M	26 September 2025	Highly fractured sandstone	7.0×10^{-8}

BH208M	26 September 2025	Highly fractured to unbroken sandstone	4.1 x 10^{-7}

Notes:
1 Standpipe screened in sand, residual soil and sandstone, but the test intervals were entirely in sandstone.
2 Standpipe screened in sand, residual soil and sandstone, with test interval through all three units. The test results were predominantly governed by the permeability of sand.

3.3 Pre-Dewatering Groundwater Depth

As part of the Geotechnical Investigation prepared by DP (2023a), three groundwater monitoring wells (BH1, BH2A and BH4A) were installed. A Groundwater Monitoring Event (GME) was completed on 13 October 2022, 18 March 2023, 24 October 2023, 7 November 2023 and 26 May 2025 comprising these three existing monitoring wells and the additional monitoring wells BH201M and BH208M. Groundwater gauging is summarised in **Table 3-2**. The logs are presented in **Appendix E**.

Table 3-2 Summary of Groundwater Monitoring Results

Monitoring Well	Date of Observation	Approximate Depth to Groundwater Level (mBGL)	Approximate Groundwater Elevation (mAHD)
BH1	13-Oct-22	4.9	45.4
	18-Mar-23	5.5	44.8
	24-Oct-23	5.7	44.6
	7-Nov-23	5.7	44.6
	26-May-25	4.5	45.7
BH2A	13-Oct-22	4.9	45.4
	18-Mar-23	5.7	44.6
	24-Oct-23	6.0	44.3
	7-Nov-23	6.0	44.3
	26-May-25	4.8	45.4
BH4A	13-Oct-22	4.4	42.9
	18-Mar-23	4.7	42.6
	24-Oct-23	4.8	42.5
	7-Nov-23	4.8	42.5
	26-May-25	3.9	43.3
	26-Sep-25	3.9	43.2
BH201M	26-Sep-25	8.5	41.5
BH208M	26-Sep-25	1.5	42.0

As discussed in the GSA report, design groundwater levels of 46.4 mAHD (0.5 m higher than highest measured groundwater level in BH1) on the western end of the site boundary and 44.0 mAHD (0.5 m higher than highest measured groundwater level in BH4A) on the eastern end of the site boundary.

3.4 Baseline Groundwater Quality Assessment

3.4.1 Monitoring Well Location

Data and samples collected from monitoring well BH101M on 1 August 2023 and from BH101M, BH201M and BH208M on 14 January 2025 were used to characterise pre-dewatering groundwater quality. Each well location is illustrated on **Figure 2, Appendix A**.

3.4.2 Analytical Parameters

The local groundwater was analysed for the following quality parameters (results are presented **Table B1** and **Table B2, Appendix B**):

- Priority metals (arsenic (As), cadmium (Cd), total chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni) and zinc (Zn));
- Total Recoverable Hydrocarbons (TRHs);

- Benzene, Toluene, Ethylbenzene and Xylenes (BTEX);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Extended suite of dissolved metals: aluminium (Al), antimony (Sb), barium (Ba), beryllium (Be), boron (B), cobalt (Co), iron (Fe), lithium (Li), manganese (Mn),molybdenum (Mo), selenium (Se), silver (Ag), strontium (Sr), uranium (U) and vanadium (V);
- Silica (dissolved SiO2);
- Ammonia, Nitrate, Total Oxidised Nitrogen, Total Phosphorus Reactive Phosphorus and Total Nitrogen;
- Major anions: Sulfate (SO_4^{-2}), chloride (Cl^-), carbonates (CO_3^{-2}), bromide (Br^-) and Fluoride (F^-);
- Major cations: Calcium (Ca^{2+}), magnesium (Mg^{2+}), sodium (Na^+) and potassium (K^+);
- Cation/anion balance (as a percentage);
- Dissolved Oxygen (DO);
- Alkalinity (bicarbonate, carbonate, hydroxide and total);
- Total Organic Carbon (TOC);
- Sodium Absorption Ratio (SAR);
- Total Suspended Solids (TSS)
- Microbiological organisms: Faecal coliforms, faecal streptococci Escherichia coli; and
- Perfluoroalkyl and polyfluoroalkyl substances (PFAS).

3.4.3 Field Observations and Water Quality Parameters

Field physicochemical water quality parameters (WQPs) were recorded before sampling, as presented in **Table 3-3**. The groundwater samples were then evaluated on the basis of odour and visual signs of contamination, with the following observations noted:

- Groundwater in the monitoring well BH101M was observed to be clear to pale brown, with low turbidity;
- Groundwater in the monitoring well BH201M and BH208M wells were pale brown to grey and high turbidity.
- No obvious odours or visual evidence of contamination was detected during well purging or groundwater sampling; and
- No petrochemical surface sheen was observed on any groundwater samples.
- A portable photo-ionisation detector (PID) was used to screen the well headspace for volatile organic compounds (VOCs). The PID readings were recorded ranging between (0.1 to 2.4 ppm).

Table 3-3 Groundwater Field Data (GME date: 1 August 2023 and 16 May 2025)

Well ID	SWL (mBTOC)[2]	Dissolved Oxygen (mg/L)	pH	Electro-conductivity (µS/cm)	Temperature (ºC)	ORP[1] (mV)
BH101M	5.92	1.24	6.41	429	16.98	239.6
BH201M	8.14	0.01	4.98	412	17.71	-10.8
BH208M	0.84	0.04	4.69	414	16.33	448.9
BH101M	4.72	0.3	4.99	303	17.19	342.1

Notes:

[1] ORP: Oxidation-Reduction Potential. Readings were adjusted to Standard Hydrogen Electrode (SHE) by adding field electrode potential (205 mV).
[2] mBTOC: metres below top of casing.

Local groundwater was considered to be slightly acidic to acidic (pH: 4.69 to 6.41), fresh (EC: 303 to 429 µS/cm), oxygen depleted (DO: 0.01 to 1.24 mg/L) and mostly oxidising (ORP: -10.8 to 448.9 mV).

3.4.4 Laboratory Analytical Results

Laboratory analytical results for groundwater samples collected as per the DSI (EI, 2025b) were assessed against the DWC presented in **Section 5.2**.

All results complied with the adopted criteria, with the exception of:

- Aluminium at BH201M (62.0 µg/L) and BH101M-2 (220.0 µg/L), which were above adopted criteria of 55 µg/L;
- Copper at BH201M (6.0 µg/L), BH208M (3.0 µg/L) and BH101M-2 (6.0 µg/L), which were above adopted criteria of 1.3 µg/L;
- Iron at BH208M (380 µg/L), which was above adopted criteria of 3 µg/L;
- Lithium at BH208M (5.0µg/L), which was above adopted criteria of 2.5 µg/L;
- Strontium at BH208M (83 µg/L), which was above adopted criteria of 1.0 µg/L;
- Zinc at GWBH101M (23.0 µg/L), BH201M (35.0 µg/L), BH208M (13.0 µg/L) and BH101M-2 (65.0 µg/L), which was above adopted criteria of 8.0 µg/L.
- Total Oxidised Nitrogen at BH208M (680 µg/L), which was above adopted criteria of 5.0 µg/L;
- Total Nitrogen at BH208M (1000 µg/L), which was above adopted criteria of 120 µg/L;

- In field and laboratory analysed pH readings ranged between (4.69 to 6.41), which were outside the acceptable range of 7.0 to 8.4;
- Total Suspended solids at BH208M (51 µg/L), which was above adopted criteria of <50 µg/L; and
- Turbidity at BH201M (12,000µg/L), BH208M (24 µg/L) and BH101M-2 (150 µg/L), which were above adopted criteria of 10 µg/L.

A summary of analytical results and the adopted water quality criteria is presented in **Tables B1** and **B2** in **Appendix B**. Laboratory documentation is attached in **Appendix G**.

3.4.5 Water Treatment Requirements

Construction Phase Dewatering

In regards to the marginal copper and zinc exceedances (**Section 3.4.4**), these can be considered to be representative of the disturbed background conditions of the local aquifer and will likely be controlled by the sediment removal stage of the treatment process (**Section 5.5**).

A water treatment specialist should be engaged to advise on the implementation of appropriate technologies for water treatment.

Further details on water quality management are provided in **Section 5**.

Operational Phase Dewatering

A GME is recommended at the end of the construction works to verify water quality parameters and review/amend the water treatment system and water quality management controls to be used during the operational phase. This will ensure that water quality is compliant with the discharge criteria (**Table 5-1**), prior to long-term operational stormwater discharge.

4. DEWATERING METHODOLOGY

4.1 Excavation and Shoring

As stated in **Section 1.2**, the proposed development will include the construction of a three level basement. The BEL was assumed to range between 36.26 and 37.51 mAHD. Locally deeper excavations may be required for footings, service trenches, crane pads and lift overrun pits.

With reference to the GSA report (**Appendix D**), the basement excavation is assumed to be supported by a shoring system comprising a fully drained secant pile wall, with the soft piles installed to the top of the sandstone bedrock to provide an impermeable wall within the sand and residual soil. The hard piles will extend further, while still allowing the sandstone bedrock to freely drain.

This assessment does not cover the overall stability or suitability of the shoring system. Should final shoring designs differ from the above description, the GSA (and this report) should be revised accordingly.

4.2 Estimated Groundwater Take Volume

As described in the GSA report, groundwater seepage analysis for flow through and beneath the excavation during construction has been undertaken using PLAXIS 3D, which is a commercially available finite element package intended for three dimensional analysis in geotechnical engineering. PLAXIS 3D estimates the seepage rate of water entering the excavation. The model estimates the volume of water which will be required to be dewatered during the construction of the basement.

Based on a specific set of assumptions and field data, which included the design groundwater elevations ranging from 40.02 to 43.7 mAHD (**Section 3.3**) and calculated, layer-specific hydraulic conductivities for the various classes of bedrock encountered at the site, annual groundwater seepage flow draining through the shored walls into the excavation is predicted to be between **5.4** and **8.8 ML** (i.e. approximately 14.8 to 24.1 m^3/day). These flow rate values would apply for the construction phase, while **4.5** to **7.9 ML** (i.e. approximately 12.2 to 21.6 m^3/day) are anticipated to be collected by the drained basement during the operational phase of the development.

Based on the NSW Government (2025), a dewatering licence exemption applies to any volume of groundwater taken in connection with the construction (but not ongoing maintenance) of buildings and infrastructure in designated coastal areas. The licence exemption applies only for water taken within specified coastal water sharing plan areas (generally to the east of the Great Dividing Range) and is valid until 30 June 2029.

Therefore, the site qualifies for the exemption and does not require a WAL licence during the construction phase.

4.3 Dewatering Level and Drawdown Monitoring

With reference to the GSA report (**Appendix D**), groundwater modelling indicated a predicted maximum groundwater level drawdown between 5.3m to 6.7m (downslope) and 1.5m to 4.9m (upslope). It also predicted a maximum ground settling between 2.6 and 4.2 mm. Ground experiencing settling less than 10 mm are considered to be a ‘negligible’ risk in regards to category of damage risk due to dewatering, as defined in Cashman and Preene (2021).

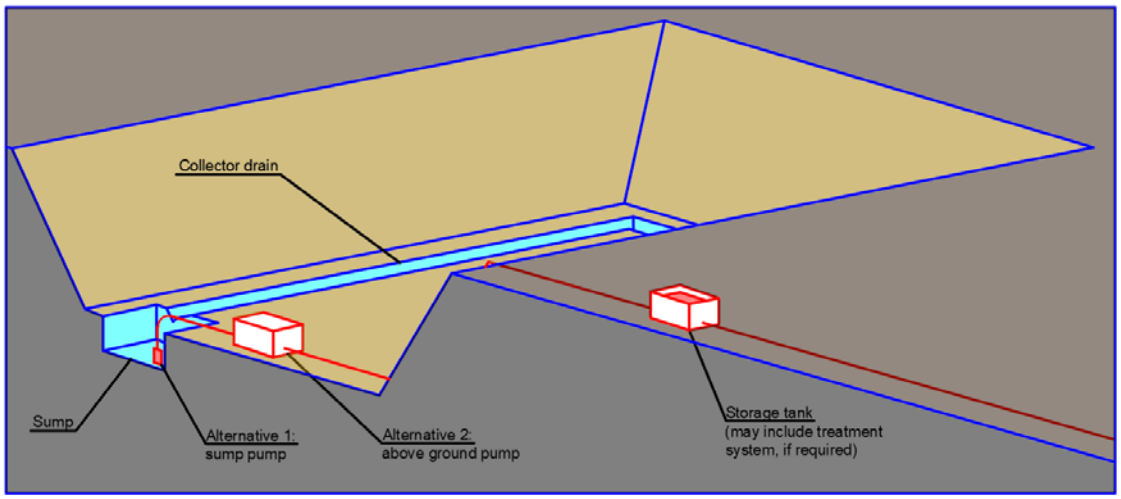
Groundwater elevations will be monitored periodically during the construction dewatering period by measuring groundwater depth in selected monitoring wells. As the estimated seepage rate is

expected to be low (14.8 to 24.1 m^3/day), groundwater depth gauging may be adequately gauged manually, using an electric water contact meter during each dewatering monitoring event, as described in **Section 5.4**.

4.4 Dewatering Method

A sump and pump system might be used to control seepage into the excavation during basement construction and in the long-term, as illustrated in **Figure 4-1**.

Figure 4-1 Hypothetical layout of a *Sump and Pump* seepage collection system



4.4.1 Construction Phase Dewatering

During construction, seepage water should be collected and appropriately treated prior to discharge to the stormwater system. A collection sump is typically located at the lowest part of the excavation, from which collected seepage waters are pumped into a storage tank for sediment settling. The preferred tank type will require capacity to accommodate the rate of groundwater seepage during basement construction, which was estimated (in the GSA report) to be between 14.8 and 24.1 m^3/day.

Groundwater treatment will be undertaken either in the storage tank, or via a water treatment system installed close to the vessel prior to discharge. The treated water will then be discharged into the municipal stormwater pit, provided that prior approval for discharge has been obtained from the relevant consent authorities.

The pumping system may operate on a full time or intermittent basis (as required, depending on the equipment selected by the Water Treatment Specialist) for the approved construction dewatering period, to control seepage during basement construction.

The Site Manager, Dewatering Contractor and Water Treatment Specialist must agree on a dewatering strategy to confirm that dewatering treatment systems and water retention tanks can be positioned appropriately within approved areas of the site, prior to the commencement of the excavation works.

4.4.2 Operational Phase Dewatering

Given the predicted total annual groundwater take volume, a drained basement is proposed for the operational (post-construction) phase of the development. This would involve collection of groundwater seepage via on-site detention storage (OSD tank, or equivalent), with discharge to the municipal stormwater system for the operational life of the project, after consent authority approval is granted.

It is understood that WaterNSW may consider an application for long-term, operational phase dewatering, where minimal impact considerations under the NSW Aquifer Interference Policy

(AIP) are satisfied. An assessment against the AIP was undertaken, which found minimal impact requirements would be satisfied, as described in **Section 7**.

A procedure for operational phase dewatering management is provided in **Section 7.3**.

4.5 Discharge Flow and Volume Monitoring

The volume of water discharged must be monitored by a calibrated flow meter (or equivalent alternative means) that is integrated as part of the dewatering system for the complete duration of the temporary construction dewatering period. The flow meter will therefore display cumulative volume discharged at any stage during dewatering, which will be documented as part of the dewatering monitoring records.

In regards to the drainage and disposal of seepage waters collected during the basement construction, the client must provide details for the proposed disposal connection to the stormwater system, preferably in the form of drawings, suitable for Council review purposes.

Flow monitoring data will be documented by a suitably trained site employee under the supervision of the Site Manager. Tabulated records should be maintained on site and made available to the Environmental Consultant for inclusion in the routine monitoring event reports.

For the construction phase, water level and volume monitoring will be conducted during the same monitoring events described in **Section 5.4**. For the operation phase, these monitoring events will be conducted annually, as described in **Section 7.3**.

4.6 Potential Drawdown-Induced Impacts

A review of potential adverse effects caused by dewatering on neighbouring properties and groundwater dependent ecosystems was undertaken, as summarised in **Table 4-1.**

Table 4-1 Assessment of Potential Dewatering Effects

Attribute	Description
Proximity of High Priority Groundwater Dependent Ecosystems (GDEs)	No high priority groundwater dependent ecosystems were documented within a 40 m radius of the site (**Section 2.6**).
Water supply losses by neighbouring groundwater users	As described in **Section 2.4** a review of registered bores within a 500 m radius of the site identified nine registered bores authorised for monitoring purposes, the closest five indicating that groundwater is not utilised as a local resource (monitoring only). As there are no known beneficial uses of the groundwater source, water supply losses are unlikely.
Potential subsidence impacts on neighbouring structures	As documented in the GSA report (**Appendix D**), the predicted maximum groundwater level drawdown between 5.3m to 6.7m (downslope) and 1.5m to 4.9m (upslope). A maximum ground settling between 2.6 and 4.2 mm was also predicted using PLAXIS 3D modelling. Ground settling levels less than 10 mm are categorised as a 'negligible' risk of damage risk due to dewatering (Cashman and Preene, 2001).
Mounding of groundwater upgradient of structure	As the future basement will be drained, it is unlikely that groundwater mounding effects upgradient of the finished structure will be attributable to the proposed structure.

It would be prudent to undertake a dilapidation survey on any nearby structures. The dilapidation survey should be completed by a suitably qualified geotechnical engineer before the start of the construction works and following the completion of construction.

5. WATER QUALITY MANAGEMENT

5.1 Responsibility

The Principal Contractor or Site Manager, appointed by the client for the construction works, will be responsible for implementing the management procedures for water quality as described in this report.

5.2 Discharge Water Quality Guidelines

In accordance with statutory requirements for site dewatering operations, discharged waters must comply with the ANZG (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, or relevant default criteria where the ANZG (2018) guidelines do not provide values. This requirement is in compliance with the Protection of the Environment Operations Act 1997.

The primary receiving water body is Rushcutters Bay which is considered an ecosystem in which aquatic biological diversity may have been adversely affected by human activity and, therefore, a moderately disturbed system due to the urban and tidal influences (**Section 2.4**). Nevertheless, the more stringent ANZG (2018) 95% Marine Default Guideline Values (DGVs) and 99% DGVs for bio-accumulative toxicants for slightly to moderately disturbed ecosystems were conservatively adopted as the Discharge Water Criteria (DWC).

The listed parameters and corresponding discharge criteria will apply for both the initial (pre-dewatering) and on-going assessment of the quality of water being discharged to the stormwater system during the construction and occupational phases of the development. It is noted however, that a few of these parameters are not mandatory after the baseline groundwater quality assessment, in accordance with the *Routine water quality monitoring lists* in Appendix A of DPIE (2022).

Table 5-1 Discharge Water Criteria (DWC)

Analyte	DWC (µg/L) [1]
Metals	
Aluminium (Al) for waters with pH > 6.5	55 [2]
Antimony (Sb)	9 [2]
Arsenic ^{III} (As III))	24 [2]
Arsenic ^{V} (As V)	13 [2]
Barium (Ba)	20 [8]
Beryllium (Be)	0.6 [8]
Boron (B)	940 [2]
Cadmium (Cd)	0.7
Chromium ^{III} (Cr III)	27
Chromium ^{VI} (Cr VI)	4.4
Cobalt (Co)	1
Copper (Cu)	1.3
Iron (Fe)	3 [8]
Lead (Pb)	4.4

Lithium (Li)	2.5 [9]
Manganese (Mn)	80 [2]
Mercury total (Hg)	0.1
Molybdenum (Mo)	34 [2]
Nickel (Ni)	70
Selenium (Se)	11 [2]
Silica (dissolved SiO_2)	800 [8]
Silver (Ag)	1.4
Strontium (Sr)	1 [9]
Uranium (U)	15 [2]
Vanadium (V)	100
Zinc (Zn)	8.0
Petroleum Hydrocarbons	
Oil and grease	*No visible sheens, surface films or oil and grease* [3]
Volatile TRH (C_6 – C_9)	*If TPH is detected analysis for BTEX and PAH is required*
Semi-volatile to heavy TRH (C_{10} – C_{40})	
Monocyclic Aromatic Hydrocarbons (BTEX)	
Benzene	700
Toluene	180
Ethylbenzene	80
o - xylene	350 [2]
p - xylene	200 [2]
m - xylene	75
Polycyclic Aromatic Hydrocarbons (PAH)	
Benzo(a)pyrene	0.2
Naphthalene	70
Microbiological organisms and Other Organics	
Faecal coliforms	Presence/Absence[10]
Faecal streptococci	Presence/Absence[10]
Escherichia coli (E. coli)	Not detectable in 100 mL[8]
Major Ions	
Anions: sulfate, chloride, carbonates, bromide, fluoride	2,500 [8]
Cations: calcium, magnesium, sodium, potassium	1,800 [8]
Ionic balance: cation / anion balance (as a percentage)	No Relevant Criteria
Nutrients	
Ammonia	910
Nitrate	700 [4]
Nitrite	30 [8]

Total Oxidised Nitrogen	5 [5]
Total Nitrogen	120 [5]
Total Phosphorus	25 [5]
Reactive Phosphorus	10 [5]
Other	
Total Cyanide	4
Total Phenol	400
PFOS	0.13 [7]
PFOA	220 [7]
Physiochemical Parameters	
Total Suspended Solids (TSS)	<50 [9]
DO (% saturation)	90 -110 [5]
pH (pH units)	7.0 to 8.4 [5]
Turbidity (NTU)	10 [6]

Note 1 Discharge water criteria are the ANZG (2018) 95% Default Guideline Values (DGVs) for the protection of moderately to highly disturbed marine ecosystems, with the 99% DGVs applied for the bio-accumulative parameters *cadmium* and *mercury*, unless otherwise indicated.

Note 2 The ANZG (2018) 95% Freshwater DGVs for highly disturbed freshwater ecosystems are applied for the indicated parameters (aluminium, arsenic, boron and selenium), in the absence of marine water criteria. Note: ANZG only provides freshwater criteria at an 'unknown' level of species protection (%) for antimony, molybdenum, o – xylene and p - xylene; therefore, these DGVs are applied. ANZG (2018) only provides marine criteria at an "unknown" level of species protection (%) for manganese; therefore, these DGVs are applied. For uranium CCME (2011) Scientific Criteria Document for the Development of the Canadian Water Quality Guidelines for the Protection of Aquatic Life – Uranium. PN 1451, ISBN 978-1-896997- 97-1 PDF, Canadian Council of Ministers of the Environment, 2011 has been adopted

Note 3 NHMRC (2008) No Detectable Oil & Grease - OG analysis must find No visible film or sheen at the water surface and No detectable hydrocarbon odours, based on aesthetic aspects, as described in NHMRC (2008) Guidelines for managing risks in recreational water, Section 10.2.2.

Note 4 In the absence of ANZG 2018 marine criteria in relation to nitrate, the Freshwater 90% trigger value was sourced from ANZECC & ARMCANZ 2000 Table 3.4.1 Trigger values for toxicants for moderately to highly disturbed systems. A marine trigger value is not currently available.

Note 5 In the absence of ANZG (2018) criteria, alternative criteria from ANZECC / ARMCANZ (2000), Table 3.3.2, Default trigger values for physical and chemical stressors for south-east Australia for moderately to highly disturbed ecosystems. The Marine criteria were adopted for total oxidised nitrogen, total phosphorus, reactive phosphorus and total nitrogen. The adopted pH and DO range are between Estuaries lower limit and upper limit for Marine settings.

Note 6 In the absence of ANZG 2018 criteria in relation to Turbidity, the ANZECC & ARMCANZ 2000 Table 3.3.3 upper default trigger value for *Estuarine and Marine* criteria is applied.

Note 7 DWC value is derived from the National Environmental Management Plan for PFAS (HEPA, 2025) - 95% species protection for highly disturbed systems.

Note 8 For chemical parameters not addressed by either ANZG (2018) or ANZECC / ARMCANZ (2000), the NHMRC (2011) *Australian Drinking Water Guidelines*, V4.0, Rev 2025, Table 10.6 Guideline values for physical and chemical characteristics, are referred to to address potential discharge to recreational beach settings. The discharge water criteria are set at one order of magnitude (10x) higher than the Drinking water health-based value, or 10x the aesthetic-based value, in the absence of a drinking value. Note: The Table 10.5 Performance measure threshold is applied for the microbiological parameter Escherichia coli (E. coli).

Note 9 In the absence of ANZG 2018 criteria in relation to *Lithium (Li),* the ANZECC & ARMCANZ 2000 Table 4.2.10 *Agricultural irrigation water* criterion is applied. The *Total Suspended Solids* (*TSS*) adopted Table 37 of *Agricultural irrigation water* criteria. In the absence of ANZG 2018 or ANZECC / ARMCANZ (2000), criteria in relation to *Strontium (Sr)* the report limit provided by laboratorial analyses is applied.

Note 10 According to NSW Health, Thermotolerant (or faecal) coliform and total coliform bacteria are no longer recommended by the Guidelines as primary indicators of faecal contamination as they might occur naturally in soil and water in the absence of faecal contamination.

5.3 Additional Pre-dewatering Monitoring Event

As the baseline groundwater quality assessment included all mandatory parameters listed in Appendix A of DPE 2022 (as detailed in **Section 3.4.3**), an additional pre-dewatering GME is considered unwarranted.

5.4 Discharge Water Quality Monitoring

5.4.1 Visual Monitoring

Visual inspections of the dewatering control measures and equipment should occur regularly (daily, where possible) by the Site Manager and/or Dewatering Contractor, to ensure:

- The effective operation of all dewatering treatment equipment, including inspection that short-circuiting of water around baffles and filter media is not occurring within sediment retention tanks;
- No petrochemical sheens are visible on the water surface and no hydrocarbon odours are being generated by the treated groundwater or sediment; and
- No green or blue effluent, potentially indicating high levels of dissolved aluminium (if used in the treatment process).

The Site Manager must keep a record of all visual observations, as well as filter media changeover events and operational measurements such as flow rates and pressures, to enable the calculation of cumulative dewatering discharge volumes.

5.4.2 Sample Collection and Analysis

On-going sample analysis must continue for the duration of construction dewatering activities, to establish that the treatment system (if required) is functioning as intended and to confirm the quality of discharge water is acceptable for release into receiving water body (ultimately, Rushcutters Bay).

Sample collection should be completed by a suitably qualified environmental scientist or equivalent, with the subsequent analyses performed by a reputable environmental laboratory using NATA-registered analytical methods. The analytical program is to include the parameters listed in **Table 5-1** (**Section 5.2**), in accordance with *Appendix A – Routine water quality monitoring lists* (DPIE, 2022). Additional water quality parameters may be added to the priority analytical suite, should daily monitoring indicate that need.

The following activities should be implemented for the on-going monitoring program:

- **Trial-Run Period**: Prior to the discharge of any extracted groundwater, a trial run will be completed as follows:
  - Initial groundwater pumped from the site will be diverted into the excavation, to infiltrate site strata and re-enter the underlying groundwater aquifer, thus allowing a reduction in suspended sediments, which are expected in the initial pump-out waters;
  - Samples of the treated groundwater will be collected and laboratory analysed for the water quality parameters of concern; and
  - After confirmation that the water quality complies with criteria, the extracted groundwater will be directed to the municipal stormwater system.

  Semi-weekly (twice per week) sampling frequency will occur during the trial-run period. As a minimum, two samples will be collected before and after the treatment of the extracted groundwater. The analytical results will be compared to each other, as well as to the DWC, to assess the performance of the water treatment system. The results of each sampling event will be recorded, to establish chemical concentration trends (if any).

Semi-weekly sampling should be maintained for a minimum of two weeks following commencement of the dewatering treatment, unless stated otherwise by the Environmental Consultant. Sampling for trial run purposes will cease once the target parameters in treated water stabilise (i.e. consecutive readings are within ± 10% of the observed results) and contaminant concentrations are within the adopted discharge criteria for three consecutive sampling events. The trial-run period may be extended if stabilisation is not observed, or if the treated water does not satisfy the adopted criteria (**Table 5-1**).

The Dewatering Contractor / Water Treatment Specialist should seek advice from the Environmental Consultant regarding termination of the trial-run period. During the trial-run period, all collected groundwater seepage (including treated water) should be retained on site and stored in appropriate bulk containers. No collected groundwater should be discharged until it is proven to meet the adopted criteria.

- **Construction Monitoring Period (Weekly, Fortnightly and Monthly)**: After the Trial-Run Period, and subject to statutory authority approval, treated water may be discharged to the receiving water bodies. A weekly sampling frequency will be adopted for four weeks. The sampling program will involve the collection of one system discharge (i.e. treated) sample (as a minimum), to be analysed for the target parameters of concern, to confirm the system is functioning as intended.

  After four weeks, the weekly sampling frequency may be extended to fortnightly monitoring for a month and then monthly for the remaining duration of construction phase dewatering, provided the analytical monitoring results indicate the treated water quality consistently meets the adopted criteria. If this is not achieved, contingency measures must be implemented, with monitoring frequency going back to weekly until consistency in the discharged water results is re-established.

  Dewatering contingency measures are detailed in **Section 6.5** (**Table 6-1**) and should be implemented if groundwater results exceed or are predicted to exceed the adopted criteria for any one monitoring event. Any changes to the sampling frequency should be determined by the appointed environmental consultant.

- **Operational Monitoring Period (Annual)**: Provided that the Discharge Monitoring Period shows consistent and compliant results, the monitoring frequency will be as follows:

  A quarterly groundwater level monitoring frequency (i.e. once every 3 months) will be adopted for the first twelve months of occupation. This will be followed by semi-annual water level monitoring (i.e. once every 6 months) for the second year. The monitoring frequency can be extended to annually during the operational period, for the lifetime of the building, as described in **Section 7.3**. As per the construction period, contingency measures detailed in **Section 6.5** should be implemented if groundwater results exceed or are predicted to exceed the adopted criteria for any one monitoring event. Any changes to the sampling frequency should be determined by the appointed environmental consultant.

All laboratory analytical results for the water samples must be retained, to be made available upon request by Council and/or WaterNSW. The Site Manager and Dewatering Contractor / Water Treatment Specialist should seek advice from the Environmental Consultant prior to deviating from any of the above monitoring requirements, to ensure the quality of discharged groundwater is not compromised.

5.4.3 Reporting of Water Quality Results

Dewatering management procedures and monitoring results will be reviewed by the appointed Environmental Consultant to ensure that the treatment procedures are effective and that the discharge waters are in compliance with the adopted criteria (**Section 5.2**). Discharge water quality reporting will be required as follows:

- **Interim Monitoring Reports** will be prepared and issued to the Site Manager (during the construction phase), upon receipt of laboratory data for each round of water quality monitoring for the discharged waters. The interim reports will detail the sampling methods

and procedures, provide a comparison between historical and current results, assess the results against the DWC and provide recommendations on corrective actions, when required.

- **Interim Dewatering Completion Report** - Following completion of construction dewatering activities, an *Interim Dewatering Completion Report* ('interim DCR') will be prepared by the appointed Environmental Consultant, as described in **Section 5.6.1.** The interim report will report on construction phase dewatering and must include copies of all analytical results and laboratory water quality test reports issued during the construction phase dewatering period. The interim DCR will be prepared using the pro-forma available for download through the WaterNSW website, as described in **Section 5.6**, and will be submitted to Council and Water NSW.
- **Annual Dewatering Monitoring Reports** will be prepared as described in **Section 5.6.2**, upon receipt of laboratory data for each annual round of water quality monitoring during the operational phase of the development, as described in **Section 7.3**.

5.4.4 Reporting of Other Information

The Site Manager must keep records of cumulative discharge volume, water treatment methods and water treatment chemicals used, if any. In addition, any periods of dewatering stoppage should also be recorded.

5.5 Water Treatment

5.5.1 Water Treatment Design Considerations

Baseline groundwater quality data to date (**Section 3.4**) indicates that treatment of seeped groundwater will be necessary prior to discharge to the stormwater system, at least for metals and pH correction. It is recommended that the selection and design of the preferred treatment system are managed by a Dewatering Contractor / Water Treatment Specialist, in collaboration with the appointed Environmental Consultant. Alternative and/or additional water treatment options may be required, depending on which parameters are found to exceed the DWC after the additional, pre-dewatering monitoring event described in **Section 5.3**.

The design and installation of the preferred system should consider:

- A treatment tank with minimum capacity capable of containing the expected inflow for the basement (as described in **Sections 4.2** and **4.4**);
- Water filtration to reduce coarse and fine suspended solids;
- If applicable, automated in-line chemical dosing systems for the addition of coagulants for the adjustment of turbidity and other parameters, which may be required as described in **Section 6.5**;
- Groundwater treatment to reduce concentrations of contaminants exceeding the DWC to below the values presented in **Section 5.2**;
- Spare retention tank(s) to provide additional residence time and sedimentation, in the case that non-compliant water quality is identified during routine monitoring, triggering temporary redirection and storage while adjustments to the water treatment system are being implemented; and
- A means of monitoring flow rate to enable the accurate determination of total discharge volume.

The water treatment system should be installed, tested and made operational prior to the commencement of dewatering, to ensure that only treated water that meets the adopted quality criteria is discharged.

5.5.2 Treatment Process

The mechanism details of the groundwater treatment process will be defined and managed by the Dewatering Contractor, based on the analytical results of the water sampling conducted during the dewatering activities. The treatment process will be adjusted as necessary based on the ongoing monitoring results to ensure that discharge waters are in compliance with the adopted criteria (**Section 5.2**). Recommended changes in the treatment process can be included in the Interim Monitoring Reports (**Section 5.4.3**) that will be prepared upon receipt of laboratory data for each round of water quality monitoring for the discharged waters.

Baseline groundwater quality data to date (**Section 3.4.5**) indicates that treatment of collected groundwater will be necessary prior to discharge to the stormwater system, at least for metals and pH correction:

- Treatment for metals typically involves coagulation, followed by settling and dewatering. Various equipment and reagents can be used for these purposes;
- pH correction can be achieved by adding acidic/alkaline reagents to the effluents to be discharged.

5.5.3 Treatment System Maintenance

The water treatment system(s) must be regularly maintained by the Dewatering Contractor / Water Treatment Specialist. Maintenance must include (if applicable):

- Regular cleaning and or replacement of the geo-fabric/particle filters within the retention tanks;
- Media changeover (e.g. granular activated carbon – GAC) whenever breakthrough conditions are met; and
- Regular removal of sediment from the retention tanks by an appropriately-licensed waste contractor.

5.6 Reporting of Dewatering Information

5.6.1 Interim Report - Construction Dewatering

In accordance with WaterNSW requirements (Ref. WaterNSW Fact Sheet 260923, Link: https://www.waternsw.com.au/__data/assets/pdf_file/0005/155417/Fact-sheet-Completion-report-Construction-dewatering.pdf), a *completion report* will be prepared and submitted to WaterNSW, at the completion of site dewatering. The completion report must accompany an application to WaterNSW to surrender the *water supply work approval*, at the time that site dewatering is ended.

As the proposed dewatering will involve operational dewatering, the first report to be submitted to WaterNSW for this site will be titled "*Interim Report – Construction Dewatering"* and will document all records collected from the beginning to the end of the construction dewatering period. A blank *Interim Report* form may be downloaded from the WaterNSW website using the internet link: https://www.waternsw.com.au/__data/assets/pdf_file/0004/167278/Completion-report-for-dewatering-work.pdf and should be used to record all of the required information, as listed on the form itself (see **Appendix H**).

The routine logging of flow meter readings at the start and finish of each dewatering event should be completed by a responsible representative of the construction team (e.g. the Site Manager). Each flow meter entry will record a volume of water take associated with it, to enable the calculation of cumulative water take volume at any time during the site dewatering period.

Other records including water quality results, laboratory analytical reports and groundwater level monitoring records may be supplied by the appointed specialist contractors/consultants to the responsible person, who will compile and attach the relevant information to the *Interim Report* form. The Site Manager may authorise a qualified contractor/consultant to maintain the *Interim Report* on the Site Manager behalf.

At the completion of the construction phase, the Interim Report will be submitted to WaterNSW for review.

5.6.2 Annual Reporting for Operational Dewatering

As site dewatering will continue during the occupational phase of the development, monitoring will continue under the responsibility of Strata Management through the occupational phase. This will require the same information as required for the *Interim Report* (described in **Section 5.4.3**), to be logged and submitted to WaterNSW on an annual basis under the report title "*Annual Report – Occupational Dewatering"*.

Monitoring frequencies for the occupational phase are detailed in **Section 7.3**.

All laboratory analytical results, flow meter logs and groundwater level monitoring records must be maintained by strata management and should be made available upon request by Council and/or WaterNSW.

5.6.3 Dewatering Completion Report

A final *"Dewatering Completion Report"* will be submitted to WaterNSW at the completion of the construction dewatering works, following construction phase, along with an application to surrender the water supply works approval (a copy of this form is also provided in **Appendix H**).

6. SITE MANAGEMENT AND CONTROLS

6.1 Deviations from this Plan

The Site Manager should seek advice from the Environmental Consultant whenever deviation from the agreed monitoring program is considered. To ensure the monitoring data set and the early warning objectives of this report are not compromised, variations will only be considered where technical justifications exist, with any deviations documented within the corresponding reports.

Should deviations from the DWC be considered technically justifiable, approval from Council and/or WaterNSW must be obtained before alternative discharge criteria are applied.

6.2 Contact Details for Key Personnel

Once the relevant personnel have been appointed, their names and contact information must be clearly displayed on site, within the site office. An example format is as follows:

Site Manager	Name: To be confirmed Company: To be confirmed	Mobile phone: To be confirmed Email: To be confirmed
Dewatering Contractor	Name: To be confirmed Company: To be confirmed	Mobile phone: To be confirmed Email: To be confirmed
Water Treatment Specialist	Name: To be confirmed Company: To be confirmed	Mobile phone: To be confirmed Email: To be confirmed
Environmental Consultant (Water Quality Expert)	Name: To be confirmed Company: To be confirmed	Mobile phone: To be confirmed Email: To be confirmed

6.3 Summary of Specific Activities

The appointed contractors and/or Site Manager will be responsible for ensuring that the following activities (requirements) are undertaken during the dewatering program:

- Maintain erosion and sediment control measures in a functioning condition, until all earthwork activities are completed.
- Perform daily visual inspection of stormwater diversions and sediment / erosion control devices, ensuring they are operating effectively and at full capacity.
- Implement appropriate remedial measures where any controls or devices are not functioning effectively or are inappropriate.
- Collate records and comments on the condition of existing erosion and runoff controls (drains, silt fences, catch drains), dewatering procedures and analytical results and any site instructions issued to subcontractors to undertake remedial works.
- Maintain rainfall data (to be filed on site).
- Confirm water quality parameters meet the relevant discharge limits, by disclosing supporting documentation upon request.
- Reporting any incidents of poor drainage or uncontrolled discharge.
- Recording all daily inspection reports, environmental incidents and controlled discharge volumes, which may be reviewed during any environmental audit performed on the site.

6.4 Vibration, Noise and Odour Management

The following vibration, noise and odour risks must not occur during dewatering:

- Excessive vibration and noise levels associated with site plant / dewatering equipment; and
- Odours released from collected groundwater, which may pose a risk to human health and/or the aesthetic condition of the environment.

It is the responsibility of the Site Manager to ensure appropriate management of vibration, noise and odour during dewatering operations. Appropriate management methodologies include:

- Undertaking dilapidation surveys of neighbouring buildings, in accordance with potential for impacts in final design type.
- All subcontractors to work only within defined hours set by the DA conditions.
- All reasonable steps shall be taken to muffle and acoustically baffle all plant and equipment. Noise and vibration levels generated by site works must be within the limits set by the DA conditions, the site-specific environmental management plan and the *Protection of Environmental Operation Act 1997*.
- Give consideration to the noise emission of plant/equipment prior to its selection/mobilisation to site.
- Schedule the use of noisy equipment at the least-sensitive time of day.
- Situate noisy equipment at the greatest distance from the noise-sensitive area, or orient the equipment so that noise emissions are directed away from sensitive areas, to achieve the maximum attenuation of noise.
- Where there are several noisy pieces of equipment, schedule operations to minimise cumulative impacts.
- Keep equipment well maintained.
- Ensure engine shrouds (acoustic linings) are installed (where feasible).

6.5 Dewatering Contingencies

Contingent actions for scenarios that may arise during dewatering are detailed in **Table 6-1**.

Table 6-1 Mitigation Measures for Potential Dewatering Issues

Anticipated Problem	Preventive/Corrective Actions
Water Quality Criteria Non-Compliance	
Water Quality Criteria Exceedance Laboratory analytical report for any monitoring event reveals that the quality of treated discharge water does not satisfy the adopted criteria detailed in **Table 5-1**.	Immediate action must be taken to halt the release of water into receiving water bodies, where water quality is found not to meet the adopted criteria detailed in **Table 5-1** Discharge of water must be suspended to enable the following procedure to be implemented: 1) Water will be redirected to storage retention basin/tanks; 2) A water sample will then be collected and sent to the laboratory for confirmation analysis for the non-compliant parameter(s) on an express (24hr) results turn-around basis; 3) Should the analytical result for the confirmation sample show that the previously non-compliant parameter(s) is/are now meet the adopted criteria, the treated water outlet may be redirected to receiving water bodies; however 4) Should the analytical result for the confirmation sample show that the discharge water quality does not comply with the adopted criteria, the environmental consultant / water

Anticipated Problem	Preventive/Corrective Actions
	treatment specialist will be required to modify the water treatment system, in order to achieve compliant discharge water quality. Collection of further treated water samples will be required to confirm the effectiveness of the modifications; 5) After laboratory confirmation that the revised treated water quality complies with criteria, extracted groundwater may be redirected to receiving water bodies; and 6) Weekly monitoring of treated discharge water quality monitoring will be required, until such time that contaminant concentrations are within the adopted criteria values for three consecutive sampling events. Once this is achieved, fortnightly monitoring may be reinstated. **Note: Wastewater Removal** - It may be necessary to have collected waters removed by a licensed wastewater contractor, should quantities exceed the on-site capacity for temporary storage. In this case, records must be maintained to document quantities of wastewater disposed in this way, with provision of wastewater disposal dockets issued by the contractor to be retained for audit and reporting purposes.
Visible and Olfactory Impacts Visual and/or olfactory anomalies (e.g. change in water colour, turbidity, odour, presence of oil / grease) are observed in extracted groundwater.	Similar to the above procedure (Steps 1 to 6) treated water will be redirected to an alternative retention vessel, while the treatment system is adjusted. It may be necessary to have collected waters removed by a licensed wastewater contractor, should retained quantities exceed the on-site capacity for temporary storage. The contractor is to seek advice from a suitably experienced environmental consultant in regard to the additional assessment and treatment that may be required for any observed changes to water appearance or detectable odours.
Repeated Criteria Exceedances After three non-compliances for discharge water quality.	Retain extracted water on site in appropriate bulk containers for subsequent removal by a licensed wastewater contractor. Determine an alternative discharge method, if necessary, updating this report accordingly.
Groundwater Take Non-Compliance	
Excessive Extraction Daily discharge rate is exceeded.	Groundwater take trigger levels are provided to ensure that appropriate measures are implemented to minimise the risk of exceeding the groundwater take limit, which would form a breach of the conditions of the WaterNSW Statement of Approval. The following trigger levels are based on the regular flow meter readings that are recorded during the dewatering monitoring program, as described in **Section 4.6**: Trigger 1: when the flow meter data indicates that 70% of the total approved groundwater take limit has been extracted, the monitoring manager is to notify the Site Manager and the Dewatering Contractor, to activate a review of construction progress against dewatering rate and to make adjustments if necessary, so as not to exceed the approved groundwater take limit. Trigger 2: at 80% of the total approved groundwater take limit, if basement construction is not close to completion, the monitoring consultant is to engage site management and the dewatering contractor to review the reasons for the increased dewatering rate and to explore options and take action to achieve sufficient lowering of the dewatering rate for compliance with the groundwater take limit. Trigger 3: at 90% of the total approved groundwater take limit, if

Anticipated Problem	Preventive/Corrective Actions
	effective reductions in dewatering rate cannot be implemented, WaterNSW should be contacted to review options, which may include a combination of: ▪ Applying for an increase to the groundwater take limit, which may require a Water Access License to be acquired. ▪ Temporary retention of tail water on site in appropriate bulk containers for subsequent removal by a licensed waste contractor; ▪ Aquifer re-injection after obtaining regulatory approval; and/or Fast-tracking of construction works to complete dewatering sooner than the scheduled timeframe.
Drawdown-induced Ground Settling Risk	
Excessive Water Level Drawdown	Groundwater drawdown trigger levels will also apply to minimise the risk of unforeseen impacts in relation to ground settling on neighbouring land. As documented in the GSA report (**Appendix D**), dewatering is expected to have negligible, adverse impact on the neighbouring properties, given that dewatering will occur in competent bedrock materials. Notwithstanding, should groundwater level monitoring during site dewatering reveal declining groundwater levels greater than the predicted, maximum drawdown outside of the basement boundary, the following contingency measures will apply at the indicated trigger levels: *Trigger 1*: when monitoring of groundwater levels indicates that the maximum predicted groundwater drawdown level has been reached in the vicinity of the shored excavation boundary wall and groundwater levels are still falling, excavation works should cease (HOLD POINT) and the monitoring manager is to notify the Site Manager and the Geotechnical Engineer to review construction progress and confirm that works can effectively continue without significant, additional groundwater level decline. The review may find that further groundwater level decline may be greater than 25% of the predicted maximum drawdown outside of the shoring wall. *Trigger 2:* should the Trigger 1 review indicate that further groundwater level decline may be greater than 25% of the predicted maximum drawdown outside the shoring wall, the appointed Structural Engineer will be notified to assesses whether this water level decline potentially poses adverse risks to neighbouring structures that would warrant mitigation measures to be implemented and, if so, to recommend relevant mitigation options for consideration and action prior to continuation of deepening the excavation.
System Performance Issues	
Dewatering system failures	Ensure that spare equipment parts (where practical) are on hand. Ensure that the failed equipment can be serviced by site personnel or an appointed contractor who can rapidly report to site when needed.
Power outages	Ensure that a backup generator is readily available. In this event, an assessment across the site and surrounding sites should also be completed in order to identify whether any other lights and electrical equipment are working so to identify if the issue is site specific or if it is across a whole area. In addition to having the back-up generator running, the contractor should also seek advice from an electrician in regard

Anticipated Problem	Preventive/Corrective Actions
	to the additional assessment and repairs that may be required.
Unexpected contaminants found during monitoring	Contact the appointed environmental consultant / water quality expert and collect samples for analysis, to assess the identified concentrations against relevant criteria. If the contaminant is found to exceed the adopted criteria, follow the corrective actions corresponding to *Water Quality Criteria Exceedance* above. Expand the adopted criteria accordingly.
Chemical/fuel spill and leaks from machinery	Stop earthworks, notify site manager. Use accessible soil or appropriate absorbent material to absorb the spill (if practicable). Stockpile the impacted material in a secure location, on builders plastic to avoid cross contamination. Inspect groundwater and note any visual and/or changes. The contractor should seek advice from environmental consultant in regard to assessment and treatment requirements.
Excessive rainfall	Ensure sediment and surface water controls are in place and functioning as intended, as per the designs provided in the site-specific Soil and Water Management Plan. Any non-conformance should be documented and rectified. The capacity of the dewatering system to dispose larger volumes of water should be evaluated and if required, a temporary system should be utilised following correspondence with Council / WaterNSW and the environmental consultant.
Excessive noise	Identify the source and isolate if possible. Modify the actions of the source or erect temporary noise barriers if required.
Impacts on the stability of adjacent structures	Contractor to seek advice from qualified professional (such as a geotechnical engineer and/or structural consultant) in regards to the additional assessment and monitoring that may be required.
Excessive organic odours / vapours	In accordance with Council Contaminated Land Policy, no nuisance odours should be detected at any site boundary during the dewatering stage. Should odour emissions be detected at a site boundary, the following measures will be implemented: 1. Stop work, to allow odour to subside. 2. Monitor ambient air across the site and boundaries with a portable photo-ionisation detector (PID). 3. Implement control measures, including respirators for on-site workers, use of odour suppressants and wetting down of excavated material. 4. Notify the occupants of adjoining premises regarding odour issues. Notification should be in writing, providing the contact details of the responsible site personnel. 5. Record logs for odours and volatile emissions using photo-ionisation detectors (PID), if applicable.
Complaint management	Notify client, site manager and environmental consultant (if required) logging and following up complaint. Reporting should follow management procedures. Implement control measures to address reason of complaint (if possible) and notify complainant of outcome.

7. MINIMAL HARM ASSESSMENT

7.1 Consideration of NSW Aquifer Interference Policy

In accordance with the NSW Water Management Act 2000 the taking of water from an aquifer and/or the disposal of water taken from an aquifer is defined as an aquifer interference activity. The NSW 2012 Aquifer Interference Policy (the 'NSW AIP') provides guidance on the assessment of potential impacts of dewatering on water users and groundwater dependent ecosystems. The NSW AIP assessment process for this project was performed with due regard for all hydrogeological information collected for the site and is presented below.

7.1.1 Hydrogeological Model Summary

According to the site-specific hydrogeological conceptual model (**Section 3.2**), groundwater seepage would enter the excavation flowing through joints, faults and bedding plane fractures within the bedrock. Lower seepage flow volumes may be expected during depressed groundwater levels in dry periods, with higher seepage flow after high rainfall events, which would be expected to cause temporary, elevated groundwater levels.

7.1.2 Groundwater Source Category

Under the NSW 2012 Aquifer Interference Policy (the 'NSW AIP') a *highly productive groundwater* source is defined as one that:

a) has total dissolved solids of less than 1,500 mg/L; and

b) involves water supply works that can yield water at a rate greater than 5 L/sec.

The site will be dewatered by allowing groundwater to drain from the sandstone bedrock. Groundwater salinity will be characterised prior to commencement of construction. The baseline assessment has identified groundwater EC values ranging up to 440 µS/cm and a maximum laboratory TDS of 240 mg/L TDS (see Table B2).With reference to **Section 4.2**, the modelled groundwater inflow to the basement was 14.8 to 24.1 m^3/day (i.e. 0.17 to 0.28 L/sec) for the construction phase and 12.2 to 21.6 m^3/day (i.e. 0.14 to 0.25 L/sec) for the operational phase of the development.

The aquifer at the site is classified as a *'less productive'* groundwater source, in accordance with Section 3.2.1 of the NSW AIP.

7.1.3 Minimal Impact Considerations

In accordance with the NSW AIP Table 1 *"If the predicted impacts are less than the Level 1 minimal impact considerations, then these impacts will be considered as acceptable."*

Table 1 *Minimal Impact Considerations for Aquifer Interference Activities* of the NSW AIP shows that for *Less Productive Groundwater Sources* in low yielding porous and fractured rock water sources that are under groundwater pressure conditions. The following minimal impact considerations are applicable:

Drawdown

- *Level 1 – A cumulative pressure head decline of not more than 2 m, at any water supply work.*
- *Level 2 – If the predicted pressure head decline is greater than the Level 1 requirement (above), then appropriate studies are required to demonstrate to the Minister's satisfaction that the decline will not prevent the long-term viability of the affected water supply works unless make good provisions apply.*

Water Quality

- *Level 1 - Any change in groundwater quality should not lower the beneficial use category of the groundwater source beyond 40 m from the activity.*
- *Level 2 - If the Level 1 condition (above) is not met, then appropriate studies will need to demonstrate to the Minister's satisfaction that the change in groundwater quality will not prevent the long-term viability of the dependent ecosystem, significant site or affected water supply works.*

7.1.4 Minimal Impact Conclusions

The proposed dewatering for the construction and operational phases of the project are considered to be compliant with the NSW AIP minimal impact criteria for the following reasons:

- Although the estimated maximum cumulative pressure head decline (6.7 m downslope and 4.9 m upslope) has been modelled to be greater than *Level 1 minimal impact considerations* in relation to drawdown, the drawdown will occur predominantly in competent bedrock, with 4.2 mm predicted ground settling immediately outside of the shored wall. Drawdown-induced ground settling would therefore have negligible impact on neighbouring properties, beyond the site boundary.
- The drawdown in surrounding areas will occur in competent bedrock, which is characterised to have a low hydraulic conductivity (7.0x 10^{-8} m/sec to 1.1 x 10^{-7} m/sec), as documented in the GSA report.
- Settling associated with drawdown is expected to have a negligible effect on neighbouring properties.
- The five nearest registered water supply bores (**Section 2.4**) are located between 220 and 301 m distance from the site. Assuming that these bores are still being used for monitoring purposes, due to the distance and location in relation to the site, they would unlikely be affected by the drawdown works.
- The site is not less than 40 m from any documented high priority groundwater dependent ecosystem or from a high priority culturally significant site.
- The routine monitoring of discharged water quality, cumulative drawdown and groundwater take, along with the dewatering contingencies tabulated in **Section 6.5**, will ensure that any potential adverse impacts described in **Sections 7.1.2** and **7.1.3** are minimised.

7.2 Assessment Inputs

The inputs for assessing the potential impacts of dewatering on the groundwater system are summarised in **Table 7-1**.

Table 7-1 Assessment inputs summary

Assessment Items	Comments
1. Estimated water take volume	As detailed in **Section 5.2**, the groundwater take volume is estimated to be **5.4** to **8.8 ML** per 365 days, for the construction phase and **4.5** to **7.9 ML** for the operational phases of the development.
2. Volume estimation process	Use of PLAXIS 3D, (a finite element computer model), implemented by experienced Geotechnical Engineer and reviewed by Senior Geotechnical Engineer (see also the GSA report in **Appendix D**).
3. Ground elevation across the site	Based on the previous investigations (**Section 3.1**), the site is relatively flat, with the existing loading dock within its western area at an approximate elevation of 50.2 mAHD and the ground floor

Assessment Items	Comments
	retail areas within the central and eastern portions of the site at elevations ranging from approximately 47.92 to 47.45 mAHD.
4. Geotechnical ground characterisation	Refer to GSA report in **Appendix D**.
5. Water level measurements	Groundwater elevations were measured from 42.5 mAHD (minimum) to 45.4 mAHD (maximum), as detailed in **Section 3.3**. Periodic groundwater level gauging will be conducted during the construction and operational phases of the development (**Section 5.4.2**).
6. Required water level drawdown and potential impacts	As documented in the GSA report (**Appendix D**), the predicted maximum groundwater level drawdown between 5.3 m to 6.7 m (downslope) and 1.5 m to 4.9 m (upslope). The maximum ground settling was also modelled between 2.6 and 4.2 mm, using PLAXIS 3D modelling. Ground settling levels less than 10 mm are categorised as a 'negligible' risk of damage risk due to dewatering (Cashman and Preene, 2001).
7. Works proposed for dewatering	A drained basement using drainage of sub-soil seepage waters and a sump-and-pump system (for example), as described in **Section 4.4**.
8. The base level of the aquifer	Fractured shale bedrock extends below the proposed BEL, see **Section 3.2**.
9. Excavation footprint dimensions	Approximately 1,921 m^2
10. Hydraulic conductivity of lithological units	Detailed in Table 1 of the GTA report, in **Appendix D**.
11. Anticipated duration of dewatering	Construction dewatering will be conducted for the duration of the approved construction period, while operational dewatering will be conducted for the life time of the project.
12. Depth of piling embedment beneath bulk excavation	Refer to **Section 4.1** – embedment depth will be provided with final design and detailed shoring plans.

7.3 Operational (Occupational) Phase Dewatering Management

7.3.1 Long-term Dewatering Monitoring

The following procedure will be adhered to by strata management to ensure that the long-term dewatering system is managed appropriately:

- **Groundwater level monitoring:** Scheduled groundwater level monitoring is required for the first 24 months of the sump and pump operational phase in order to characterise seasonal groundwater level fluctuations for the operational (post-construction) phase of the development. The monitoring frequency will be as follows:
  - A quarterly groundwater level monitoring frequency (i.e. once every 3 months) will be adopted for the first twelve months of occupation.
  - This will be followed by semi-annual water level monitoring (i.e. once every 6 months) for the second year.
  - Water level data will be recorded along with the monitoring date, well identification number, reference point from where all water level measurements should be consistently taken (e.g. top of well casing, or ground level), the depth to water and the name of the person conducting the monitoring.

EI notes that the existing groundwater monitoring well BH101M and BH208M are located inside the basement footprint and therefore will be destroyed during basement construction. At least three wells should be installed outside basement footprint to enable groundwater level monitoring close to the basement.

- **Discharge volume monitoring**: The volume of water discharged to stormwater must be monitored by a calibrated flow meter (or equivalent alternative means), integrated to the long-term pumping system. The flow meter (or flow monitoring device) will display cumulative volume discharged, which will be recorded onto the same data form used to document groundwater level, at the time of each water level monitoring event. Discharge volume monitoring frequency will therefore be the same as for groundwater level monitoring, i.e. quarterly for the first year, then every 6 months during year two.
- **Water quality monitoring**: A single, post-treatment water sample will be collected on an annual basis during the final monitoring event in each year (i.e., at 12, 24, 36, 48 months and throughout the operational lifetime of the building). Treated water samples will be analysed for the DWC parameters (**Table 5-1**), to confirm DWC compliance over time. Given that the groundwater should be treated prior to offsite discharge, the risks presented to the human health and environment for the construction phase of the development can be considered low and acceptable. Groundwater assessment of water quality parameters will also be required at the end of the construction phase, to review or amend the proposed operational phase water treatment process.
- **Annual dewatering monitoring report**: A factual, 12-monthly Dewatering Monitoring Report will be prepared in letter format after each 12-month monitoring period by the appointed consultant. Each report will include:
    - The groundwater level gauging results, groundwater quality results and the cumulative volume of water discharged to the stormwater system;
    - An updated copy of the monitoring data form, showing all monitoring records since the start of the operational phase;
    - A discussed trend analysis of the monitoring data, as measured in the monitoring well; and
    - Water discharge volumes over time.

7.3.2 Well Replacement Protocol

EI notes that the existing groundwater monitoring well BH201M is located outside the basement footprint (the ‘external well’), whilst BH208M and BH101M are located inside of the basement footprint. If practical, all external wells should be preserved to enable groundwater level monitoring close to the basement

Should existing wells be damaged during the construction works, installation of up to three new, long-term, groundwater monitoring well must be installed as follows:

a) The replacement monitoring well must be appropriately located so as to avoid any damage or destruction during construction works;

b) Well design should be in accordance with the design for water monitoring bores for water level monitoring as specified under the *Minimum Construction Requirements for Water Bores in Australia* (Ref. NUDLC, 2020);

c) The well should be appropriately screened, with the water intake interval set across the lowermost basement level to monitor groundwater levels at the bulk excavation level, assuming uniform ground conditions; and

d) All reasonable steps must be taken to have the replacement bore installed within one week of the damage having occurred, subject to licensed driller availability.

8. DEWATERING MANAGEMENT SUMMARY

8.1 Dewatering Summary

The requirements of this report are summarised in **Table 8-1**.

Table 8-1 Dewatering Management Summary

Item	Requirement / Procedure
Objective	Ensure that the proposed dewatering operations do not impact on the quality of the receiving surface waters (i.e. at the point of groundwater discharge). Where necessary, groundwater will be treated to achieve an acceptable water quality prior to discharge: ▪ *See **Section 3** for baseline groundwater conditions.* ▪ *See **Section 5.2** for groundwater quality discharge requirements.* ▪ *See **Section 5.5** for groundwater treatment options.* Provide comment on groundwater level changes that occur during dewatering: ▪ *See **Section 4** for summary of groundwater take assessment and dewatering drawdown impacts.* ▪ *Refer to **Appendix D** for groundwater seepage analysis model.* Provide relevant information demonstrating that post-construction, operational dewatering would pose minimal harm to the groundwater source: *See **Section 7** for operational phase dewatering management.*
Person Responsible for Implementation of this Report	During basement excavation and construction, the Site Manager / Water Treatment Specialist will be responsible for ensuring the implementation of appropriate treatment of extracted groundwater, as outlined in this document. Occupation phase responsibility will rest with Strata Management.
Operation Dewatering Policy	To ensure that all extracted groundwater from dewatering is effectively treated prior to discharge to the receiving water bodies, as will be confirmed by the Operational Dewatering Management Procedure detailed in **Section 7.3**.
Pre-Dewatering Groundwater Assessment	As set out in **Section 3**, representative samples were collected prior to dewatering and analysed for the identified contaminants of potential concern (COPCs), to provide baseline groundwater quality data and review the proposed discharge water quality requirements.
Discharge Water Quality Criteria	All groundwater to be discharge into the local stormwater network is to meet (at the very least) the criteria outlined in **Table 5-1**, **Section 5.2**.
Implementation Strategy	All extracted groundwater will be monitored and treated (where necessary). On-going sampling and analysis should be performed to confirm water quality meets the adopted Discharge Water Criteria (DWC) prior to release into the stormwater network, which discharges to receiving water bodies. Additional treatment / wastewater disposal to be undertaken if the DWC values are not met.

Item	Requirement / Procedure
Monitoring Requirements for Construction Phase Dewatering	As specified in **Section 5.4**: ▪ 1. Initial Assessment = Prior to dewatering ▪ 2. Trial-Run Period = Twice per week* ▪ 3. Discharge Monitoring Period = Weekly for a month to fortnightly for a month then monthly* **provided the analytical results indicate treated water quality meets the adopted criteria, or risks are considered to be significantly low. Should analytical results exceed the adopted discharge criteria, contingencies listed in **Section 6.5** must be followed.*
Monitoring Requirements for Operational Phase Dewatering	As specified in **Section 7.3**: Quarterly for the first year, every 6 months for year two and a single monitoring event per year for the remaining lifetime of the building.
Auditing	The appointed environmental consultant (water quality expert) will undertake weekly audits during the Trial-Run Period (if required) and monthly audits during the Monitoring Period, to ensure that all discharges comply with the criteria specified in **Section 5.2**.
Reporting	The contractor responsible for dewatering will keep records of all monitoring and laboratory analytical results, as well as quantities of treatment agents applied during the dewatering process. All records should be made available for inspection on site during the construction phase.
Corrective Actions	As specified in the contingency measures, outlined in **Section 6.5**.

9. STATEMENT OF LIMITATIONS

This plan has been prepared for the exclusive use of 17 Oxford St Pty Ltd (‘the client’), which is the only intended beneficiary of EI’s work. The scope of work completed for the purpose of this plan is limited to that agreed with the client.

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

EI has used a degree of care and skill ordinarily exercised in drafting similar plans by reputable members of the environmental industry in Australia, as at the date of this document. No other warranty, expressed or implied, is made or intended. Each section must be read in conjunction with the whole of this plan, including its appendices.

EI's professional opinions are reasonable and based on its judgment, experience, training and results from analytical data. EI may also have relied upon information provided by the client and other third parties to prepare this document, some of which may not have been verified by EI.

EI's professional opinions contained in this document are subject to modification if additional information is obtained through further investigation or observations. In some cases, further sampling and analysis may be required, which may result in a further report with different conclusions.

Should you have any queries regarding this plan, please do not hesitate to contact EI.

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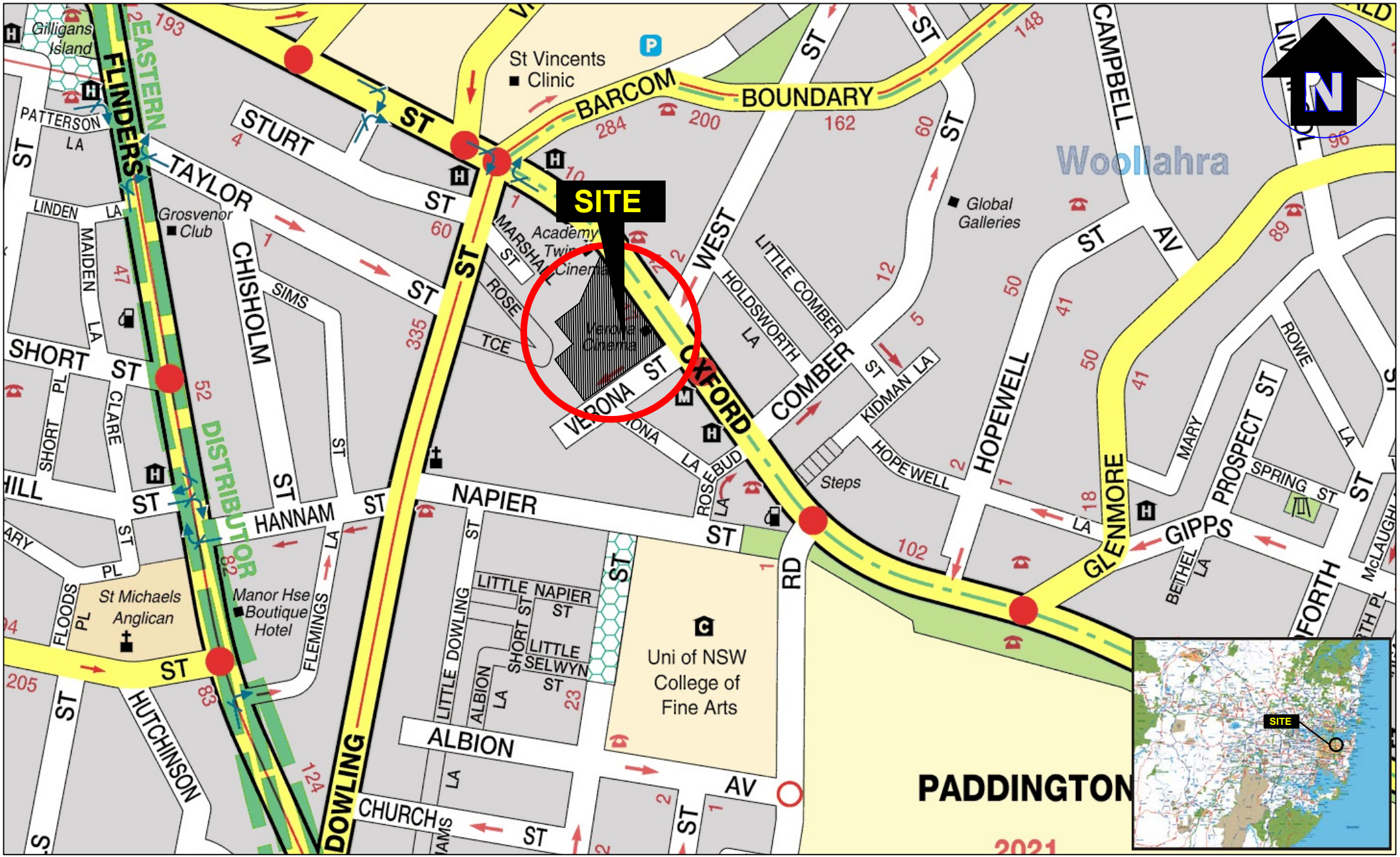
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ABBREVIATIONS

AIP	Aquifer Interference Policy
ANZECC	Australian and New Zealand Environment Conservation Council
ANZG	Australian and New Zealand Governments
ASS	Acid Sulfate Soil
BEL	Bulk Excavation Level
BTEX	Benzene, Toluene, Ethyl benzene, Xylene
DGV	Default Guideline Values
DO	Dissolved Oxygen
DP	Deposited Plan
DWC	Discharge Water Criteria
EC	Electrical Conductivity
EI	EI Australia
FFL	Finished Floor Level
GME	Groundwater Monitoring Event
GSA	Groundwater Seepage Analysis
GTA	Groundwater Take Assessment
LGA	Local Government Area
LOR	Limit of Reporting (limit of laboratory reporting for analytical method; see PQL)
m	metres
mAHD	metres Australian Height Datum
mBGL	metres Below Ground Level
ML	Megalitres
mg/L	Milligrams per Litre
µg/L	Micrograms per Litre
µS/cm	Microsiemens per Centimetre
N/A	No Available Criterion
NATA	National Association of Testing Authorities
NTU	Nepholemetric Turbidity Units
PAHs	Polycyclic Aromatic Hydrocarbons
pH	Potential Hydrogen (a measure of the acidity or basicity of an aqueous solution)
PID	Photo-ionisation Detector
PQL	Practical Quantitation Limit (limit of reporting for analytical method; see LOR)
RL	Reduced Level
TDS	Total Dissolved Solids
TRH	Total Recoverable Hydrocarbons (non-specific analysis of organic compounds)
VOCs	Volatile Organic Compounds

Appendix A – Figures



eiaustralia Practical Solutions for Built Environments Suite 6.01, 55 Miller Street, PYRMONT 2009 Ph (02) 9516 0722 Fax (02) 9518 5088	Drawn:	J.O.	**17 Oxford Street Pty Ltd** Hydrogeological Report Including Dewatering Management Plan, Groundwater Modelling & Seepage Assessment 13-17 Oxford St and 2 Verona St, Paddington NSW Site Locality Plan
	Approved:	-	
	Date:	10-10-25	
	Scale:	Not To Scale	

Figure: 1

Project: E25559.E16.001_Rev3



Map Source: NSW SIXMaps, accessed 10/4/26

LEGEND Note: Areas are approximate

- Site Boundary
- Proposed Basement Boundary
- Previous monitoring well location (DP, 2023a)
- Groundwater monitoring well location (EI, 2025 DSI)

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Drawn:	M.C.
Approved:	P.B.
Date:	10/04/2026

17 Oxford Street Pty Ltd

Hydrogeological Report including Dewatering Management Plan, Groundwater Modelling and Groundwater Take Assessment

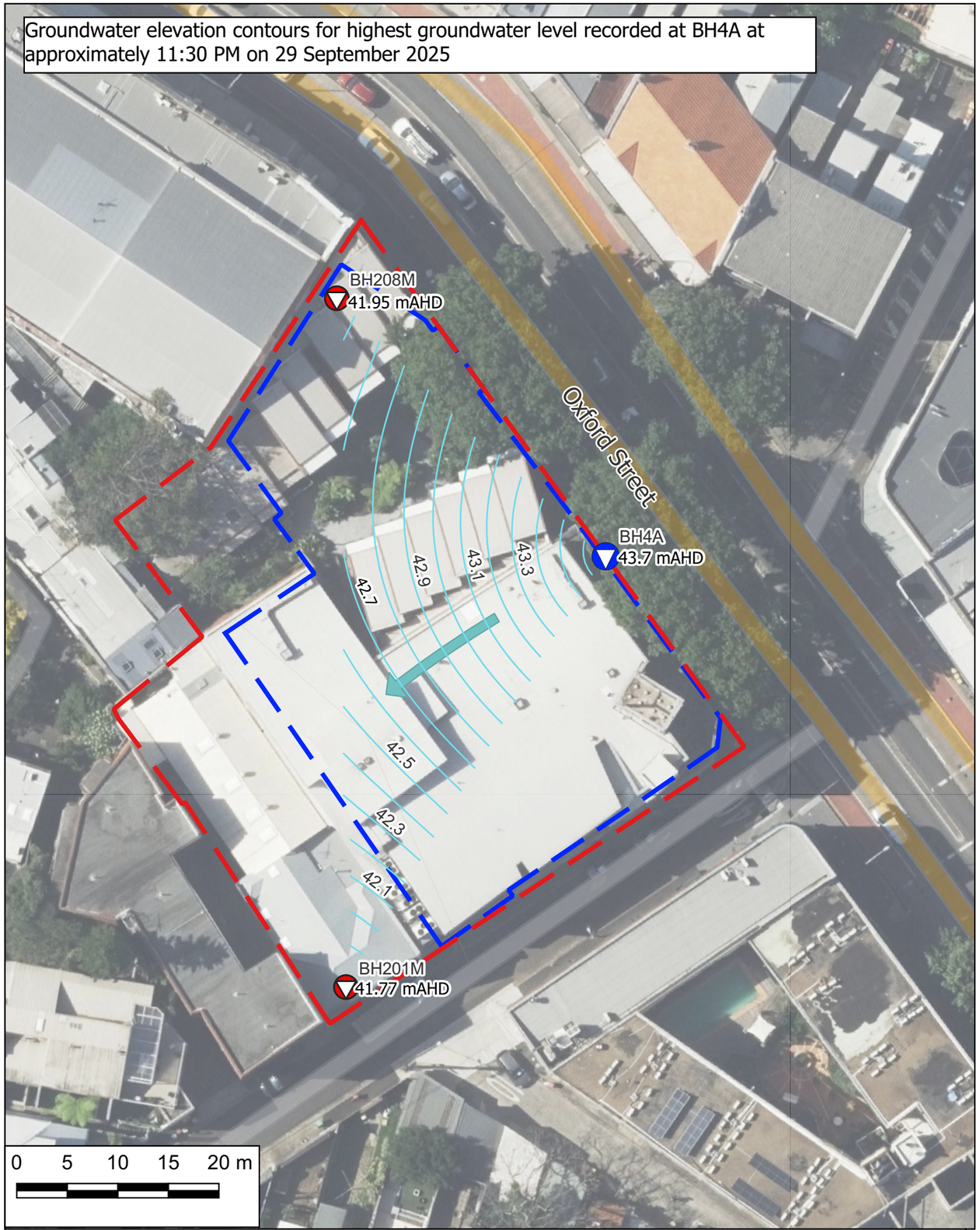
13-15 Oxford Street, 17 Oxford Street & 2 Verona Street, Paddington NSW

Site Sampling Plan

Figure: 2

Project: E25559.E16.001_Rev3

Groundwater elevation contours for highest groundwater level recorded at BH4A at approximately 11:30 PM on 29 September 2025



Groundwater elevation contours for lowest groundwater level recorded at BH201M at approximately 1:45 PM on 4 January 2025



Map Source: NSW SIXMaps, accessed 1/4/2026

LEGEND Note: Areas are approximate

- Site Boundary
- Proposed Basement Boundary
- Monitoring Well Location (DP, 2023)
- Groundwater monitoring Well Location (EI, 2025 DSI)
- Groundwater Contour (Interval 0.1 mAHD)
- Inferred Groundwater Flow Direction

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Approved:	P.B.
Date:	01/04/2026

17 Oxford St Pty Ltd

Hydrogeological Report including Dewatering Management Plan, Groundwater Modelling & Seepage Assessment

13-17 Oxford Street and 2 Verona Street, Paddington NSW

Groundwater Contour Plan

Figure: 3

Project: E25559.E16.001_Rev3

Appendix B – Tables

Table B1 - Summary of Baseline Groundwater Quality - Analytical Results

E25559.E16.002 - Paddington

Sample ID	Sampling Date	Metals																						PAHs			BTEX					VOCs
		Total As	Cd	[1] Total Cr	Cu	Pb	Hg	Ni	Zn	Al (pH>6.5)	Sb	Ba	Be	Co	Fe	Li	Mn	Mo	Se	SiO_2	Ag	Sr	U	V	Total PAHs	Benzo(a)pyrene	Naphthalene	Benzene	Toluene	Ethylbenzene	o-xylene	m/p-xylene	Total VOCs
Detailed Site Investigation (EI, 2025b)																																
GWBH101M	1/8/2023	<1	<0.1	<1	<1	<1	<0.1	3	23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<1	<10
Detailed Site Investigation (EI, 2025b)																																
BH201M	16/5/2025	<1	<0.1	2	6	<1	<0.05	8	35	62	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	<0.1	<0.1	<0.5	3	<0.5	<0.5	<1	NA
BH208M		<1	<0.1	<1	3	<1	<0.05	4	13	23	<1	17	<1	1	380	5	21	<1	1	5.2	<1	83	<1	<1	NA	<0.1	<0.1	<0.5	86	<0.5	<0.5	<1	86.0
BH101M-2		<1	<0.1	1	6	<1	<0.1	3	65	220	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<1	NA
Guidelines																																
Water Quality Criteria		24 (As III) 13 (As V)	0.7	27 (Cr III) 4.4 (Cr VI)	1.3	4.4	0.1	70	8	55	9	20	0.6	1	3	2.5	80	34	11	800	1.4	1	15	100		0.2	70	700	180	80	350	275	

Sample ID	Sampling Date	Petroleum Hydrocarbons			Microbiological Organisms			Total Phenols	Total Cyanide	PFAS			Other																						
		Oil & Grease	TPH C6 - C9	TPH C10 - C40	Faecal coliforms	Faecal streptococci	Escherichia coli (E. coli)			PFOS	PFOS + PFHxS	PFOA	Flouride	Chloride (mg/L)	Sulfate (mg/L)	Bromide	Ammonia Nitrogen as NH_4 as N	Nitrate Nitrogen NO3-N	Nitrite Nitrogen NO2 as N	Total Oxidised Nitrogen, NOx-N	Total Kjeldahl Nitrogen	Total Nitrogen (calc)	Total Phosphorus (Kjeldahl) as P	Filterable Reactive Phosphorus as P	Bicarbonate Alkalinity as CaCO3 (mg/L)	Carbonate Alkalinity as CaCO3 (mg/L)	Hydroxide Alkalinity as CaCO3 (mg/L)	Total Alkalinity as CaCO3 (mg/L)	Hydroxide Alkalinity as OH (meq/L)	Bicarbonate Alkalinity as HCO3 (meq/L)	Carbonate Alkalinity as CO3 (meq/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	K (mg/L)
Detailed Site Investigation (EI, 2025b)																																		
GWBH101M	1/8/2023	NA	<40	<320	NA	NA	NA	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Detailed Site Investigation (EI, 2025b)																																		
BH201M	16/5/2025	NA	<40	<320	NA	NA	NA	<50	4	N.A.	N.A.	N.A.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.1	2.6	NA	NA
BH208M		NA	210	490	<1	<1	<1	<50	NA	0.03	0.04	0.040	<0.1	55	47	<0.05	20	660	23	680	320	1000	<20	<5	31	<5	<5	31	NA	NA	NA	26	2.5	31	7.9
BH101M-2		NA	<40	<320	NA	NA	NA	<50	4	N.A.	N.A.	N.A.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Guidelines																																		
Water Quality Criteria					Presence/ Absence	Presence/ Absence	Not detectable in 100 mL	400	4	0.13		220					910			5		120	25	10												

Notes:

All values are µg/L unless stated otherwise; NA - not analysed

Water quality criteria are based on the ANZG, 2018 (Rev. Jan 2024) 95% Marine water DGVs, or relevant default guidelines where ANZG Marine DGVs are not currently available, as explained in the footnotes to **Table 5-1**, in **Section 5** of the DMP.

1 This result was for *Total Chromium*. Chromium speciation testing was not undertaken, but should be included in future monitoring.

Highlighted value does not meet the adopted criteria

No relevant criteria are currently available

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Table B2 – Summary of Baseline Groundwater Quality Results: Physicochemical Characteristics

E25559.E16.002- Paddington

Sample ID	Date sampled	Physiochemical Characteristics												Aesthetic Properties
		Electrical Conductivity (Field EC) (µs/cm)	Electrical Conductivity (µs/cm)	pH	pH (field)	Total Dissolved Solids (mg/L)	Total Suspended Solids (mg/L)	Turbidity (NTU)	Field Redox (mV)	Hardness (mg $CaCO_3$/L)	Dissolved Oxygen (field DO) (mg/L)	Dissolved Oxygen (mg/L)	Total Organic Carbon as NPOC (mg/L)	Oil & Grease (present/absent)
Detailed Site Investigation (EI, 2025b)														
GWBH101M	1/8/2023	429	NA	NA	6.41	NA	NA	NA	239.6	NA	1.24	NA	NA	Absent
Detailed Site Investigation (EI, 2025b)														
BH201M	16/5/2025	412	440	5.4	4.98	240	N.A.	12,000	-10.8	31	0.01	NA	NA	Absent
BH208M		414	360	5.0	4.69	210	51	24	448.9	76	0.04	4.1	1.8	Absent
BH101M-2		303	250	5.3	4.99	140	NA	150	342.1	NA	0.3	NA	NA	Absent
Guidelines														
Water Quality Criteria				7.0 - 8.4	7.0 - 8.4		<50	10						No visible sheens, surface films or oil and grease

Notes:

All values are in units as shown; NA - Not analysed.

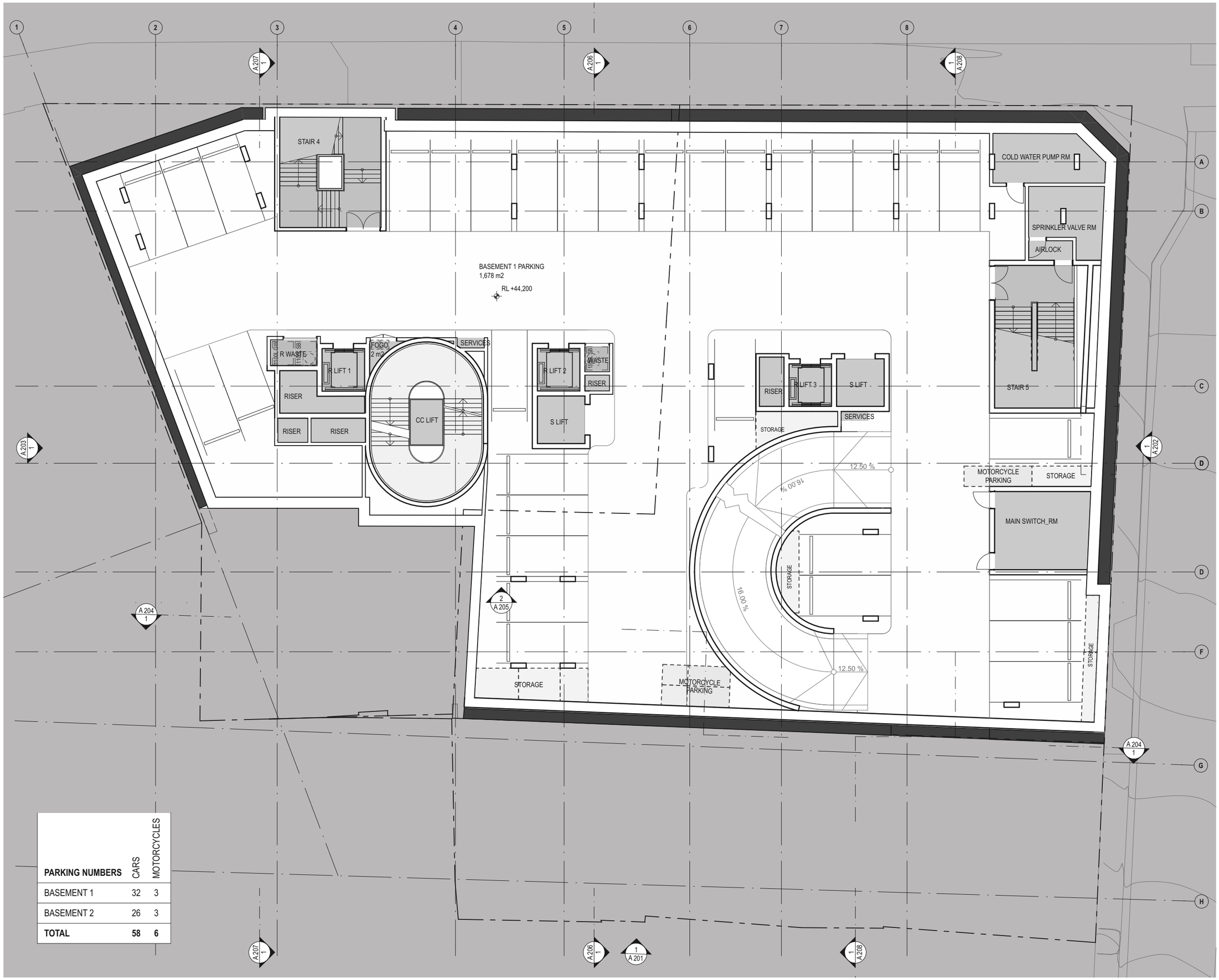
Water quality criteria are based on the ANZG, 2018 (Rev. Jan 2024) 95% Marine water DGVs, or relevant default guidelines where ANZG Marine DGVs are not currently available, as explained in the footnotes to **Table 5-1**, in **Section 5** of the DMP.

Highlighted value does not meet the adopted criteria

No relevant criteria are currently available

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Appendix C – Proposed Development Plans



PARKING NUMBERS	CARS	MOTORCYCLES
BASEMENT 1	32	3
BASEMENT 2	26	3
TOTAL	**58**	**6**

DATE	REV	DESCRIPTION
17/11/2025	-	For SSDA
7/4/2026	A	For SSDA

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Planner Urbis	**Civil + Stormwater** Telford Civil
Landscape Architect Wyer & Co	**Geotech** EI Australia
Structure Northop	**BCA** BCAlign
Building Services O&S Consulting	**Traffic** JMT Consulting
Basix + ESD Credwell	**Waste** Elephants Foot
Fire + Acoustic E-Lab	**Access** Purple Apple

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Project
Verona, Paddington

Phase
SSDA

Job No.
24026

Drawing Title
BASEMENT 1 PLAN

Drawing No.
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Rev No.
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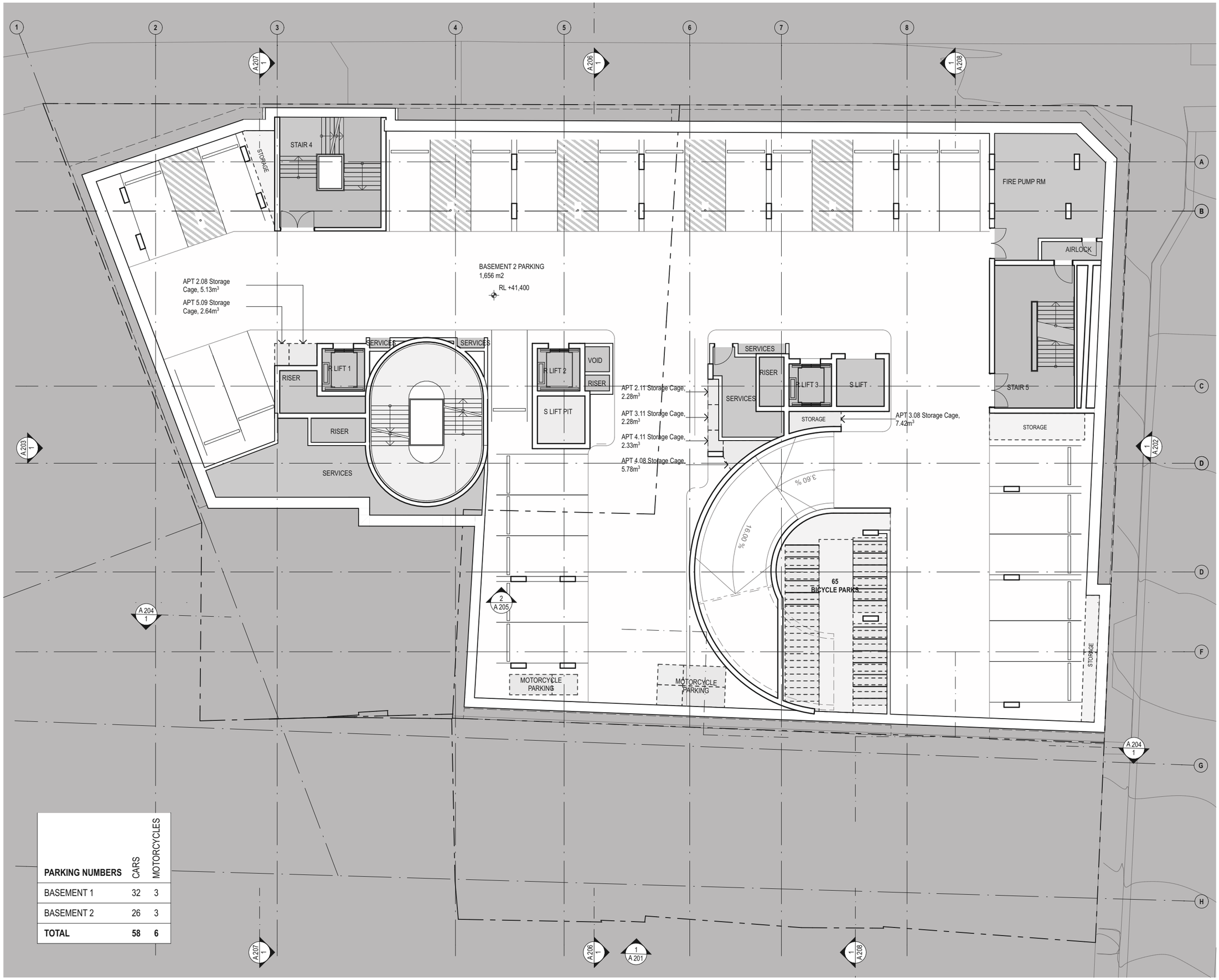
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7/4/2026

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Nominated Architects
Peter Tonkin NSW Registration 4147
Tim Greer NSW Registration 5603



PARKING NUMBERS	CARS	MOTORCYCLES
BASEMENT 1	32	3
BASEMENT 2	26	3
TOTAL	**58**	**6**

DATE	REV	DESCRIPTION
17/11/2025	-	For SSDA
7/4/2026	A	For SSDA

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Landscape Architect Wyer & Co	**Geotech** EI Australia
Structure Northop	**BCA** BCAlign
Building Services O&S Consulting	**Traffic** JMT Consulting
Basix + ESD Credwell	**Waste** Elephants Foot
Fire + Acoustic E-Lab	**Access** Purple Apple

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Project
Verona, Paddington

Phase
SSDA

Job No.
24026

Drawing Title
BASEMENT 2 PLAN

Drawing No.	Rev No.
A 101	A

Drawn	Date
AM, IR, CY	7/4/2026

Checked
TG

Scale 1:200@A3
0 2 4 8 m @A3

Nominated Architects
Peter Tonkin NSW Registration 4147
Tim Greer NSW Registration 5603

BASEMENT 3 - CULTURAL CREATIVE IS A REFERENCE DESIGN ONLY AND IS INDICATIVE. FITOUT TO FUTURE DA BY OPERATORS.

STAIR 4
GREEN ROOM 58 m2
RL +36,560
THEATRE 1 104 m2
THEATRE 2 76 m2
THEATRE 3 116 m2
THEATRE 4 105-m2
BREAKOUT 2 38 m2
RL +37,810
STAIR 5
S.LIFT
CC LIFT
CULTURAL CREATIVE 1,484 m2
BREAKOUT 1 92 m2
WC LOBBY 30 m2
BOX OFFICE / BAR 78 m2
KITCHEN 104 m2
ACC. WC 5 m2
MALE WC 19 m2
FEMALE WC 25 m2
STAFF EOT 32 m2
STORE 28 m2
HWU's
BOH

BUSBY'S BORE
KNOWN BORE FOOTPRINT IS AS PER SURVEY DATA FROM FULCRUM ROBOTICS REPORT. EXTRAPOLATED LOCATION AND CURTILAGE IS AS PER APPROVED DA DRAWINGS.

3,000 CURTILAGE

EXTRAPOLATED LOCATION OF BUSBY'S BORE AS PER APPROVED DA DRAWINGS

DATE	REV	DESCRIPTION
17/11/2025	-	For SSDA
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Job No.
24026

Drawing Title
BASEMENT 3 PLAN

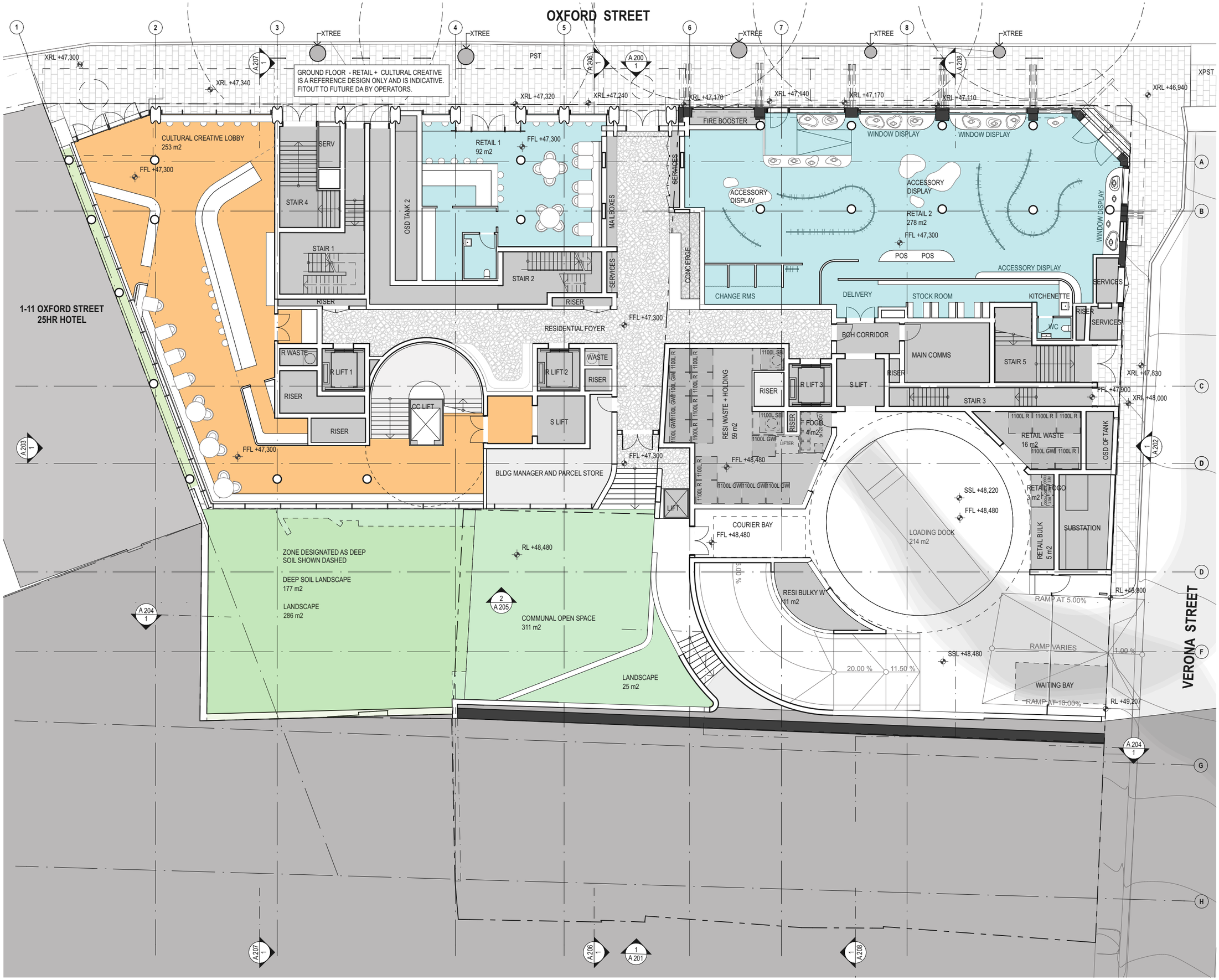
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Drawn	Date
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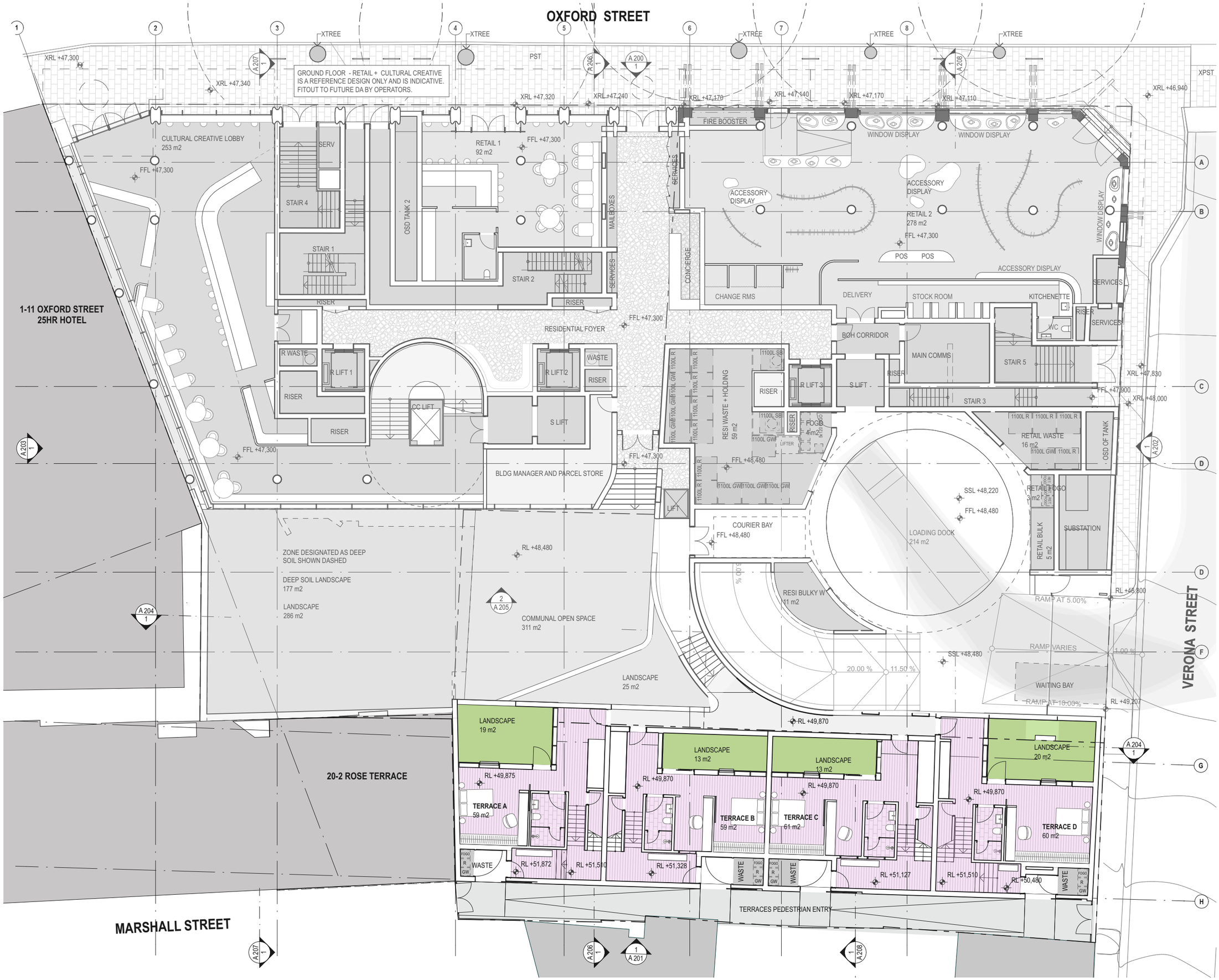
Job No.
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Drawing Title
GROUND FLOOR PLAN

Drawing No.	Rev No.
A 103	A
Drawn AM, IR, CY	Date 7/4/2026
Checked TG	

Scale 1:200@A3
0 2 4 8 m @A3

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Job No.
24026

Drawing Title
TERRACES GROUND FLOOR PLAN

Drawing No.	Rev No.
A 104	A

Drawn	Date
AM, IR, CY	7/4/2026

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Scale 1:200@A3

0 2 4 8 m @A3

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Appendix D – Groundwater Seepage Assessment and Groundwater Level Monitoring Report No.1

16 April 2026
E25559.G12.02_Rev1

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Groundwater Seepage Analysis
13-17 Oxford Street and 2 Verona Street, Paddington, NSW

1. INTRODUCTION

1.1 Background

At the request of Jack Joseph on behalf of 17 Oxford Street Pty Ltd (the Client), EI Australia (EI) has prepared this Groundwater Seepage Analysis 13-17 Oxford Street and 2 Verona Street, Paddington, NSW (the site).

The following documents were used to assist in the preparation of this analysis:

- Architectural drawings prepared by Tonkin Zulaikha Greer Architect Pty Ltd, Job No: 24026 – Revision A,Dated 7 April 2026;
- Survey Plan prepared by Boxall, Drawing No:1144-001,REV D- dated 22 July 2024
- Structural plans and details of the existing site building prepared by Connell Wagner and annotated by the client – Job No. 3516, Drawing No. S4, S5 & S6, Rev. E, Dated 23 June 1994,
- Geotechnical Investigation report prepared by Douglas Partners, Project No. 212062.00, dated June 2023;
- Hydrology report prepared by Douglas Partners, Project No. 212062.00, dated November 2023;
- Groundwater level Measurement report prepared by Douglas Partners, Project No. 212062.01, Reference No. R.001.Rev0, dated 23 July 2024;

EI has completed the following relevant reports for the site:

- Additional Geotechnical Investigation (AGI) report, Referenced E25559.G04, dated 18 November 2025;
- Groundwater Level Monitoring Report No.1, Referenced E25559.G11.GW01, dated 14 January 2026.

Based on the provided documents above, EI understands that the proposed development involves the demolition of the existing site structures (with the exception of the existing basement shoring wall of 17 Oxford St) and the construction of a seven-storey mixed-use building overlying a three-level stepped basement. The basement is proposed to have a Finished Floor Levels (FFL) of RL 36.56 m Australian Height Datum (AHD) and 37.81 m AHD. Therefore, Bulk Excavation Level (BEL) of RL 36.26 m AHD and 37.51 m AHD are assumed for the construction which includes allowance for a concrete basement slab. To achieve the BEL, an excavation depth of about 9 m to 14 m Below Existing Ground Level (BEGL) is expected. Locally deeper excavations may be required for footings, service trenches, crane pads, and lift overrun pits.

1.2 Assessment Objectives

The objective of this GSA is to provide an estimation of the groundwater take volumes that require pumping out during the construction and operational stage of the development, estimation of the groundwater drawdown as a result of the dewatering, and its associated ground settlements.

2. SITE MODEL

2.1. Subsurface Conditions and Permeability

For the purpose of the groundwater take assessment, the conservative subsurface conditions outlined in EI's AGI report have been adopted. The ground profile used in this analysis has been interpreted from boreholes BH201M, BH2 and BH1 (average, southern portion of the model), BH2A (western portion of the model), BH208 (northern portion of the model), and BH4A (eastern portion of the model). Given the sloping nature of the local topography beyond the site, the layers at the model boundaries was assumed to rise to the west and fall to the east, linearly extrapolated based on the thickness of the soil/rock layers of the closest boreholes. The stratigraphy and corresponding permeability values used for the assessment of groundwater take volumes are presented in **Table 1** below.

Table 1 Summary of Subsurface Conditions and Adopted Design Parameters

Unit	Material [1]	RL of Top of Unit (m AHD) [2]				Adopted Permeability (m/s)	Ky'/Kx'
		BH201M/ BH2(EI)/ BH1(DP)	BH208M	BH4A	BH2A		
1	**Aeolian Sand**[3]	50.1	47.3	47.3	50.1	1.0×10^{-5}	1.0
2	**Residual Soil** [4]	43.1	43.3	42.1	44.7	1.0×10^{-7}	1.0
3	**Fractured Sandstone Bedrock** [3]	42.7	41.5	41.2	44.4	2.8×10^{-7}	0.3
4	**Intact Sandstone Bedrock** [5]	39.1	39.5	32.5	36.5	1.0×10^{-7}	0.2

Notes

1 For more detailed descriptions of subsurface conditions reference should be made to the EI's GI Report.
2 Depths presented in **Table 1** above are generalised using the conservative levels from the Geotechnical Investigation across the excavation area for the purpose of groundwater seepage modelling. Fill and Class IV Sandstone have not been explicitly included in the model to simplify the stratigraphy, as these materials were not consistently encountered across all boreholes.
3 Permeability values of Unit 1 and 3 have been adopted from the Pump-out test undertaken as part of the site investigations.
4 Permeability values of Unit 2 have been correlated using Look (2014).
5 Permeability values of Unit 4 have been correlated using Pells (2019)

2.2. Groundwater Observations and Pump out tests

As part of the Geotechnical Investigation prepared by DP, three monitoring wells (BH1, BH2A and BH4A) were installed for groundwater monitoring. DP undertook a Groundwater Monitoring Event (GME) on 13 October 2022, 18 March 2023, 24 October 2023 and 7 November 2023 within all the monitoring wells installed by DP. EI also completed a monitoring event on 26 May 2025 within the existing wells and the additional monitoring wells BH201M and BH208M. Groundwater measurements are presented in **Table 2** below.

Table 2 Summary of Groundwater Levels

Monitoring Well / Test ID	Date of Observation	Approximate Depth to Groundwater Level (m BEGL)	Approximate RL of Groundwater Level (m AHD)
BH1	13-Oct-22	4.9	45.4
	18-Mar-23	5.5	44.8
	24-Oct-23	5.7	44.6
	7-Nov-23	5.7	44.6
	26-May-25	4.5	45.7
BH2A	13-Oct-22	4.9	45.4
	18-Mar-23	5.7	44.6
	24-Oct-23	6.0	44.3
	7-Nov-23	6.0	44.3
	26-May-25	4.8	45.4
BH4A	13-Oct-22	4.4	42.9
	18-Mar-23	4.7	42.6
	24-Oct-23	4.8	42.5
	7-Nov-23	4.8	42.5
	26-May-25	3.9	43.25
	26-Sep-25	3.9	43.2
BH201M	26-Sep-25	8.5	41.5
BH208M	26-Sep-25	1.5	42.0

As a part of the Geotechnical Investigation and Hydrogeological report (DP, 2023B), DP undertook long term monitoring in wells BH1, BH2A and BH4A between the dates 13 October 2022 to 18 March 2023, and between 24 October 2023 and 7 November 2023. The second set of monitoring was extended up to 18 July 2024 by DP (DP, 2024). EI have also completed long-term monitoring in BH4A, BH201M and BH208M between 26 September 2025 to 5 January 2026. A summary of the long term groundwater levels is summarised in **Table 3**, **Table 4,** and **Table 5** below.

Table 3 Summary of Long Term Groundwater Monitoring (13 October 2022 to 18 March 2023)

Monitoring Well / Test ID	Average Groundwater Level (m AHD)	Minimum Groundwater Level (m AHD)	Maximum Groundwater Level (m AHD)
BH1	44.9	44.5	45.5
BH2A	44.8	44.5	45.4
BH4A	42.7	42.4	43.0

Table 4 Summary of Long Term Groundwater Monitoring (24 October 2023 to 18 July 2024)

Monitoring Well / Test ID	Average Groundwater Level (m AHD)	Minimum Groundwater Level (m AHD)	Maximum Groundwater Level (m AHD)
BH1	45.2	44.5	45.9
BH2A	44.95	44.2	45.7
BH4A	42.9	42.4	43.4

Table 5 Summary of Long Term Groundwater Monitoring (26 September 2025 to 5 January 2026)

Monitoring Well / Test ID	Average Groundwater Level (m AHD)	Minimum Groundwater Level (m AHD)	Maximum Groundwater Level (m AHD)
BH201M	40.7	40.0	41.8
BH208M	41.9	41.4	42.5
BH4A	43.0	42.5	43.5

We note that the groundwater is known to flow from west to east, following the topography of the land. The latest long-term groundwater monitoring from 26 September 2025 to 5 May January 2026 appears to contradict this, but EI believes that the groundwater level in BH201M only reflects the groundwater seepage through the sandstone bedrock (due to the screen being only in sandstone and soil being sealed off with bentonite), therefore resulting in a lower groundwater head in the monitoring well. We also note that during the long-term groundwater monitoring, some high rainfall events of

greater than 50mm/day and even 100mm/day were observed in both EI and DP. Given that high rainfall events were captured during the long-term monitoring periods, EI is of the opinion that a 0.5m allowance for possible seasonal variation on top of the highest measured water levels is a conservative assumption for this site.

Therefore, based on the groundwater monitoring results presented above, design groundwater levels of RL 46.4m (0.5m higher than highest measured groundwater level in BH1) to the western end of the site boundary, and RL 44.0m (0.5m higher than highest measured groundwater level in BH4A) to the eastern end of the site boundary. Given the sloping nature of the local topography beyond the site, the groundwater at the model boundaries was assumed to rise to the west and fall to the east, linearly extrapolated based on the design groundwater levels.

Given the conservative assumption of the high groundwater levels above, EI has also completed a sensitivity analysis of a design groundwater level based on the average groundwater levels.

Pump-out tests were completed within the monitoring wells by DP and EI. A summary of the test results are provided in **Table 6** bellow.

Table 6 Summary of Pump-out Test Results

Monitoring Well	Test Date	Hydrogeological Unit Tested	Hydraulic Conductivity (m/s)
BH1	15 August 2023 – Test 1	Highly fractured to unbroken sandstone [1]	2.6×10^{-7}
	15 August 2023 – Test 2	Highly fractured to unbroken sandstone [1]	2.3×10^{-7}
	26 May 2025	Sand [2]	6.6×10^{-5}
BH2A	15 August 2023 – Test 1	Highly fractured to unbroken sandstone [1]	5.5×10^{-7}
	15 August 2023 – Test 2	Highly fractured to unbroken sandstone [1]	4.7×10^{-7}
	26 May 2025	Highly fractured to unbroken sandstone [1]	2.6×10^{-7}
BH4A	15 August 2023 – Test 1	Highly fractured to unbroken sandstone [1]	2.3×10^{-7}
	15 August 2023 – Test 2	Sand [2]	1.0×10^{-5}
	26 May 2025	Highly fractured to unbroken sandstone [1]	1.1×10^{-7}
BH201M	26 September 2025	Highly fractured sandstone	7.0×10^{-8}
BH208M	26 September 2025	Highly fractured to unbroken sandstone	4.1×10^{-7}

Notes:

1 Standpipe screened in sand, residual soil and sandstone, but the test intervals were entirely in sandstone.
2 Standpipe screened in sand, residual soil and sandstone with test interval through all three units. Test result was predominantly governed by the permeability of sand.

2.3. THE MAXIMUM EXTENT OF THE CONE OF DEPRESSION

The estimated maximum extent of the cone of depression has been determined using Sichardt's Formula, as follows:

$$R = 3000\,(H - h)\sqrt{k}$$

where:

- R = Maximum extent of the cone of depression (m).
- H = Highest design groundwater level (m).
- h = Estimated groundwater level at the BEL due to full duration of dewatering (m).

- k = Hydraulic conductivity of the aquifer (m/s).

The coefficient of 3000 is based on empirical observations, predominantly for sandy aquifers. The lowest coefficient outlined in Sichardt's formula is approximately 1000, which would result in a smaller radius of influence. Therefore, using a coefficient of 3000 in this case is considered conservative. The change in groundwater head is also assumed to be 1.5m based on the drawdown of the groundwater to the top of bedrock level, as the majority of the seepage into the site will be from this unconfined layer.

Based on the formula above, the maximum extent of the cone of depression is estimated to be approximately 15 m from the basement outline. However, to maintain conservatism in the model when predicting the effective drawdown radius and potential drawdown-induced settlement due to the full duration of dewatering for the proposed development, a wider maximum extent of the cone of depression of 30 m from the basement outline has been adopted in the PLAXIS model.

2.4. Shoring System

Based on discussions with the client and structural engineers, EI understand the proposed shoring system comprises of a secant pile wall, with the soft piles installed to the top of the sandstone bedrock to provide an impermeable wall within the sand and residual soil. The hard piles will extend further, but will allow the sandstone to freely drain.

This assessment does not assess the overall stability or suitability of the shoring system. Once final designs are made available, this assessment should be revised accordingly.

3. GROUNDWATER TAKE ASSESSMENT

3.1. Groundwater Seepage Volumes During Construction Phase

3.1.1. INITIAL VOLUME OF PORE WATER DEWATERED WITHIN EXCAVATED MATERIALS

For calculation of the volume of pore water pumped out in the upper sands prior to bulk excavation works the following assumptions have been made:

- Soil below the groundwater table is completely saturated
- A design groundwater level within the site as per **Section 2.2** of this report
- Porosity (η) of 0.366 for sand material

Therefore every 1m^3 of sand material removed from below the water table, contains approximately 0.4m^3 of water. We note that this does not include the area for the existing basement of 13-15 Oxford Street as the saturated Aeolian sands are not present.

The total volume of sand material below the water table estimated for dewatering is calculated to be 2246m^3. Hence, the volume of groundwater to be initially dewatered within the sand is estimated to be 899m^3, or 0.9ML.

Given that the groundwater within the sandstone will be minor (<5%) and will likely be removed with excavation spoil, we are of the opinion that this water within the sandstone will not be pumped out to stormwater and hence is not part of this calculation.

3.1.2. GROUNDWATER INFLOW VOLUMES SEEPAGE THROUGH AND BENEATH THE EXCAVATION DURING CONSTRUCTION

Groundwater seepage analysis during construction has been undertaken using PLAXIS 3D Ultimate (Version 2024.1.0.1060). PLAXIS 3D is a commercially available finite element package intended for three dimensional analysis in geotechnical engineering. It is equipped with features to deal with various aspects of geotechnical structures and construction processes using robust and theoretically sound computational procedures. PLAXIS 3D estimates the seepage rate of water entering the excavation. This model estimates the volume of water which will be required to be dewatered during the construction of the basement and until the dewatering is turned off.

For the purpose of this modelling, it has been assumed that:

- The subsurface conditions outlined in GI and AGI reports by DP and EI (referenced in **Section 2.1** of this report) were applied along the site of the proposed basement excavation.
- The permeability values presented in **Table 1** were adopted for modelling each of the units.
- The Unit 4 encountered within the boreholes extended down to the bottom of model boundaries.
- The design groundwater levels as provided at **Section 2.2** of this report were adopted in the analysis.
    - EI have also completed a sensitivity analysis of a design groundwater level based on the average groundwater levels (without the 0.5m allowance).
- The surface and subsurface layers extend beyond the western and eastern boundaries linearly following the falling topography form west to east.

Table 7 below provides the estimated groundwater inflow rate into the basement for different scenarios.

Table 7 Summary of Groundwater Inflow Results

Analysis Case	Inflow into excavation (m³/day)	Total Inflow per year (ML/year)
Design Groundwater Level (0.5m allowance)	21.6	7.9
Average Groundwater Level	12.2	4.5

The PLAXIS 3D results are presented in **Appendix A**.

3.2. Assessment of Groundwater Take During Operational Phase

A drained basement using sub-soil drainage and a sump-and-pump system was assumed. Therefore, the estimated volume of groundwater removed beneath the basement during the operational phase of the development is expected to be approximately 4.5 to 8.0 ML per year

3.3. Groundwater Drawdown and Groundwater Induced Settlement

EI have completed a settlement analysis using PLAXIS 3D to estimate the potential drawdown-induced settlements as a result of the above predicted drawdown. The maximum predicted drawdown over the zone of influence and settlement is shown in **Table 9** below.

Table 9 Maximum Groundwater Drawdown and Induced Settlement

Analysis Case	Maximum Drawdown Depth (m)	Maximum Ground Settlement (mm)
Design Groundwater Level (0.5m allowance)	1.5 (upslope) 6.7 (downslope)	4.2
Average Groundwater Level	4.9 (upslope) 5.3 (downslope)	2.6

The groundwater drawdown has induced a maximum settlement of 4.2 mm in close proximity to the shoring system, in the conservative design groundwater level case.

As tabulated above, the maximum predicted ground settlements occur immediately outside of the excavation is negligible (<5mm) due to the groundwater drawdown occurring primarily within the bedrock.

Ground experiencing settlements less than 10 mm are considered to be a 'Negligible' risk in regards to category of damage risk due to dewatering, as defined in Cashman and Preene (2021), as shown in the excerpt in **Plate 1**.

Risk category[a]	*Maximum settlement (mm)*[b]	*Building tilt*[c]	*Anticipated effects*
Negligible	<10	<1/500	Superficial damage unlikely
Slight	10–50	1/500–1/200	Possible superficial damage; unlikely to have structural significance
Moderate	50–75	1/200–1/50	Expected superficial damage and possible structural damage to buildings; possible damage to rigid pipelines
Severe	75	>1/50	Expected structural damage to buildings and expected damage to rigid pipelines or possible damage to other pipelines

Source: Preene, M., *Proceedings of the Institution of Civil Engineers—Geotechnical Engineering*, 143(4), 177–190, 2000. With permission.

[a] The risk category is to be based on the more severe of the settlement or tilt criteria.
[b] Maximum settlement is based on the nearest edge of the structure to the groundwater control system.
[c] Tilt is based on rigid body rotation, assuming that all of the maximum settlement occurs as differential settlement across the width of the structure or across an element of the structure.

Plate 1 Excerpt from Cashman and Preene (2021)

3.4. Busby's Bore

Busby's Bore, a hand carved tunnel excavated in the early 1800s for drawing water onto horse-drawn carts near the corner of Park and Elizabeth Streets, is located near the site. Various previous geophysical surveys and studies referenced by DP's GI report show that the bore follows an irregular path below and adjacent to the site, typically in a north-west to south-east direction, with the tunnel crown at about RL 34.2m, and the base at about RL 32.4m. The tunnel is on average 1.5m high and 1.2m wide, filled with sandy soils to at least mid-height, and with water filling up the bore, but with areas which was below the crown of Busby's Bore. The bore runs from the south-eastern corner of the site heading towards 17 Oxford Street. The bore is approximately 4m west of the site with a consistent level along the surveyed length. The report by DP states that the strength of the rock close to Busby's Bore is typically of high strength and consistent with that located elsewhere across the site.

While the bore does have water contained within, it did not appear to be charged with pressure as it is not filled to the crown across the entire length. Hence, it is unlikely that the water within Busby's Bore will leak under pressure and enter the excavation as there is not enough pressure (Busby's bore crown is at RL 32.4m, while the BEL for the basement is 38.1m to 36.2m). Furthermore, Busby's Bore starts from Lachlan Swamp of Centennial Park which has a surface level of approximately 36m AHD, falling down towards the development along Busby's Bore. Given that the maximum point of groundwater head at Lachlan Swamp is below the proposed BEL of the basement, it is unlikely that the water within Busby's Bore will act as a source of groundwater flow into the basement from below during and after construction. Therefore, analysis of higher flows from Busby's Bore is not warranted for this site.

4. CONCLUSIONS AND COMMENTS

Based on the findings of this report and within the limitations of available data, EI concludes that:

- Construction phase groundwater take will be approximately 5.4 to 8.8 ML for the proposed development, assuming up to 1 year of construction;
- Operational phase groundwater take will be approximately 4.5 to 7.9 ML per year for the proposed development.
- The lower limit is based on the average groundwater levels observed during the long-term groundwater monitoring, resulting in the majority of the seepage occurring through the sandstone bedrock. The upper limit is based on the highest measured groundwater levels during long-term groundwater monitoring, plus 0.5m to account for possible further seasonal variation. With this conservative model, the groundwater seeps above the bedrock on the sand/bedrock interface into the site, resulting in higher groundwater inflow volumes.
- In our opinion, the actual volumes removed will likely be closer to the lower limit of the range predicted, with the upper range being based on elevated groundwater levels during heavy rainfall events, resulting on water entering the site via the sand/bedrock interface.
- The above estimate is based on the following assumptions:
  - The shoring wall system is a secant pile wall retention system with the soft piles installed to top of sandstone bedrock. Water seepage is allowed to drain into the basement through defects in the sandstone bedrock.
  - Continuous dewatering in order to maintain the groundwater at a depth of BEL during construction;
  - The basement walls and slab will be designed as drained structure for the development lifetime, while the portion of the secant pile wall above bedrock will be water tight;
  - This assessment does not take into consideration any excavation that may be required for footings, service trenches, lift pits, or crane pads. This additional excavation, if required, is not expected to affect the retention or the dewatering system.
- The maximum predicted groundwater drawdown surrounding the basement boundary is approximately 4.9m upslope, and 6.7m downslope, with a maximum settlement of up to 4.2mm. The settlement fall within the ‘negligible’ risk category of damage risk resulting from ground settlement due to dewatering, as per Cashman and Preene (2021). It would be prudent for potential risks to neighbouring structures to be assessed by a qualified and experienced structural engineer.
- Should any design or construction conditions differ from that adopted in this report; this GSA should be reviewed and updated as required.

5. LIMITATIONS

This report has been prepared for the exclusive use of 17 Oxford Street Pty Ltd who is the only intended beneficiary of EI's work. The scope of the inspections carried out for the purpose of this report is limited to those agreed with 17 Oxford Street Pty Ltd.

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

EI has used a degree of care and skill ordinarily exercised in similar tasks by reputable members of the geotechnical industry in Australia as at the date of this document. No other warranty, expressed or implied, is made or intended. Each section of this report must be read in conjunction with the whole of this report, including its appendices and attachments.

The conclusions presented in this report are based on a limited assessment of conditions, with specific locations chosen to be as representative as possible under the given circumstances.

EI's professional opinions are reasonable and based on its professional judgment, experience, training and results from analytical data. EI may also have relied upon information provided by the Client and other third parties to prepare this document, some of which may not have been verified by EI.

EI's professional opinions contained in this document are subject to modification if additional information is obtained through further investigation, observations, or validation testing and analysis during remedial activities. In some cases, further testing and analysis may be required, which may result in a further report with different conclusions.

6. CLOSURE

Please do not hesitate to contact the undersigned should you have any questions.

For and on behalf of
EI Australia

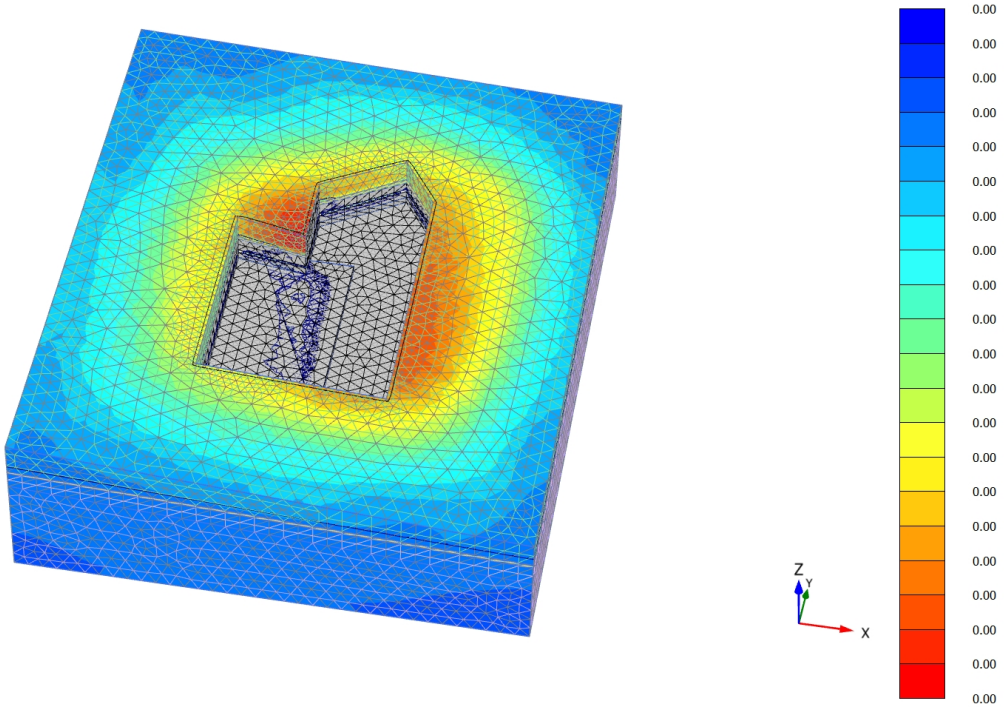
Author	Technical Reviewer
	
Mihimal Kadurugamuwa Geotechnical Engineer	Stephen Kim Associate Geotechnical Engineer

Attachments: **Appendix A** – PLAXIS 3D Model and Results
Appendix B – Rising Head Permeability Tests
Appendix C – Long Term Ground Water Monitoring report
Appendix D – Important Information

Appendix A – PLAXIS Results

PLAXIS Report

4.1.1 Calculation results, Dewatering [Phase_2] (2/6), Total displacements u_z

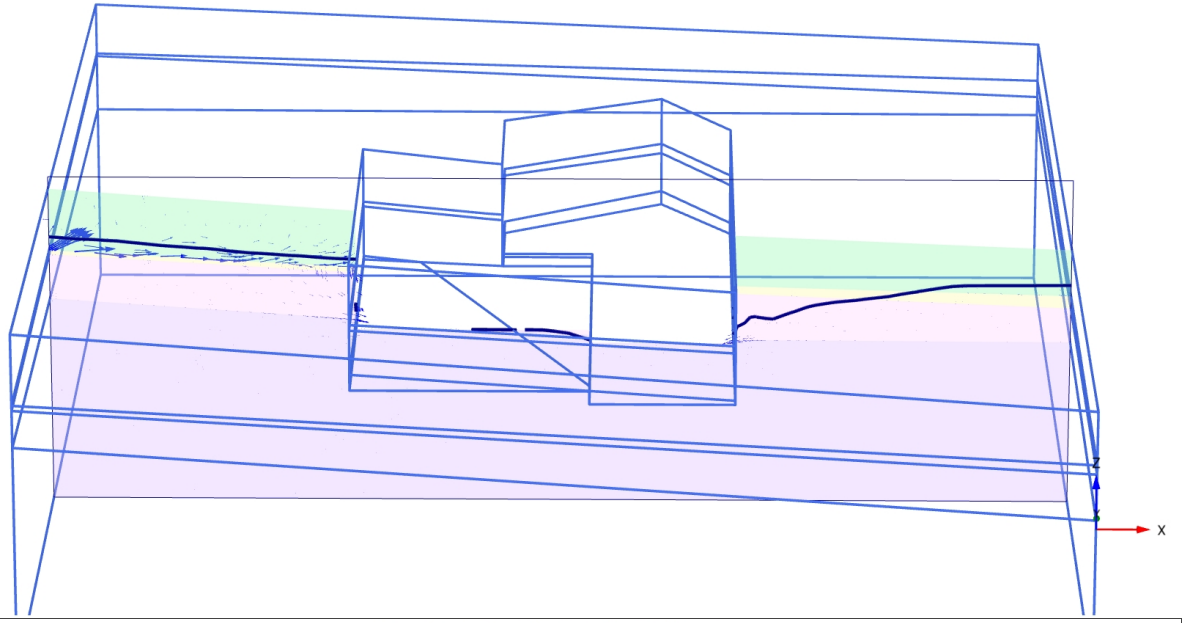


Total displacements u_z (scaled up $1.00*10^3$ times)

Maximum value = $0.5118*10^{-3}$ m (Element 22110 at Node 13652)

Minimum value = $-4.222*10^{-3}$ m (Element 2896 at Node 38556)

4.2.1 Calculation results, cross section A-A*, Dewatering [Phase_2] (2/6), Groundwater flow |q|



Groundwater flow |q| (scaled up 50.0 times)

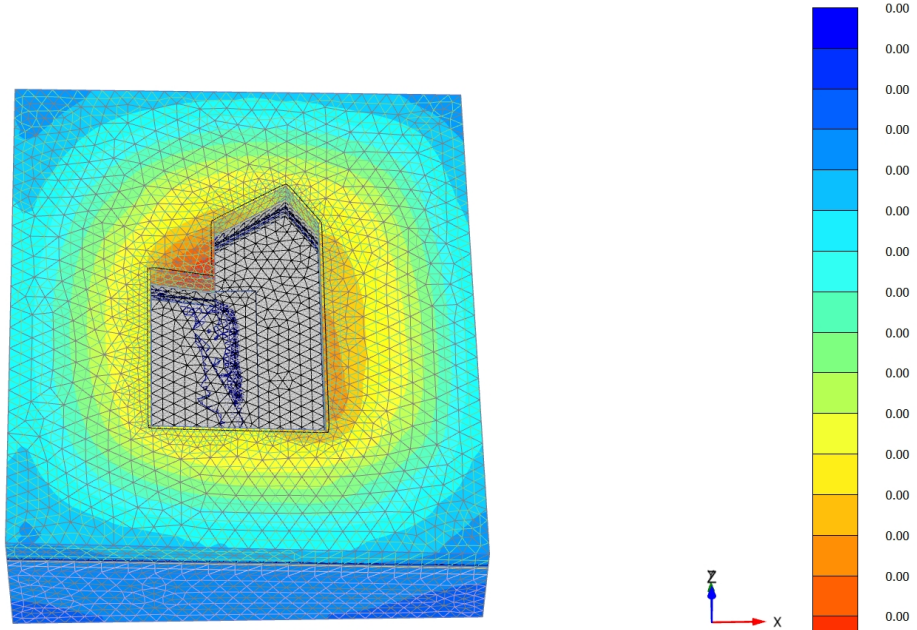
Maximum value = 0.08783 m/day

Minimum value = 0.000 m/day

Total discharge is -0.7343 m³/day

PLAXIS Report

4.1.1 Calculation results, Dewatering [Phase_2] (2/6), Total displacements u_z

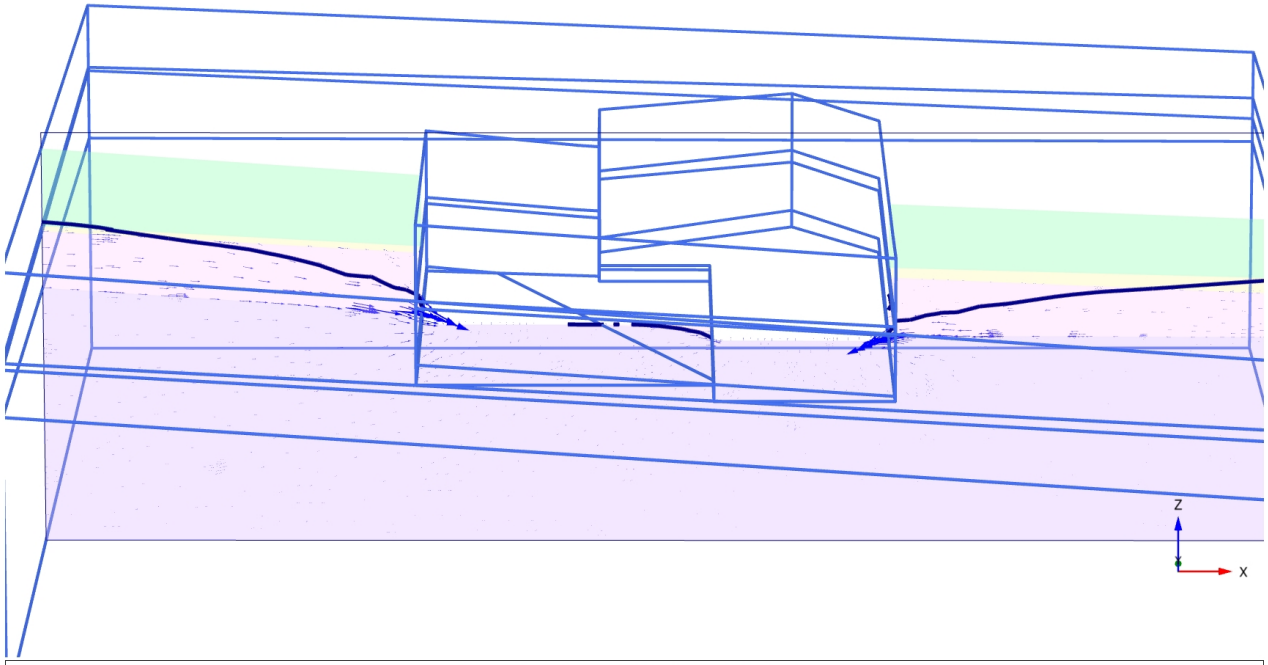


Total displacements u_z (scaled up $2.00*10^3$ times)

Maximum value = $0.4317*10^{-3}$ m (Element 22110 at Node 13652)

Minimum value = $-2.624*10^{-3}$ m (Element 3839 at Node 20152)

4.2.1 Calculation results, cross section A-A*, Dewatering [Phase_2] (2/6), Groundwater flow |q|



Groundwater flow |q| (scaled up 200 times)

Maximum value = 0.02036 m/day

Minimum value = 0.000 m/day

Total discharge is -0.2558 m³/day

Appendix B – Rising Head Permeability Tests

Rising Head Permeability Test

EI Job No.	E25559.G12		Test Date	26/09/2025
By	S2		Location	BH201M

Borehole Detail

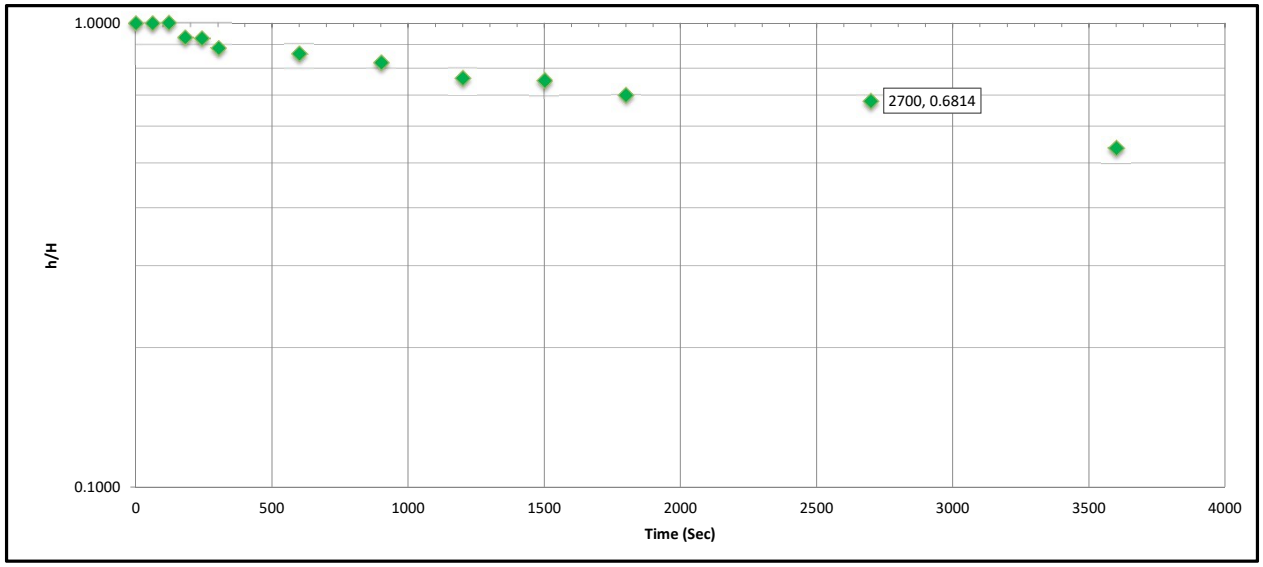
BH No.	BH201M
Casing Stick-up (m)	-0.1
Effective Piezo Screen Length (m)	3
Piezo Radius r (m)	0.025
Bore radium (Auger Radius) (m)	0.038
Depth of the piezometer (m BGL)	14.1
Static Water Level (m BToC)	8.45
Lag time T0 (sec)	753.51
Calculated Permeability k	**7.04E-08** m/sec

Based on Hvorslev Method

$$k = \frac{r^2}{2L} \ln\left(\frac{L}{R}\right) \left(\frac{\ln(h_1/h_2)}{t_2 - t_1}\right)$$

t1	600
t2	3600
h1	0.8584
h2	0.5398

Time (mins)	Time (sec)	Depth to water (ft BToC)	Depth to water (m BToC)	Change in Level (m)	h/H
Static			8.45		
0	0		14.1	5.65	1.0000
1	60		14.1	5.65	1.0000
2	120		14.1	5.65	1.0000
3	180		13.72	5.27	0.9327
4	240		13.7	5.25	0.9292
5	300		13.45	5.00	0.8850
10	600		13.3	4.85	0.8584
15	900		13.1	4.65	0.8230
20	1200		12.75	4.30	0.7611
25	1500		12.7	4.25	0.7522
30	1800		12.4	3.95	0.6991
45	2700		12.30	3.85	0.6814
60	3600		11.50	3.05	0.5398



Rising Head Permeability Test

EI Job No.	E25559.G12		Test Date	26/09/2025
By	S2		Location	BH208M

Borehole Detail

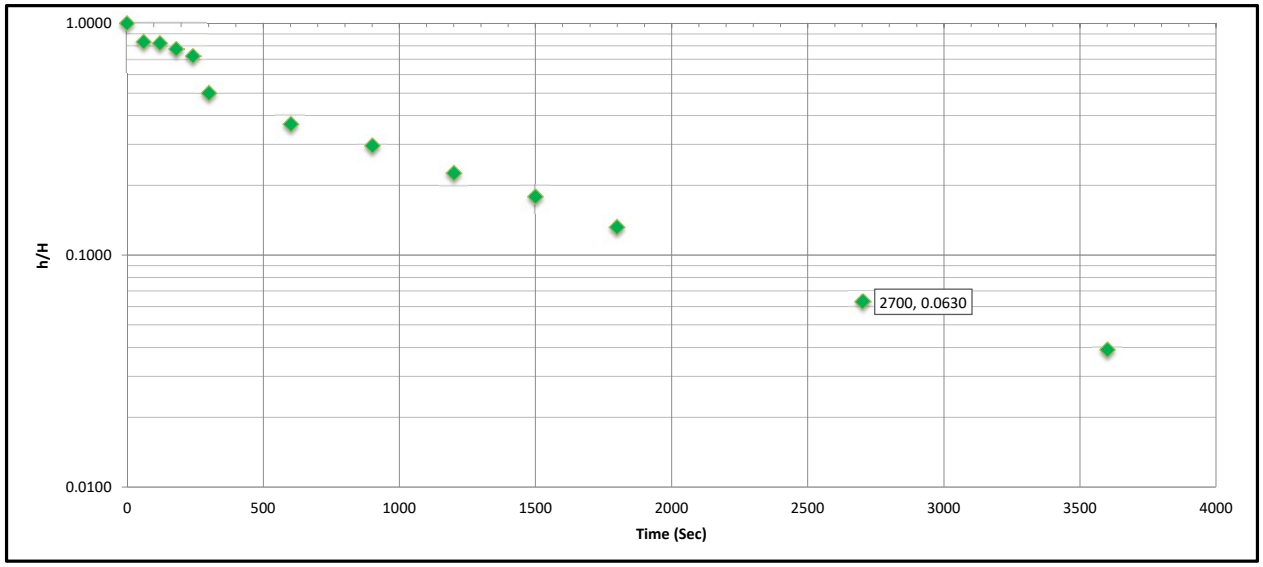
BH No.	BH208M
Casing Stick-up (m)	-0.1
Effective Piezo Screen Length (m)	3
Piezo Radius r (m)	0.025
Bore radium (Auger Radius) (m)	0.038
Depth of the piezometer (m BGL)	8.1
Static Water Level (m BToC)	1.43
Lag time T0 (sec)	4804.68
Calculated Permeability k	**4.10E-07** m/sec

Based on Hvorslev Method

$$k = \frac{r^2}{2L} \ln\left(\frac{L}{R}\right) \left(\frac{\ln(h_1/h_2)}{t_2 - t_1}\right)$$

t1	900
t2	1800
h1	0.2969
h2	0.1319

Time (mins)	Time (sec)	Depth to water (ft BToC)	Depth to water (m BToC)	Change in Level (m)	h/H
Static			1.43		
0	0		8.1	6.67	1.0000
1	60		7	5.57	0.8351
2	120		6.9	5.47	0.8201
3	180		6.6	5.17	0.7751
4	240		6.26	4.83	0.7241
5	300		4.78	3.35	0.5022
10	600		3.88	2.45	0.3673
15	900		3.41	1.98	0.2969
20	1200		2.94	1.51	0.2264
25	1500		2.63	1.20	0.1799
30	1800		2.31	0.88	0.1319
45	2700		1.85	0.42	0.0630
60	3600		1.69	0.26	0.0390



Pump-Out Test Results & Permeability Calculation

Well ID: BH1

EI Job Number	E25559.G12	Test Date	26 May 2025
Test By	S2	Site Address	17 Oxford Street, Paddington

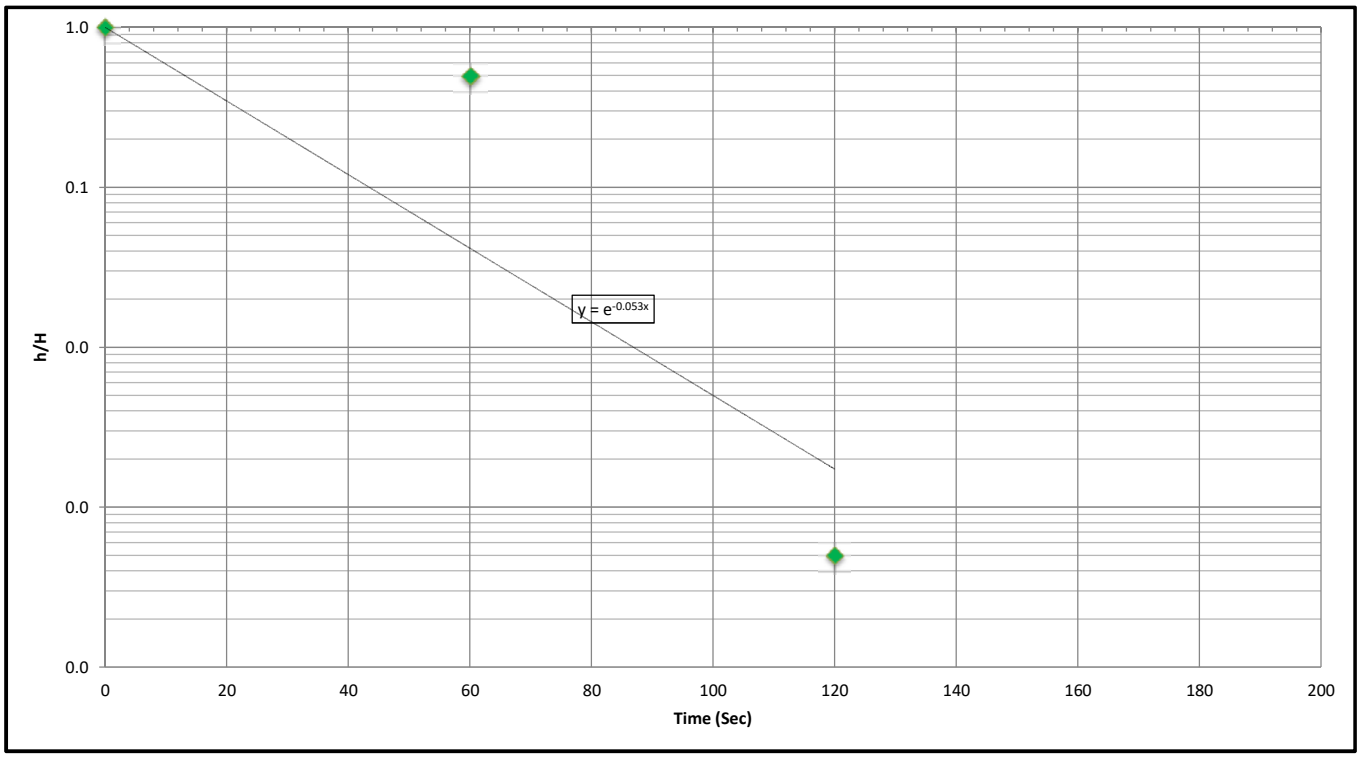
Casing Stick-up (m)	-0.1
Effective Piezo Screen Length, L (m)	15.35
Piezo Radius, r (m)	0.025
Borehole Radius, R (m)	0.038
Depth of Piezometer (m BEGL)	19.85
Static Water Level (m BToC)	4.50
Hvorslev Lag Time, T_o (sec)	18.55

Hvorslev Formula
T_o = t when h/H = 0.37

$$K = \frac{r^2 \ln(L/R)}{2LT_o}$$

Estimation Method Used	Standard Hvorslev (To)
Estimated Permeability, k (m/sec)	**6.59E-06**

Time (mins)	Time (sec)	Depth to water (m BToC)	Change in Level (m)	h/H
Static (prior to pumpout)		4.50		
0 (after pumpout, start of test	0	4.70	0.20	1.0000
1	60	4.60	0.10	0.5000
2	120	4.50	0.00	0.0005



Pump-Out Test Results & Permeability Calculation

Well ID: BH2A

EI Job Number	E25559.G12	Test Date	26 May 2025
Test By	S2	Site Address	17 Oxford Street, Paddington

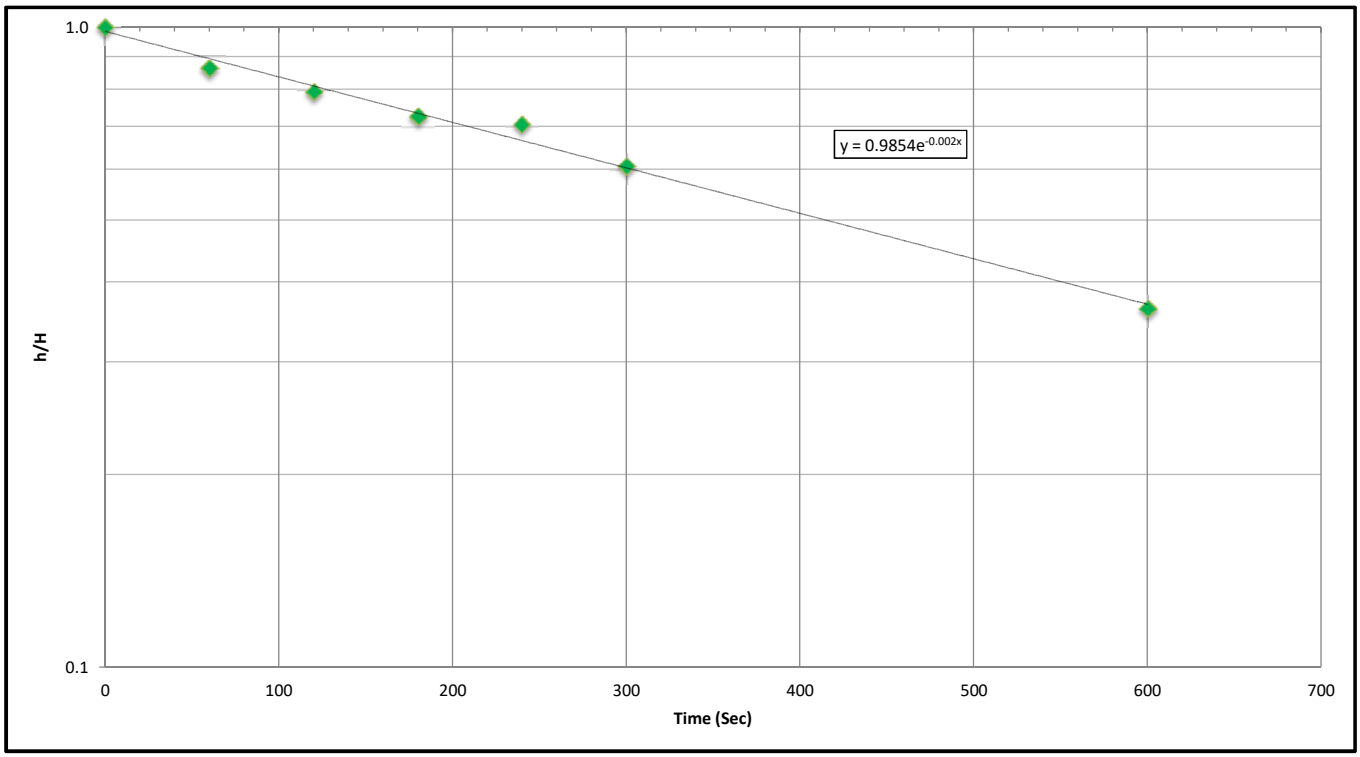
Casing Stick-up (m)	-0.1
Effective Piezo Screen Length, L (m)	14.7
Piezo Radius, r (m)	0.025
Borehole Radius, R (m)	0.038
Depth of Piezometer (m BEGL)	19.5
Static Water Level (m BToC)	4.80
Hvorslev Lag Time, T_o (sec)	490

Hvorslev Formula
T_o = t when h/H = 0.37

$$K = \frac{r^2 \ln(L/R)}{2LT_o}$$

Estimation Method Used	Standard Hvorslev (To)
Estimated Permeability, k (m/sec)	**2.58E-07**

Time (mins)	Time (sec)	Depth to water (m BToC)	Change in Level (m)	h/H
Static (prior to pumpout)		4.80		
0 (after pumpout, start of test	0	16.5	11.70	1.0000
1	60	14.9	10.10	0.8632
2	120	14.1	9.30	0.7949
3	180	13.3	8.50	0.7265
4	240	13.05	8.25	0.7051
5	300	11.9	7.10	0.6068
10	600	9.05	4.25	0.3632
15	900	5.4	0.60	0.0513



Pump-Out Test Results & Permeability Calculation

Well ID: BH4A

EI Job Number	E25559.G12	Test Date	26 May 2025
Test By	S2	Site Address	17 Oxford Street, Paddington

Casing Stick-up (m)	-0.1
Effective Piezo Screen Length, L (m)	16.1
Piezo Radius, r (m)	0.025
Borehole Radius, R (m)	0.038
Depth of Piezometer (m BEGL)	20
Static Water Level (m BToC)	3.90
Hvorslev Lag Time, T_o (sec)	1088

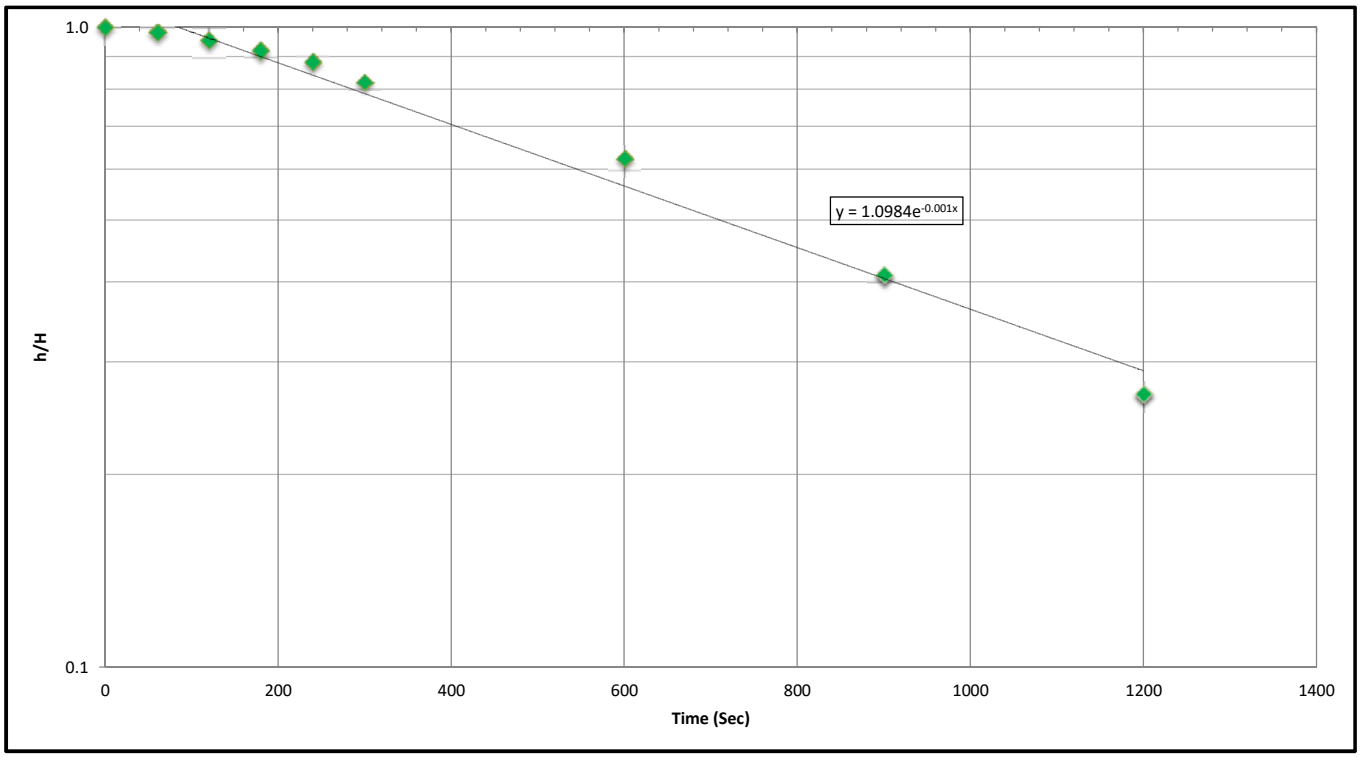
Hvorslev Formula

T_o = t when h/H = 0.37

$$K = \frac{r^2 \ln(L/R)}{2LT_o}$$

Estimation Method Used	Standard Hvorslev (To)
Estimated Permeability, k (m/sec)	**1.08E-07**

Time (mins)	Time (sec)	Depth to water (m BToC)	Change in Level (m)	h/H
Static (prior to pumpout)		3.90		
0 (after pumpout, start of test	0	15.1	11.20	1.0000
1	60	14.9	11.00	0.9821
2	120	14.6	10.70	0.9554
3	180	14.2	10.30	0.9196
4	240	13.8	9.90	0.8839
5	300	13.1	9.20	0.8214
10	600	10.9	7.00	0.6250
15	900	8.5	4.60	0.4107
20	1200	6.9	3.00	0.2679



Appendix C – Long-Term Groundwater Monitoring

Suite 6.01, 55 Miller Street
PYRMONT NSW 2009
www.eiaustralia.com.au
02 9516 0722

14 January 2026
E25559.G11.GW01

Jack Joseph
17 Oxford Street Pty Ltd
Suite 5A, 2 New Mclean Street

Groundwater Level Monitoring Report No. 1
17 Oxford St, Paddington

EI Australia (EI) has been engaged to prepare this factual letter report to provide continual groundwater levels at the above site. The monitoring period in this report is from Friday 26 September 2025 to Monday 5 January 2026.

Groundwater levels were collected at the end of the monitoring period using data loggers installed within monitoring wells. The data logger / monitoring well details and the groundwater levels observed during the monitoring period are summarised in Table 1 & 2 below.

Table 1 Summary of Data Logger & Well Installation Details

Monitoring Well ID	Top of Well RL (mAHD)	Existing Ground RL (mAHD)	Well Stickup (m)	Well Depth Below Ground (m) [1]	Sensor RL (mAHD)
BH201M	50.00	50.10	-0.10	17.80	37.30
BH208M	43.40	43.50	-0.10	11.38	39.30
BH4A	47.20	47.30	-0.10	20.00	37.00

Note 1: The level of the bottom of the well is based on manual measurements after the well installation. The measurement accounts for any variation of the well depth caused by infilling of material through the well screen.

Table 2 Summary of Groundwater Levels

Monitoring Well ID	Average Groundwater RL (mAHD)	Highest Groundwater RL (mAHD)	Lowest Groundwater RL (mAHD)	Highest Groundwater Depth (m Below Ground)	Lowest Groundwater Depth (m Below Ground)
BH201M	40.77	41.77	40.02	8.33	10.08
BH208M	41.95	42.53	41.42	0.97	2.08
BH4A	43.08	43.70	42.48	3.60	4.82

Please do not hesitate to contact the undersigned should you have any questions.

For and on behalf of:
EI AUSTRALIA

Author



Salah Khalifa
Geotechnical Engineer

Reviewer



Stephen Kim
Associate Geotechnical Engineer

Attachments:

Figure 1: Data Logger Location Plan
Figure 2-4: Groundwater Level, Daily Rainfall vs. Time From 26 September 2025 to 5 January 2026
Important Information



Map Source: BoxAllSurveyors - Drawing No. 11434-001, Sheet 1-2 of 4, Latest Revision F, Dated 18 October 2022

LEGEND **(All Locations are Approximate)**

- Site boundary
- Basement boundary
- Monitoring well locations (EI Australia, 2025)
- Monitoring well locations (Douglas Partners, 2023)

eiaustralia
Practical Solutions for Built Environments
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Ph (02) 9516 0722 Fax (02) 9518 5088

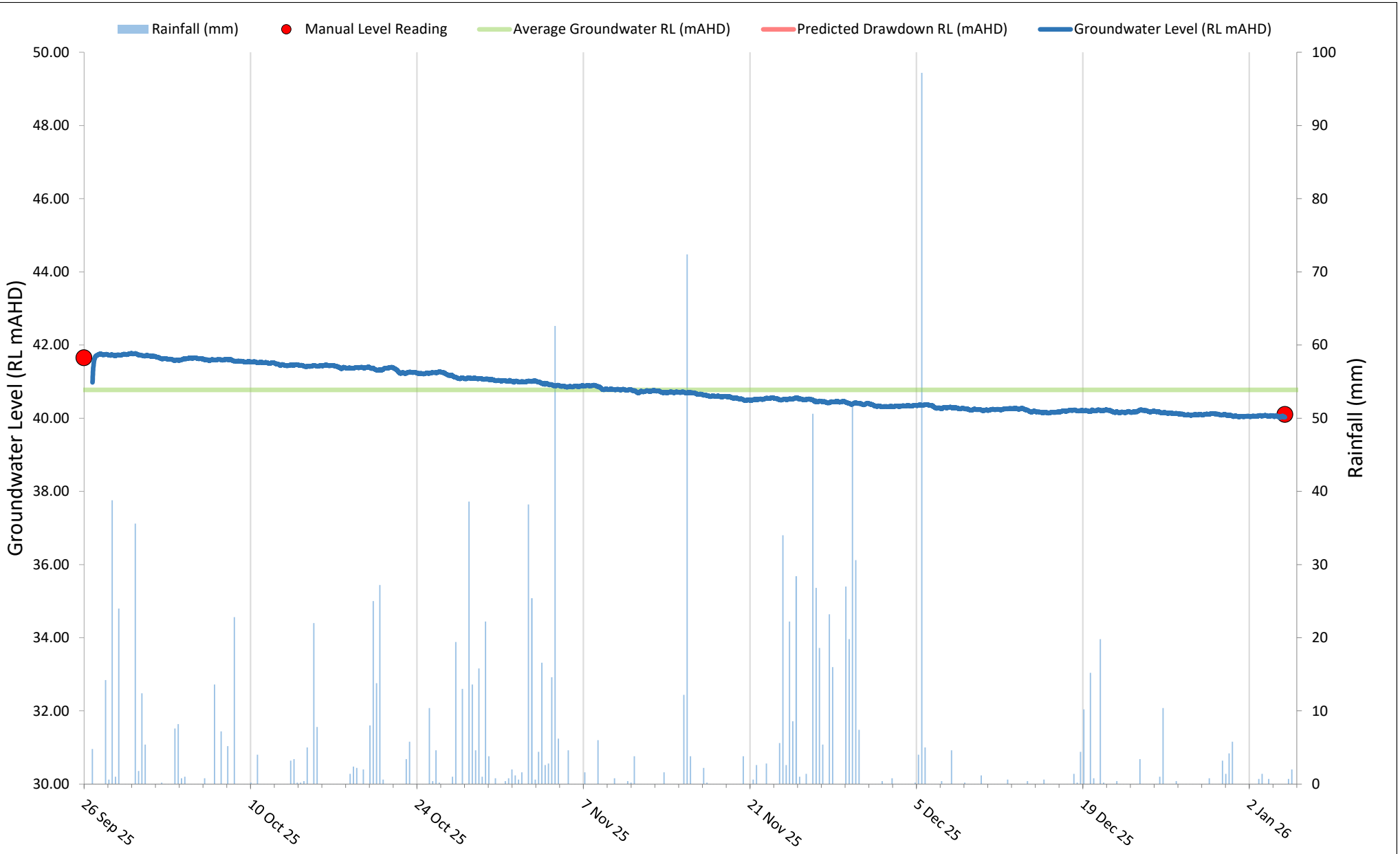
Drawn:	S.2.
Approved:	S.K-
Date:	10-10-25

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Additional Geotechnical Investigation
17 Oxford Street, Paddington, NSW

Borehole Location Plan

Figure: 1

Project: E25559.G11



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Drawn:	DJ
Approved:	SK
Date:	14/01/2026

17 Oxford Street Pty Ltd

Groundwater Level Monitoring

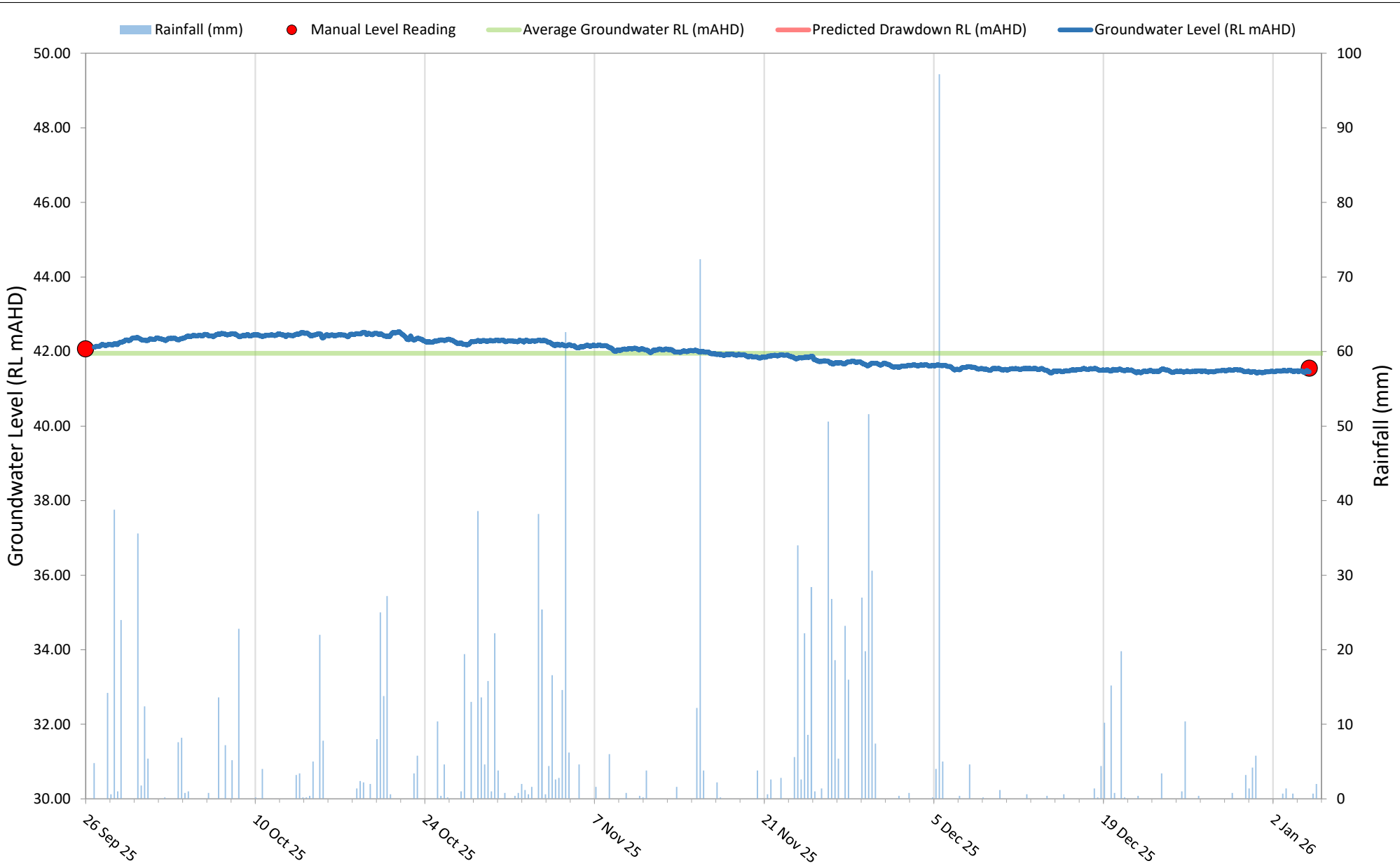
17 Oxford St, Paddington

BH201M

Figure:

2

Project: E25559.G11.GW01



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Date:	14/01/2026

17 Oxford Street Pty Ltd

Groundwater Level Monitoring

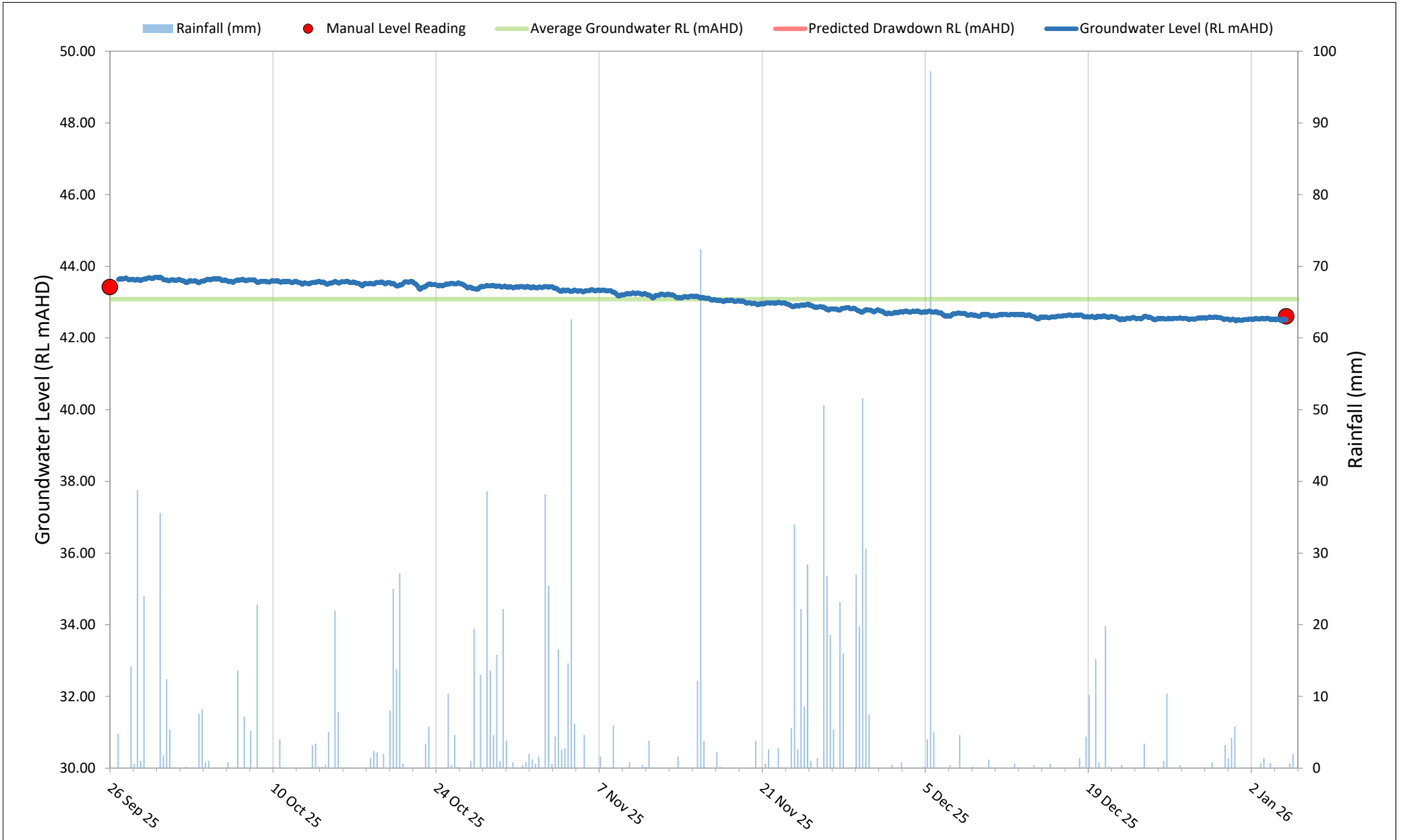
17 Oxford St, Paddington

BH208M

Figure:

3

Project: E25559.G11.GW01



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Drawn:	DJ
Approved:	SK
Date:	14/01/2026

17 Oxford Street Pty Ltd

Groundwater Level Monitoring

17 Oxford St, Paddington

BH4A

Figure: **4**

Project: E25559.G11.GW01

Memorandum

To:	Trescon Pty Ltd	Date:	23 July 2024
Attention:	Glen Chang	Project No.:	212062.01
Email:	glenc@trescon.com.au	Reference:	R.001.Rev0
CC:			
Subject:	Groundwater Level Measurements 17 Oxford Street, Paddington		

Introduction

This memorandum provides a factual summary of groundwater monitoring results carried out by Douglas Partners Pty Ltd (Douglas) at 17 Oxford Street, Paddington for a proposed commercial development. This summary consists of recent groundwater monitoring within the existing groundwater monitoring wells installed during prior geotechnical and groundwater investigations (refer to Douglas reports 212062.00.R.001.Rev1 and 212062.00.R.002.Rev2, dated November 2023 for the developer Verona Co).

Reference should be made to the above reports regarding the monitoring well details as well as to the comments on groundwater their findings.

Groundwater Monitoring

The continuous readings collected by the data loggers within the monitoring wells were downloaded on 18 July 2024. All monitoring wells were purged prior to installation of the data loggers. The attached drawings (Drawing Nos. 2 to 4) show the continuously recorded groundwater levels at the monitoring well locations from 23 October 2023 to 18 July 2024, together with rainfall measured at weather station 66160 at Centennial Park.

Discrete groundwater levels were also measured during the site visit on 18 July 2024. The minimum and maximum recorded groundwater level observed during the monitoring period is summarised in Table 1. The minimum groundwater levels are taken as the minimum recorded level after recharge of the monitoring well post purging.

Table 1: Measured Depth / RL to Groundwater at Monitoring Well Location

Monitoring Well Location	Surface RL (m AHD)	Minimum Recorded Groundwater RL (m AHD)	Maximum Recorded Groundwater RL (m AHD)	Variation in Groundwater Level (m)
BH1A	50.3	44.5	45.9	1.4
BH2A	50.3	44.2	45.7	1.5
BH4A	47.3	42.4	43.4	1.0

The monitoring results presented in Table 1 indicate groundwater level fluctuations of up to 1.5 m between the maximum and minimum recorded levels during the observation period at the monitoring wells.

It should be noted that groundwater levels are transient and that fluctuations may occur in response to climatic and seasonal conditions.

Please contact the undersigned if you have any questions on this matter.

Douglas Partners Pty Ltd

Adam Teoh
Associate

Reviewed by

pp. **Brendan O'Kane**
Principal

Attachments:
About This Report
Test Location Plan (Drawing 1)
Groundwater Level Graphs (Drawing 2 to 4)

About this Report

November 2023

Introduction

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

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

Copyright

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

Borehole and Test Pit Logs

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

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

Groundwater

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

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

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

Reports

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

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

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

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

continued next page

About this Report

Site Anomalies

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

Information for Contractual Purposes

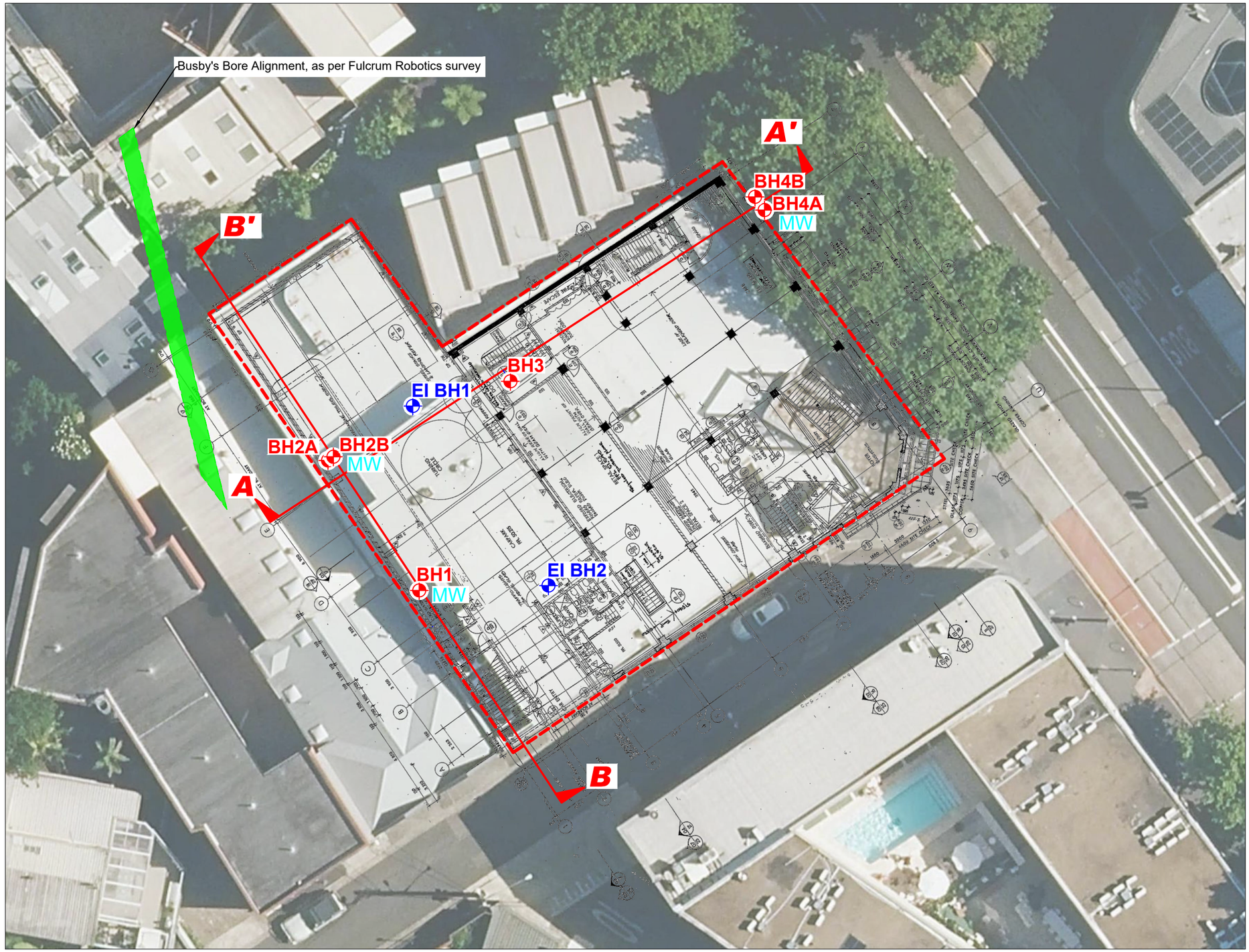
Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate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

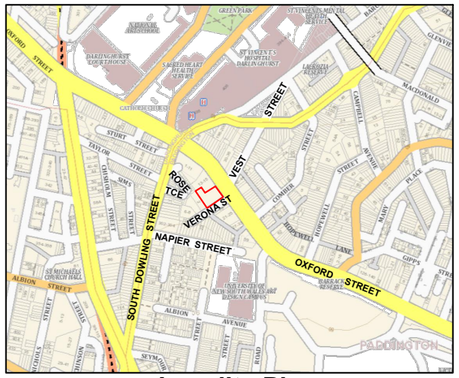
Site Inspection

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

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Locality Plan

LEGEND

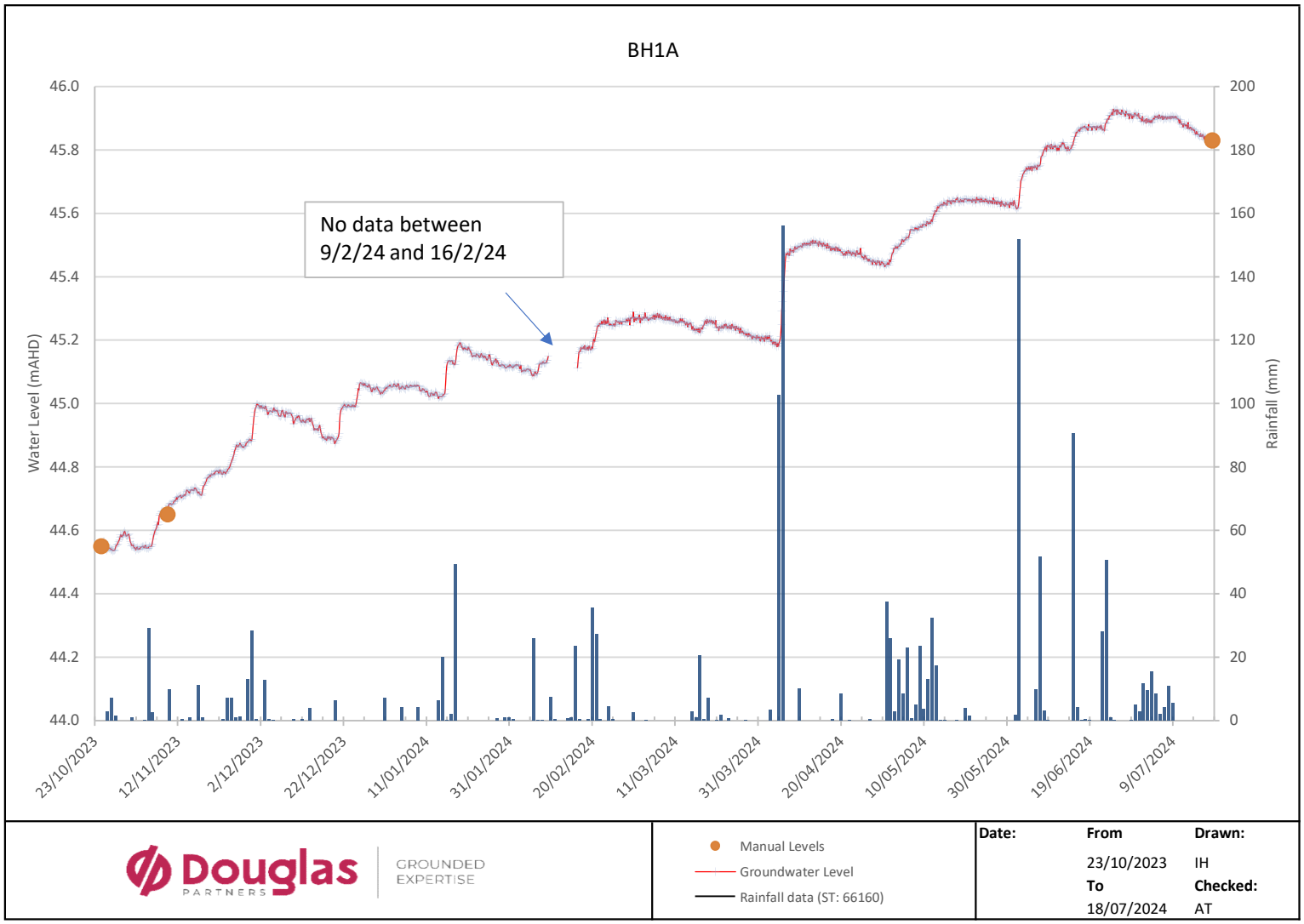
- EIA Borehole Location (March, 2022)
- DP Borehole Location (September, 2022)
- MW Groundwater Monitoring Well
- Site Boundary
- Geological Cross Section

NOTE:
1: Base image from MetroMap (Date 11.12.2022)
2: Base plan is adapted from Scott Carver, Drawing No.AD-DA100, Revision R, Dated10.07.2023

0 1 2 4 6 8 10 15 20 30m
1:300 @ A3

Douglas Partners
Geotechnics / Environment / Groundwater

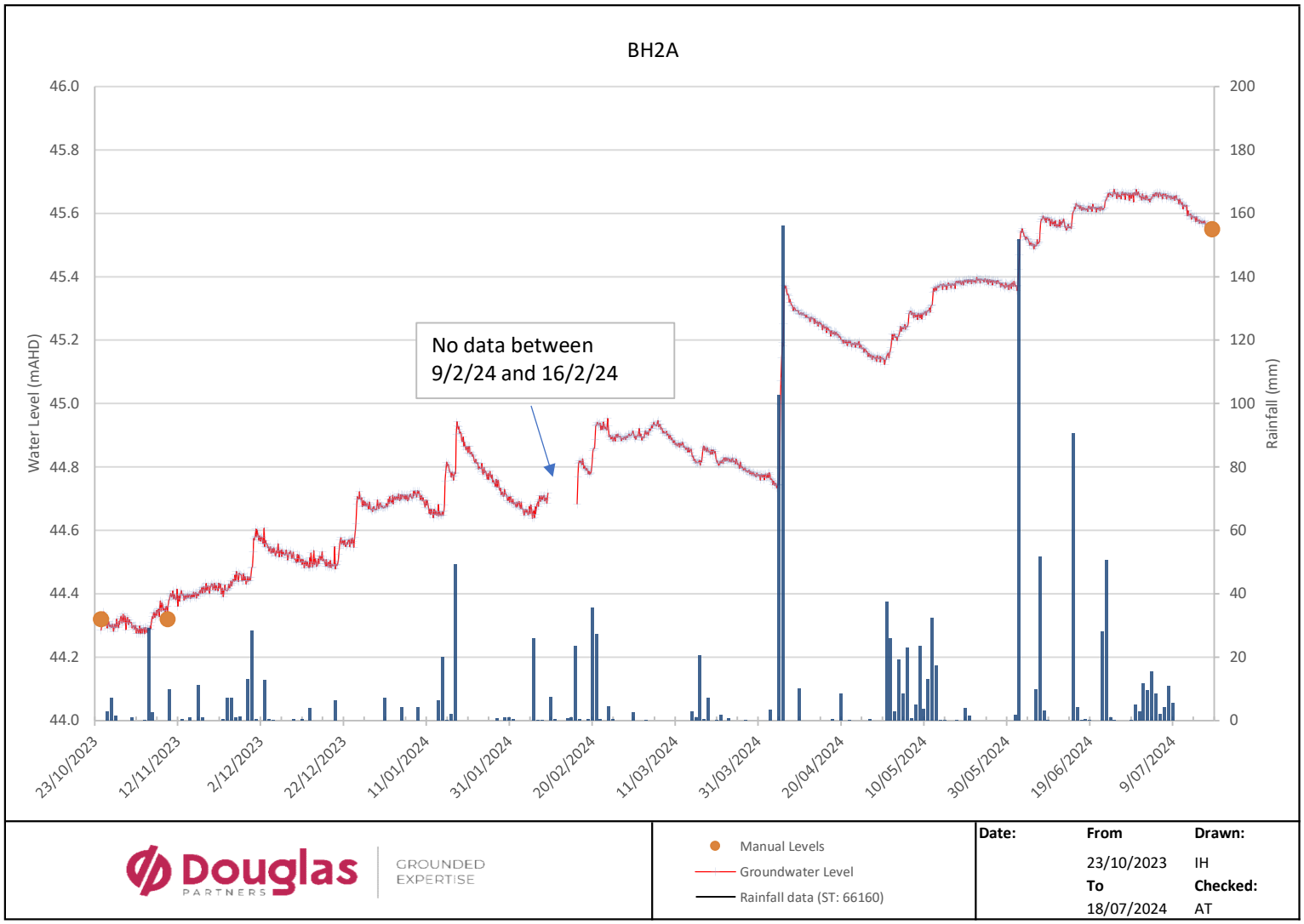
CLIENT:		TITLE: **Test Location Plan**	PROJECT No: 212062.00
OFFICE: Sydney	DRAWN BY: EC	**Proposed Commercial Development**	DRAWING No: 1
SCALE: 1:300 @ A3	DATE: 12.07.2023	**17 Oxford Street, Paddington**	REVISION: 1



Douglas PARTNERS | GROUNDED EXPERTISE

Manual Levels
Groundwater Level
Rainfall data (ST: 66160)

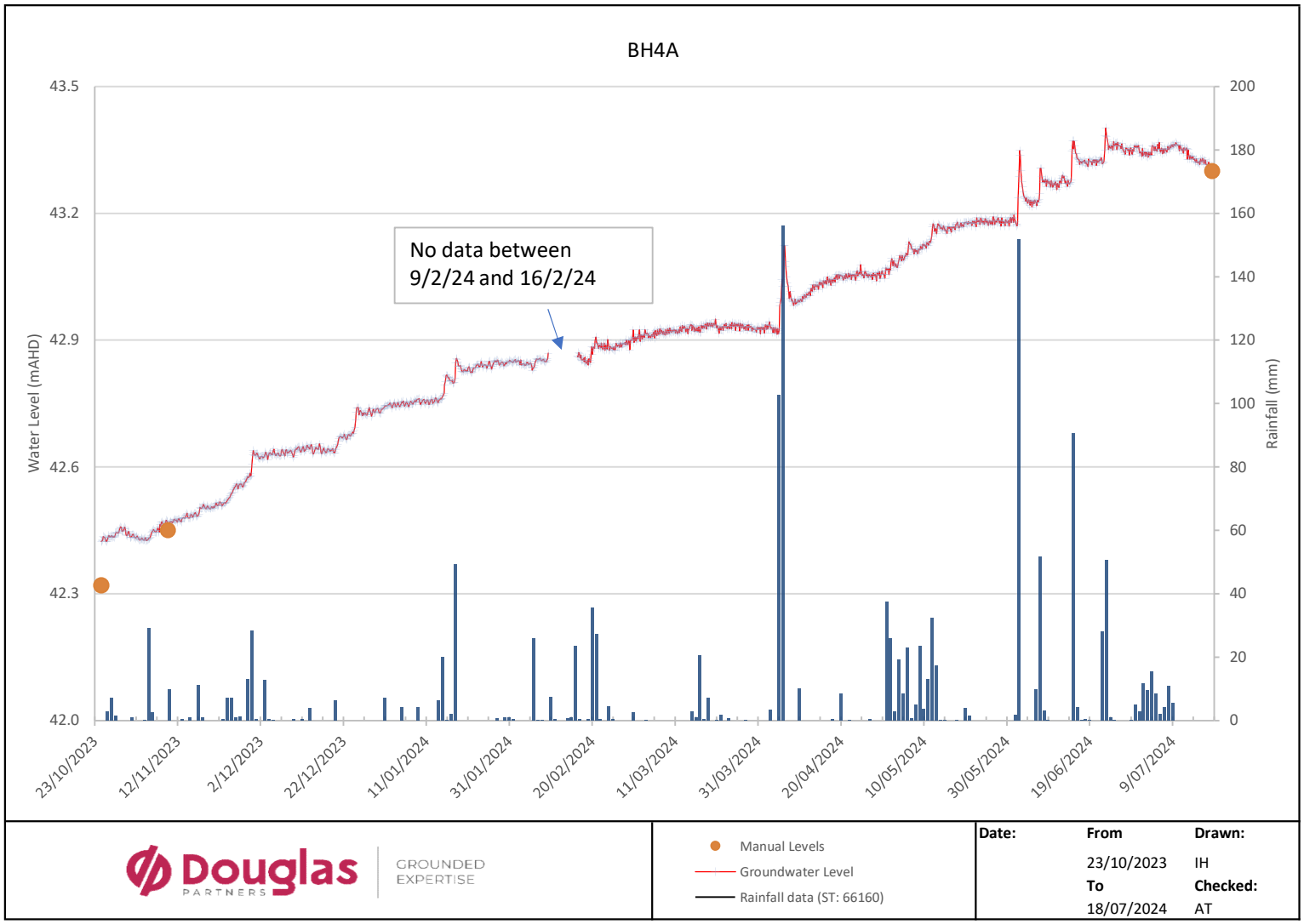
Date:	From	Drawn:
	23/10/2023	IH
	To	Checked:
	18/07/2024	AT



Douglas PARTNERS | GROUNDED EXPERTISE

Manual Levels
Groundwater Level
Rainfall data (ST: 66160)

Date:	From	Drawn:
	23/10/2023	IH
	To	Checked:
	18/07/2024	AT



Douglas PARTNERS | GROUNDED EXPERTISE

Manual Levels
Groundwater Level
Rainfall data (ST: 66160)

Date:	From	Drawn:
	23/10/2023	IH
	To	Checked:
	18/07/2024	AT

Appendix D – Important Information

Important Information

SCOPE OF SERVICES

The geotechnical report ("the report") has been prepared in accordance with the scope of services as set out in the contract, or as otherwise agreed, between the Client And EI Australia ("EI"). The scope of work may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints.

RELIANCE ON DATA

EI has relied on data provided by the Client and other individuals and organizations, to prepare the report. Such data may include surveys, analyses, designs, maps and plans. EI has not verified the accuracy or completeness of the data except as stated in the report. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations ("conclusions") are based in whole or part on the data, EI will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to EI.

GEOTECHNICAL ENGINEERING

Geotechnical engineering is based extensively on judgment and opinion. It is far less exact than other engineering disciplines. Geotechnical engineering reports are prepared for a specific client, for a specific project and to meet specific needs, and may not be adequate for other clients or other purposes (e.g. a report prepared for a consulting civil engineer may not be adequate for a construction contractor). The report should not be used for other than its intended purpose without seeking additional geotechnical advice. Also, unless further geotechnical advice is obtained, the report cannot be used where the nature and/or details of the proposed development are changed.

LIMITATIONS OF SITE INVESTIGATION

The investigation programme undertaken is a professional estimate of the scope of investigation required to provide a general profile of subsurface conditions. The data derived from the site investigation programme and subsequent laboratory testing are extrapolated across the site to form an inferred geological model, and an engineering opinion is rendered about overall subsurface conditions and their likely behaviour with regard to the proposed development. Despite investigation, the actual conditions at the site might differ from those inferred to exist, since no subsurface exploration program, no matter how comprehensive, can reveal all subsurface details and anomalies. The engineering logs are the subjective interpretation of subsurface conditions at a particular location and time, made by trained personnel. The actual interface between materials may be more gradual or abrupt than a report indicates.

SUBSURFACE CONDITIONS ARE TIME DEPENDENT

Subsurface conditions can be modified by changing natural forces or man-made influences. The report is based on conditions that existed at the time of subsurface exploration. Construction operations adjacent to the site, and natural events such as floods, or ground water fluctuations, may also affect subsurface conditions, and thus the continuing adequacy of a geotechnical report. EI should be kept appraised of any such events, and should be consulted to determine if any additional tests are necessary.

VERIFICATION OF SITE CONDITIONS

Where ground conditions encountered at the site differ significantly from those anticipated in the report, either due to natural variability of subsurface conditions or construction activities, it is a condition of the report that EI be notified of any variations and be provided with an opportunity to review the recommendations of this report. Recognition of change of soil and rock conditions requires experience and it is recommended that a suitably experienced geotechnical engineer be engaged to visit the site with sufficient frequency to detect if conditions have changed significantly.

REPRODUCTION OF REPORTS

This report is the subject of copyright and shall not be reproduced either totally or in part without the express permission of this Company. Where information from the accompanying report is to be included in contract documents or engineering specification for the project, the entire report should be included in order to minimize the likelihood of misinterpretation from logs.

REPORT FOR BENEFIT OF CLIENT

The report has been prepared for the benefit of the Client and no other party. EI assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report (including without limitation matters arising from any negligent act or omission of EI or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in the report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own inquiries and obtain independent advice in relation to such matters.

OTHER LIMITATIONS

EI will not be liable to update or revise the report to take into account any events or emergent circumstances or fact occurring or becoming apparent after the date of the report.

Suite 6.01, 55 Miller Street
PYRMONT NSW 2009
www.eiaustralia.com.au
02 9516 0722

14 January 2026
E25559.G11.GW01

Jack Joseph
17 Oxford Street Pty Ltd
Suite 5A, 2 New Mclean Street

Groundwater Level Monitoring Report No. 1
17 Oxford St, Paddington

EI Australia (EI) has been engaged to prepare this factual letter report to provide continual groundwater levels at the above site. The monitoring period in this report is from Friday 26 September 2025 to Monday 5 January 2026.

Groundwater levels were collected at the end of the monitoring period using data loggers installed within monitoring wells. The data logger / monitoring well details and the groundwater levels observed during the monitoring period are summarised in Table 1 & 2 below.

Table 1 Summary of Data Logger & Well Installation Details

Monitoring Well ID	Top of Well RL (mAHD)	Existing Ground RL (mAHD)	Well Stickup (m)	Well Depth Below Ground (m) [1]	Sensor RL (mAHD)
BH201M	50.00	50.10	-0.10	17.80	37.30
BH208M	43.40	43.50	-0.10	11.38	39.30
BH4A	47.20	47.30	-0.10	20.00	37.00

Note 1: The level of the bottom of the well is based on manual measurements after the well installation. The measurement accounts for any variation of the well depth caused by infilling of material through the well screen.

Table 2 Summary of Groundwater Levels

Monitoring Well ID	Average Groundwater RL (mAHD)	Highest Groundwater RL (mAHD)	Lowest Groundwater RL (mAHD)	Highest Groundwater Depth (m Below Ground)	Lowest Groundwater Depth (m Below Ground)
BH201M	40.77	41.77	40.02	8.33	10.08
BH208M	41.95	42.53	41.42	0.97	2.08
BH4A	43.08	43.70	42.48	3.60	4.82

Please do not hesitate to contact the undersigned should you have any questions.

For and on behalf of:
EI AUSTRALIA

Author



Salah Khalifa
Geotechnical Engineer

Reviewer



Stephen Kim
Associate Geotechnical Engineer

Attachments:

Figure 1: Data Logger Location Plan
Figure 2-4: Groundwater Level, Daily Rainfall vs. Time From 26 September 2025 to 5 January 2026
Important Information



Map Source: BoxAllSurveyors - Drawing No. 11434-001, Sheet 1-2 of 4, Latest Revision F, Dated 18 October 2022

LEGEND **(All Locations are Approximate)**

- Site boundary
- Basement boundary
- Monitoring well locations (EI Australia, 2025)
- Monitoring well locations (Douglas Partners, 2023)

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

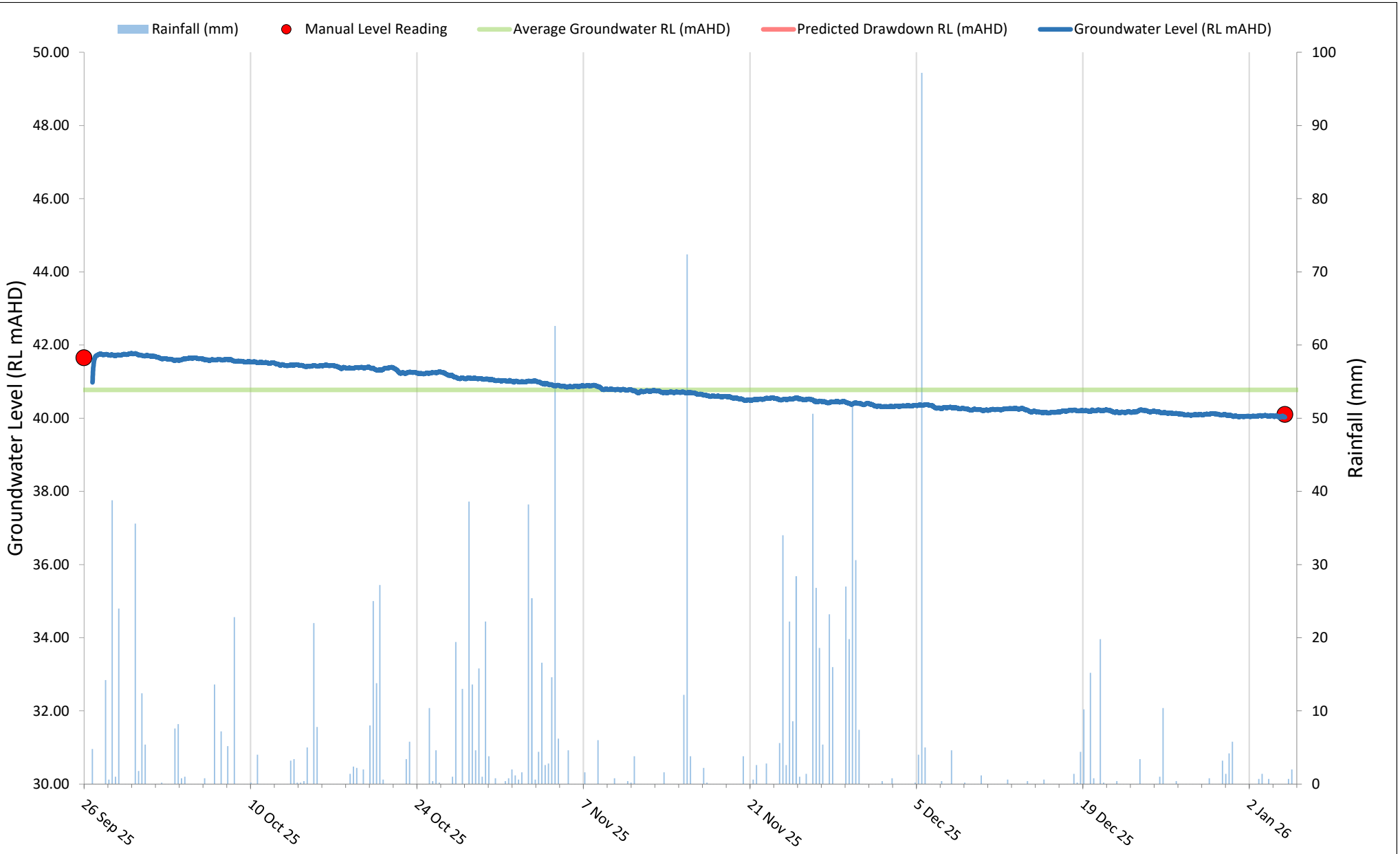
Drawn:	S.2.
Approved:	S.K-
Date:	10-10-25

17 Oxford Street Pty Ltd
Additional Geotechnical Investigation
17 Oxford Street, Paddington, NSW

Borehole Location Plan

Figure: 1

Project: E25559.G11



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Ph. (02) 9516 0722 Fax (02) 9518 5088

Drawn:	DJ
Approved:	SK
Date:	14/01/2026

17 Oxford Street Pty Ltd

Groundwater Level Monitoring

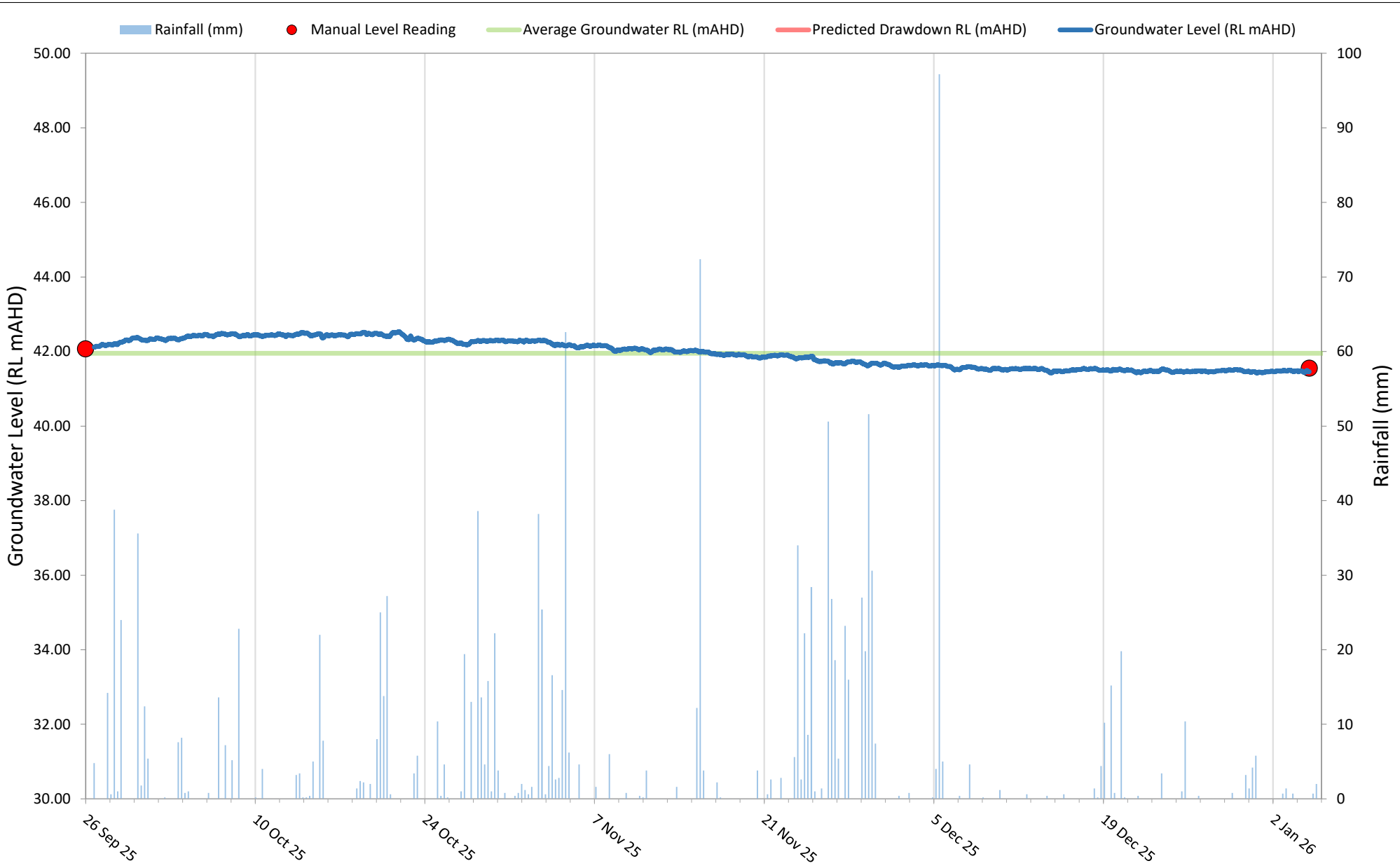
17 Oxford St, Paddington

BH201M

Figure:

2

Project: E25559.G11.GW01



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Drawn:	DJ
Approved:	SK
Date:	14/01/2026

17 Oxford Street Pty Ltd

Groundwater Level Monitoring

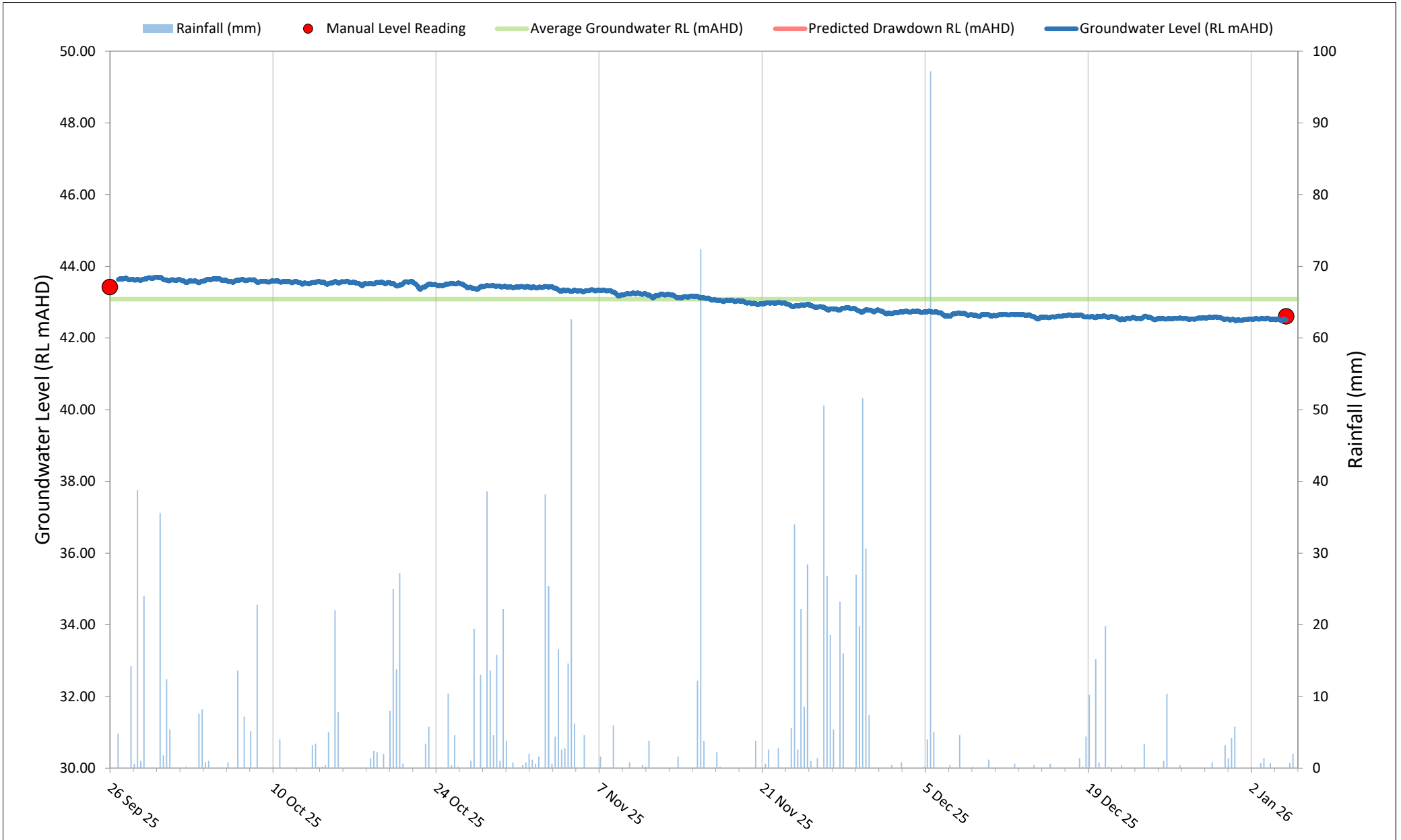
17 Oxford St, Paddington

BH208M

Figure:

3

Project: E25559.G11.GW01



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

Drawn:	DJ
Approved:	SK
Date:	14/01/2026

17 Oxford Street Pty Ltd

Groundwater Level Monitoring

17 Oxford St, Paddington

BH4A

Figure: **4**

Project: E25559.G11.GW01

Important Information

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Appendix E – Monitoring Well Logs

BOREHOLE LOG

BH ID: BH101M

Location	17 Oxford Street			**Started**	28 July 2023
Client	Verona Co Pty Ltd.			**Completed**	28 July 2023
Job No.	E25559			**Logged By**	AL **Date** 28 July 2023
Sheets	1 of 1			**Review By**	**Date**
Drilling Contractor	Geosense	**Surface RL**	≈50.22 m (AHD)	**Latitude**	-
Plant	GEO205 drill	**Inclination**	90°	**Longitude**	-

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (m AHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	MATERIAL ORIGIN & OBSERVATIONS
AD/T	GWNE	BH101M_0.3-0.4 PID = 1.3 PPM		0.00		50.22	Concrete Slab:			CONCRETE
				0.27		49.95	FILL: SAND: Fine Grained plasticity, Brown to yellow with builders plastic and concrete, dry, no odour			FILL
		BH101M_0.8-0.9 PID = 1.1 PPM		1						
		BH101M_1.3-1.4 PID = 0.4 PPM		1.20		49.02	SAND: Fine Grained plasticity, Yellow, dry, no odour			RESIDUAL SOIL
				2						
				3						
				4						
				5						
				5.70		44.52	Bedrock: weathered sandstone			BEDROCK
WB				6						
				7						
				8						
				9		41.22	Terminated at 9.00m. Target Depth Reached.			
				10						

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

MONITORING WELL LOG

BH ID: BH101M

Location	17 Oxford Street			**Started**	28 July 2023
Client	Verona Co Pty Ltd.			**Completed**	28 July 2023
Job No.	E25559			**Logged By**	AL **Date** 28 July 2023
Sheets	1 of 1			**Review By**	**Date**
Drilling Contractor	Geosense	**Surface RL**	≈50.22 m (AHD)	**Latitude**	-
Plant	GEO205 drill	**Inclination**	90°	**Longitude**	-

WATER	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	RL (m AHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	BACKFILL DETAILS	STANDPIPE DETAILS
GWNE	BH101M_0.3-0.4 PID = 1.3 PPM BH101M_0.8-0.9 PID = 1.1 PPM BH101M_1.3-1.4 PID = 0.4 PPM	0.00 0.27 1 1.20 2 3 4 5 5.70 6 7 8 9 10		50.22 49.95 49.02 44.52 41.22	Concrete Slab: FILL: SAND: Fine Grained plasticity, Brown to yellow with builders plastic and concrete, dry, no odour SAND: Fine Grained plasticity, Yellow, dry, no odour Bedrock: weathered sandstone Terminated at 9.00m. Target Depth Reached.		Steel Cover at Surface Grout 0.00m - 5.00m Bentonite 5.00m - 5.50m Sand 5.50m - 9.00m	Well Stickup =-0.05m (RL 50.17m) 0.05m - 6.0m PVC casing (50mm Ø) 6.0m - 9.0m PVC screen (50mm Ø)

BOREHOLE LOG

BH ID: BH201M

Location	13-15, Oxford Street and 2 Verona Street Paddington NSW			**Started**	09 September 2025
Client	Aspire Property Consulting			**Completed**	10 September 2025
Job No.	E25559.G04			**Logged By**	S2 **Date** 09 September 2025
Sheets	1 of 3			**Review By**	SK **Date**
Drilling Contractor	STS Geotechnics	**Surface RL**	≈50.10 m (AHD)	**Northing**	6250678.9 (MGA 2020 Zone 56)
Plant	Christie	**Inclination**	90°	**Easting**	332768.0 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (m AHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	DCP BLOWS	MATERIAL ORIGIN & OBSERVATIONS
DT				0.00		50.10	CONCRETE: 200mm thick	-	-		CONCRETE
AD/T	▷	BH201M_0.40-0.50		0.20		49.90	SAND: fine to medium grained, pale brown	D	VL - L	6, 5, 3, 1, 1, 2, 1, 1	MARINE SOIL
		BH201M_0.80-1.00		1						2, 2	
									D	4, 8, 6, 6, 8, 8, 8	
		BH201M_2.60-3.00		2					D - VD	10, 10, 10, 11, 12, 13, 11, 10, 9, 8, 9, 12, 7, 20	
		BH201M_3.40-3.60 BH201M_3.50-3.70		3							
				4				M			
				5		45.10	From 5.00m, red brown with clay nodules.		-		
		BH201M_5.20-5.30		5.00							
				6							
				7				W			
				8							
				9							
				9.50		40.60	Sandy CLAY: low plasticity, pale grey	M > PL			RESIDUAL SOIL
				10							

BOREHOLE LOG

BH ID: BH201M

Location	13-15, Oxford Street and 2 Verona Street Paddington NSW			**Started**	09 September 2025
Client	Aspire Property Consulting			**Completed**	10 September 2025
Job No.	E25559.G04			**Logged By**	S2 **Date** 09 September 2025
Sheets	2 of 3			**Review By**	SK **Date**
Drilling Contractor	STS Geotechnics	**Surface RL**	≈50.10 m (AHD)	**Northing**	6250678.9 (MGA 2020 Zone 56)
Plant	Christie	**Inclination**	90°	**Easting**	332768.0 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (m AHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	DCP BLOWS 0 5 10 15 20 25 30	MATERIAL ORIGIN & OBSERVATIONS
AD/T				10.10		40.00	Sandy CLAY: low plasticity, pale grey *Log continued on next page.*	M > PL	-		RESIDUAL SOIL

BOREHOLE CORE LOG

BH ID: BH201M

Location	13-15, Oxford Street and 2 Verona Street Paddington NSW			**Started**	09 September 2025
Client	Aspire Property Consulting			**Completed**	10 September 2025
Job No.	E25559.G04			**Logged By**	S2 **Date** 09 September 2025
Sheets	3 of 3			**Review By**	SK **Date**
Drilling Contractor	STS Geotechnics	**Surface RL**	≈50.10 m (AHD)	**Northing**	6250678.9 (MGA 2020 Zone 56)
Plant	Christie	**Inclination**	90°	**Easting**	332768.0 (MGA 2020 Zone 56)

METHOD	Flush Return	TCR %	RQD %	DEPTH (m)	GRAPHIC LOG	RL (m AHD)	MATERIAL DESCRIPTION	WEATHERING	ESTIMATED STRENGTH Is(50) ▼ - Axial ▽ - Diametral (VL 0-1, L 0-3, M 1, H 3, VH 10, EH)	DISCONTINUITIES & ADDITIONAL DATA	FRACTURE SPACING (30, 100, 300, 1000, 3000)
				10			*Log continued from previous page.*				
						39.87	NO CORE: 130mm thick	---			
				10.23			SANDSTONE: fine to medium grained, with dark grey laminate, thinly bedded.			10.23-10.25: CS 10.28-10.33: CS 10.38-10.42: CS 10.52-10.56: CS	
		91	81	11				FR		11.03-11.06: XWS	
		76	46	12						11.62-11.85: XWZ 12.06: JT 80° RO Fe SN	
				12.73		37.37	NO CORE: 370mm thick	---		12.68-12.73: XWS	
				13							
				13.10		37.00	SANDSTONE: fine to medium grained, with dark grey laminate, thinly bedded.	FR		13.20-13.79: XWZ	
NMLC	30%	46	0	13.79		36.31	NO CORE: 810mm thick	---			
				14							
		100	0	14.60		35.50	SANDSTONE: fine to medium grained, with extremely weathered bands and dark grey laminate, thinly bedded.	FR		14.60-15.00: XWZ	
				15							
				15.00		35.10	NO CORE: 200mm thick	---			
		80	25	15.20		34.90	SANDSTONE: fine to medium grained, with extremely weathered bands and dark grey and brown laminate, thinly bedded.	FR		15.40: JT 30° PR RO Fe SN 15.62: JT 50-60° PR RO Fe SN 15.77-16.00: XWZ	
				16							
				16.00		34.10	NO CORE: 520mm thick	---			
		48	10	16.52		33.58	SANDSTONE: fine to medium grained, grey with dark grey laminate,thinly bedded.			16.60-16.65: CS 16.77-16.80: XWS 16.95: JT 90° PR RO CN	
		100	100	17				FR		17.78: BP 5° PR SM Infilled	
						32.30	Terminated at 17.80m. Target Depth Reached.				
				18							
				19							
				20							

MONITORING WELL LOG

BH ID: BH201M

Location	13-15, Oxford Street and 2 Verona Street Paddington NSW			**Started**	09 September 2025
Client	Aspire Property Consulting			**Completed**	10 September 2025
Job No.	E25559.G04			**Logged By**	S2 **Date** 09 September 2025
Sheets	1 of 2			**Review By**	SK **Date**
Drilling Contractor	STS Geotechnics	**Surface RL**	≈50.10 m (AHD)	**Northing**	6250678.9 (MGA 2020 Zone 56)
Plant	Christie	**Inclination**	90°	**Easting**	332768.0 (MGA 2020 Zone 56)

WATER	SAMPLES & FIELD TESTS	DEPTH (m)	RL (m AHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	BACKFILL DETAILS	STANDPIPE DETAILS
		0.00	50.10	CONCRETE: 200mm thick	-		Well Stickup =0.0m (RL 50.10m)
		0.20	49.90	SAND: fine to medium grained, pale brown			
	BH201M_0.40-0.50					Grout 0.00m - 1.00m	
	BH201M_0.80-1.00						
					D		
	BH201M_2.60-3.00						
	BH201M_3.40-3.60						
	BH201M_3.50-3.70						
					M	Sand 1.00m - 8.50m	
		5.00	45.10	From 5.00m, red brown with clay nodules.			
	BH201M_5.20-5.30						0.0m - 11.10m PVC casing (50mm Ø)
▽							
					W		
						Bentonite 8.50m - 9.50m	
		9.50	40.60	Sandy CLAY: low plasticity, pale grey	M > PL		
		10					

MONITORING WELL LOG

BH ID: BH201M

Location	13-15, Oxford Street and 2 Verona Street Paddington NSW			**Started**	09 September 2025
Client	Aspire Property Consulting			**Completed**	10 September 2025
Job No.	E25559.G04			**Logged By**	S2 **Date** 09 September 2025
Sheets	2 of 2			**Review By**	SK **Date**
Drilling Contractor	STS Geotechnics	**Surface RL**	≈50.10 m (AHD)	**Northing**	6250678.9 (MGA 2020 Zone 56)
Plant	Christie	**Inclination**	90°	**Easting**	332768.0 (MGA 2020 Zone 56)

WATER	SAMPLES & FIELD TESTS	DEPTH (m)	RL (m AHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION
		10.10	40.00	Sandy CLAY: low plasticity, pale grey	M > PL
				NO CORE: 130mm thick	
		10.23	39.87	SANDSTONE: fine to medium grained, with dark grey laminate, thinly bedded.	
		12.73	37.37	NO CORE: 370mm thick	
		13.10	37.00	SANDSTONE: fine to medium grained, with dark grey laminate, thinly bedded.	
30%		13.79	36.31	NO CORE: 810mm thick	
		14.60	35.50	SANDSTONE: fine to medium grained, with extremely weathered bands and dark grey laminate, thinly bedded.	
		15.00	35.10	NO CORE: 200mm thick	
		15.20	34.90	SANDSTONE: fine to medium grained, with extremely weathered bands and dark grey and brown laminate, thinly bedded.	
		16.00	34.10	NO CORE: 520mm thick	
		16.52	33.58	SANDSTONE: fine to medium grained, grey with dark grey laminate,thinly bedded.	
			32.30	Terminated at 17.80m. Target Depth Reached.	

BACKFILL DETAILS

Sand
9.50m - 14.10m

Bentonite
14.10m - 15.00m

Sand
15.00m - 17.80m

STANDPIPE DETAILS

11.10m - 14.10m
PVC screen (50mm Ø)

BOREHOLE LOG

BH ID: BH208M

Location	13-15, Oxford Street and 2 Verona Street Paddington NSW			**Started**	08 September 2025
Client	Aspire Property Consulting			**Completed**	08 September 2025
Job No.	E25559.G04			**Logged By**	S2 **Date** 08 September 2025
Sheets	1 of 3			**Review By**	SK **Date**
Drilling Contractor	Tightsite Geotechnical & Environmental Drilling	**Surface RL**	≈43.50 m (AHD)	**Northing**	6251631.2 (MGA 2020 Zone 56)
Plant	Hand Portable Rig	**Inclination**	90°	**Easting**	333765.5 (MGA 2020 Zone 56)

METHOD	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	SAMPLE RECOVERY	DEPTH (m)	GRAPHIC LOG	RL (m AHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY / REL. DENSITY	DCP BLOWS	MATERIAL ORIGIN & OBSERVATIONS
DT				0.00		43.50	CONCRETE: 200mm thick	-	-		CONCRETE
HA	▽	BH208M_0.60-0.70		0.20		43.30	Sandy CLAY: low plasticity, pale brown and red brown, with fine to coarse grained sandstone gravels.	M	St	3, 3, 5, 4, 4, 3, 2	RESIDUAL SOIL
								W	VSt	6, 6, 5, 6, 6, 6, 6, 15/50mm	
				2.00		41.50	*Log continued on next page.*				

0 5 10 15 20 25 30

BOREHOLE CORE LOG

BH ID: BH208M

Location	13-15, Oxford Street and 2 Verona Street Paddington NSW			**Started**	08 September 2025
Client	Aspire Property Consulting			**Completed**	08 September 2025
Job No.	E25559.G04			**Logged By**	S2 **Date** 08 September 2025
Sheets	2 of 3			**Review By**	SK **Date**
Drilling Contractor	Tightsite Geotechnical & Environmental Drilling	**Surface RL**	≈43.50 m (AHD)	**Northing**	6251631.2 (MGA 2020 Zone 56)
Plant	Hand Portable Rig	**Inclination**	90°	**Easting**	333765.5 (MGA 2020 Zone 56)

METHOD	Flush Return	TCR %	RQD %	DEPTH (m)	GRAPHIC LOG	RL (m AHD)	MATERIAL DESCRIPTION	WEATHERING	ESTIMATED STRENGTH Is(50) ▼ - Axial ▽ - Diametral (VL 0-1, L 0-3, M 1, H 3, VH 10, EH)	DISCONTINUITIES & ADDITIONAL DATA	FRACTURE SPACING (30, 100, 300, 1000, 3000)
				0			*Log continued from previous page.*				
NMLC	95%	100	31	2			SANDSTONE: fine to medium grained, red brown and grey, ironstained, with extremely weathered bands,thinly bedded.	DW		2.30-3.00: XWZ	
				3.00		40.50	SANDSTONE: fine to medium grained,red brown and grey,ironstained, with dark brown and grey laminate, thinly bedded.			3.22-3.24: CS	
		100	90	4.00		39.50	SANDSTONE: fine to medium grained,grey and red brown,ironstained, with dark grey laminate and trace of carbonaceous lenses,thinly bedded.	SW		3.80-3.96: CZ	
		100	100	5.60		37.90	SANDSTONE: fine to medium grained, grey with dark grey laminate, thinly bedded.			6.48: BP 5° PR RO Clay VN	
		100	100	7.60		35.90	From 7.60m, interbedded siltstone bands.	FR		6.88-6.91: XWS 7.61-7.63: CS	
		100	100	8.00		35.50	SANDSTONE: fine to medium grained, grey with dark grey laminate, thinly bedded.				
				8.30		35.20	From 8.30m, thinly to medium bedded.				
				10							

BOREHOLE CORE LOG

BH ID: BH208M

Location	13-15, Oxford Street and 2 Verona Street Paddington NSW			**Started**	08 September 2025		
Client	Aspire Property Consulting			**Completed**	08 September 2025		
Job No.	E25559.G04			**Logged By**	S2	**Date**	08 September 2025
Sheets	3 of 3			**Review By**	SK	**Date**	
Drilling Contractor	Tightsite Geotechnical & Environmental Drilling	**Surface RL**	≈43.50 m (AHD)	**Northing**	6251631.2 (MGA 2020 Zone 56)		
Plant	Hand Portable Rig	**Inclination**	90°	**Easting**	333765.5 (MGA 2020 Zone 56)		

METHOD	Flush Return	TCR %	RQD %	DEPTH (m)	GRAPHIC LOG	RL (m AHD)	MATERIAL DESCRIPTION	WEATHERING	ESTIMATED STRENGTH Is(50) ▼ - Axial ▽ - Diametral (VL 0-1, L 0-3, M 1, H 3, VH 10, EH)	DISCONTINUITIES & ADDITIONAL DATA	FRACTURE SPACING (30, 100, 300, 1000, 3000)
NMLC	95%	100	100	11			From 8.30m, thinly to medium bedded.	FR			
						32.12	Terminated at 11.38m. Target Depth Reached.				
				12							
				13							
				14							
				15							
				16							
				17							
				18							
				19							
				20							

MONITORING WELL LOG

BH ID: BH208M

Location	13-15, Oxford Street and 2 Verona Street Paddington NSW			**Started**	08 September 2025
Client	Aspire Property Consulting			**Completed**	08 September 2025
Job No.	E25559.G04			**Logged By**	S2 **Date** 08 September 2025
Sheets	1 of 2			**Review By**	SK **Date**
Drilling Contractor	Tightsite Geotechnical & Environmental Drilling	**Surface RL**	≈43.50 m (AHD)	**Northing**	6251631.2 (MGA 2020 Zone 56)
Plant	Hand Portable Rig	**Inclination**	90°	**Easting**	333765.5 (MGA 2020 Zone 56)

WATER	SAMPLES & FIELD TESTS	DEPTH (m)	RL (m AHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION
		0.00	43.50	CONCRETE: 200mm thick	-
		0.20	43.30	Sandy CLAY: low plasticity, pale brown and red brown, with fine to coarse grained sandstone gravels.	M
	BH208M_0.60-0.70				
		2.00	41.50	SANDSTONE: fine to medium grained, red brown and grey, ironstained, with extremely weathered bands,thinly bedded.	W
		3.00	40.50	SANDSTONE: fine to medium grained,red brown and grey,ironstained, with dark brown and grey laminate, thinly bedded.	
		4.00	39.50	SANDSTONE: fine to medium grained,grey and red brown,ironstained, with dark grey laminate and trace of carbonaceous lenses,thinly bedded.	
95%		5.60	37.90	SANDSTONE: fine to medium grained, grey with dark grey laminate, thinly bedded.	
		7.60	35.90	From 7.60m, interbedded siltstone bands.	
		8.00	35.50	SANDSTONE: fine to medium grained, grey with dark grey laminate, thinly bedded.	
		8.30	35.20	From 8.30m, thinly to medium bedded.	

BACKFILL DETAILS

Bentonite
0.00m - 3.20m

Sand
3.20m - 8.10m

Bentonite
8.10m - 8.60m

STANDPIPE DETAILS

Well Stickup =0.0m
(RL 43.50m)

0.0m - 5.10m
PVC casing (50mm Ø)

5.10m - 8.10m
PVC screen (50mm Ø)

MONITORING WELL LOG

BH ID: BH208M

Location	13-15, Oxford Street and 2 Verona Street Paddington NSW			**Started**	08 September 2025
Client	Aspire Property Consulting			**Completed**	08 September 2025
Job No.	E25559.G04			**Logged By**	S2 **Date** 08 September 2025
Sheets	2 of 2			**Review By**	SK **Date**
Drilling Contractor	Tightsite Geotechnical & Environmental Drilling	**Surface RL**	≈43.50 m (AHD)	**Northing**	6251631.2 (MGA 2020 Zone 56)
Plant	Hand Portable Rig	**Inclination**	90°	**Easting**	333765.5 (MGA 2020 Zone 56)

WATER	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	RL (m AHD)	MATERIAL DESCRIPTION	MOISTURE CONDITION	BACKFILL DETAILS	STANDPIPE DETAILS
95%		11			From 8.30m, thinly to medium bedded.		Sand 8.60m - 11.38m	
				32.12	Terminated at 11.38m. Target Depth Reached.			
		12						
		13						
		14						
		15						
		16						
		17						
		18						
		19						
		20						

BOREHOLE LOG

CLIENT: Verona Co
PROJECT: Proposed Commercial Development
LOCATION: 17 Oxford Street, Paddington

SURFACE LEVEL: 50.3 AHD
EASTING: 335356.3168
NORTHING: 6249430.6883
DIP/AZIMUTH: 90°/--

BORE No: BH1
PROJECT No: 212062.00
DATE: 12/9/2022
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
50	0.26	CONCRETE										
	0.5	FILL/SAND: fine to medium, dark grey, trace sandstone gravel, moist										
		SAND: fine to medium, dark grey, trace sandstone gravel, moist, aeolian							A			
49	1.2	SAND: fine to medium, pale grey and yellow-brown, moist							A			
48												
47						13-10-22						
46												
45	5.5	Clayey SAND: fine to medium, pale grey and yellow-brown, trace sandstone and ironstone gravel, moist							A			
44	6.27	SANDSTONE: medium grained, red-brown-brown, low strength with some clay seams, highly weathered, fractured, Hawkesbury Sandstone						6.34-6.47m: B(x3)0°-15°, pl, ro, cly co 6.68-6.80m: B(x2)15°, pl, ro, cly co 6.85m: B15°, pl, ro, cly co 6.92m: B15°, pl, ro, cly co 7.03-7.09m: B(x3)15°, pl, ro, cly co 7.32m: B0°-10°, pl, ro, cly 3mm 7.34m: B0°-10°, pl, ro, cly co 7.39-7.40m: B(x2)0°-10°, pl, ro, cly co 7.54m: B0°-10°, pl, ro, cly co 7.65m: Cs 50mm CORE LOSS: 50mm 7.97m: Cs 50mm	C	97	77	PL(A) = 0.14
43	7.7											
42	8.05	SANDSTONE: medium grained, red-brown-brown, medium strength, moderately weathered, slightly fractured, Hawkesbury Sandstone							C	100	100	PL(A) = 0.23 PL(A) = 0.42
41									C	100	95	PL(A) = 0.44

RIG: Underpinner (Short Mast) **DRILLER:** Ground Test **LOGGED:** RS **CASING:** 100mm PVC to 6.27m

TYPE OF BORING: 110mm Diatube to 0.26m, Solid Flight Auger (TC-bit) to 6.27m, NMLC Coring to 19.85m

WATER OBSERVATIONS: Groundwater observed at 5.0m depth whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. Standpipe installed to 19.85m (screen 4.8m-19.85m, PVC 0.0m-4.8m, Gravel 4.6m-19.85m, Bentonite 3.6m-4.6m, Gravel to 0.1m, gatic cover at top)

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U$_x$	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Verona Co
PROJECT: Proposed Commercial Development
LOCATION: 17 Oxford Street, Paddington

SURFACE LEVEL: 50.3 AHD
EASTING: 335356.3168
NORTHING: 6249430.6883
DIP/AZIMUTH: 90°/--

BORE No: BH1
PROJECT No: 212062.00
DATE: 12/9/2022
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Type	Core Rec. %	RQD %	Test Results & Comments
40	10.2	SANDSTONE: medium grained, pale grey, medium to high strength, fresh, unbroken, Hawkesbury Sandstone						10m: B0°-10°, pl, ro, cly 3mm 10.13m: B0°, pl, ro, cln	C	100	95	
39	11							11.2m: B0°, pl, ro, cly vn	C	100	100	PL(A) = 0.45 PL(A) = 0.31
38	12							12.06m: J10°, pl, ro, cln 12.27m: B0°, pl, ro, cln				
37	13								C	100	100	PL(A) = 0.63
36	14							13.7m: B0°, pl, ro, cly vn	C	100	100	PL(A) = 0.25
35	15											PL(A) = 2.28
34	16							15.91m: J20°, pl, ro, cly co	C	100	100	PL(A) = 0.93
33	17							16.69-16.70m: Cs 16.78m: B0°, pl, ro, cly vn 17.37m: B0°, pl, ro, cly vn	C	100	100	PL(A) = 0.9
32	18							17.98m: B0°, pl, ro, cln				PL(A) = 1.32
31	19							18.61m: B10°, pl, ro, cln	C	100	100	PL(A) = 1.28
	19.85	Bore discontinued at 19.85m Target Depth Reached										PL(A) = 1.84

RIG: Underpinner (Short Mast) **DRILLER:** Ground Test **LOGGED:** RS **CASING:** 100mm PVC to 6.27m

TYPE OF BORING: 110mm Diatube to 0.26m, Solid Flight Auger (TC-bit) to 6.27m, NMLC Coring to 19.85m

WATER OBSERVATIONS: Groundwater observed at 5.0m depth whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. Standpipe installed to 19.85m (screen 4.8m-19.85m, PVC 0.0m-4.8m, Gravel 4.6m-19.85m, Bentonite 3.6m-4.6m, Gravel to 0.1m, gatic cover at top)

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U,	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Verona Co
PROJECT: Proposed Commercial Development
LOCATION: 17 Oxford Street, Paddington

SURFACE LEVEL: 50.3 AHD
EASTING: 335349.6431
NORTHING: 6249440.1846
DIP/AZIMUTH: 90°/--

BORE No: BH2A
PROJECT No: 212062.00
DATE: 15/9/2022
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
50	0.27	CONCRETE										
	0.6	FILL/SAND: fine to medium, dark grey, trace sandstone gravel, moist										
49	1	SAND: fine to medium, dark grey, trace sandstone gravel, moist, aeolian										
	1.3	SAND: fine to medium, pale grey and yellow-brown, moist										
48	2											
47	3											
46	4											
45	5					13-10-22						
	5.6	Clayey SAND: fine to medium, pale grey and yellow-brown, trace sandstone and ironstone gravel, moist										
	5.9	SANDSTONE: medium grained, red-brown-brown, low strength with some low strength pale grey bands, moderately then highly weathered, slightly fractured, Hawkesbury Sandstone						6.41-6.66m: Cs 6.95m: Cs 10mm	C	100	100	PL(A) = 0.5
44	6											
43	7								C	100	100	
	7.48	SANDSTONE: medium grained, red-brown-brown, medium strength, moderately weathered, slightly fractured and unbroken, Hawkesbury Sandstone							C	100	100	PL(A) = 0.44
42	8											
												PL(A) = 0.26
41	9							8.93m: B0°, pl, ro, cly co 9.48m: B10°, pl, ro, cly co 9.68m: B0°-5°, pl, ro, cln	C	100	100	PL(A) = 0.75

RIG: Underpinner (Tall Mast) **DRILLER:** Ground Test **LOGGED:** RS **CASING:** 100mm PVC to 5.9m

TYPE OF BORING: 110mm Diatube to 0.27m, Solid Flight Auger (TC-bit) to 5.9m, NMLC Coring to 19.63m

WATER OBSERVATIONS: Groundwater observed at 5.1m depth whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. Standpipe installed to 19.5m (screen 4.4m-19.5m, PVC 0.0m-4.4m, Gravel 3.9m-19.5m, Bentonite 2.9m-3.9m, Gravel to 0.1m, gatic cover at top)

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U,	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Verona Co
PROJECT: Proposed Commercial Development
LOCATION: 17 Oxford Street, Paddington

SURFACE LEVEL: 50.3 AHD
EASTING: 335349.6431
NORTHING: 6249440.1846
DIP/AZIMUTH: 90°/--

BORE No: BH2A
PROJECT No: 212062.00
DATE: 15/9/2022
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low, Very Low, Low, Medium, High, Very High, Ex High)	Water	Fracture Spacing (m) (0.01, 0.05, 0.10, 0.50, 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Type	Core Rec. %	RQD %	Test Results & Comments
40		SANDSTONE: medium grained, red-brown-brown, medium strength, moderately weathered, slightly fractured and unbroken, Hawkesbury Sandstone *(continued)*						10.23-10.25m: Cs	C	100	100	
								10.59m: B0°-5°, pl, ro, cly co	C	100	100	PL(A) = 0.68
39	11							11.43m: B10°, pl, ro, cln 11.55m: B0°, pl, ro, cln				
	11.82	SANDSTONE: medium grained, pale brown to pale grey, 10% dark grey siltstone laminations, medium to high strength, fresh, slightly fractured and unbroken, Hawkesbury Sandstone										PL(A) = 0.46
38	12							12.23m: B30°, pl, ro, cln	C	100	100	
	13											PL(A) = 0.49
37												PL(A) = 1.11
36	14							14.22-14.27m: B(x2)0°, pl, ro, Fe stn 14.3m: B0°, pl, ro, Fe stn 14.33m: B20°, pl, ro, Fe stn	C	100	92	
	15	Below 15.38m: becoming 20% dark grey siltstone laminations										PL(A) = 1.6
35								15.67m: B10°, pl, ro, cln	C	100	100	
	16											PL(A) = 1.69
34	17											PL(A) = 1.4
33								17.73m: B10°, pl, ro, cly co 5mm	C	100	100	
	18											PL(A) = 1.04
32								18.65-18.66m: Cs				
	19								C	100	100	PL(A) = 2.12
31	19.63	Bore discontinued at 19.63m Target Depth Reached										PL(A) = 2.08

RIG: Underpinner (Tall Mast) **DRILLER:** Ground Test **LOGGED:** RS **CASING:** 100mm PVC to 5.9m

TYPE OF BORING: 110mm Diatube to 0.27m, Solid Flight Auger (TC-bit) to 5.9m, NMLC Coring to 19.63m

WATER OBSERVATIONS: Groundwater observed at 5.1m depth whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. Standpipe installed to 19.5m (screen 4.4m-19.5m, PVC 0.0m-4.4m, Gravel 3.9m-19.5m, Bentonite 2.9m-3.9m, Gravel to 0.1m, gatic cover at top)

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U$_x$	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

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Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Verona Co
PROJECT: Proposed Commercial Development
LOCATION: 17 Oxford Street, Paddington

SURFACE LEVEL: 47.25 AHD
EASTING: 335381.5612
NORTHING: 6249458.4724
DIP/AZIMUTH: 90°/--

BORE No: BH4A
PROJECT No: 212062.00
DATE: 18/9/2022
SHEET 1 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering	Graphic Log	Rock Strength	Water	Fracture Spacing (m)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Sampling & In Situ Testing: Type	Core Rec. %	RQD %	Test Results & Comments
47	0.15	ASPHALTIC CONCRETE: 150mm										
		FILL/SAND: medium brown to dark grey, with rootlets, trace siltstone gravel, dry										
46	1											
	1.8	SAND: fine to medium, dark brown, loose to medium dense, moist, aeolian										
45	2								S			5,7,8 N = 15
44	3											
43	4					14-10-22						
	4.0	SAND: fine to medium, pale grey, medium dense to dense, moist, aeolian							S			7,8,16 N = 24
42	5											
	5.2	Clayey SAND: fine to medium, red-brown, dense, moist Below 5.6m: grading into extremely weathered sandstone							S			8,10,25 N = 35
	6											
41	6.1	SANDSTONE: medium grained, red-brown and brown, low strength with some clay seams, highly to moderately weathered, slightly fractured, Hawkesbury Sandstone						6.54-6.65m: J70°, pl, ro, cln 7.04-7.10m: J50°, pl, ro, cly co 7.23-7.27m: Cs	C	100	100	PL(A) = 0.1
	7											
40	8											PL(A) = 0.11
												PL(A) = 0.13
39	9							8.78-8.97m: J80°, pl, ro, cln 9.06-10.86m: J80°, ir, he	C	100	100	
38												
	10.0											PL(A) = 0.21

RIG: Bobcat (Tall Mast) **DRILLER:** Ground Test **LOGGED:** RS **CASING:** HQ to 2.5m

TYPE OF BORING: Non Destructive Digging to 2.5m, Solid Flight Auger to 5.6m, Washbore to 6.1m, NMLC Coring to 20.0m

WATER OBSERVATIONS: Groundwater observed at 4.1m depth whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. Standpipe installed to 20.0m (screen 4.6m-20.0m, PVC 0.0m-4.6m, Gravel 4.1m-20.0m, Bentonite 3.1m-4.1m, Gravel to 0.1m, gatic cover at top)

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U,	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▽	Water level	V	Shear vane (kPa)

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BOREHOLE LOG

CLIENT: Verona Co
PROJECT: Proposed Commercial Development
LOCATION: 17 Oxford Street, Paddington

SURFACE LEVEL: 47.25 AHD
EASTING: 335381.5612
NORTHING: 6249458.4724
DIP/AZIMUTH: 90°/--

BORE No: BH4A
PROJECT No: 212062.00
DATE: 18/9/2022
SHEET 2 OF 2

RL	Depth (m)	Description of Strata	Degree of Weathering (EW HW MW SW FS FR)	Graphic Log	Rock Strength (Ex Low / Very Low / Low / Medium / High / Very High / Ex High)	Water	Fracture Spacing (m) (0.01 / 0.05 / 0.10 / 0.50 / 1.00)	Discontinuities (B - Bedding J - Joint S - Shear F - Fault)	Type	Core Rec. %	RQD %	Test Results & Comments
37		SANDSTONE: *(Refer to previous page)*										
	10.6											
36	11	SANDSTONE: medium grained, brown to grey, medium strength, moderately weathered, slightly fractured, Hawkesbury Sandstone						11.04-11.10m: J80°, ir, he	C	100	100	PL(A) = 0.5
35	12							11.82-11.85m: J45°, ir, ro, cln 11.88-12.30m: J70°, ir, ro, fe				PL(A) = 0.6
	12.9											PL(A) = 0.58
34	13	SANDSTONE: medium grained, pale grey, 10-20% dark grey siltstone laminations, medium and high strength, fresh, slightly fractured and unbroken, Hawkesbury Sandstone							C	100	100	
								13.61m: B0°, ro, cln, cly vo				PL(A) = 0.88
33	14											
32	15											PL(A) = 0.7
								15.49m: B45°, ro, pl, cln				
												PL(A) = 1.34
31	16								C	100	100	
								16.53m: B0°, ro, pl, cln				
30	17											PL(A) = 0.96
												PL(A) = 0.92
29	18							18.1m: B10°, pl, ro, cly co 18.27m: B30°, pl, ro, cln	C	100	100	
								18.9m: B10°, pl, ro, cln				PL(A) = 1.95
28	19								C	100	100	
								19.73m: B0°, pl, ro, cln				PL(A) = 1.28
	20.0	Bore discontinued at 20.0m										

RIG: Bobcat (Target Depth) **DRILLER:** Ground Test **LOGGED:** RS **CASING:** HQ to 2.5m

TYPE OF BORING: Non Destructive Digging to 2.5m, Solid Flight Auger to 5.6m, Washbore to 6.1m, NMLC Coring to 20.0m

WATER OBSERVATIONS: Groundwater observed at 4.1m depth whilst augering

REMARKS: Location coordinates are in MGA94 Zone 56. Standpipe installed to 20.0m (screen 4.6m-20.0m, PVC 0.0m-4.6m, Gravel 4.1m-20.0m, Bentonite 3.1m-4.1m, Gravel to 0.1m, gatic cover at top)

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U,	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	▷	Water seep	S	Standard penetration test
E	Environmental sample	▼	Water level	V	Shear vane (kPa)

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Appendix F – GME Fieldwork Sheet and NSW Groundwater Map

WATER SAMPLING FIELD SHEET

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Site Address: 17 Oxford Street, Paddington	Job Number: E25559
Client:	Date: 1/8/23
Field Staff:	Sampling Location ID GW BH101M
Well Location:	Round No: 1

MEDIUM ☑Groundwater ☐Surface Water ☐Stormwater ☐Other:

SAMPLING POINT INFO

Well Installation Date:	Stick up / down (m): -0.05 (+ above ground - below ground)
Initial Well Depth (mBTOC):	Screen Interval (mBTOC):
Previous Sampling Date:	Previous SWL (mBTOC):

PID READINGS

PID Headspace (ppm): 0	PID Background (ppm): 0
PID Breathing Space (ppm): 0	

PRE PURGE

Total Well Depth (mBTOC): 8.8	Well Head Condition: good
SWL (mBTOC): 5.92	Water Column (m): 2.88

PHASE SEPARATED HYDROCARBONS (PSH)

Depth to PSH (mBTOC):	PSH Visually Confirmed (Bailer):
PSH Thickness (mm):	

Field Filtered

Yes (0.45 µm) ☑ No ☐ (Request lab 0.45 µm filter the sample)

PURGE AND SAMPLE

Sampling Method ☐Bladder ☑Peristaltic ☐Submersible ☐Other:

Depth of Pump Inlet (mBTOC):	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer:
Weather Conditions: drizzling	Cycle:
Pump on time: 11:00	Pump off time:

WATER QUALITY PARAMETERS

Probe Make and Model: | 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.)
11:15	0.5	5.93	16.91	2625	50.6	1.46	6.78	slightly cloudy, low T, NO, NS
11:20	1	5.93	16.97	618	36.3	1.31	6.69	"
11:25	1.6	5.93	16.98	458	34.5	1.24	6.60	clear, low T, NO, NS
11:30	2	5.93	16.98	432	35.1	1.26	6.48	↓
11:35	2.5	5.93	16.98	429	34.6	1.24	6.41	↓
Stabilisation range: 3 consecutive readings			**±0.2°C**	**±3%**	**±20mV**	**±10%**	**±0.2**	

OTHER COMMENTS/OBSERVATIONS:

SIGNATURE:

GROUNDWATER GAUGING FIELD SHEET

Site Address:	Job Number:
Client:	Date:
Field Staff:	Round Number:

STATIC WATER LEVELS AND OBSERVATIONS

Probe Make and Model:

Well ID	Date	Time	Depth to PSH (m)	PSH Thickness (m)	Depth to Water (m BTOC)	Depth to Base (m)	Well Volume (L)	Distance TOC to Gatic (mm)	Comments (colour, turbidity, odour, sheen etc.)

WATER SAMPLING FIELD SHEET

17 Oxford street

eiaustralia

Site Address: 13-15 Oxford Street, 2 Verona Street	Job Number: E27159
Client:	Date: 16/9/25
Field Staff: MC	Sampling Location ID BH101M
Well Location: 17 Oxford Street	Round No: 2

MEDIUM ☒Groundwater ☐Surface Water ☐Stormwater ☐Other:

SAMPLING POINT INFO

Well Installation Date: -	Stick up / down (m): 0.07 (+ above ground - below ground)
Initial Well Depth (mBTOC): -	Screen Interval (mBTOC): -
Previous Sampling Date: -	Previous SWL (mBTOC): -

PID READINGS

PID Headspace (ppm): 0.1	PID Background (ppm): 0.0
PID Breathing Space (ppm): 0.1	

PRE PURGE

Total Well Depth (mBTOC): 8.75	Well Head Condition: Good
SWL (mBTOC): 4.72	Water Column (m): -

PHASE SEPARATED HYDROCARBONS (PSH)

Depth to PSH (mBTOC): -	PSH Visually Confirmed (Bailer): No PSH
PSH Thickness (mm): -	

Field Filtered

Yes (0.45 µm) ☒ No ☐ (Request lab 0.45 µm filter the sample)

PURGE AND SAMPLE

Sampling Method ☒Bladder ☐Peristaltic ☐Submersible ☐Other:

Depth of Pump Inlet (mBTOC): 7.75	Fill Timer: 10
Pump Pressure Regulator (psi): -	Discharge Timer: 5
Weather Conditions: Cloudy	Cycle: -
Pump on time: 11.56	Pump off time: 12.18

WATER QUALITY PARAMETERS

Probe Make and Model: Hanna 98194 multiparameter 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.)
12.00	1	4.88	17.87	303	141.2	0.4	5.21	pale brown to clear, low turbidity,
12.03	1	5.01	17.41	309	140.1	0.4	5.03	no sheen, no odour
12.06	1	5.26	17.31	306	138.7	0.3	5.01	
12.09	1	5.41	17.19	303	137.1	0.3	4.99	
Stabilisation range: 3 consecutive readings			**±0.2°C**	**±3%**	**±20mV**	**±10%**	**±0.2**	

OTHER COMMENTS/OBSERVATIONS:

SIGNATURE:

WATER SAMPLING FIELD SHEET

eiaustralia

Site Address: B-15, 17 oxford street, 2 Verona Paddington	Job Number: G25779
Client: MC	Date: 16/9/25
Field Staff:	Sampling Location ID BH209M
Well Location: 13-15 oxford	Round No: 1

MEDIUM ☒Groundwater ☐Surface Water ☐Stormwater ☐Other:

SAMPLING POINT INFO

Well Installation Date: 8/9/25	Stick up / down (m): 0.1 (+ above ground - below ground)
Initial Well Depth (mBTOC): -	Screen Interval (mBTOC): -
Previous Sampling Date: -	Previous SWL (mBTOC):

PID READINGS

PID Headspace (ppm): 0.7	PID Background (ppm): 0.1
PID Breathing Space (ppm): 0.7	

PRE PURGE

Total Well Depth (mBTOC): 7.70	Well Head Condition: Good
SWL (mBTOC): 0.84	Water Column (m): -

PHASE SEPARATED HYDROCARBONS (PSH)

Depth to PSH (mBTOC):	PSH Visually Confirmed (Bailer): No PSH
PSH Thickness (mm):	

Field Filtered

Yes (0.45 µm) ☒	No ☐ (Request lab 0.45 µm filter the sample)

PURGE AND SAMPLE

Sampling Method ☒Bladder ☐Peristaltic ☐Submersible ☐Other:

Depth of Pump Inlet (mBTOC): 6.70	Fill Timer: 10
Pump Pressure Regulator (psi):	Discharge Timer: 5
Weather Conditions: Cloudy	Cycle: -
Pump on time: 12.21	Pump off time: 12.48

WATER QUALITY PARAMETERS

Probe Make and Model: Hanna 98194 multiparameter — 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.)
12.24	1	1.56	16.32	403	190.1	0.13	4.07	Pale brown, Grey, high turbidity,
12.27	1	1.93	16.35	408	232.1	0.5	4.7	no sheen, no odour
12.30	1	2.29	16.34	411	243.1	0.5	4.65	
12.33	1	2.50	16.33	414	243.9	0.04	4.69	
Stabilisation range: 3 consecutive readings			**±0.2°C**	**±3%**	**±20mV**	**±10%**	**±0.2**	

OTHER COMMENTS/OBSERVATIONS:

SIGNATURE:

WATER SAMPLING FIELD SHEET

eiaustralia

Site Address: 13-15, 17 Oxford Street, 2 Verona Street Paddington.	Job Number: E25559
Client:	Date: 16/9/25
Field Staff: MC	Sampling Location ID BH201M
Well Location: 2 Verona	Round No: 1

MEDIUM ☒Groundwater ☐Surface Water ☐Stormwater ☐Other:

SAMPLING POINT INFO

Well Installation Date: 9/9/25	Stick up / down (m): 0.08 (+ above ground - below ground)
Initial Well Depth (mBTOC): -	Screen Interval (mBTOC):
Previous Sampling Date: -	Previous SWL (mBTOC):

PID READINGS

PID Headspace (ppm): 2.4	PID Background (ppm): 0.2
PID Breathing Space (ppm): 0.8	

PRE PURGE

Total Well Depth (mBTOC): 14.15	Well Head Condition: Good
SWL (mBTOC): 8.14	Water Column (m): -

PHASE SEPARATED HYDROCARBONS (PSH)

Depth to PSH (mBTOC):	PSH Visually Confirmed (Bailer): No PSH
PSH Thickness (mm):	

Field Filtered

Yes (0.45 µm) ☒ No ☐ (Request lab 0.45 µm filter the sample)

PURGE AND SAMPLE

Sampling Method ☒Bladder ☐Peristaltic ☐Submersible ☐Other:

Depth of Pump Inlet (mBTOC): 13.15	Fill Timer: 10
Pump Pressure Regulator (psi):	Discharge Timer: 5
Weather Conditions: Cloudy	Cycle: -
Pump on time: 10.37	Pump off time: 11.05

WATER QUALITY PARAMETERS

Probe Make and Model: Hanna 91894 multiparameter 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.)
10.40	1	8.59	17.51	416	-267.9	0.01	5.89	brown, high turbidity, no odor/sheen.
10.44	1	9.28	17.79	384	-167.5	0.02	4.91	
10.47	1	10.00	17.79	401	-184.6	0.01	4.99	
10.50	1		17.71	412	-215.8	0.01	4.98	
Stabilisation range: 3 consecutive readings			**±0.2°C**	**±3%**	**±20mV**	**±10%**	**±0.2**	

OTHER COMMENTS/OBSERVATIONS:

QA/QC → QD - 20250916
QT - 20250916

SIGNATURE:

EI Australia
Suite 6.01, 55 Miller Street
PYRMONT, NSW, 2009

ABN 33 102 449 507
E service@eiaustralia.com.au
W www.eiaustralia.com.au
T 02 9516 0722

CALIBRATION CERTIFICATE
FOR PHOTO IONISATION DETECTOR

Instrument: Mini RAE 3000

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

Instrument Conditions: Good

Calibration gas species: Isobutylene.

Calibration gas concentration: 100 ppm

Gas bottle number: Lot 119291 CYL: 921

This PID has been calibrated to Isobutylene gas with the span concentration displayed as 100 ppm at 100 ppm span setting (allowable range +/-10ppm from span setting).

The PID is initially zero calibrated in fresh air.

Remaining gas in bottle: 350 psi (if reading is <250 psi, notify Equipment Manager to arrange new gas bottle order)

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

Signed: _____

Date: 02/08/2023

Time: _____

EI Australia
Suite 6.01, 55 Miller Street
PYRMONT, NSW, 2009

ABN 33 102 449 507
E service@eiaustralia.com.au
W www.eiaustralia.com.au
T 02 9516 0722

CALIBRATION CERTIFICATE
FOR PHOTO IONISATION DETECTOR

Instrument: Mini RAE 3000

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

Instrument Conditions: Good

Calibration gas species: Isobutylene.

Calibration gas concentration: 100 ppm

Gas bottle number: Part no 3405100 is OA, Batch WO 388602-3

This PID has been calibrated to Isobutylene gas with the span concentration displayed as 101.3 ppm at 100 ppm span setting (allowable range +/-10ppm from span setting).

The PID is initially zero calibrated in fresh air.

Remaining gas in bottle: 100 psi (if reading is <250 psi, notify Equipment Manager to arrange new gas bottle order)

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

Signed: [signature]

Date: 16/9/25

Time: 9.10am.

State Overview
State Overview

Rivers and Streams
favourites | search | download sites | find a site
⊞ Real Time Data - Rivers And Streams

Daily River Reports
⊞ Daily River Reports

Dams
favourites | search | download sites | find a site
⊞ Real Time Data - Major Dams

Groundwater (Telemetered data)
favourites | search | download sites | find a site
⊞ Real Time Data - Bores

All Groundwater Site details
search | download sites | find a site
search by licence
⊞ All Groundwater Map

Meteorology
favourites | search | download sites | find a site
⊞ Real Time Data - Weather Stations

Hunter Integrated Telemetry System
Hunter Integrated Telemetry System

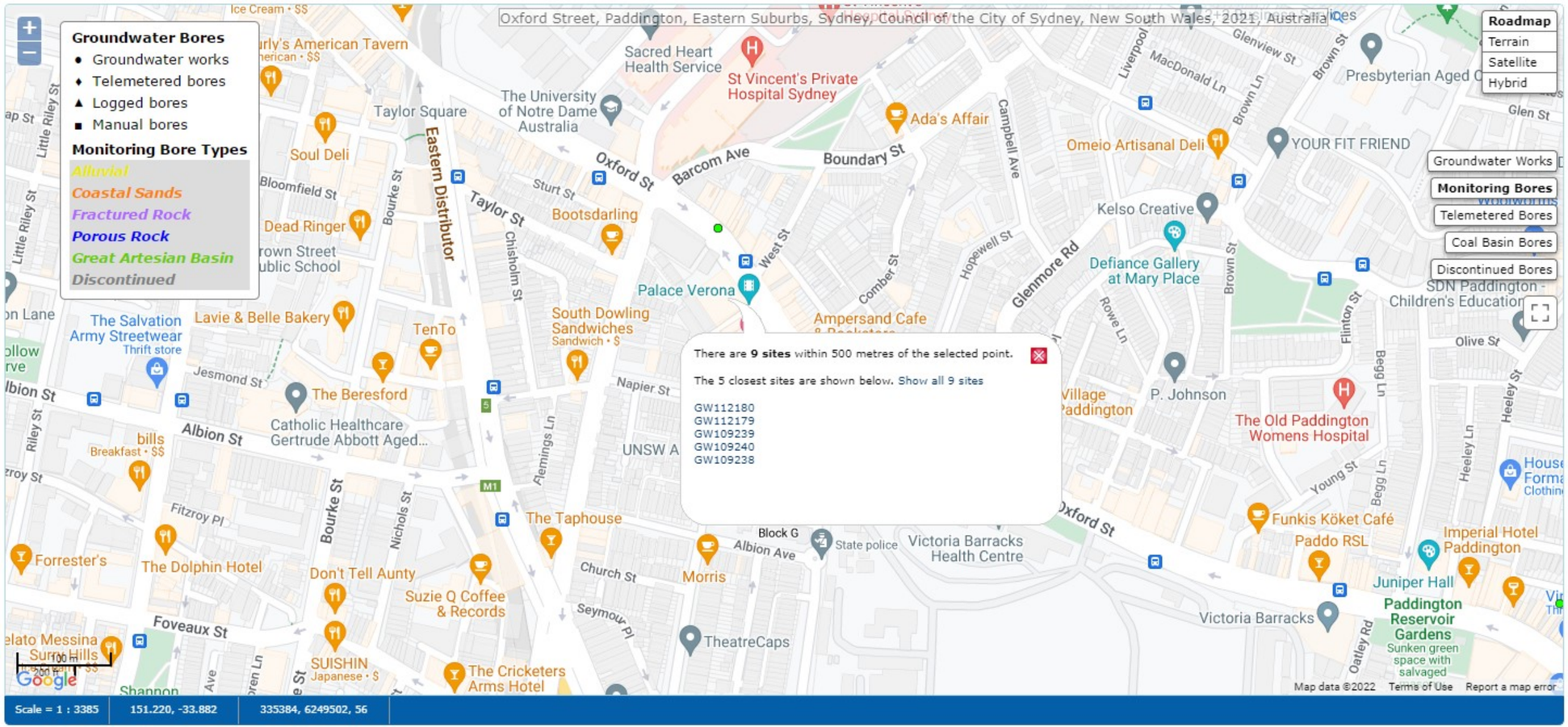
glossary and metadata
contact WaterNSW

ALL GROUNDWATER MAP

bookmark this page

All data times are Eastern Standard Time

Map | Info



WaterNSW
Work Summary

GW109238

Licence: 10BL602378 **Licence Status:** ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Battery Spears, Filter Pac
Work Status:
Construct.Method: Auger
Owner Type: Private

Commenced Date: **Final Depth:** 7.50 m
Completion Date: 19/08/2008 **Drilled Depth:** 7.50 m

Contractor Name: INVIRODRILL
Driller: Lloyd Norman Whitsed
Assistant Driller:

Property: TEPCORP HOLDINGS PTY LTD 350-352 Bourke St SURRY HILLS 2010 NSW **Standing Water Level (m):** 4.590
GWMA: - **Salinity Description:** Fresh
GW Zone: - **Yield (L/s):**

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ALEXANDRI	1//533894
Licensed:	CUMBERLAND	ALEXANDRIA	Whole Lot 1//533894

Region: 10 - Sydney South Coast **CMA Map:**
River Basin: - Unknown **Grid Zone:** **Scale:**
Area/District:

Elevation: 0.00 m (A.H.D.) **Northing:** 6249391.000 **Latitude:** 33°52'58.6"S
Elevation Source: Unknown **Easting:** 335069.000 **Longitude:** 151°12'59.7"E

GS Map: - **MGA Zone:** 56 **Coordinate Source:** Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	7.50	150			Auger
1		Annulus	Waterworn/Rounded	1.00	7.50				Graded
1	1	Casing	Pvc Class 18	0.00	1.50	50			Seated on Bottom, Screwed
1	1	Opening	Slots - Horizontal	1.50	7.30	50		0	Slotted In Hole, PVC Class 18, SL: 5.8mm, A: 0.20mm

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)
4.50	7.50	3.00	Unknown	4.59					

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	ASHPHALT	Ash	
0.10	0.40	0.30	FILL,BRICK,SANDSTONE	Fill	
0.40	2.50	2.10	CLAY BROWN	Clay Loam	
2.50	7.50	5.00	SHALE, RED/GREY	Shale	

***** End of GW109238 *****

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

GW109239

Licence: 10BL602379
Licence Status: ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status:
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 19/08/2008
Final Depth: 7.45 m
Drilled Depth: 7.45 m

Contractor Name: INVIRODRILL
Driller: Lloyd Norman Whitsed
Assistant Driller:

Property: TEPCORP HOLDINGS PTY LTD 4-12 Hill St SURRY HILLS 2010 NSW
GWMA: -
GW Zone: -
Standing Water Level (m): 4.570
Salinity Description: Fresh
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ALEXANDRI	2//78252
Licensed:	CUMBERLAND	ALEXANDRIA	Whole Lot 2//78252

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: 6249385.000
Easting: 335107.000
Latitude: 33°52'58.8"S
Longitude: 151°13'01.2"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	7.45	150			Auger
1		Annulus	Waterworn/Rounded	1.00	7.45				Graded
1	1	Casing	Pvc Class 18	0.00	1.50	50			Seated on Bottom, Screwed
1	1	Opening	Slots - Horizontal	1.50	7.20	50		0	Slotted In Hole, PVC Class 18, SL: 5.7mm, A: 0.20mm

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)
3.00	7.40	4.40	Unknown	4.57					

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	0.10	0.10	ASHPHALT	Ash	
0.10	0.60	0.50	FILL BROWN,GRAVEL,CLAY	Fill	
0.60	2.90	2.30	CLAY BROWN ORANGE,RED,SILT MOIST	Clay Loam	
2.90	7.45	4.55	SHALE RED,GREY, CLAY BANDS	Shale	

***** End of GW109239 *****

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

GW109240

Licence: 10BL602380
Licence Status: ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status:
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 20/08/2008
Final Depth: 7.50 m
Drilled Depth: 7.50 m

Contractor Name: INVIRODRILL
Driller: Lloyd Norman Whitsed
Assistant Driller:

Property: TEPCORP HOLDINGS PTY LTD 2 Short St SURRY HILLS 2010 NSW
GWMA: -
GW Zone: -
Standing Water Level (m): 5.670
Salinity Description: Fresh
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	CUMBERLAND	ALEXANDRI	11//1062742
Licensed:	CUMBERLAND	ALEXANDRIA	Whole Lot 11//1062742

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: 6249420.000
Easting: 335100.000
Latitude: 33°52'57.7"S
Longitude: 151°13'00.9"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

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

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	7.50	150			Auger
1		Annulus	Waterworn/Rounded	1.00	7.50				Graded
1	1	Casing	Pvc Class 18	0.00	1.50	50			Seated on Bottom, Screwed
1	1	Opening	Slots - Horizontal	1.50	7.30	50		0	PVC Class 18, SL: 5.8mm, A: 0.20mm

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)
2.70	7.50	4.80	Unknown	5.67					

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.10	0.20	0.10	CONCRETE	Conglomerate	
0.20	0.50	0.30	FILL BROWN,GRAVEL,CLAY,GLASS,BRICK,SANDSTONE	Fill	
0.50	2.70	2.20	CLAY,RED, GREY,WHITE	Clay	
2.70	7.50	4.80	SHALE RED,WEATHERED, CLAY BANDS,MOIST	Shale	

***** End of GW109240 *****

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

GW112178

Licence:
Licence Status:

Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/03/1999
Final Depth: 30.00 m
Drilled Depth: 30.00 m

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:	CUMBERLAND	BOTANY	1 124972
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: 6249714.000
Easting: 335084.000
Latitude: 33°52'48.1"S
Longitude: 151°13'00.5"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Remarks

17/07/2014: Nat Carling, 17-July-2014; Updated status, drill method & drilled depth.

***** End of GW112178 *****

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

GW112179

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/03/1999
Final Depth: 30.00 m
Drilled Depth: 30.00 m

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:	CUMBERLAND	BOTANY	303 1111765
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: 6249527.000
Easting: 335136.000
Latitude: 33°52'54.2"S
Longitude: 151°13'02.4"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Remarks

17/07/2014: Nat Carling, 17-July-2014; Updated status, drill method & drilled depth.

***** End of GW112179 *****

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

GW112180

Licence:
Licence Status:

Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/03/1999
Final Depth: 30.00 m
Drilled Depth: 30.00 m

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:	CUMBERLAND	BOTANY	5 66692
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: 6249351.000
Easting: 335167.000
Latitude: 33°52'60.0"S
Longitude: 151°13'03.5"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Remarks

17/07/2014: Nat Carling, 17-July-2014; Updated status, drill method & drilled depth.

***** End of GW112180 *****

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

GW112181

Licence:
Licence Status:

Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/03/1999
Final Depth: 30.00 m
Drilled Depth: 30.00 m

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:	CUMBERLAND	BOTANY	4 1090185
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: 6249161.000
Easting: 335201.000
Latitude: 33°53'06.1"S
Longitude: 151°13'04.7"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Remarks

17/07/2014: Nat Carling, 17-July-2014; Updated status, drill method & drilled depth.

***** End of GW112181 *****

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

GW112182

Licence:
Licence Status:

Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/03/1999
Final Depth: 30.00 m
Drilled Depth: 30.00 m

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:	CUMBERLAND	ALEXANDRI	16//1090187
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: 6249077.000
Easting: 335240.000
Latitude: 33°53'08.9"S
Longitude: 151°13'06.1"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Remarks

17/07/2014: Nat Carling, 17-July-2014; Updated status, drill method & drilled depth.

***** End of GW112182 *****

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.

Appendix G – Laboratory Reports

source: Sydney.pdf page: 1 SGS Ref: SE251689_COC

Sheet _1_ of _1_

Site: 17 Oxford Street, Paddington

Project No: E25559

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
GWBH101M	1	S/P/VC	2/08/2023	PM		X				X																	
QD1	2	S/P/VC	2/08/2023	PM		X					X																
Trip blank	3					X						X															
Trip spike	4					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
SE251689

LABORATORY TURNAROUND
- [ ] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [X] 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: Antony Lo	Print:
Signature:	Signature:
Date: 2/08/2023	Date: 02/08/23 @12:20

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

Report with EI Waste Classification Table ☐

Sampler's Comments:
1) Please cc Andrew Ibrahim
2) Please send QT1 to envirolab

COC: 2/8/23 1602

Sheet 1 of 1

Site: 17 Oxford Street, Paddington

Project No: E25559

Laboratory: Envirolab Services, 12 Ashley Street, CHATSWOOD NSW 2067, P: 02 9910 6200

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] /PAHs	HM[A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride			TCLP HM[B] / PAH
QT1	1	S/P/VC	2/08/2023	PM		X					X																

ENVIROLAB

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

Job No: 321644
Date Received: 3/8/23
Time Received: 1630
Received By: AM
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

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

- [ ] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [X] 72 Hours
- [ ] Other_____

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

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 (Envirolab):
Print: Antony Lo	Print: AM
Signature:	Signature: AM
Date: 2/08/2023	Date: 3/8/23 1630

Sampler's Comments:

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

Sheet _1_ of _1_

Site: 17 Oxford Street, Paddington

Project No: E25559

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
GWBH101M		S/P/VC	2/08/2023	PM		X				X																		
QD1		S/P/VC	2/08/2023	PM		X					X																	
Trip blank						X						X																
Trip spike						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

- [ ] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [X] 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

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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 Antony Lo	*Print*
Signature	*Signature*
Date 2/08/2023	*Date*

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

Report with EI Waste Classification Table ☐

Sampler's Comments:
1) Please cc Andrew Ibrahim
2) Please send QT to envirolab (1) (2)

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

Job No: 329644
Date Received: 3/8/23
Time Received: 1630
Received By:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Sheet _1_ of _1_

Site: 13-15 oxford street, 2 verona street, Paddington

Project No: GL317

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 (including F1, F2, F3, F4)/BTEX/ PAHs/ OCP/OP/PCB/Asbestos	HM [A] /TRH (including F1, F2, F3, F4)/ BTEX/PAHs	HM [A] /TRH (including F1, F2, F3, F4)/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification (500ml)	Asbestos 10L field screening	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~~ DDTE AN2 Full suite	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
BH201M	1	S/P/VC	16/9/25	PM		X	X													X									
BH203M	2	S/P/VC	16/9/25	PM		X	X															X							
QD-20250916	3	S/P/VC	16/9/25	PM		X					X																		
~~TS2~~ TS	4	VC	16/9/25	PM		X						X																	
TB	5	VC	16/9/25	PM		X						X																	
R1-20250916	6	S/P/VC	16/9/25	PM		X					X																		
RB1-20250916		S/P/VC	16/9/25	PM		X																							

SGS EHS Sydney COC
SE289532

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

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: Matthew Chee	Print: Xiaotian Wei
Signature:	Signature:
Date: 16/9/25	Date: 16/09/2025 2pm

Sampler's Comments:
CC
Leo Ho
Please Forward QT-20250916 to envirolab.

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

source:Sydney_urgent_coc_250916_151722.pdf page: 1 SGS Ref: SE289532_COC

CoC: 18/09/2025 942.

Sheet 1 of 1					Sample Matrix				Analysis																					Comments
Site:			Project No:																											
13-15 Oxford Street & 2 Verona Street, Paddington NSW			E25559																											
Laboratory:	**Envirolab Services** **12 Ashley Street,** **CHATSWOOD NSW 2067** **P: 02 9910 6200**																													
Sample ID	Laboratory ID	Container Type	Sampling		SOIL	WATER	0.45 µm field filtered	OTHER	HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	HOLD		TCLP HM [B] / PAH	
			Date	Time																										
QT1-20250916	1	SPVC	16/09/2025	PM		X					X																			**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

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

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 (Envirolab):
Print	Matthew Chee	*Print*
Signature:		*Signature*
Date	18/09/2025	*Date*

Sampler's Comments:
CC. Leo Ho

IMPORTANT:
Please e-mail laboratory results to: lab@eiaustralia.com.au

#391021

eiaustralia
Contamination | Remediation | Geotechnical
Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

Date received: 17/09/2025
Time rec: 1540.
KC

ENVIROLAB GROUP
Environmental Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 391021
Date Received: 17/9/25
Time Received: 1540
Received By: LE
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Sheet _1_ of _1_

Site: 13-15 Oxford Street, 2 Verona Street, Paddington
Project No: GZ1179

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 (including F1, F2, F3, F4)/BTEX/ PAHs/ OCP/OP/PCB/Asbestos	HM[A] /TRH (including F1, F2, F3, F4)/ BTEX/PAHs	HM[A] /TRH (including F1, F2, F3, F4)/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification (500ml)	Asbestos 10L field screening	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	~~PFAS~~ DTSE AND Full suite	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM[B] / PAH	Comments
BH201M	1	S/P/VC	16/9/25	PM		X	X													X										
BH208M	2	S/P/VC	16/9/25	PM		X	X															X								
QD-20250916	3	S/P/VC	16/9/25	PM		X																								
~~FS2~~ TS	4	VC	16/9/25	PM		X																								
TB	5	VC	16/9/25	PM		X																								
R1-20250916	6	S/P/VC	16/9/25	PM		X																								
RB1-20250916		S/P/VC	16/9/25	PM		X																								

SGS EHS Sydney COC
SE289532

LABORATORY TURNAROUND
- [x] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other____

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

Container Type:
J = solvent washed, acid rinsed, Teflon sealed glass jar
S = solvent washed, acid rinsed glass bottle
P = natural HDPE plastic bottle
VC = glass vial, Teflon Septum
ZLB = Zip-Lock Bag BB = Bulk Bag

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (SGS):	Sampler's Comments:
Print: Matthew Chee	Print: Xicotian Wei	CC Leo Ho
Signature:	Signature:	Please Forward QT-20250916 to envirolab.
Date: 16/9/25	Date: 16/09/2025 2pm	

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

Yin, Emily (Alexandria)

From: Matthew Chee - EIAustralia <matthew.chee@eiaustralia.com.au>
Sent: Tuesday, 16 September 2025 2:57 PM
To: Yin, Emily (Alexandria)
Subject: [EXTERNAL] RE: SE289532 - E25559

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

Hi Emily,

Apologies,

Please could you test

TS -BTEX

TB- BTEX

R1- 20250916- HM, TRH, BTEX

QD- 20250916- HM, TRH, BTEX

Thank you,

Matthew Chee
Environmental Engineer

T (02) 9516 0722 M 0404 652 915
E matthew.chee@eiaustralia.com.au

Suite 6.01, 55 Miller Street
Pyrmont, NSW 2009

www.eiaustralia.com.au



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Please consider the environment before printing this email.

From: Yin, Emily (Alexandria) [mailto:Emily.Yin@sgs.com]
Sent: Tuesday, 16 September 2025 2:43 PM
To: Matthew Chee - EIAustralia
Subject: SE289532 - E25559
Importance: High

SAMPLE RECEIPT ADVICE

SE289532

CLIENT DETAILS

Contact	Matthew Chee
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	matthew.chee@eiaustralia.com.au
Project	**E25559 13-15 Oxford St 2 Verona St Paddi**
Order Number	**E25559**
Samples	6

LABORATORY DETAILS

Manager	Shane McDermott
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	Tue 16/9/2025
Report Due	Tue 23/9/2025
SGS Reference	**SE289532**

SUBMISSION DETAILS

This is to confirm that 6 samples were received on Tuesday 16/9/2025. Results are expected to be ready by COB Tuesday 23/9/2025. Please quote SGS reference SE289532 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Type of documentation received	COC	Date documentation received	16/9/2025
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	17.6°C	Sample container provider	SGS
Turnaround time requested	Standard	Samples received in correct containers	Yes
Sufficient sample for analysis	Yes	Sample cooling method	Ice Bricks
Samples clearly labelled	Yes	Complete documentation received	Yes

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

COMMENTS

1 sample has been placed on hold as no tests have been assigned for it. This sample will not be processed.
QT20250916 forwarded to Envirolab.

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SAMPLE RECEIPT ADVICE

SE289532

CLIENT DETAILS

Client EI AUSTRALIA

Project E25559 13-15 Oxford St 2 Verona St Paddi

SUMMARY OF ANALYSIS

No.	Sample ID	Full 8270 SVOC in Water	OC Pesticides in Water	OP Pesticides in Water	PAH (Polynuclear Aromatic Hydrocarbons) in Water	PCBs in Water	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
001	BH201M	-	-	-	23	-	9	11	7
002	BH208M	167	26	13	22	9	9	84	6
003	QD_20250916	-	-	-	-	-	9	11	7
004	TS	-	-	-	-	-	-	11	-
005	TB	-	-	-	-	-	-	11	-
006	R1-20250916	-	-	-	-	-	9	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

SE289532

CLIENT DETAILS

Client EI AUSTRALIA

Project E25559 13-15 Oxford St 2 Verona St Paddi

SUMMARY OF ANALYSIS

No.	Sample ID	Alkalinity	Anions by Ion Chromatography in Water	Conductivity and TDS by Calculation - Water	Dissolved Oxygen by Membrane Electrode	Forms of Carbon	pH in water	Total and Volatile Suspended Solids (TSS /	Total Dissolved Solids (TDS) in water	Total Phenolics in Water	Turbidity
001	BH201M	-	-	1	-	-	2	-	1	1	1
002	BH208M	10	5	1	3	1	2	1	1	1	1

CONTINUED OVERLEAF

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SAMPLE RECEIPT ADVICE

SE289532

CLIENT DETAILS

Client EI AUSTRALIA

Project E25559 13-15 Oxford St 2 Verona St Paddi

SUMMARY OF ANALYSIS

No.	Sample ID	Ammonia Nitrogen by Discrete Analyser	Calculation of Anion-Cation Balance	Filterable Reactive Phosphorus (FRP)	Metals in Water (Dissolved) by ICPOES	Nitrite in Water	Redox Potential (Eh) in water	TKN Kjeldahl Digestion by Discrete Analyser	Total Phosphorus by Kjeldahl Digestion DA in	Trace Metals (Dissolved) in Water by ICPMS
001	BH201M	-	-	-	3	-	-	-	-	8
002	BH208M	1	4	1	9	2	2	2	1	21
003	QD_20250916	-	-	-	-	-	-	-	-	7
006	R1-20250916	-	-	-	-	-	-	-	-	7

CONTINUED OVERLEAF

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

SE289532

CLIENT DETAILS

Client EI AUSTRALIA

Project E25559 13-15 Oxford St 2 Verona St Paddi

SUMMARY OF ANALYSIS

No.	Sample ID	E. coli and Thermotolerant coliforms in Water (CFU)	Enterococci in Water	Mercury (dissolved) in Water	Per- and Polyfluoroalkyl Substances (PFAS) in	Total Cyanide in water by Discrete Analyser
001	BH201M	-	-	1	-	1
002	BH208M	3	3	1	60	-
003	QD_20250916	-	-	1	-	-
006	R1-20250916	-	-	1	-	-

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

SE251689

CLIENT DETAILS

Contact	Andrew Ibrahim
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	andrew.ibrahim@eiaustralia.com.au
Project	**E25559 17 Oxford Street, Paddington**
Order Number	**E25559**
Samples	4

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	Wed 2/8/2023
Report Due	Mon 7/8/2023
SGS Reference	**SE251689**

SUBMISSION DETAILS

This is to confirm that 4 samples were received on Wednesday 2/8/2023. Results are expected to be ready by COB Monday 7/8/2023. Please quote SGS reference SE251689 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	4 Water	Type of documentation received	COC
Date documentation received	2/8/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	5.3°C
Sample container provider	SGS	Turnaround time requested	Three Days
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

COMMENTS

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SAMPLE RECEIPT ADVICE

SE251689

CLIENT DETAILS

Client EI AUSTRALIA

Project E25559 17 Oxford Street, Paddington

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	PAH (Polynuclear Aromatic Hydrocarbons) in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
001	GWBH101M	1	22	7	9	11	7
002	QD1	1	-	7	9	11	7
003	Trip blank	-	-	-	-	11	-
004	Trip spike	-	-	-	-	11	-

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

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Matthew Chee
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	matthew.chee@eiaustralia.com.au
Project	**E25559 13-15 Oxford St 2 Verona St Paddi**
Order Number	**E25559**
Samples	6

LABORATORY DETAILS

Manager	Shane McDermott
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	**SE289532 R0**
Date Received	16/9/2025
Date Reported	23/9/2025

COMMENTS

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

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Dong LIANG
Metals/Inorganics Team Leader

Gemma MOON
Organic Chemist

Ly Kim HA
Organic Section Head

Tim MEEYAN
Microbiologist

Ying Ying ZHANG
Laboratory Technician

VOCs in Water [AN433] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002	QD_20250916 WATER - 16/9/2025 SE289532.003	TS WATER - 16/9/2025 SE289532.004	TB WATER - 16/9/2025 SE289532.005
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	[102%]	<0.5
Toluene	µg/L	0.5	**2.5**	**86**	**3.0**	[101%]	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	[101%]	<0.5
m/p-xylene	µg/L	1	<1	<1	<1	[101%]	<1
o-xylene	µg/L	0.5	<0.5	<0.5	<0.5	[101%]	<0.5
Total Xylenes	µg/L	1.5	<1.5	<1.5	<1.5	-	<1.5
Total BTEX	µg/L	3	<3	**86**	<3	-	<3
Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	<0.5	[96%]	<0.5
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	-	-	-
Acetone (2-propanone)	µg/L	10	-	<10	-	-	-
Iodomethane	µg/L	5	-	<5	-	-	-
1,1-dichloroethene	µg/L	0.5	-	<0.5	-	-	-
Acrylonitrile	µg/L	0.5	-	<0.5	-	-	-
Dichloromethane (Methylene chloride)	µg/L	5	-	<5	-	-	-
Allyl chloride	µg/L	2	-	<2.0	-	-	-
Carbon disulfide	µg/L	2	-	<2.0	-	-	-
trans-1,2-dichloroethene	µg/L	0.5	-	<0.5	-	-	-
MtBE (Methyl-tert-butyl ether)	µg/L	0.5	-	<0.5	-	-	-
1,1-dichloroethane	µg/L	0.5	-	<0.5	-	-	-
Vinyl acetate*	µg/L	10	-	<10	-	-	-
MEK (2-butanone)	µg/L	10	-	<10	-	-	-
cis-1,2-dichloroethene	µg/L	0.5	-	<0.5	-	-	-
Bromochloromethane	µg/L	0.5	-	<0.5	-	-	-
Chloroform (THM)	µg/L	0.5	-	<0.5	-	-	-
2,2-dichloropropane	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	-	-	-
1,2-dichloropropane	µg/L	0.5	-	<0.5	-	-	-
Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	-	<0.5	-	-	-
2-nitropropane	µg/L	100	-	<100	-	-	-
Bromodichloromethane (THM)	µg/L	0.5	-	<0.5	-	-	-
MIBK (4-methyl-2-pentanone)	µg/L	5	-	<5	-	-	-
cis-1,3-dichloropropene	µg/L	0.5	-	<0.5	-	-	-
trans-1,3-dichloropropene	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	-	-	-
Dibromochloromethane (THM)	µg/L	0.5	-	<0.5	-	-	-
2-hexanone (MBK)	µg/L	5	-	<5	-	-	-
1,2-dibromoethane (EDB)	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	-	-	-
Chlorobenzene	µg/L	0.5	-	<0.5	-	-	-
Bromoform (THM)	µg/L	0.5	-	<0.5	-	-	-
Styrene (Vinyl benzene)	µg/L	0.5	-	<0.5	-	-	-
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	-	-	-
Isopropylbenzene (Cumene)	µg/L	0.5	-	<0.5	-	-	-

VOCs in Water [AN433] Tested: 17/9/2025 (continued)

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002	QD_20250916 WATER - 16/9/2025 SE289532.003	TS WATER - 16/9/2025 SE289532.004	TB WATER - 16/9/2025 SE289532.005
Bromobenzene	µg/L	0.5	-	<0.5	-	-	-
n-propylbenzene	µg/L	0.5	-	<0.5	-	-	-
2-chlorotoluene	µg/L	0.5	-	<0.5	-	-	-
4-chlorotoluene	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	-	-	-
1,3-dichlorobenzene	µg/L	0.5	-	<0.5	-	-	-
1,4-dichlorobenzene	µg/L	0.3	-	<0.3	-	-	-
p-isopropyltoluene	µg/L	0.5	-	<0.5	-	-	-
1,2-dichlorobenzene	µg/L	0.5	-	<0.5	-	-	-
n-butylbenzene	µg/L	0.5	-	<0.5	-	-	-
1,2-dibromo-3-chloropropane	µg/L	0.5	-	<0.5	-	-	-
1,2,4-trichlorobenzene	µg/L	0.5	-	<0.5	-	-	-
Hexachlorobutadiene	µg/L	0.5	-	<0.5	-	-	-
1,2,3-trichlorobenzene	µg/L	0.5	-	<0.5	-	-	-
Total VOC	µg/L	10	-	**86**	-	-	-
Total Halogenated Hydrocarbons	µg/L	10	-	<10	-	-	-
Total Chlorinated Hydrocarbons VIC EPA	µg/L	0.5	-	<0.5	-	-	-
Total MAH	µg/L	0.5	-	**86**	-	-	-
Total Chlorinated Hydrocarbons	µg/L	10	-	<10	-	-	-
Total Other Chlorinated Hydrocarbons VIC EPA	µg/L	0.5	-	<0.5	-	-	-
Total THM	µg/L	2	-	<2	-	-	-
Total MAH VIC EPA (BTEX+Styrene)	µg/L	0.5	-	**86**	-	-	-

VOCs in Water [AN433] Tested: 17/9/2025 (continued)

PARAMETER	UOM	LOR	R1-20250916 WATER - 16/9/2025 SE289532.006
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
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	0.5	-
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	-
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	-
Isopropylbenzene (Cumene)	µg/L	0.5	-

VOCs in Water [AN433] Tested: 17/9/2025 (continued)

PARAMETER	UOM	LOR	R1-20250916 WATER - 16/9/2025 SE289532.006
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	-
Total Halogenated Hydrocarbons	µg/L	10	-
Total Chlorinated Hydrocarbons VIC EPA	µg/L	0.5	-
Total MAH	µg/L	0.5	-
Total Chlorinated Hydrocarbons	µg/L	10	-
Total Other Chlorinated Hydrocarbons VIC EPA	µg/L	0.5	-
Total THM	µg/L	2	-
Total MAH VIC EPA (BTEX+Styrene)	µg/L	0.5	-

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002	QD_20250916 WATER - 16/9/2025 SE289532.003	R1-20250916 WATER - 16/9/2025 SE289532.006
TRH C6-C10	µg/L	50	<50	**220**	<50	<50
TRH C6-C9	µg/L	40	<40	**210**	<40	<40
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	**130**	<50	<50
Benzene (F0)	µg/L	0.5	<0.5	<0.5	<0.5	<0.5

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002	QD_20250916 WATER - 16/9/2025 SE289532.003	R1-20250916 WATER - 16/9/2025 SE289532.006
TRH C10-C14	µg/L	50	**64**	<50	**60**	<50
TRH C15-C28	µg/L	200	<200	**360**	**200**	<200
TRH C29-C36	µg/L	200	<200	<200	<200	<200
TRH C37-C40	µg/L	200	<200	<200	<200	<200
TRH >C10-C16	µg/L	60	**83**	**68**	**88**	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	**83**	**68**	**88**	<60
TRH >C16-C34 (F3)	µg/L	500	<500	<500	<500	<500
TRH >C34-C40 (F4)	µg/L	500	<500	<500	<500	<500
TRH C10-C40	µg/L	320	<320	**490**	**330**	<320

PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002
Naphthalene	µg/L	0.1	<0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1	<0.1
Acenaphthene	µg/L	0.1	<0.1	<0.1
Fluorene	µg/L	0.1	<0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1	<0.1
Anthracene	µg/L	0.1	<0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1	<0.1
Pyrene	µg/L	0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1
Chrysene	µg/L	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1
Benzo(b&j&k)fluoranthene	µg/L	0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1
Total PAH (18)	µg/L	1	<1	-

OC Pesticides in Water [AN420] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Alpha BHC	µg/L	0.1	<0.1
Hexachlorobenzene (HCB)	µg/L	0.1	<0.1
Beta BHC	µg/L	0.1	<0.1
Lindane (gamma BHC)	µg/L	0.1	<0.1
Delta BHC	µg/L	0.1	<0.1
Heptachlor	µg/L	0.1	<0.1
Aldrin	µg/L	0.1	<0.1
Heptachlor epoxide	µg/L	0.1	<0.1
Gamma Chlordane	µg/L	0.1	<0.1
Alpha Chlordane	µg/L	0.1	<0.1
Alpha Endosulfan	µg/L	0.1	<0.1
p,p'-DDE	µg/L	0.1	<0.1
Dieldrin	µg/L	0.1	<0.1
Endrin	µg/L	0.1	<0.1
Beta Endosulfan	µg/L	0.1	<0.1
p,p'-DDD	µg/L	0.1	<0.1
Endrin aldehyde	µg/L	0.1	<0.1
Endosulfan sulphate	µg/L	0.1	<0.1
p,p'-DDT	µg/L	0.1	<0.1
Endrin ketone	µg/L	0.1	<0.1
Methoxychlor	µg/L	0.1	<0.1
Mirex	µg/L	0.1	<0.1
Total OC	µg/L	1	<1
Total OC	µg/L	1	<1
Total Other OC VIC EPA	µg/L	1	<1

OP Pesticides in Water [AN420] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Azinphos-methyl	µg/L	0.2	<0.2
Bromophos Ethyl	µg/L	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	µg/L	0.2	<0.2
Diazinon (Dimpylate)	µg/L	0.5	<0.5
Dichlorvos	µg/L	0.5	<0.5
Dimethoate	µg/L	0.5	<0.5
Ethion	µg/L	0.2	<0.2
Fenitrothion	µg/L	0.2	<0.2
Malathion	µg/L	0.2	<0.2
Methidathion	µg/L	0.5	<0.5
Parathion-ethyl (Parathion)	µg/L	0.2	<0.2

PCBs in Water [AN420] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Arochlor 1016	µg/L	1	<1
Arochlor 1221	µg/L	1	<1
Arochlor 1232	µg/L	1	<1
Arochlor 1242	µg/L	1	<1
Arochlor 1248	µg/L	1	<1
Arochlor 1254	µg/L	1	<1
Arochlor 1260	µg/L	1	<1
Total Arochlors*	µg/L	5	<5

Full 8270 SVOC in Water [AN420] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Acenaphthene	µg/L	0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1
Anthracene	µg/L	0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1
Benzo(b&j&k)fluoranthene	µg/L	0.2	<0.2
Benzo(k)fluoranthene	µg/L	0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1
Chrysene	µg/L	0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1
Fluorene	µg/L	0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1
Naphthalene	µg/L	0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1
Pyrene	µg/L	0.1	<0.1
2-acetylaminofluorene	µg/L	0.5	<0.5
7,12-dimethyl-benz(a)anthracene	µg/L	0.5	<0.5
3-methylcholanthrene	µg/L	0.5	<0.5
Aldrin	µg/L	0.1	<0.1
Alpha-BHC	µg/L	0.1	<0.1
Beta-BHC	µg/L	0.1	<0.1
Delta-BHC	µg/L	0.1	<0.1
Gamma-BHC (Lindane)	µg/L	0.1	<0.1
p,p-DDD	µg/L	0.1	<0.1
p,p-DDE	µg/L	0.1	<0.1
p,p-DDT	µg/L	0.1	<0.1
Dieldrin	µg/L	0.1	<0.1
Alpha-endosulfan	µg/L	0.1	<0.1
Beta-endosulfan	µg/L	0.1	<0.1
Endosulfan sulphate	µg/L	0.1	<0.1
Endrin	µg/L	0.1	<0.1
Heptachlor	µg/L	0.1	<0.1
Heptachlor epoxide	µg/L	0.1	<0.1
Methoxychlor	µg/L	0.1	<0.1
Mirex	µg/L	0.1	<0.1
Alpha-chlordane	µg/L	0.1	<0.1
Gamma-chlordane	µg/L	0.1	<0.1
Endrin ketone	µg/L	0.1	<0.1
Azinphos-methyl (Guthion)	µg/L	0.2	<0.2
Bromophos ethyl	µg/L	0.2	<0.2
Carbophenothion	µg/L	0.5	<0.5
Chlorfenvinphos-cis	µg/L	5	<5
Chlorfenvinphos-trans	µg/L	0.5	<0.5
Chlorpyrifos (Chlorpyrifos Ethyl)	µg/L	0.2	<0.2
Chlorpyrifos-methyl	µg/L	0.5	<0.5
Co-Ral (Coumaphos)	µg/L	0.5	<0.5
Diazinon (Dimpylate)	µg/L	0.5	<0.5
Dichlorvos	µg/L	0.5	<0.5
Demeton-S-methyl	µg/L	0.5	<0.5
Dimethoate	µg/L	0.5	<0.5
Disulfoton (Di-syston)	µg/L	0.5	<0.5
EPN*	µg/L	0.5	<0.5

Full 8270 SVOC in Water [AN420] Tested: 17/9/2025 (continued)

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Ethion	µg/L	0.2	<0.2
Ethoprophos (ethoprop or prophos)	µg/L	0.5	<0.5
Famphur (Famophos)	µg/L	0.5	<0.5
Fenamiphos (Phenamiphos)	µg/L	0.5	<0.5
Fenchlorophos (Ronnel)	µg/L	0.5	<0.5
Fenitrothion	µg/L	0.2	<0.2
Fenthion	µg/L	0.5	<0.5
Malathion (Maldison)	µg/L	0.2	<0.2
Methidathion	µg/L	0.5	<0.5
Mevinphos-cis/trans	µg/L	1	<1
o,o,o-triethyl phosphorothioate	µg/L	0.5	<0.5
Parathion ethyl (Parathion)	µg/L	0.2	<0.2
Parathion methyl	µg/L	0.5	<0.5
Phorate	µg/L	0.5	<0.5
Pirimiphos-ethyl	µg/L	0.5	<0.5
Pirimiphos-methyl	µg/L	0.5	<0.5
Profenofos	µg/L	0.5	<0.5
Prothiophos (Tokuthion)*	µg/L	0.5	<0.5
Sulfotepp	µg/L	0.5	<0.5
Tetrachlorvinphos (Stirophos)*	µg/L	0.5	<0.5
PCB Congener C28	µg/L	0.1	<0.1
PCB Congener C52	µg/L	0.1	<0.1
PCB Congener C101	µg/L	0.1	<0.1
PCB Congener C118	µg/L	0.1	<0.1
PCB Congener C138	µg/L	0.1	<0.1
PCB Congener C153	µg/L	0.1	<0.1
PCB Congener C180	µg/L	0.1	<0.1
Hexachlorobenzene (HCB)	µg/L	0.1	<0.1
1,2-dichlorobenzene	µg/L	0.5	<0.5
1,3-dichlorobenzene	µg/L	0.5	<0.5
1,4-dichlorobenzene	µg/L	0.5	<0.5
Hexachlorobutadiene	µg/L	0.5	<0.5
Hexachlorocyclopentadiene	µg/L	2	<2
Hexachloroethane	µg/L	0.5	<0.5
Hexachloroproprene	µg/L	0.5	<0.5
Pentachlorobenzene	µg/L	0.5	<0.5
Pentachloroethane	µg/L	0.5	<0.5
1,2,3,5 and 1,2,4,5 -tetrachlorobenzene	µg/L	1	<1
1,2,3,4-tetrachlorobenzene	µg/L	0.5	<0.5
1/2-Chloronaphthalene	µg/L	1	<1
1,2,4-trichlorobenzene	µg/L	0.5	<0.5
Bis(2-ethylhexyl)phthalate	µg/L	10	<10
Bis(2-ethylhexyl)adipate	µg/L	1	<1
Butyl benzyl phthalate	µg/L	1	<1
Di-n-butyl phthalate	µg/L	10	<10
Diethyl phthalate	µg/L	5	<5
Dimethyl phthalate	µg/L	1	<1
Di-n-octyl phthalate	µg/L	1	<1
Carbofuran	µg/L	0.5	<0.5
Carbaryl	µg/L	0.5	<0.5
Trifluralin	µg/L	0.5	<0.5
N-nitroso-di-n-butylamine (NDBA)	µg/L	1	<1
N-nitroso-diethylamine (NDEA)	µg/L	1	<1
N-nitroso-di-n-propylamine (NDPA)	µg/L	1	<1
N-nitroso-morpholine (NMOR)	µg/L	1	<1
N-nitroso-piperidine (NPIP)	µg/L	1	<1

Full 8270 SVOC in Water [AN420] Tested: 17/9/2025 (continued)

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
N-nitroso-pyrrolidine (NPYR)	µg/L	1	<1
4-amino biphenyl	µg/L	1	<1
Acetophenone	µg/L	1	<1
1,3-dinitrobenzene	µg/L	1	<1
2,4-dinitrotoluene	µg/L	1	<1
2,6-dinitrotoluene	µg/L	1	<1
Isophorone	µg/L	1	<1
Nitrobenzene	µg/L	1	<1
p-(dimethylamino) azobenzene	µg/L	1	<1
Phenacetin	µg/L	1	<1
Pentachloronitrobenzene (quintozene)	µg/L	1	<1
Aniline	µg/L	5	<5
4-chloroaniline	µg/L	1	<1
2-nitroaniline	µg/L	1	<1
3-nitroaniline	µg/L	1	<1
4-nitroaniline	µg/L	1	<1
Diphenylamine	µg/L	1	<1
o-toluidine	µg/L	1	<1
5-nitro-o-toluidine	µg/L	1	<1
1-naphthylamine	µg/L	2	<2
2-naphthylamine	µg/L	2	<2
Bis(2-chloroethoxy) methane	µg/L	1	<1
Bis(2-chloroethyl) ether	µg/L	1	<1
Bis(2-chloroisopropyl) ether	µg/L	1	<1
4-chlorophenyl phenyl ether	µg/L	1	<1
4-bromophenyl phenyl ether	µg/L	1	<1
Methyl methanesulfonate	µg/L	1	<1
Ethyl methanesulfonate	µg/L	1	<1
Dibenzofuran	µg/L	1	<1
Benzyl alcohol	µg/L	1	<1
Safrole	µg/L	1	<1
Isosafrole Isomer 1	µg/L	1	<1
Isosafrole Isomer 2	µg/L	1	<1
1,4-naphthoquinone	µg/L	1	<1
Thionazin	µg/L	1	<1
3/4-methyl phenol (m/p-cresol)	µg/L	1	<1
2-methyl phenol (o-cresol)	µg/L	0.5	<0.5
2,6-dichlorophenol	µg/L	0.5	<0.5
2,3,4,6-tetrachlorophenol	µg/L	0.5	<0.5
2,4,5-trichlorophenol	µg/L	0.5	<0.5
4-chloro-3-methylphenol	µg/L	2	<2
2-chlorophenol	µg/L	0.5	<0.5
2,4-dichlorophenol	µg/L	0.5	<0.5
2,4-dimethylphenol	µg/L	0.5	<0.5
2-nitrophenol	µg/L	0.5	<0.5
Phenol	µg/L	0.5	**1.8**
2,4,6-trichlorophenol	µg/L	0.5	<0.5
Pentachlorophenol	µg/L	0.5	<0.5
4-nitrophenol	µg/L	1	<1
Total Endosulfan (alpha+beta+sulfate)	µg/L	0.2	<0.2

pH in water [AN101] Tested: 16/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002
pH**	pH Units	0.1	**5.4**	**5.0**
Temperature of test*	°C	-	-	-

Conductivity and TDS by Calculation - Water [AN106] Tested: 16/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002
Conductivity @ 25 C	µS/cm	2	**440**	**360**

Total Dissolved Solids (TDS) in water [AN113] Tested: 18/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002
Total Dissolved Solids Dried at 175-185°C	mg/L	10	**240**	**210**

Turbidity [AN119] Tested: 16/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002
Turbidity	NTU	0.5	**12000**	**24**

Total Phenolics in Water [AN295] Tested: 18/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002
Total Phenols	mg/L	0.05	<0.05	<0.05

Anions by Ion Chromatography in Water [AN245] Tested: 18/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Chloride	mg/L	0.05	**55**
Bromide	mg/L	0.05	<0.05
Fluoride	mg/L	0.1	<0.10
Sulfate, SO4	mg/L	1	**47**
Nitrate Nitrogen, NO3-N	mg/L	0.005	**0.66**

Alkalinity [AN135] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Bicarbonate Alkalinity as CaCO3	mg/L	5	**31**
Bicarbonate Alkalinity as HCO3	mg/L	5	**38**
Carbonate Alkalinity as CaCO3	mg/L	5	<5
Carbonate Alkalinity as CO3	mg/L	5	<5
Hydroxide Alkalinity as CaCO3	mg/L	5	<5
Hydroxide Alkalinity as OH	mg/L	5	<5
Total Alkalinity as CaCO3	mg/L	5	**31**
Carbonate Hardness as CaCO3*	mg CaCO3/L	2	**31.251566666666**
Non-Carbonate Hardness as CaCO3*	mg CaCO3/L	2	-
Negative Hardness as CaCO3*	mg CaCO3/L	-100	-

Dissolved Oxygen by Membrane Electrode [AN176] Tested: 16/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Temperature*	°C	-	**20.0**
Dissolved Oxygen**	mg/L	0.5	**4.1**
Dissolved Oxygen (percent saturation)**	%	1	**44.7**

Total and Volatile Suspended Solids (TSS / VSS) [AN114] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Total Suspended Solids Dried at 103-105°C	mg/L	5	**51**

Forms of Carbon [AN190] Tested: 18/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Total Organic Carbon as NPOC	mg/L	0.2	**1.8**

Ammonia Nitrogen by Discrete Analyser [AN291] Tested: 16/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Ammonia Nitrogen, NH_3 as N	mg/L	0.01	**0.02**

Calculation of Anion-Cation Balance (SAR Calc) [AN121] Tested: 23/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Sum of Ions*	mg/L	10	**205**
Anion-Cation Balance	%	-100	**-2.30**
TFSS*	mg/L	10	**205**
Sodium Adsorption Ratio*	No unit	0.1	**1.5**

Nitrite in Water [AN277] Tested: 16/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Nitrite Nitrogen, NO2 as N	mg/L	0.005	**0.023**
Total Oxidised Nitrogen, NOx-N	mg/L	0.005	**0.68**

TKN Kjeldahl Digestion by Discrete Analyser [AN281/292] Tested: 18/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Total Kjeldahl Nitrogen	mg/L	0.05	**0.32**
Total Nitrogen (calc)	mg/L	0.05	**1.0**

Total Phosphorus by Kjeldahl Digestion DA in Water [AN279/AN293] Tested: 18/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Total Phosphorus (Kjeldahl Digestion) as P	mg/L	0.02	<0.02

Filterable Reactive Phosphorus (FRP) [AN278] Tested: 16/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Filterable Reactive Phosphorus as P	mg/L	0.005	<0.005

Redox Potential (Eh) in water [AN240] Tested: 16/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Eh of Sample Relative to Standard H+ Electrode***	mV	-500	**450**
Temperature of Sample*	°C	0.1	**22.6**

Metals in Water (Dissolved) by ICPOES [AN320] Tested: 19/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002
Calcium, Ca	mg/L	0.2	**8.1**	**26**
Magnesium, Mg	mg/L	0.1	**2.6**	**2.5**
Total Hardness by Calculation	mg CaCO3/L	1	**31**	**76**
Sodium Adsorption Ratio	No unit	0.2	-	**1.5**
Sodium, Na	mg/L	0.5	-	**31**
Potassium, K	mg/L	0.1	-	**7.9**
Lithium, Li	mg/L	0.005	-	<0.005
Silicon, Si*	mg/L	0.05	-	**2.5**
Soluble Silicon as Silica, SiO2*	mg/L	0.1	-	**5.2**

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 22/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002	QD_20250916 WATER - 16/9/2025 SE289532.003	R1-20250916 WATER - 16/9/2025 SE289532.006
Silver	µg/L	1	-	<1	-	-
Aluminium	µg/L	5	**62**	**23**	-	-
Arsenic	µg/L	1	<1	<1	<1	<1
Cadmium	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Chromium	µg/L	1	**2**	<1	**1**	<1
Copper	µg/L	1	**6**	**3**	**4**	<1
Lead	µg/L	1	<1	<1	<1	<1
Nickel	µg/L	1	**8**	**4**	**8**	<1
Zinc	µg/L	5	**35**	**13**	**34**	<5
Antimony	µg/L	1	-	<1	-	-
Barium	µg/L	1	-	**17**	-	-
Beryllium	µg/L	1	-	<1	-	-
Boron	µg/L	5	-	**78**	-	-
Cobalt	µg/L	1	-	**1**	-	-
Iron	µg/L	5	-	**380**	-	-
Manganese	µg/L	1	-	**21**	-	-
Molybdenum	µg/L	1	-	<1	-	-
Selenium	µg/L	1	-	**1**	-	-
Strontium	µg/L	1	-	**83**	-	-
Uranium	µg/L	1	-	<1	-	-
Vanadium	µg/L	1	-	<1	-	-

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 23/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001	BH208M WATER - 16/9/2025 SE289532.002	QD_20250916 WATER - 16/9/2025 SE289532.003	R1-20250916 WATER - 16/9/2025 SE289532.006
Mercury, Hg	mg/L	0.00005	<0.00005	<0.00005	<0.00005	<0.00005

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples [AN404] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.05
Perfluoropentanoic acid (PFPeA)	µg/L	0.01	**0.03**
Perfluorohexanoic acid (PFHxA)	µg/L	0.01	**0.03**
Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	**0.01**
Perfluorooctanoic acid (PFOA)	µg/L	0.01	**0.04**
Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.01
Perfluorodecanoic acid (PFDA)	µg/L	0.01	**0.01**
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.01
Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.01
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.01
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.01
Perfluoropropane sulfonic acid (PFPrS)	µg/L	0.01	<0.01
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	<0.01
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	<0.01
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	**0.01**
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.01
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	**0.03**
Perfluorononane sulfonic acid (PFNS)	µg/L	0.01	<0.01
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.01	<0.01
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	µg/L	0.01	<0.01
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	µg/L	0.01	<0.01
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	µg/L	0.01	<0.01
1H,1H,2H,2H-Perfluorododecane sulfonic acid (10:2	µg/L	0.01	<0.01
Perfluorooctane sulfonamide (FOSA)	µg/L	0.01	<0.01
N-Methylperfluoroctane sulfonamide (N-MeFOSA)	µg/L	0.01	<0.01
N-Ethylperfluoroctane sulfonamide (N-EtFOSA)	µg/L	0.01	<0.01
N-Methylperfluorooctanesulfonamidoacetic acid	µg/L	0.05	<0.05
N-Ethylperfluorooctanesulfonamidoacetic acid	µg/L	0.05	<0.05
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	µg/L	0.05	<0.05
2-(N-Methylperfluorooctane sulfonamido)-ethanol	µg/L	0.05	<0.05
Sum of PFOS and PFHxS	µg/L	0.01	**0.04**
Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	µg/L	0.01	**0.09**
Sum of US EPA PFAS (PFOS+PFOA)	µg/L	0.01	**0.08**
Sum of PFAS A	µg/L	0.01	**0.11**
Sum of PFAS B	µg/L	0.01	<0.01
Sum of PFAS C	µg/L	0.01	**0.06**
Sum of Positive PFAS	µg/L	0.01	**0.17**

Total Cyanide in water by Discrete Analyser [AN077/AN287] Tested: 18/9/2025

PARAMETER	UOM	LOR	BH201M WATER - 16/9/2025 SE289532.001
Total Cyanide	mg/L	0.004	<0.004

E. coli, Total and Faecal (Thermotolerant) coliforms in Water (MPN) [AN735] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Date & Time Processed*	No unit	-	2025-09-17 19:07
Faecal Coliforms	MPN/100mL	1	<1
Notes for Faecal coliforms	No unit	-	-
E. coli	MPN/100mL	1	<1
Notes for E. coli	No unit	-	-

Enterococci in Water [AN705] Tested: 17/9/2025

PARAMETER	UOM	LOR	BH208M WATER - 16/9/2025 SE289532.002
Date & Time Processed*	No unit	-	2025-09-17 19:07
Intestinal Enterococci*	CFU/100mL	1	<1
Notes*	No unit	-	-

METHOD	METHODOLOGY SUMMARY
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN077	Hydrogen cyanide is liberated from an acidified sample by distillation and purging with air. The hydrogen cyanide gas is then collected by passing it through a sodium hydroxide scrubbing solution. The scrubbing solution will then be analysed for cyanide by the appropriate method.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode (glass plus reference electrode) and is calibrated against 3 buffers purchased commercially. For soils, an extract with water is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
AN106	Conductivity and TDS by Calculation: Conductivity is measured by meter with temperature compensation and is calibrated against a standard solution of potassium chloride. Conductivity is generally reported as µmhos /cm or µS/cm @ 25°C. For soils, an extract with water is made at a ratio of 1:5 and the EC determined and reported on the extract, or calculated back to the as-received sample. Total Dissolved Salts can be estimated from conductivity using a conversion factor, which for natural waters, is in the range 0.55 to 0.75. SGS use 0.6. Reference APHA 2510 B.
AN106	Salinity may be calculated in terms of NaCl from the sample conductivity. This assumes all soluble salts present , measured by the conductivity, are present as NaCl.
AN113	Total Dissolved Solids: A well-mixed filtered sample of known volume is evaporated to dryness at 180°C and the residue weighed. Approximate methods for correlating chemical analysis with dissolved solids are available . Reference APHA 2540 C.
AN113	The Total Dissolved Solids residue may also be ignited at 550 C and volatile TDS (Organic TDS) and non-volatile TDS (Inorganic) can be determined.
AN114	Total Suspended and Volatile Suspended Solids: The sample is homogenised by shaking and a known volume is filtered through a pre-weighed GF/C filter paper and washed well with deionised water. The filter paper is dried and reweighed. The TSS is the residue retained by the filter per unit volume of sample. Reference APHA 2540 D. Internal Reference AN114
AN119	Turbidity by Nepholometry: Small particles in a light beam scatter light at a range of angles. A turbidimeter measures this scatter and reports results compared to turbidity standards, in NTU. This procedure is not suitable for very dark coloured liquids or samples with high solids because light absorption causes artificially low light scatter and low turbidity. Reference APHA 2130B.
AN121	This method is used to calculation the balance of major Anions and Cations in water samples and converts major ion concentration to milliequivalents and then summed. Anions sum and Cation sum is calculated as a difference and expressed as a percentage.
AN135	Alkalinity (and forms of) by Titration: The sample is titrated with standard acid to pH 8.3 (P titre) and pH 4.5 (T titre) and permanent and/or total alkalinity calculated. The results are expressed as equivalents of calcium carbonate or recalculated as bicarbonate, carbonate and hydroxide. Reference APHA 2320. Internal Reference AN135
AN176	Dissolved Oxygen: DO can also be measured directly using an oxygen permeable membrane electrode and meter. Under steady state conditions the current is directly proportional to the DO conc. DO can also be measured via Luminescent dissolved oxygen probes (LDO) which also operates using an oxygen permeable membrane with an oxygen sensitive luminescent dye making up the second probe layer. The presence of oxygen causes changes in the lifetime and intensity of luminescence, which are then quantified. Zero headspace is required for sample analysis, if headspace is observed report comment will be recorded . Reference APHA 4500-C, G & O.
AN190	TOC and DOC in Water: A homogenised micro portion of sample is injected into a heated reaction chamber packed with an oxidative catalyst that converts organic carbon to carbon dioxide. The CO2 is measured using a non-dispersive infrared detector. The process is fully automated in a commercially available analyser. If required a sugar value can be calculated from the TOC result . Reference APHA 5310 B.
AN190	Chemical oxygen demand can be calculated/estimated based on the O2/C relation as 2.67*NPOC (TOC). This is an estimate only and the factor will vary with sample matrix so results should be interpreted with caution.
AN240	Oxidation-Reduction Potential (Eh): Electrometric measurements are made by potentiometric determination of electron activity (or intensity) with an inert indicator electrode and a suitable reference electrode. At redox equilibrium, the potential difference between the two electrodes equals the redox potential of the system. This measurement is then corrected for the difference between the potential of the reference electrode and that of the standard hydrogen electrode.

AN245	Anions by Ion Chromatography: A water sample is injected into an eluent stream that passes through the ion chromatographic system where the anions of interest ie Br, Cl, NO2, NO3 and SO4 are separated on their relative affinities for the active sites on the column packing material. Changes to the conductivity and the UV-visible absorbance of the eluent enable identification and quantitation of the anions based on their retention time and peak height or area. APHA 4110 B
AN277	Nitrite ions, when reacted with a reagent containing sulphanilamide and N-(1-naphthyl)-ethylenediamine dihydrochloride produce a highly coloured azo dye that is measured photometrically at 540nm.
AN278	Filterable Reactive Phosphorus by DA (determined on filtered sample): Orthophosphate reacts with ammonium molybdate (Mo VI) and potassium antimonyl tartrate (Sb III) in acid medium to form an antimony-phosphomolybdate complex. This complex is subsequently reduced with ascorbic acid to form a blue colour and the absorbance is read at 880 nm. The sensitivity of the automated method is 10-20 times that of the macro method. Reference APHA 4500-P F
AN279/AN293(Sydney)	The sample is digested with Sulphuric acid, K2SO4 and CuSO4. All forms of phosphorus are converted into orthophosphate. The digest is cooled and placed on the discrete analyser for colorimetric analysis.
AN281	An unfiltered water or soil sample is first digested in a block digestor with sulfuric acid, K2SO4 and CuSO4. The ammonia produced following digestion is then measured colourimetrically using the Discrete Analyser. A portion of the digested sample is buffered to an alkaline pH, and interfering cations are complexed. The ammonia then reacts with salicylate and hypochlorite to give a blue colour whose absorbance is measured at 660nm and compared with calibration standards. This is proportional to the concentration of Total Kjeldahl Nitrogen in the original sample.
AN287	A buffered distillate or water sample is treated with chloramine/barbituric acid reagents and the intensity of the colour developed is proportional to the cyanide concentration by DA.
AN291	Ammonia in solution reacts with hypochlorite ions from Sodium Dichloroisocyanuate, and salicylate in the presence of Sodium Nitroprusside to form indophenol blue and measured at 660 nm by Discrete Analyser.
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).
AN320	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components .
AN320	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements . Reference APHA 3120 B.
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.

AN404	This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts. After spiking with isotopically labelled quantification surrogates and sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification. PFOS and PFHXS are determined as the total of linear and branched isomers.
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.
AN705	A known volume of water is passed through a membrane of known pore size. The membrane is placed on a selective agar plate and incubated. The volume of sample filtered depends upon the expected count. Referenced to AS/NZS4276.9 (ISO 7899-2:2000 MOD).
AN735	The Colilert matrix contains two nutrient indicators, ONPG (ortho-nitro-phenyl B-d- galactopyranoside) and MUG (4-methyl-umbelliferyl B-d-glucruonide). As coliforms grow, they use B-galactosidase to metabolise ONPG which causes yellow colouration of the matrix via the nitro-phenyl. E.coli possesses an additional enzyme, B-glucuronidase, which it uses to metabolise MUG and display florescence (caused by the 4 methyl-umbelliferyl). Incubation at 37°C.
AN735	Non target organisms are suppressed by a combination of high salts, detergents etc. present within the matrix . Faecal coliforms are thermotolerant, thus they can be enumerated by testing at 44.5°C.
Calculation	Free and Total Carbon Dioxide may be calculated using alkalinity forms only when the samples TDS is <500mg/L. If TDS is >500mg/L free or total carbon dioxide cannot be reported . APHA4500CO2 D.

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			
***	Indicates that both * and ** apply.		Sample listed, but not received.		
NAD	No Asbestos Detected.	NA	Not Applicable.		

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: https://www.sgs.com/en-au/industry/environmental-health-and-safety.

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STATEMENT OF QA/QC PERFORMANCE

SE289532 R0

CLIENT DETAILS

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Project	**E25559 13-15 Oxford St 2 Verona St Paddi**
Order Number	**E25559**
Samples	6

LABORATORY DETAILS

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SGS Reference	**SE289532 R0**
Date Received	16 Sep 2025
Date Reported	23 Sep 2025

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

Type of documentation received	COC	Date documentation received	16/9/2025
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	17.6°C	Sample container provider	SGS
Turnaround time requested	Standard	Samples received in correct containers	Yes
Sufficient sample for analysis	Yes	Sample cooling method	Ice Bricks
Samples clearly labelled	Yes	Complete documentation received	Yes

HOLDING TIME SUMMARY

SE289532 R0

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

Alkalinity

Method: ME-(AU)-[ENV]AN135

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361350	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	17 Sep 2025

Ammonia Nitrogen by Discrete Analyser

Method: ME-(AU)-[ENV]AN291

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361138	16 Sep 2025	16 Sep 2025	14 Oct 2025	16 Sep 2025	14 Oct 2025	17 Sep 2025

Anions by Ion Chromatography in Water

Method: ME-(AU)-[ENV]AN245

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361441	16 Sep 2025	16 Sep 2025	14 Oct 2025	18 Sep 2025	14 Oct 2025	22 Sep 2025

Conductivity and TDS by Calculation - Water

Method: ME-(AU)-[ENV]AN106

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361147	16 Sep 2025	16 Sep 2025	14 Oct 2025	16 Sep 2025	14 Oct 2025	16 Sep 2025
BH208M	SE289532.002	LB361147	16 Sep 2025	16 Sep 2025	14 Oct 2025	16 Sep 2025	14 Oct 2025	16 Sep 2025

Dissolved Oxygen by Membrane Electrode

Method: ME-(AU)-[ENV]AN176

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361149	16 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025

E. coli, Total and Faecal (Thermotolerant) coliforms in Water (MPN)

Method: ME-(AU)-[ENV]AN735

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB362103	16 Sep 2025	16 Sep 2025	17 Sep 2025	17 Sep 2025	20 Sep 2025	17 Sep 2025

Enterococci in Water

Method: ME-(AU)-[ENV]AN705

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB362103	16 Sep 2025	16 Sep 2025	17 Sep 2025	17 Sep 2025	20 Sep 2025	17 Sep 2025

Filterable Reactive Phosphorus (FRP)

Method: ME-(AU)-[ENV]AN278

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361138	16 Sep 2025	16 Sep 2025	14 Oct 2025	16 Sep 2025	14 Oct 2025	17 Sep 2025

Forms of Carbon

Method: ME-(AU)-[ENV]AN190

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361442	16 Sep 2025	16 Sep 2025	23 Sep 2025	18 Sep 2025	23 Sep 2025	19 Sep 2025

Full 8270 SVOC in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	23 Sep 2025
BH208M	SE289532.002	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	23 Sep 2025
QD_20250916	SE289532.003	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	23 Sep 2025
R1-20250916	SE289532.006	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	23 Sep 2025

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
BH201M	SE289532.001	LB361798	16 Sep 2025	16 Sep 2025	14 Oct 2025	23 Sep 2025	14 Oct 2025	23 Sep 2025
BH208M	SE289532.002	LB361798	16 Sep 2025	16 Sep 2025	14 Oct 2025	23 Sep 2025	14 Oct 2025	23 Sep 2025
QD_20250916	SE289532.003	LB361798	16 Sep 2025	16 Sep 2025	14 Oct 2025	23 Sep 2025	14 Oct 2025	23 Sep 2025
R1-20250916	SE289532.006	LB361798	16 Sep 2025	16 Sep 2025	14 Oct 2025	23 Sep 2025	14 Oct 2025	23 Sep 2025

Metals in Water (Dissolved) by ICPOES

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361611	16 Sep 2025	16 Sep 2025	15 Mar 2026	19 Sep 2025	15 Mar 2026	22 Sep 2025
BH208M	SE289532.002	LB361611	16 Sep 2025	16 Sep 2025	15 Mar 2026	19 Sep 2025	15 Mar 2026	22 Sep 2025

Nitrite in Water

Method: ME-(AU)-[ENV]AN277

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361138	16 Sep 2025	16 Sep 2025	20 Sep 2025	16 Sep 2025	20 Sep 2025	17 Sep 2025

HOLDING TIME SUMMARY

SE289532 R0

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

OC Pesticides in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
BH208M	SE289532.002	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
QD_20250916	SE289532.003	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
R1-20250916	SE289532.006	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025

OP Pesticides in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
BH208M	SE289532.002	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
QD_20250916	SE289532.003	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
R1-20250916	SE289532.006	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025

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
BH201M	SE289532.001	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
BH208M	SE289532.002	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
QD_20250916	SE289532.003	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
R1-20250916	SE289532.006	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025

PCBs in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
BH208M	SE289532.002	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
QD_20250916	SE289532.003	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
R1-20250916	SE289532.006	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples

Method: ME-(AU)-[ENV]AN404

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361255	16 Sep 2025	16 Sep 2025	14 Oct 2025	17 Sep 2025	15 Oct 2025	18 Sep 2025

pH in water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361147	16 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025
BH208M	SE289532.002	LB361147	16 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025

Redox Potential (Eh) in water

Method: ME-(AU)-[ENV]AN240

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361150	16 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025

TKN Kjeldahl Digestion by Discrete Analyser

Method: ME-(AU)-[ENV]AN281/292

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361588	16 Sep 2025	16 Sep 2025	14 Oct 2025	18 Sep 2025	14 Oct 2025	22 Sep 2025

Total and Volatile Suspended Solids (TSS / VSS)

Method: ME-(AU)-[ENV]AN114

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361261	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	24 Sep 2025	17 Sep 2025

Total Cyanide in water by Discrete Analyser

Method: ME-(AU)-[ENV]AN077/AN287

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361447	16 Sep 2025	16 Sep 2025	30 Sep 2025	18 Sep 2025	30 Sep 2025	19 Sep 2025

Total Dissolved Solids (TDS) in water

Method: ME-(AU)-[ENV]AN113

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361560	16 Sep 2025	16 Sep 2025	23 Sep 2025	18 Sep 2025	23 Sep 2025	19 Sep 2025
BH208M	SE289532.002	LB361560	16 Sep 2025	16 Sep 2025	23 Sep 2025	18 Sep 2025	23 Sep 2025	19 Sep 2025

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN295

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361445	16 Sep 2025	16 Sep 2025	30 Sep 2025	18 Sep 2025	30 Sep 2025	18 Sep 2025
BH208M	SE289532.002	LB361445	16 Sep 2025	16 Sep 2025	30 Sep 2025	18 Sep 2025	30 Sep 2025	18 Sep 2025

HOLDING TIME SUMMARY

SE289532 R0

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

Total Phosphorus by Kjeldahl Digestion DA in Water

Method: ME-(AU)-[ENV]AN279/AN293

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH208M	SE289532.002	LB361588	16 Sep 2025	16 Sep 2025	14 Oct 2025	18 Sep 2025	14 Oct 2025	19 Sep 2025

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
BH201M	SE289532.001	LB361843	16 Sep 2025	16 Sep 2025	15 Mar 2026	22 Sep 2025	15 Mar 2026	23 Sep 2025
BH208M	SE289532.002	LB361843	16 Sep 2025	16 Sep 2025	15 Mar 2026	22 Sep 2025	15 Mar 2026	23 Sep 2025
QD_20250916	SE289532.003	LB361843	16 Sep 2025	16 Sep 2025	15 Mar 2026	22 Sep 2025	15 Mar 2026	23 Sep 2025
R1-20250916	SE289532.006	LB361843	16 Sep 2025	16 Sep 2025	15 Mar 2026	22 Sep 2025	15 Mar 2026	23 Sep 2025

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
BH201M	SE289532.001	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
BH208M	SE289532.002	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
QD_20250916	SE289532.003	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025
R1-20250916	SE289532.006	LB361226	16 Sep 2025	16 Sep 2025	23 Sep 2025	17 Sep 2025	27 Oct 2025	22 Sep 2025

Turbidity

Method: ME-(AU)-[ENV]AN119

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361148	16 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025
BH208M	SE289532.002	LB361148	16 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025	17 Sep 2025	16 Sep 2025

VOCs in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	18 Sep 2025
BH208M	SE289532.002	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	18 Sep 2025
QD_20250916	SE289532.003	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	18 Sep 2025
TS	SE289532.004	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	18 Sep 2025
TB	SE289532.005	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	18 Sep 2025
R1-20250916	SE289532.006	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	18 Sep 2025

Volatile Petroleum Hydrocarbons in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH201M	SE289532.001	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	18 Sep 2025
BH208M	SE289532.002	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	19 Sep 2025
QD_20250916	SE289532.003	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	18 Sep 2025
TS	SE289532.004	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	19 Sep 2025
TB	SE289532.005	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	19 Sep 2025
R1-20250916	SE289532.006	LB361348	16 Sep 2025	16 Sep 2025	30 Sep 2025	17 Sep 2025	30 Sep 2025	18 Sep 2025

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.

Full 8270 SVOC in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2,4,6-Tribromophenol (Surrogate)	BH208M	SE289532.002	%	40 - 130%	78
2-fluorobiphenyl (Surrogate)	BH208M	SE289532.002	%	40 - 130%	104
d14-p-terphenyl (Surrogate)	BH208M	SE289532.002	%	40 - 130%	116
d5-nitrobenzene (Surrogate)	BH208M	SE289532.002	%	40 - 130%	112
d5-phenol (Surrogate)	BH208M	SE289532.002	%	20 - 130%	81

OC Pesticides in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH208M	SE289532.002	%	40 - 130%	113

OP Pesticides in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH208M	SE289532.002	%	40 - 130%	97
d14-p-terphenyl (Surrogate)	BH208M	SE289532.002	%	40 - 130%	103

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH201M	SE289532.001	%	40 - 130%	90
	BH208M	SE289532.002	%	40 - 130%	97
d14-p-terphenyl (Surrogate)	BH201M	SE289532.001	%	40 - 130%	101
	BH208M	SE289532.002	%	40 - 130%	103
d5-nitrobenzene (Surrogate)	BH201M	SE289532.001	%	40 - 130%	98
	BH208M	SE289532.002	%	40 - 130%	102

PCBs in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH208M	SE289532.002	%	40 - 130%	113

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples

Method: ME-(AU)-[ENV]AN404

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	10 - 150%	50
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 300%	117
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 300%	93
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 300%	111
(13C2-PFDoA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	10 - 150%	75
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 150%	80
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 150%	90
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 150%	90
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	5 - 150%	64
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 150%	103
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 150%	93
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	35 - 150%	73
(13C6-PFDA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 150%	81
(13C7-PFUdA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	30 - 150%	72
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 150%	70
(13C8-PFOSA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	20 - 150%	70
(13C9-PFNA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	40 - 150%	79
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	10 - 150%	59
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	30 - 170%	62
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	10 - 150%	66
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	20 - 150%	69
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	10 - 150%	49
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	BH208M	SE289532.002	%	10 - 150%	49

VOCs in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH201M	SE289532.001	%	40 - 130%	102
	BH208M	SE289532.002	%	40 - 130%	105
	QD_20250916	SE289532.003	%	40 - 130%	102
	TS	SE289532.004	%	40 - 130%	97
	TB	SE289532.005	%	40 - 130%	102

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.

VOCs in Water (continued) — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	R1-20250916	SE289532.006	%	40 - 130%	103
d4-1,2-dichloroethane (Surrogate)	BH201M	SE289532.001	%	40 - 130%	80
	BH208M	SE289532.002	%	40 - 130%	79
	QD_20250916	SE289532.003	%	40 - 130%	81
	TS	SE289532.004	%	40 - 130%	96
	TB	SE289532.005	%	40 - 130%	81
	R1-20250916	SE289532.006	%	40 - 130%	80
d8-toluene (Surrogate)	BH201M	SE289532.001	%	40 - 130%	79
	BH208M	SE289532.002	%	40 - 130%	77
	QD_20250916	SE289532.003	%	40 - 130%	80
	TS	SE289532.004	%	40 - 130%	90
	TB	SE289532.005	%	40 - 130%	78
	R1-20250916	SE289532.006	%	40 - 130%	78

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH201M	SE289532.001	%	40 - 130%	102
	BH208M	SE289532.002	%	40 - 130%	105
	QD_20250916	SE289532.003	%	40 - 130%	102
	R1-20250916	SE289532.006	%	40 - 130%	103
d4-1,2-dichloroethane (Surrogate)	BH201M	SE289532.001	%	60 - 130%	80
	BH208M	SE289532.002	%	60 - 130%	79
	QD_20250916	SE289532.003	%	60 - 130%	81
	R1-20250916	SE289532.006	%	60 - 130%	80
d8-toluene (Surrogate)	BH201M	SE289532.001	%	40 - 130%	79
	BH208M	SE289532.002	%	40 - 130%	77
	QD_20250916	SE289532.003	%	40 - 130%	80
	R1-20250916	SE289532.006	%	40 - 130%	78

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.

Alkalinity

Method: ME-(AU)-[ENV]AN135

Sample Number	Parameter	Units	LOR	Result
LB361350.001	Bicarbonate Alkalinity as CaCO3	mg/L	5	<5
	Carbonate Alkalinity as CaCO3	mg/L	5	<5
	Total Alkalinity as CaCO3	mg/L	5	<5

Ammonia Nitrogen by Discrete Analyser

Method: ME-(AU)-[ENV]AN291

Sample Number	Parameter	Units	LOR	Result
LB361138.001	Ammonia Nitrogen, NH_3 as N	mg/L	0.01	<0.01

Anions by Ion Chromatography in Water

Method: ME-(AU)-[ENV]AN245

Sample Number	Parameter	Units	LOR	Result
LB361441.001	Fluoride	mg/L	0.1	<0.10
	Chloride	mg/L	0.05	<0.05
	Bromide	mg/L	0.05	<0.05
	Nitrate Nitrogen, NO3-N	mg/L	0.005	<0.005
	Sulfate, SO4	mg/L	1	<1.0

Conductivity and TDS by Calculation - Water

Method: ME-(AU)-[ENV]AN106

Sample Number	Parameter	Units	LOR	Result
LB361147.001	Conductivity @ 25 C	µS/cm	2	<2

Dissolved Oxygen by Membrane Electrode

Method: ME-(AU)-[ENV]AN176

Sample Number	Parameter	Units	LOR	Result
LB361149.001	Dissolved Oxygen**	mg/L	0.5	<0.5

Filterable Reactive Phosphorus (FRP)

Method: ME-(AU)-[ENV]AN278

Sample Number	Parameter	Units	LOR	Result
LB361138.001	Filterable Reactive Phosphorus as P	mg/L	0.005	<0.005

Forms of Carbon

Method: ME-(AU)-[ENV]AN190

Sample Number	Parameter	Units	LOR	Result
LB361442.001	Total Organic Carbon as NPOC	mg/L	0.2	<0.2

Full 8270 SVOC in Water

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

Sample Number		Parameter	Units	LOR	Result
LB361226.001	01-PAHs	Acenaphthene	µg/L	0.1	<0.1
		Acenaphthylene	µg/L	0.1	<0.1
		Anthracene	µg/L	0.1	<0.1
		Benzo(a)anthracene	µg/L	0.1	<0.1
		Benzo(b&j&k)fluoranthene	µg/L	0.2	<0.2
		Benzo(a)pyrene	µg/L	0.1	<0.1
		Chrysene	µg/L	0.1	<0.1
		Dibenzo(ah)anthracene	µg/L	0.1	<0.1
		Fluoranthene	µg/L	0.1	<0.1
		Fluorene	µg/L	0.1	<0.1
		1-methylnaphthalene	µg/L	0.1	<0.1
		2-methylnaphthalene	µg/L	0.1	<0.1
		Naphthalene	µg/L	0.1	<0.1
		Phenanthrene	µg/L	0.1	<0.1
		Pyrene	µg/L	0.1	<0.1
		2-acetylaminofluorene	µg/L	0.5	<0.5
		7,12-dimethyl-benz(a)anthracene	µg/L	0.5	<0.5
		3-methylcholanthrene	µg/L	0.5	<0.5
	02-OCs	Aldrin	µg/L	0.1	<0.1
		Alpha-BHC	µg/L	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.

Full 8270 SVOC in Water (continued) — **Method: ME-(AU)-[ENV]AN420**

Sample Number		Parameter	Units	LOR	Result
LB361226.001	02-OCs	Beta-BHC	µg/L	0.1	<0.1
		Delta-BHC	µg/L	0.1	<0.1
		Gamma-BHC (Lindane)	µg/L	0.1	<0.1
		p,p-DDD	µg/L	0.1	<0.1
		p,p-DDE	µg/L	0.1	<0.1
		p,p-DDT	µg/L	0.1	<0.1
		Dieldrin	µg/L	0.1	<0.1
		Alpha-endosulfan	µg/L	0.1	<0.1
		Beta-endosulfan	µg/L	0.1	<0.1
		Endosulfan sulphate	µg/L	0.1	<0.1
		Endrin	µg/L	0.1	<0.1
		Heptachlor	µg/L	0.1	<0.1
		Heptachlor epoxide	µg/L	0.1	<0.1
		Methoxychlor	µg/L	0.1	<0.1
		Mirex	µg/L	0.1	<0.1
		Alpha-chlordane	µg/L	0.1	<0.1
		Gamma-chlordane	µg/L	0.1	<0.1
		Endrin ketone	µg/L	0.1	<0.1
	03-OPs	Azinphos-methyl (Guthion)	µg/L	0.2	<0.2
		Bromophos ethyl	µg/L	0.2	<0.2
		Carbophenothion	µg/L	0.5	<0.5
		Chlorfenvinphos-cis	µg/L	5	<5
		Chlorfenvinphos-trans	µg/L	0.5	<0.5
		Chlorpyrifos (Chlorpyrifos Ethyl)	µg/L	0.2	<0.2
		Chlorpyrifos-methyl	µg/L	0.5	<0.5
		Co-Ral (Coumaphos)	µg/L	0.5	<0.5
		Diazinon (Dimpylate)	µg/L	0.5	<0.5
		Dichlorvos	µg/L	0.5	<0.5
		Demeton-S-methyl	µg/L	0.5	<0.5
		Dimethoate	µg/L	0.5	<0.5
		Disulfoton (Di-syston)	µg/L	0.5	<0.5
		EPN*	µg/L	0.5	<0.5
		Ethion	µg/L	0.2	<0.2
		Ethoprophos (ethoprop or prophos)	µg/L	0.5	<0.5
		Famphur (Famophos)	µg/L	0.5	<0.5
		Fenamiphos (Phenamiphos)	µg/L	0.5	<0.5
		Fenchlorophos (Ronnel)	µg/L	0.5	<0.5
		Fenitrothion	µg/L	0.2	<0.2
		Fenthion	µg/L	0.5	<0.5
		Malathion (Maldison)	µg/L	0.2	<0.2
		Methidathion	µg/L	0.5	<0.5
		Mevinphos-cis/trans	µg/L	1	<1
		o,o,o-triethyl phosphorothioate	µg/L	0.5	<0.5
		Parathion ethyl (Parathion)	µg/L	0.2	<0.2
		Parathion methyl	µg/L	0.5	<0.5
		Phorate	µg/L	0.5	<0.5
		Pirimiphos-ethyl	µg/L	0.5	<0.5
		Pirimiphos-methyl	µg/L	0.5	<0.5
		Profenofos	µg/L	0.5	<0.5
		Prothiophos (Tokuthion)*	µg/L	0.5	<0.5
		Sulfotepp	µg/L	0.5	<0.5
	04-PCB UPAC(7) Congeners	PCB Congener C28	µg/L	0.1	<0.1
		PCB Congener C52	µg/L	0.1	<0.1
		PCB Congener C101	µg/L	0.1	<0.1
		PCB Congener C118	µg/L	0.1	<0.1
		PCB Congener C138	µg/L	0.1	<0.1
		PCB Congener C153	µg/L	0.1	<0.1
		PCB Congener C180	µg/L	0.1	<0.1
	05-SVCH (Cl Benzenes, Hydrocarbons & VOCs)	Hexachlorobenzene (HCB)	µg/L	0.1	<0.1
		1,2-dichlorobenzene	µg/L	0.5	<0.5
		1,3-dichlorobenzene	µg/L	0.5	<0.5

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Full 8270 SVOC in Water (continued) — **Method: ME-(AU)-[ENV]AN420**

Sample Number		Parameter	Units	LOR	Result
LB361226.001	05-SVCH (Cl Benzenes, Hydrocarbons & VOCs)	1,4-dichlorobenzene	µg/L	0.5	<0.5
		Hexachlorobutadiene	µg/L	0.5	<0.5
		Hexachlorocyclopentadiene	µg/L	2	<2
		Hexachloroethane	µg/L	0.5	<0.5
		Hexachloroproprene	µg/L	0.5	<0.5
		Pentachlorobenzene	µg/L	0.5	<0.5
		Pentachloroethane	µg/L	0.5	<0.5
		1,2,3,5 and 1,2,4,5 -tetrachlorobenzene	µg/L	1	<1
		1,2,3,4-tetrachlorobenzene	µg/L	0.5	<0.5
		1/2-Chloronaphthalene	µg/L	1	<1
		1,2,4-trichlorobenzene	µg/L	0.5	<0.5
	06-Phthalates	Bis(2-ethylhexyl)phthalate	µg/L	10	<10
		Bis(2-ethylhexyl)adipate	µg/L	1	<1
		Butyl benzyl phthalate	µg/L	1	<1
		Di-n-butyl phthalate	µg/L	10	<10
		Diethyl phthalate	µg/L	5	<5
		Dimethyl phthalate	µg/L	1	<1
		Di-n-octyl phthalate	µg/L	1	<1
	07-Carbamates	Carbofuran	µg/L	0.5	<0.5
		Carbaryl	µg/L	0.5	<0.5
	08-Herbicides (normal)	Trifluralin	µg/L	0.5	<0.5
	09-Nitrosamines	N-nitroso-di-n-butylamine (NDBA)	µg/L	1	<1
		N-nitroso-diethylamine (NDEA)	µg/L	1	<1
		N-nitroso-di-n-propylamine (NDPA)	µg/L	1	<1
		N-nitroso-morpholine (NMOR)	µg/L	1	<1
		N-nitroso-piperidine (NPIP)	µg/L	1	<1
		N-nitroso-pyrrolidine (NPYR)	µg/L	1	<1
		4-amino biphenyl	µg/L	1	<1
	10-Nitroaromatics and Ketones	Acetophenone	µg/L	1	<1
		1,3-dinitrobenzene	µg/L	1	<1
		2,4-dinitrotoluene	µg/L	1	<1
		2,6-dinitrotoluene	µg/L	1	<1
		Isophorone	µg/L	1	<1
		Nitrobenzene	µg/L	1	<1
		p-(dimethylamino) azobenzene	µg/L	1	<1
		Phenacetin	µg/L	1	<1
		Pentachloronitrobenzene (quintozene)	µg/L	1	<1
	11-Anilines and Amines	Aniline	µg/L	5	<5
		4-chloroaniline	µg/L	1	<1
		2-nitroaniline	µg/L	1	<1
		3-nitroaniline	µg/L	1	<1
		4-nitroaniline	µg/L	1	<1
		Diphenylamine	µg/L	1	<1
		o-toluidine	µg/L	1	<1
		5-nitro-o-toluidine	µg/L	1	<1
		1-naphthylamine	µg/L	2	<2
		2-naphthylamine	µg/L	2	<2
	12-Haloethers	Bis(2-chloroethoxy) methane	µg/L	1	<1
		Bis(2-chloroethyl) ether	µg/L	1	<1
		Bis(2-chloroisopropyl) ether	µg/L	1	<1
		4-chlorophenyl phenyl ether	µg/L	1	<1
		4-bromophenyl phenyl ether	µg/L	1	<1
	13-Other SVOCs	Methyl methanesulfonate	µg/L	1	<1
		Ethyl methanesulfonate	µg/L	1	<1
		Dibenzofuran	µg/L	1	<1
		Benzyl alcohol	µg/L	1	<1
		Safrole	µg/L	1	<1
		Isosafrole Isomer 1	µg/L	1	<1
		Isosafrole Isomer 2	µg/L	1	<1
		1,4-naphthoquinone	µg/L	1	<1
		Thionazin	µg/L	1	<1

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Full 8270 SVOC in Water (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB361226.001	14-Speciated Routine Phenols	3/4-methyl phenol (m/p-cresol)	µg/L	1	<1
		2-methyl phenol (o-cresol)	µg/L	0.5	<0.5
		2,6-dichlorophenol	µg/L	0.5	<0.5
		2,4,5-trichlorophenol	µg/L	0.5	<0.5
		4-chloro-3-methylphenol	µg/L	2	<2
		2-chlorophenol	µg/L	0.5	<0.5
		2,4-dichlorophenol	µg/L	0.5	<0.5
		2,4-dimethylphenol	µg/L	0.5	<0.5
		2-nitrophenol	µg/L	0.5	<0.5
		Phenol	µg/L	0.5	<0.5
		2,4,6-trichlorophenol	µg/L	0.5	<0.5
		Pentachlorophenol	µg/L	0.5	<0.5
		4-nitrophenol	µg/L	1	<1
	Surrogates	d5-phenol (Surrogate)	%	-	101
		d5-nitrobenzene (Surrogate)	%	-	106
		2-fluorobiphenyl (Surrogate)	%	-	102
		2,4,6-Tribromophenol (Surrogate)	%	-	98
		d14-p-terphenyl (Surrogate)	%	-	98

Mercury (dissolved) in Water

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

Sample Number	Parameter	Units	LOR	Result
LB361798.001	Mercury, Hg	mg/L	0.00005	<0.00005

Metals in Water (Dissolved) by ICPOES

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

Sample Number	Parameter	Units	LOR	Result
LB361611.001	Calcium, Ca	mg/L	0.2	<0.2
	Magnesium, Mg	mg/L	0.1	<0.1
	Potassium, K	mg/L	0.1	<0.1
	Silicon, Si*	mg/L	0.05	<0.05
	Sodium, Na	mg/L	0.5	<0.5

Nitrite in Water

Method: ME-(AU)-[ENV]AN277

Sample Number	Parameter	Units	LOR	Result
LB361138.001	Nitrite Nitrogen, NO2 as N	mg/L	0.005	0.005

OC Pesticides in Water

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

Sample Number	Parameter	Units	LOR	Result
LB361226.001	Alpha BHC	µg/L	0.1	<0.1
	Hexachlorobenzene (HCB)	µg/L	0.1	<0.1
	Beta BHC	µg/L	0.1	<0.1
	Lindane (gamma BHC)	µg/L	0.1	<0.1
	Delta BHC	µg/L	0.1	<0.1
	Heptachlor	µg/L	0.1	<0.1
	Aldrin	µg/L	0.1	<0.1
	Heptachlor epoxide	µg/L	0.1	<0.1
	Gamma Chlordane	µg/L	0.1	<0.1
	Alpha Chlordane	µg/L	0.1	<0.1
	Alpha Endosulfan	µg/L	0.1	<0.1
	p,p'-DDE	µg/L	0.1	<0.1
	Dieldrin	µg/L	0.1	<0.1
	Endrin	µg/L	0.1	<0.1
	Beta Endosulfan	µg/L	0.1	<0.1
	p,p'-DDD	µg/L	0.1	<0.1
	Endrin aldehyde	µg/L	0.1	<0.1
	Endosulfan sulphate	µg/L	0.1	<0.1
	p,p'-DDT	µg/L	0.1	<0.1
	Endrin ketone	µg/L	0.1	<0.1
	Methoxychlor	µg/L	0.1	<0.1
	Mirex	µg/L	0.1	<0.1

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OC Pesticides in Water (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB361226.001	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	91

OP Pesticides in Water

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

Sample Number		Parameter	Units	LOR	Result
LB361226.001		Azinphos-methyl	µg/L	0.2	<0.2
		Bromophos Ethyl	µg/L	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	µg/L	0.2	<0.2
		Diazinon (Dimpylate)	µg/L	0.5	<0.5
		Dichlorvos	µg/L	0.5	<0.5
		Dimethoate	µg/L	0.5	<0.5
		Ethion	µg/L	0.2	<0.2
		Fenitrothion	µg/L	0.2	<0.2
		Malathion	µg/L	0.2	<0.2
		Methidathion	µg/L	0.5	<0.5
		Parathion-ethyl (Parathion)	µg/L	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	80
		d14-p-terphenyl (Surrogate)	%	-	86

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result
LB361226.001		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(b&j&k)fluoranthene	µg/L	0.2	<0.2
		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)	%	-	80
		2-fluorobiphenyl (Surrogate)	%	-	80
		d14-p-terphenyl (Surrogate)	%	-	86

PCBs in Water

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

Sample Number	Parameter	Units	LOR	Result
LB361226.001	Arochlor 1016	µg/L	1	<1
	Arochlor 1221	µg/L	1	<1
	Arochlor 1232	µg/L	1	<1
	Arochlor 1242	µg/L	1	<1
	Arochlor 1248	µg/L	1	<1
	Arochlor 1254	µg/L	1	<1
	Arochlor 1260	µg/L	1	<1

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples

Method: ME-(AU)-[ENV]AN404

Sample Number	Parameter	Units	LOR	Result
LB361255.001	Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.05
	Perfluoropentanoic acid (PFPeA)	µg/L	0.01	<0.01
	Perfluorohexanoic acid (PFHxA)	µg/L	0.01	<0.01
	Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.01
	Perfluorooctanoic acid (PFOA)	µg/L	0.01	<0.01
	Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.01
	Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.01
	Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.01
	Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.01
	Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.01

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

Method: ME-(AU)-[ENV]AN404

Sample Number	Parameter	Units	LOR	Result
LB361255.001	Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.01
	Perfluoropropane sulfonic acid (PFPrS)	µg/L	0.01	<0.01
	Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	<0.01
	Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	<0.01
	Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	<0.01
	Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.01
	Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	<0.01
	Perfluorononane sulfonic acid (PFNS)	µg/L	0.01	<0.01
	Perfluorodecane sulfonic acid (PFDS)	µg/L	0.01	<0.01
	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	µg/L	0.01	<0.01
	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	µg/L	0.01	<0.01
	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	µg/L	0.01	<0.01
	1H,1H,2H,2H-Perfluorododecane sulfonic acid (10:2 FTS)	µg/L	0.01	<0.01
	Perfluorooctane sulfonamide (FOSA)	µg/L	0.01	<0.01
	N-Methylperfluorooctane sulfonamide (N-MeFOSA)	µg/L	0.01	<0.01
	N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	µg/L	0.01	<0.01
	N-Methylperfluorooctanesulfonamidoacetic acid (N_MeFOSAA)	µg/L	0.05	<0.05
	N-Ethylperfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	µg/L	0.05	<0.05
	2-(N-Methylperfluorooctane sulfonamido)-ethanol (N-MeFOSE)	µg/L	0.05	<0.05
	2-(N-Ethylperfluorooctane sulfonamido)-ethanol (N-EtFOSE)	µg/L	0.05	<0.05

Total and Volatile Suspended Solids (TSS / VSS)

Method: ME-(AU)-[ENV]AN114

Sample Number	Parameter	Units	LOR	Result
LB361261.001	Total Suspended Solids Dried at 103-105°C	mg/L	5	<5

Total Cyanide in water by Discrete Analyser

Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result
LB361447.001	Total Cyanide	mg/L	0.004	<0.004

Total Dissolved Solids (TDS) in water

Method: ME-(AU)-[ENV]AN113

Sample Number	Parameter	Units	LOR	Result
LB361560.001	Total Dissolved Solids Dried at 175-185°C	mg/L	10	<10

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN295

Sample Number	Parameter	Units	LOR	Result
LB361445.001	Total Phenols	mg/L	0.05	<0.05

Total Phosphorus by Kjeldahl Digestion DA in Water

Method: ME-(AU)-[ENV]AN279/AN293

Sample Number	Parameter	Units	LOR	Result
LB361588.001	Total Phosphorus (Kjeldahl Digestion) as P	mg/L	0.02	<0.02

Trace Metals (Dissolved) in Water by ICPMS

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

Sample Number	Parameter	Units	LOR	Result
LB361843.001	Aluminium	µg/L	5	<5
	Antimony	µg/L	1	<1
	Arsenic	µg/L	1	<1
	Barium	µg/L	1	<1
	Beryllium	µg/L	1	<1
	Boron	µg/L	5	<5
	Cadmium	µg/L	0.1	<0.1
	Chromium	µg/L	1	<1
	Cobalt	µg/L	1	<1
	Copper	µg/L	1	<1
	Iron	µg/L	5	<5

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Trace Metals (Dissolved) in Water by ICPMS (continued)

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

Sample Number	Parameter	Units	LOR	Result
LB361843.001	Lead	µg/L	1	<1
	Manganese	µg/L	1	<1
	Molybdenum	µg/L	1	<1
	Nickel	µg/L	1	<1
	Selenium	µg/L	1	<1
	Silver	µg/L	1	<1
	Strontium	µg/L	1	<1
	Uranium	µg/L	1	<1
	Vanadium	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
LB361226.001	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

Turbidity

Method: ME-(AU)-[ENV]AN119

Sample Number	Parameter	Units	LOR	Result
LB361148.001	Turbidity	NTU	0.5	<0.5

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result
LB361348.001	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
		1,1-dichloroethene	µg/L	0.5	<0.5
		Iodomethane	µg/L	5	<5
		Dichloromethane (Methylene chloride)	µg/L	5	<5
		Allyl chloride	µg/L	2	<2.0
		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
		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

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
LB361348.001	Halogenated Aromatics	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	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
		Styrene (Vinyl benzene)	µg/L	0.5	<0.5
		o-xylene	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	0.5	<0.5
		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	<2.0
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	80
		d8-toluene (Surrogate)	%	-	77
		Bromofluorobenzene (Surrogate)	%	-	98
	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
		Bromoform (THM)	µg/L	0.5	<0.5

Volatile Petroleum Hydrocarbons in Water

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

Sample Number		Parameter	Units	LOR	Result
LB361348.001		TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	80
		d8-toluene (Surrogate)	%	-	77
		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

Alkalinity

Method: ME-(AU)-[ENV]AN135

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289547.007	LB361350.013	Bicarbonate Alkalinity as CaCO3	mg/L	5	<5	7	106	28
		Carbonate Alkalinity as CaCO3	mg/L	5	<1	<1	200	0
		Total Alkalinity as CaCO3	mg/L	5	<5	7	106	28
SE289547.010	LB361350.017	Bicarbonate Alkalinity as CaCO3	mg/L	5	9	8	74	1
		Carbonate Alkalinity as CaCO3	mg/L	5	<1	<1	200	0
		Total Alkalinity as CaCO3	mg/L	5	9	8	74	1

Ammonia Nitrogen by Discrete Analyser

Method: ME-(AU)-[ENV]AN291

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289500.001	LB361138.014	Ammonia Nitrogen, NH_3 as N	mg/L	0.01	0.17	0.17	21	0
SE289532.002	LB361138.024	Ammonia Nitrogen, NH_3 as N	mg/L	0.01	0.02	0.02	80	2

Anions by Ion Chromatography in Water

Method: ME-(AU)-[ENV]AN245

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289319.001	LB361441.014	Nitrate Nitrogen, NO3-N	mg/L	0.005	<0.025	<0.025	200	0
		Sulfate, SO4	mg/L	1	250	240	15	3
SE289539.001	LB361441.020	Fluoride	mg/L	0.1	0.40	0.45	38	12
		Nitrate Nitrogen, NO3-N	mg/L	0.005	0.015	0.015	49	3

Conductivity and TDS by Calculation - Water

Method: ME-(AU)-[ENV]AN106

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289532.002	LB361147.008	Conductivity @ 25 C	µS/cm	2	360	360	16	0

Filterable Reactive Phosphorus (FRP)

Method: ME-(AU)-[ENV]AN278

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289500.001	LB361138.014	Filterable Reactive Phosphorus as P	mg/L	0.005	4.7	4.6	15	4
SE289532.002	LB361138.024	Filterable Reactive Phosphorus as P	mg/L	0.005	<0.005	<0.005	162	0

Metals in Water (Dissolved) by ICPOES

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289532.001	LB361611.014	Calcium, Ca	mg/L	0.2	8.1	8.2	17	1
		Magnesium, Mg	mg/L	0.1	2.6	2.6	19	2
SE289547.008	LB361611.028	Calcium, Ca	mg/L	0.2	5.9	6.0	18	2
		Magnesium, Mg	mg/L	0.1	5.1	5.2	17	2
		Potassium, K	mg/L	0.1	2.124	2.1635	20	2
		Sodium, Na	mg/L	0.5	25.039	25.406	17	1
SE289547.010	LB361611.031	Calcium, Ca	mg/L	0.2	3.0	3.0	22	0
		Magnesium, Mg	mg/L	0.1	2.4	2.4	19	0
		Potassium, K	mg/L	0.1	2.3733	2.3886	19	1
		Sodium, Na	mg/L	0.5	12.484	12.503	19	0

Nitrite in Water

Method: ME-(AU)-[ENV]AN277

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289500.001	LB361138.014	Nitrite Nitrogen, NO2 as N	mg/L	0.005	0.30	0.30	17	1
SE289532.002	LB361138.024	Nitrite Nitrogen, NO2 as N	mg/L	0.005	0.023	0.022	37	3

OC Pesticides in Water

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289479.013	LB361226.028	Alpha BHC	µg/L	0.1	<0.1	<0.1	200	0
		Hexachlorobenzene (HCB)	µg/L	0.1	<0.1	<0.1	200	0
		Beta BHC	µg/L	0.1	<0.1	<0.1	200	0
		Lindane (gamma BHC)	µg/L	0.1	<0.1	<0.1	200	0
		Delta BHC	µg/L	0.1	<0.1	<0.1	200	0
		Heptachlor	µg/L	0.1	<0.1	<0.1	200	0
		Aldrin	µg/L	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	µg/L	0.1	<0.1	<0.1	200	0
		Gamma Chlordane	µg/L	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	µg/L	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 Water (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289479.013	LB361226.028		Alpha Endosulfan	µg/L	0.1	<0.1	<0.1	200	0
			p,p'-DDE	µg/L	0.1	<0.1	<0.1	200	0
			Dieldrin	µg/L	0.1	<0.1	<0.1	200	0
			Endrin	µg/L	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	µg/L	0.1	<0.1	<0.1	200	0
			p,p'-DDD	µg/L	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	µg/L	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	µg/L	0.1	<0.1	<0.1	200	0
			p,p'-DDT	µg/L	0.1	<0.1	<0.1	200	0
			Endrin ketone	µg/L	0.1	<0.1	<0.1	200	0
			Methoxychlor	µg/L	0.1	<0.1	<0.1	200	0
			Mirex	µg/L	0.1	<0.1	<0.1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	µg/L	-	0.13	0.13	30	1

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289532.001	LB361226.028		Naphthalene	µg/L	0.1	<0.1	<0.1	154	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(b&j&k)fluoranthene	µg/L	0.2	<0.2	<0.2	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	-	0.49	0.51	30	3
			2-fluorobiphenyl (Surrogate)	µg/L	-	0.45	0.48	30	6
			d14-p-terphenyl (Surrogate)	µg/L	-	0.50	0.50	30	1

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples

Method: ME-(AU)-[ENV]AN404

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289434.001	LB361255.020	Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.05	<0.05	200	0
		Perfluoropentanoic acid (PFPeA)	µg/L	0.01	0.03	0.03	200	1
		Perfluorohexanoic acid (PFHxA)	µg/L	0.01	0.03	0.03	200	1
		Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.01	<0.01	200	0
		Perfluorooctanoic acid (PFOA)	µg/L	0.01	<0.01	<0.01	200	0
		Perfluoropropane sulfonic acid (PFPrS)	µg/L	0.01	<0.01	<0.01	200	0
		Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	0.04	0.04	200	4
		Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	0.05	0.06	200	4
		Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	0.56	0.59	200	4
		Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.01	<0.01	200	0
		Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.03	0.04	200	15
		Perfluorononane sulfonic acid (PFNS)	µg/L	0.01	<0.01	<0.01	200	0
		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	µg/L	0.01	<0.01	<0.01	200	0
		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	µg/L	0.01	<0.01	<0.01	200	0
		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	µg/L	0.01	<0.01	<0.01	200	0
		1H,1H,2H,2H-Perfluorododecane sulfonic acid (10:2	µg/L	0.01	<0.01	<0.01	200	0
		Sum of PFOS and PFHxS	µg/L	0.01	0.60	0.63	200	5
		Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	µg/L	0.01	0.60	0.63	200	5
		Sum of US EPA PFAS (PFOS+PFOA)	µg/L	0.01	0.03	0.04	200	15
		(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	65	64	200	2
		(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	64	64	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

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

Method: ME-(AU)-[ENV]AN404

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289434.001	LB361255.020	(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	92	89	200	3
		(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	92	88	200	3
		(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	93	92	200	0
		(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	82	82	200	0
		(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	91	87	200	6
		(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	72	65	200	10
		(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	121	116	200	5
		(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	85	86	200	1
		(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	70	64	200	10
SE289551.003	LB361255.015	Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.05	<0.05	200	0
		Perfluoropentanoic acid (PFPeA)	µg/L	0.01	0.04	0.03	200	11
		Perfluorohexanoic acid (PFHxA)	µg/L	0.01	0.15	0.14	200	8
		Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	0.02	0.02	200	7
		Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.05	0.05	200	0
		Perfluoropropane sulfonic acid (PFPrS)	µg/L	0.01	0.04	0.04	200	18
		Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	0.1	0.1	200	3
		Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	0.12	0.12	200	2
		Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	1.0	1.1	200	1
		Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	0.08	0.07	200	5
		Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	1.6	1.5	200	6
		Perfluorononane sulfonic acid (PFNS)	µg/L	0.01	<0.01	<0.01	200	0
		1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	µg/L	0.01	<0.01	<0.01	200	0
		1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	µg/L	0.01	<0.01	<0.01	200	0
		1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	µg/L	0.01	<0.01	<0.01	200	0
		1H,1H,2H,2H-Perfluorododecane sulfonic acid (10:2	µg/L	0.01	<0.01	<0.01	200	0
		Sum of PFOS and PFHxS	µg/L	0.01	2.6	2.5	200	3
		Sum of enHealth PFAS (PFHxS+PFOS+PFOA)	µg/L	0.01	2.7	2.6	200	3
		Sum of US EPA PFAS (PFOS+PFOA)	µg/L	0.01	1.6	1.5	200	6
		(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	65	64	200	1
		(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	63	66	200	5
		(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	90	89	200	1
		(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	89	86	200	2
		(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	88	95	200	8
		(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	79	80	200	1
		(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	90	90	200	1
		(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	66	75	200	13
		(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	119	106	200	12
		(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	88	81	200	9
		(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	69	76	200	10

pH in water

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289532.002	LB361147.008	pH**	pH Units	0.1	5.0	5.0	17	0

Redox Potential (Eh) in water

Method: ME-(AU)-[ENV]AN240

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289532.002	LB361150.003	Eh of Sample Relative to Standard H+ Electrode***	mV	-500	450	445	15	1

TKN Kjeldahl Digestion by Discrete Analyser

Method: ME-(AU)-[ENV]AN281/292

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289500.001	LB361588.027	Total Kjeldahl Nitrogen	mg/L	0.05	10	10	15	2
SE289547.003	LB361588.014	Total Kjeldahl Nitrogen	mg/L	0.05	0.84	0.84	21	0

Total and Volatile Suspended Solids (TSS / VSS)

Method: ME-(AU)-[ENV]AN114

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 and Volatile Suspended Solids (TSS / VSS) (continued)

Method: ME-(AU)-[ENV]AN114

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289446.001	LB361261.013	Total Suspended Solids Dried at 103-105°C	mg/L	5	5	<5	126	0
SE289539.001	LB361261.015	Total Suspended Solids Dried at 103-105°C	mg/L	5	<5	<5	126	0

Total Cyanide in water by Discrete Analyser

Method: ME-(AU)-[ENV]AN077/AN287

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289626.001	LB361447.013	Total Cyanide	mg/L	0.004	<0.004	<0.004	200	0

Total Dissolved Solids (TDS) in water

Method: ME-(AU)-[ENV]AN113

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289547.005	LB361560.013	Total Dissolved Solids Dried at 175-185°C	mg/L	10	95	93	26	2
SE289569.001	LB361560.022	Total Dissolved Solids Dried at 175-185°C	mg/L	10	3200	3200	15	2

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN295

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289367.002	LB361445.014	Total Phenols	mg/L	0.05	<0.05	<0.05	200	0
SE289423.001	LB361445.040	Total Phenols	mg/L	0.05	<0.05	<0.05	200	0
SE289539.001	LB361445.048	Total Phenols	mg/L	0.05	<0.05	<0.05	200	0

Total Phosphorus by Kjeldahl Digestion DA in Water

Method: ME-(AU)-[ENV]AN279/AN293

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289500.001	LB361588.027	Total Phosphorus (Kjeldahl Digestion) as P	mg/L	0.02	5.9	5.7	15	3
SE289547.003	LB361588.014	Total Phosphorus (Kjeldahl Digestion) as P	mg/L	0.02	<0.01	<0.01	200	0

Trace Metals (Dissolved) in Water by ICPMS

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289545.022	LB361843.021	Arsenic	µg/L	1	<1	<1	200	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	200	0
		Copper	µg/L	1	<1	<1	200	0
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	<1	<1	200	0
		Zinc	µg/L	5	<5	<5	200	0
SE289699.001	LB361843.014	Aluminium	µg/L	5	61	63	23	3
		Arsenic	µg/L	1	<1	<1	200	0
		Boron	µg/L	5	89	89	21	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	200	0
		Cobalt	µg/L	1	<1	<1	148	0
		Copper	µg/L	1	1	1	85	4
		Iron	µg/L	5	220	220	17	1
		Lead	µg/L	1	<1	<1	200	0
		Manganese	µg/L	1	120	120	16	0
		Molybdenum	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	3	3	49	2
		Selenium	µg/L	1	<1	<1	200	0
		Silver	µg/L	1	<1	<1	200	0
		Zinc	µg/L	5	43	44	26	2

TRH (Total Recoverable Hydrocarbons) in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289532.001	LB361226.028		TRH C10-C14	µg/L	50	64	54	115	16
			TRH C15-C28	µg/L	200	<200	<200	191	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	177	0
		TRH F Bands	TRH >C10-C16	µg/L	60	83	80	103	4
			TRH >C10-C16 - Naphthalene (F2)	µg/L	60	83	80	103	4

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 Water (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289532.001	LB361226.028	TRH F Bands	TRH >C16-C34 (F3)	µg/L	500	<500	<500	200	0
			TRH >C34-C40 (F4)	µg/L	500	<500	<500	200	0

Turbidity

Method: ME-(AU)-[ENV]AN119

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289532.002	LB361148.013	Turbidity	NTU	0.5	24	24	17	3

VOCs in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289449.001	LB361348.022	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
			1,1-dichloroethene	µg/L	0.5	<0.5	<0.5	200	0
			Iodomethane	µg/L	5	<5	<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
			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
			2-chlorotoluene	µg/L	0.5	<0.5	<0.5	200	0
			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
			Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			Styrene (Vinyl benzene)	µg/L	0.5	<0.5	<0.5	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
			Isopropylbenzene (Cumene)	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 %
SE289449.001	LB361348.022	Monocyclic	n-propylbenzene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatic	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	0.5	<0.5	<0.5	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	-	7.9	8.2	30	3
			d8-toluene (Surrogate)	µg/L	-	7.8	7.7	30	1
			Bromofluorobenzene (Surrogate)	µg/L	-	10.3	10.0	30	2
		Trihalomethan	Chloroform (THM)	µg/L	0.5	<0.5	<0.5	200	0
		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
SE289532.001	LB361348.023	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	166	0
		Aromatic	Toluene	µg/L	0.5	2.5	3.1	48	23
			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	-	8.0	7.8	30	2
			d8-toluene (Surrogate)	µg/L	-	7.9	7.8	30	2
			Bromofluorobenzene (Surrogate)	µg/L	-	10	10.0	30	2
		Totals	Total BTEX	µg/L	3	<3	3	136	5

Volatile Petroleum Hydrocarbons in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE289449.001	LB361348.022		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	-	7.9	8.2	30	3
			d8-toluene (Surrogate)	µg/L	-	7.8	7.7	30	1
			Bromofluorobenzene (Surrogate)	µg/L	-	10.3	10.0	30	2
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0
SE289532.001	LB361348.023		TRH C6-C10	µg/L	50	<50	<50	200	0
			TRH C6-C9	µg/L	40	<40	<40	179	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	8.0	7.8	30	2
			d8-toluene (Surrogate)	µg/L	-	7.9	7.8	30	2
			Bromofluorobenzene (Surrogate)	µg/L	-	10	10.0	30	2
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	166	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.

Ammonia Nitrogen by Discrete Analyser

Method: ME-(AU)-[ENV]AN291

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361138.002	Ammonia Nitrogen, NH_3 as N	mg/L	0.01	2.6	2.5	80 - 120	102

Anions by Ion Chromatography in Water

Method: ME-(AU)-[ENV]AN245

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361441.002	Fluoride	mg/L	0.1	2.0	2	80 - 120	99
	Chloride	mg/L	0.05	21	20	80 - 120	103
	Bromide	mg/L	0.05	2.2	2	80 - 120	111
	Nitrate Nitrogen, NO3-N	mg/L	0.005	2.0	2	80 - 120	101
	Sulfate, SO4	mg/L	1	19	20	80 - 120	95

Conductivity and TDS by Calculation - Water

Method: ME-(AU)-[ENV]AN106

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361147.002	Conductivity @ 25 C	µS/cm	2	1000	1015	85 - 115	98

Filterable Reactive Phosphorus (FRP)

Method: ME-(AU)-[ENV]AN278

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361138.002	Filterable Reactive Phosphorus as P	mg/L	0.005	0.095	0.1	80 - 120	95

Forms of Carbon

Method: ME-(AU)-[ENV]AN190

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361442.002	Total Organic Carbon as NPOC	mg/L	0.2	17	20	80 - 120	86

Full 8270 SVOC in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361226.002	01-PAHs	Acenaphthene	µg/L	0.1	36	40	60 - 140	91
		Acenaphthylene	µg/L	0.1	35	40	60 - 140	87
		Anthracene	µg/L	0.1	37	40	60 - 140	93
		Benzo(a)pyrene	µg/L	0.1	38	40	60 - 140	94
		Fluoranthene	µg/L	0.1	33	40	60 - 140	82
		Naphthalene	µg/L	0.1	34	40	60 - 140	85
		Phenanthrene	µg/L	0.1	35	40	60 - 140	88
		Pyrene	µg/L	0.1	33	40	60 - 140	82
	02-OCs	Aldrin	µg/L	0.1	3.4	4	60 - 140	86
		Delta-BHC	µg/L	0.1	4.3	4	60 - 140	107
		p,p-DDT	µg/L	0.1	3.7	4	60 - 140	92
		Dieldrin	µg/L	0.1	4.5	4	60 - 140	112
		Endrin	µg/L	0.1	3.8	4	60 - 140	96
		Heptachlor	µg/L	0.1	3.3	4	60 - 140	83
	03-OPs	Chlorpyrifos (Chlorpyrifos Ethyl)	µg/L	0.2	11	8	60 - 140	138
		Diazinon (Dimpylate)	µg/L	0.5	9.1	8	60 - 140	114
		Dichlorvos	µg/L	0.5	11	8	60 - 140	137
		Ethion	µg/L	0.2	11	8	60 - 140	137
	05-SVCH (Cl	Hexachlorobenzene (HCB)	µg/L	0.1	4.1	4	60 - 140	103
	Benzenes,	Hexachlorobutadiene	µg/L	0.5	4.0	4	60 - 140	101
		Hexachloroethane	µg/L	0.5	4.0	4	60 - 140	100
		Pentachlorobenzene	µg/L	0.5	3.9	4	60 - 140	99
		1,2,3,4-tetrachlorobenzene	µg/L	0.5	4.3	4	60 - 140	107
	06-Phthalates	Bis(2-ethylhexyl)phthalate	µg/L	10	<10	8	60 - 140	98
		Butyl benzyl phthalate	µg/L	1	7	8	60 - 140	84
		Di-n-butyl phthalate	µg/L	10	<10	8	60 - 140	81
		Diethyl phthalate	µg/L	5	7	8	60 - 140	93
		Dimethyl phthalate	µg/L	1	6	8	60 - 140	78
		Di-n-octyl phthalate	µg/L	1	8	8	60 - 140	101
	09-Nitrosamine	N-nitroso-di-n-propylamine (NDPA)	µg/L	1	34	32	60 - 140	107
	10-Nitroaromat	Pentachloronitrobenzene (quintozene)	µg/L	1	6	4	60 - 140	140

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.

Full 8270 SVOC in Water (continued)

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361226.002	14-Speciated	2,4-dichlorophenol	µg/L	0.5	37	40	60 - 140	91
	Routine	Phenol	µg/L	0.5	42	40	60 - 140	105
		2,4,6-trichlorophenol	µg/L	0.5	43	40	60 - 140	107
		Pentachlorophenol	µg/L	0.5	37	40	60 - 140	93
	Surrogates	d5-phenol (Surrogate)	µg/L	-	2.4	2	40 - 130	119
		d5-nitrobenzene (Surrogate)	µg/L	-	0.63	0.5	40 - 130	126
		2-fluorobiphenyl (Surrogate)	µg/L	-	0.56	0.5	40 - 130	112
		2,4,6-Tribromophenol (Surrogate)	µg/L	-	5.6	5	40 - 130	112
		d14-p-terphenyl (Surrogate)	µg/L	-	0.55	0.5	40 - 130	110

Metals in Water (Dissolved) by ICPOES

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361611.002	Calcium, Ca	mg/L	0.2	49	50.5	80 - 120	98
	Lithium, Li	mg/L	0.005	0.095	0.1	80 - 120	95
	Magnesium, Mg	mg/L	0.1	48	50.5	80 - 120	96
	Potassium, K	mg/L	0.1	52	55	80 - 120	94
	Silicon, Si*	mg/L	0.05	0.25	0.25	80 - 120	101
	Sodium, Na	mg/L	0.5	50	50.5	80 - 120	100

Nitrite in Water

Method: ME-(AU)-[ENV]AN277

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361138.002	Nitrite Nitrogen, NO2 as N	mg/L	0.005	0.087	0.1	80 - 120	87

OC Pesticides in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361226.002		Delta BHC	µg/L	0.1	0.2	0.2	60 - 140	96
		Heptachlor	µg/L	0.1	0.2	0.2	60 - 140	101
		Aldrin	µg/L	0.1	0.2	0.2	60 - 140	98
		Dieldrin	µg/L	0.1	0.2	0.2	60 - 140	100
		Endrin	µg/L	0.1	0.2	0.2	60 - 140	92
		p,p'-DDT	µg/L	0.1	0.2	0.2	60 - 140	88
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	µg/L	-	0.14	0.15	40 - 130	91

OP Pesticides in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361226.002		Chlorpyrifos (Chlorpyrifos Ethyl)	µg/L	0.2	9.4	8	60 - 140	117
		Diazinon (Dimpylate)	µg/L	0.5	9.9	8	60 - 140	124
		Dichlorvos	µg/L	0.5	7.6	8	60 - 140	95
		Ethion	µg/L	0.2	9.4	8	60 - 140	118
	Surrogates	2-fluorobiphenyl (Surrogate)	µg/L	-	0.42	0.5	40 - 130	84
		d14-p-terphenyl (Surrogate)	µg/L	-	0.43	0.5	40 - 130	86

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361226.002		Naphthalene	µg/L	0.1	43	40	60 - 140	108
		Acenaphthylene	µg/L	0.1	44	40	60 - 140	109
		Acenaphthene	µg/L	0.1	44	40	60 - 140	110
		Phenanthrene	µg/L	0.1	46	40	60 - 140	114
		Anthracene	µg/L	0.1	43	40	60 - 140	107
		Fluoranthene	µg/L	0.1	45	40	60 - 140	111
		Pyrene	µg/L	0.1	45	40	60 - 140	112
		Benzo(a)pyrene	µg/L	0.1	50	40	60 - 140	126
	Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.40	0.5	40 - 130	80
		2-fluorobiphenyl (Surrogate)	µg/L	-	0.42	0.5	40 - 130	84
		d14-p-terphenyl (Surrogate)	µg/L	-	0.43	0.5	40 - 130	86

PCBs in Water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361226.002	Arochlor 1260	µg/L	1	<1	0.4	60 - 140	113

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.

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples

Method: ME-(AU)-[ENV]AN404

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361255.002	Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	0.17	0.2	40 - 160	83
	Perfluorooctanoic acid (PFOA)	µg/L	0.01	0.15	0.2	40 - 160	77
	Perfluorononanoic acid (PFNA)	µg/L	0.01	0.19	0.2	40 - 160	97
	Perfluorodecanoic acid (PFDA)	µg/L	0.01	0.17	0.2	40 - 160	83
	Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	0.19	0.2	40 - 160	95
	Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	0.16	0.2	40 - 160	78
	Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	0.18	0.2	40 - 160	92
	Perfluorooctane sulfonamide (FOSA)	µg/L	0.01	0.17	0.2	40 - 160	83

pH in water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361147.003	pH**	pH Units	0.1	7.4	7.415	98 - 102	100

Redox Potential (Eh) in water

Method: ME-(AU)-[ENV]AN240

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361150.001	Eh of Sample Relative to Standard H+ Electrode***	mV	-500	428	428	90 - 110	100

Total and Volatile Suspended Solids (TSS / VSS)

Method: ME-(AU)-[ENV]AN114

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361261.002	Total Suspended Solids Dried at 103-105°C	mg/L	5	96	100	80 - 120	96

Total Cyanide in water by Discrete Analyser

Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361447.002	Total Cyanide	mg/L	0.004	0.026	0.025	80 - 120	103

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN295

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361445.002	Total Phenols	mg/L	0.05	0.20	0.2	80 - 120	102

Total Phosphorus by Kjeldahl Digestion DA in Water

Method: ME-(AU)-[ENV]AN279/AN293

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361588.002	Total Phosphorus (Kjeldahl Digestion) as P	mg/L	0.02	1.1	1	80 - 120	107

Trace Metals (Dissolved) in Water by ICPMS

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361843.002	Aluminium	µg/L	5	19	20	80 - 120	96
	Antimony	µg/L	1	20	20	80 - 120	100
	Arsenic	µg/L	1	18	20	80 - 120	92
	Barium	µg/L	1	21	20	80 - 120	103
	Beryllium	µg/L	1	18	20	80 - 120	92
	Boron	µg/L	5	20	20	80 - 120	98
	Cadmium	µg/L	0.1	20	20	80 - 120	100
	Chromium	µg/L	1	20	20	80 - 120	101
	Cobalt	µg/L	1	20	20	80 - 120	102
	Copper	µg/L	1	21	20	80 - 120	103
	Iron	µg/L	5	20	20	80 - 120	98
	Lead	µg/L	1	21	20	80 - 120	103
	Manganese	µg/L	1	20	20	80 - 120	100
	Molybdenum	µg/L	1	20	20	80 - 120	100
	Nickel	µg/L	1	20	20	80 - 120	101
	Selenium	µg/L	1	19	20	80 - 120	93
	Silver	µg/L	1	17	20	80 - 120	86

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

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

Trace Metals (Dissolved) in Water by ICPMS (continued)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361843.002	Strontium	µg/L	1	20	20	80 - 120	102
	Uranium	µg/L	1	21	20	80 - 120	107
	Vanadium	µg/L	1	20	20	80 - 120	99
	Zinc	µg/L	5	21	20	80 - 120	103

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361226.002		TRH C10-C14	µg/L	50	870	1000	60 - 140	87
	TRH F Bands	TRH >C10-C16	µg/L	60	870	1000	60 - 140	87

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361348.002	Halogenated	1,1-dichloroethene	µg/L	0.5	54	45.45	60 - 140	118
	Aliphatics	1,2-dichloroethane	µg/L	0.5	43	45.45	60 - 140	96
		Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	46	45.45	60 - 140	102
	Halogenated	Chlorobenzene	µg/L	0.5	43	45.45	60 - 140	94
	Monocyclic	Benzene	µg/L	0.5	21	25	60 - 140	86
	Aromatic	Toluene	µg/L	0.5	21	25	60 - 140	85
		Ethylbenzene	µg/L	0.5	22	25	60 - 140	86
		m/p-xylene	µg/L	1	43	50	60 - 140	87
		o-xylene	µg/L	0.5	23	25	60 - 140	92
	Trihalomethan	Chloroform (THM)	µg/L	0.5	53	45.45	60 - 140	116

Volatile Petroleum Hydrocarbons in Water

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB361348.002	TRH C6-C10	µg/L	50	300	400	60 - 140	76
	TRH C6-C9	µg/L	40	280	350	60 - 140	81

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.

Ammonia Nitrogen by Discrete Analyser

Method: ME-(AU)-[ENV]AN291

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289446.001	LB361138.004	Ammonia Nitrogen, NH_3 as N	mg/L	0.01	2.8	0.01	2.5	111

Anions by Ion Chromatography in Water

Method: ME-(AU)-[ENV]AN245

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289532.002	LB361441.021	Fluoride	mg/L	0.1	2.2	<0.10	2	106
		Chloride	mg/L	0.05	74	55	20	94
		Bromide	mg/L	0.05	2.4	<0.05	2	119
		Nitrate Nitrogen, NO3-N	mg/L	0.005	2.7	0.66	2	101

Filterable Reactive Phosphorus (FRP)

Method: ME-(AU)-[ENV]AN278

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289532.002	LB361138.026	Filterable Reactive Phosphorus as P	mg/L	0.005	0.094	<0.005	0.1	96

Forms of Carbon

Method: ME-(AU)-[ENV]AN190

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289429.001	LB361442.005	Total Organic Carbon as NPOC	mg/L	0.2	51	5.8	50	89

Mercury (dissolved) in Water

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289531.001	LB361798.004	Mercury, Hg	mg/L	0.00005	0.0022	<0.0001	0.008	111

Metals in Water (Dissolved) by ICPOES

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289435.001	LB361611.004	Calcium, Ca	mg/L	0.2	260	220	50.5	96

Nitrite in Water

Method: ME-(AU)-[ENV]AN277

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289532.002	LB361138.026	Nitrite Nitrogen, NO2 as N	mg/L	0.005	0.11	0.023	0.1	86

TKN Kjeldahl Digestion by Discrete Analyser

Method: ME-(AU)-[ENV]AN281/292

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289532.002	LB361588.028	Total Kjeldahl Nitrogen	mg/L	0.05	2.9	0.32	2.5	102

Total Cyanide in water by Discrete Analyser

Method: ME-(AU)-[ENV]AN077/AN287

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289627.001	LB361447.014	Total Cyanide	mg/L	0.004	0.026	0.000445	0.025	102

Total Phenolics in Water

Method: ME-(AU)-[ENV]AN295

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289295.001	LB361445.004	Total Phenols	mg/L	0.05	0.20	<0.05	0.2	100

Total Phosphorus by Kjeldahl Digestion DA in Water

Method: ME-(AU)-[ENV]AN279/AN293

QC Sample	Sample Number	Parameter	Units	LOR

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 Phosphorus by Kjeldahl Digestion DA in Water (continued)

Method: ME-(AU)-[ENV]AN279/AN293

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289532.002	LB361588.028	Total Phosphorus (Kjeldahl Digestion) as P	mg/L	0.02	1.0	<0.02	1	102

Trace Metals (Dissolved) in Water by ICPMS

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE289324.001	LB361843.004	Antimony	µg/L	1	20	<1	20	100
		Arsenic	µg/L	1	18	<1	20	91
		Barium	µg/L	1	26	5	20	106
		Cadmium	µg/L	0.1	20	<0.1	20	101
		Copper	µg/L	1	21	<1	20	105
		Iron	µg/L	5	69	43	20	130
		Lead	µg/L	1	21	<1	20	103
		Manganese	µg/L	1	42	21	20	105
		Molybdenum	µg/L	1	17	<1	20	86
		Nickel	µg/L	1	21	<1	20	103
		Selenium	µg/L	1	18	<1	20	91
		Strontium	µg/L	1	37	16	20	102
		Zinc	µg/L	5	26	<5	20	105

VOCs in Water

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

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE289532.006	LB361348.024	Monocyclic Aromatic	Benzene	µg/L	0.5	<0.5	25	91
			Toluene	µg/L	0.5	<0.5	25	99
			Ethylbenzene	µg/L	0.5	<0.5	25	103
			m/p-xylene	µg/L	1	<1	50	93
			o-xylene	µg/L	0.5	<0.5	25	97
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	8.0	-	88
			d8-toluene (Surrogate)	µg/L	-	7.8	-	87
			Bromofluorobenzene (Surrogate)	µg/L	-	10	-	95
		Totals	Total BTEX	µg/L	3	<3	-	-

Volatile Petroleum Hydrocarbons in Water

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

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE289532.006	LB361348.024		TRH C6-C10	µg/L	50	<50	400	85
			TRH C6-C9	µg/L	40	<40	350	88
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	8.0	-	88
			d8-toluene (Surrogate)	µg/L	-	7.8	-	87
			Bromofluorobenzene (Surrogate)	µg/L	-	10	-	95
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	-	-
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	-	-

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/en-au/industry/environmental-health-and-safety

*	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.
NA	Not Applicable
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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CERTIFICATE OF ANALYSIS 391021

Client Details

Client	EI Australia
Attention	Matthew Chee
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details

Your Reference	**E25559, 13-15 Oxford St, 2 Verona St, Paddington**
Number of Samples	1 Water
Date samples received	17/09/2025
Date completed instructions received	18/09/2025

Analysis Details

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

Samples were analysed as received from the client unless as indicated below in the method summaries. 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	25/09/2025
Date of Issue	23/09/2025

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Results Approved By
Liam Timmins, Organics Supervisor
Tabitha Roberts, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Water		
Our Reference		391021-1
Your Reference	UNITS	QT1-20250916
Date Sampled		16/09/2025
Type of sample		Water
Date extracted	-	19/09/2025
Date analysed	-	22/09/2025
TRH C_6 - C_9	µg/L	14
TRH C_6 - C_{10}	µg/L	19
TRH C_6 - C_{10} less BTEX (F1)	µg/L	17
Benzene	µg/L	<1
Toluene	µg/L	3
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	105
Surrogate Toluene-d8	%	99
Surrogate 4-Bromofluorobenzene	%	94

svTRH (C10-C40) in Water		
Our Reference		391021-1
Your Reference	UNITS	QT1-20250916
Date Sampled		16/09/2025
Type of sample		Water
Date extracted	-	19/09/2025
Date analysed	-	19/09/2025
TRH C_{10} - C_{14}	µg/L	83
TRH C_{15} - C_{28}	µg/L	130
TRH C_{29} - C_{36}	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	210
TRH >C_{10} - C_{16}	µg/L	92
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	92
TRH >C_{16} - C_{34}	µg/L	120
TRH >C_{34} - C_{40}	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	210
Surrogate o-Terphenyl	%	104

HM in water - dissolved		
Our Reference		391021-1
Your Reference	UNITS	QT1-20250916
Date Sampled		16/09/2025
Type of sample		Water
Date prepared	-	19/09/2025
Date analysed	-	19/09/2025
Arsenic-Dissolved	µg/L	<1
Cadmium-Dissolved	µg/L	<0.1
Chromium-Dissolved	µg/L	2
Copper-Dissolved	µg/L	4
Lead-Dissolved	µg/L	<1
Mercury-Dissolved	µg/L	<0.05
Nickel-Dissolved	µg/L	10
Zinc-Dissolved	µg/L	38

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS. Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements. Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
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.
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 Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			19/09/2025	1	19/09/2025	22/09/2025		19/09/2025	[NT]
Date analysed	-			22/09/2025	1	22/09/2025	22/09/2025		22/09/2025	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	1	14	14	0	110	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	1	19	20	5	110	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	114	[NT]
Toluene	µg/L	1	Org-023	<1	1	3	3	0	109	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	107	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	110	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	114	[NT]
Naphthalene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	97	1	105	100	5	97	[NT]
Surrogate Toluene-d8	%		Org-023	97	1	99	98	1	100	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	90	1	94	97	3	110	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			19/09/2025	[NT]	[NT]	[NT]	[NT]	19/09/2025	[NT]
Date analysed	-			19/09/2025	[NT]	[NT]	[NT]	[NT]	19/09/2025	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	94	[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]	85	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	[NT]
Surrogate o-Terphenyl	%		Org-020	81	[NT]	[NT]	[NT]	[NT]	97	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date prepared	-			19/09/2025	[NT]	[NT]	[NT]	[NT]	19/09/2025	[NT]
Date analysed	-			19/09/2025	[NT]	[NT]	[NT]	[NT]	19/09/2025	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	106	[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]	107	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	103	[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.

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.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

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.

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.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

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	Anthony Lo

Sample Login Details

Your reference	E25559, 17 Oxford Street, Paddington
Envirolab Reference	329644
Date Sample Received	03/08/2023
Date Instructions Received	03/08/2023
Date Results Expected to be Reported	08/08/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Water
Turnaround Time Requested	3 days
Temperature on Receipt (°C)	14
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
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Sample ID	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	HM in water - dissolved
QT1	✓	✓	✓

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

Additional Info

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

Order E25559
Project E25559 17 Oxford Street, Paddington

				Sample Name	SE251689.001	SE251689.002	SE251689.003	SE251689.004
				Description	GWBH101M	QD1	Trip blank	Trip spike
				Sample Date	2/8/2023	2/8/2023	2/8/2023	2/8/2023
				Matrix	Water	Water	Water	Water
Job Number	**Method Name**	**Analyte Name**	**Units**	**Reporting Limit**	**Result**	**Result**	**Result**	**Result**
SE251689	VOCs in Water	Benzene	µg/L	0.5	<0.5	<0.5	<0.5	[100%]
SE251689	VOCs in Water	Toluene	µg/L	0.5	<0.5	<0.5	<0.5	[102%]
SE251689	VOCs in Water	Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	[103%]
SE251689	VOCs in Water	m/p-xylene	µg/L	1	<1	<1	<1	[105%]
SE251689	VOCs in Water	o-xylene	µg/L	0.5	<0.5	<0.5	<0.5	[102%]
SE251689	VOCs in Water	Total Xylenes	µg/L	1.5	<1.5	<1.5	<1.5	N.A.
SE251689	VOCs in Water	Total BTEX	µg/L	3	<3	<3	<3	N.A.
SE251689	VOCs in Water	Naphthalene (VOC)	µg/L	0.5	<0.5	<0.5	<0.5	[95%]
SE251689	VOCs in Water	d4-1,2-dichloroethan	%	0	**96**	**99**	**102**	**111**
SE251689	VOCs in Water	d8-toluene (Surrogat	%	0	**108**	**87**	**105**	**104**
SE251689	VOCs in Water	Bromofluorobenzene	%	0	**114**	**92**	**106**	**119**
SE251689	Volatile Petroleum Hydrocarbon	TRH C6-C9	µg/L	40	<40	<40	N.A.	N.A.
SE251689	Volatile Petroleum Hydrocarbon	Benzene (F0)	µg/L	0.5	<0.5	<0.5	N.A.	N.A.
SE251689	Volatile Petroleum Hydrocarbon	TRH C6-C10	µg/L	50	<50	<50	N.A.	N.A.
SE251689	Volatile Petroleum Hydrocarbon	TRH C6-C10 minus I	µg/L	50	<50	<50	N.A.	N.A.
SE251689	Volatile Petroleum Hydrocarbon	d4-1,2-dichloroethan	%	0	**96**	**99**	N.A.	N.A.
SE251689	Volatile Petroleum Hydrocarbon	d8-toluene (Surrogat	%	0	**108**	**87**	N.A.	N.A.
SE251689	Volatile Petroleum Hydrocarbon	Bromofluorobenzene	%	0	**114**	**92**	N.A.	N.A.
SE251689	TRH (Total Recoverable Hydroc	TRH C10-C14	µg/L	50	<50	<50	N.A.	N.A.
SE251689	TRH (Total Recoverable Hydroc	TRH C15-C28	µg/L	200	<200	<200	N.A.	N.A.
SE251689	TRH (Total Recoverable Hydroc	TRH C29-C36	µg/L	200	<200	<200	N.A.	N.A.
SE251689	TRH (Total Recoverable Hydroc	TRH C37-C40	µg/L	200	<200	<200	N.A.	N.A.
SE251689	TRH (Total Recoverable Hydroc	TRH >C10-C16	µg/L	60	<60	<60	N.A.	N.A.
SE251689	TRH (Total Recoverable Hydroc	TRH >C10-C16 - Na	µg/L	60	<60	<60	N.A.	N.A.
SE251689	TRH (Total Recoverable Hydroc	TRH >C16-C34 (F3)	µg/L	500	<500	<500	N.A.	N.A.
SE251689	TRH (Total Recoverable Hydroc	TRH >C34-C40 (F4)	µg/L	500	<500	<500	N.A.	N.A.
SE251689	TRH (Total Recoverable Hydroc	TRH C10-C40	µg/L	320	<320	<320	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Naphthalene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	2-methylnaphthalene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	1-methylnaphthalene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Acenaphthylene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Acenaphthene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Fluorene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Phenanthrene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Anthracene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Fluoranthene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Pyrene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Benzo(a)anthracene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Chrysene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Benzo(b&j)fluoranthe	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Benzo(k)fluoranthen	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Benzo(a)pyrene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Indeno(1,2,3-cd)pyre	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Dibenzo(ah)anthrace	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Benzo(ghi)perylene	µg/L	0.1	<0.1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	Total PAH (18)	µg/L	1	<1	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	d5-nitrobenzene (Su	%	0	**57**	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	2-fluorobiphenyl (Sur	%	0	**66**	N.A.	N.A.	N.A.
SE251689	PAH (Polynuclear Aromatic Hyd	d14-p-terphenyl (Sur	%	0	**83**	N.A.	N.A.	N.A.
SE251689	Trace Metals (Dissolved) in Wat	Arsenic	µg/L	1	<1	<1	N.A.	N.A.
SE251689	Trace Metals (Dissolved) in Wat	Cadmium	µg/L	0.1	<0.1	<0.1	N.A.	N.A.
SE251689	Trace Metals (Dissolved) in Wat	Chromium	µg/L	1	<1	<1	N.A.	N.A.
SE251689	Trace Metals (Dissolved) in Wat	Copper	µg/L	1	<1	**1**	N.A.	N.A.
SE251689	Trace Metals (Dissolved) in Wat	Lead	µg/L	1	<1	<1	N.A.	N.A.
SE251689	Trace Metals (Dissolved) in Wat	Nickel	µg/L	1	**3**	**3**	N.A.	N.A.
SE251689	Trace Metals (Dissolved) in Wat	Zinc	µg/L	5	**23**	**22**	N.A.	N.A.
SE251689	Mercury (dissolved) in Water	Mercury	mg/L	0.0001	<0.0001	<0.0001	N.A.	N.A.

Reference	Description	Sample Description	Sample No.	Replicate	ate Sample	ype of sam	ate extract	ate analys	TRH C6 - C	RH C6 - C	C10 less	BT	Benzene	Toluene	thylbenzen	m+p-xylen	o-xylene	Naphthalen	bromofluo	esate (surr	rocosate-d	ate extract	late analys	H C10 - C	H C15 - C	H C29 - C	ve TRH (C	H >C10 -	Naphthale	H >C16 -	H >C34 -	ve TRH (>	osate (surr	Ter late ore	ease late	analys	emic-Diso	nium-Diso	enium-Diso	ower-Diso	sad-Diso	curv-Diso	ibel-Diso	m Inc-Dissolved
Units																																											
PQL																																											
329644	525559.1	OT1	1	0	02/08/201	Water		04/08/201	07/08/201	<10		<10		<10	<1	<1	<2	<2	<1	<2	103	99	99	07/08/202	07/08/202	<50	<100	<100	<50	<50	<50	<100	<100	<50	65	04/08/201	04/08/201	<1	<0.1	<2	4	<3	<0.05	3	24
329644	525559.1	OT1	1	1	02/08/201	Water																		07/08/202	07/08/202	<50	<100	<100	<50	<50	INT	<100	<100	<50	72										

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Andrew Ibrahim
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	andrew.ibrahim@eiaustralia.com.au
Project	**E25559 17 Oxford Street, Paddington**
Order Number	**E25559**
Samples	4

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	**SE251689 R0**
Date Received	2/8/2023
Date Reported	7/8/2023

COMMENTS

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

SIGNATORIES

Dong LIANG
Metals/Inorganics Team Leader

Ly Kim HA
Organic Section Head

VOCs in Water [AN433] Tested: 3/8/2023

PARAMETER	UOM	LOR	GWBH101M WATER - 2/8/2023 SE251689.001	QD1 WATER - 2/8/2023 SE251689.002	Trip blank WATER - 2/8/2023 SE251689.003	Trip spike WATER - 2/8/2023 SE251689.004
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	[100%]
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	[102%]
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	[103%]
m/p-xylene	µg/L	1	<1	<1	<1	[105%]
o-xylene	µg/L	0.5	<0.5	<0.5	<0.5	[102%]
Total Xylenes	µg/L	1.5	<1.5	<1.5	<1.5	-
Total BTEX	µg/L	3	<3	<3	<3	-
Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	<0.5	[95%]

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 3/8/2023

PARAMETER	UOM	LOR	GWBH101M WATER - 2/8/2023 SE251689.001	QD1 WATER - 2/8/2023 SE251689.002
TRH C6-C9	µg/L	40	<40	<40
Benzene (F0)	µg/L	0.5	<0.5	<0.5
TRH C6-C10	µg/L	50	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 3/8/2023

PARAMETER	UOM	LOR	GWBH101M WATER - 2/8/2023 SE251689.001	QD1 WATER - 2/8/2023 SE251689.002
TRH C10-C14	µg/L	50	<50	<50
TRH C15-C28	µg/L	200	<200	<200
TRH C29-C36	µg/L	200	<200	<200
TRH C37-C40	µg/L	200	<200	<200
TRH >C10-C16	µg/L	60	<60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60
TRH >C16-C34 (F3)	µg/L	500	<500	<500
TRH >C34-C40 (F4)	µg/L	500	<500	<500
TRH C10-C40	µg/L	320	<320	<320

PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 3/8/2023

PARAMETER	UOM	LOR	GWBH101M WATER - 2/8/2023 SE251689.001
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(b&j)fluoranthene	µg/L	0.1	<0.1
Benzo(k)fluoranthene	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
Total PAH (18)	µg/L	1	<1

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 3/8/2023

PARAMETER	UOM	LOR	GWBH101M WATER - 2/8/2023 SE251689.001	QD1 WATER - 2/8/2023 SE251689.002
Arsenic	µg/L	1	<1	<1
Cadmium	µg/L	0.1	<0.1	<0.1
Chromium	µg/L	1	<1	<1
Copper	µg/L	1	<1	1
Lead	µg/L	1	<1	<1
Nickel	µg/L	1	3	3
Zinc	µg/L	5	23	22

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 4/8/2023

PARAMETER	UOM	LOR	GWBH101M WATER - 2/8/2023 SE251689.001	QD1 WATER - 2/8/2023 SE251689.002
Mercury	mg/L	0.0001	<0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). Where F2 is corrected for Naphthalene, the VOC data for Naphthalene is used.
AN403	Additionally, the volatile C6-C9/C6-C10 fractions may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total 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.
		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

SE251689 R0

CLIENT DETAILS

Contact	Andrew Ibrahim
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Telephone	61 2 95160722
Facsimile	(Not specified)
Email	andrew.ibrahim@eiaustralia.com.au
Project	**E25559 17 Oxford Street, Paddington**
Order Number	**E25559**
Samples	4

LABORATORY DETAILS

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Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE251689 R0**
Date Received	02 Aug 2023
Date Reported	07 Aug 2023

COMMENTS

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

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Sample counts by matrix	4 Water	Type of documentation received	COC
Date documentation received	2/8/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	5.3°C
Sample container provider	SGS	Turnaround time requested	Three Days
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE251689 R0

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

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

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

Mercury (dissolved) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBH101M	SE251689.001	LB287211	02 Aug 2023	02 Aug 2023	30 Aug 2023	04 Aug 2023	30 Aug 2023	04 Aug 2023
QD1	SE251689.002	LB287211	02 Aug 2023	02 Aug 2023	30 Aug 2023	04 Aug 2023	30 Aug 2023	04 Aug 2023

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBH101M	SE251689.001	LB287090	02 Aug 2023	02 Aug 2023	09 Aug 2023	03 Aug 2023	12 Sep 2023	04 Aug 2023
QD1	SE251689.002	LB287090	02 Aug 2023	02 Aug 2023	09 Aug 2023	03 Aug 2023	12 Sep 2023	04 Aug 2023

Trace Metals (Dissolved) in Water by ICPMS

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBH101M	SE251689.001	LB287085	02 Aug 2023	02 Aug 2023	29 Jan 2024	03 Aug 2023	29 Jan 2024	03 Aug 2023
QD1	SE251689.002	LB287085	02 Aug 2023	02 Aug 2023	29 Jan 2024	03 Aug 2023	29 Jan 2024	03 Aug 2023

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBH101M	SE251689.001	LB287090	02 Aug 2023	02 Aug 2023	09 Aug 2023	03 Aug 2023	12 Sep 2023	07 Aug 2023
QD1	SE251689.002	LB287090	02 Aug 2023	02 Aug 2023	09 Aug 2023	03 Aug 2023	12 Sep 2023	07 Aug 2023

VOCs in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBH101M	SE251689.001	LB287101	02 Aug 2023	02 Aug 2023	16 Aug 2023	03 Aug 2023	16 Aug 2023	07 Aug 2023
QD1	SE251689.002	LB287101	02 Aug 2023	02 Aug 2023	16 Aug 2023	03 Aug 2023	16 Aug 2023	07 Aug 2023
Trip blank	SE251689.003	LB287101	02 Aug 2023	02 Aug 2023	16 Aug 2023	03 Aug 2023	16 Aug 2023	07 Aug 2023
Trip spike	SE251689.004	LB287101	02 Aug 2023	02 Aug 2023	16 Aug 2023	03 Aug 2023	16 Aug 2023	07 Aug 2023

Volatile Petroleum Hydrocarbons in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
GWBH101M	SE251689.001	LB287101	02 Aug 2023	02 Aug 2023	16 Aug 2023	03 Aug 2023	16 Aug 2023	07 Aug 2023
QD1	SE251689.002	LB287101	02 Aug 2023	02 Aug 2023	16 Aug 2023	03 Aug 2023	16 Aug 2023	07 Aug 2023
Trip blank	SE251689.003	LB287101	02 Aug 2023	02 Aug 2023	16 Aug 2023	03 Aug 2023	16 Aug 2023	07 Aug 2023
Trip spike	SE251689.004	LB287101	02 Aug 2023	02 Aug 2023	16 Aug 2023	03 Aug 2023	16 Aug 2023	07 Aug 2023

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

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason 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)	GWBH101M	SE251689.001	%	40 - 130%	66
d14-p-terphenyl (Surrogate)	GWBH101M	SE251689.001	%	40 - 130%	83
d5-nitrobenzene (Surrogate)	GWBH101M	SE251689.001	%	40 - 130%	57

VOCs in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	GWBH101M	SE251689.001	%	40 - 130%	114
	QD1	SE251689.002	%	40 - 130%	92
	Trip blank	SE251689.003	%	40 - 130%	106
	Trip spike	SE251689.004	%	40 - 130%	119
d4-1,2-dichloroethane (Surrogate)	GWBH101M	SE251689.001	%	40 - 130%	96
	QD1	SE251689.002	%	40 - 130%	99
	Trip blank	SE251689.003	%	40 - 130%	102
	Trip spike	SE251689.004	%	40 - 130%	111
d8-toluene (Surrogate)	GWBH101M	SE251689.001	%	40 - 130%	108
	QD1	SE251689.002	%	40 - 130%	87
	Trip blank	SE251689.003	%	40 - 130%	105
	Trip spike	SE251689.004	%	40 - 130%	104

Volatile Petroleum Hydrocarbons in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	GWBH101M	SE251689.001	%	40 - 130%	114
	QD1	SE251689.002	%	40 - 130%	92
d4-1,2-dichloroethane (Surrogate)	GWBH101M	SE251689.001	%	60 - 130%	96
	QD1	SE251689.002	%	60 - 130%	99
d8-toluene (Surrogate)	GWBH101M	SE251689.001	%	40 - 130%	108
	QD1	SE251689.002	%	40 - 130%	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.

Mercury (dissolved) in Water

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

Sample Number	Parameter	Units	LOR	Result
LB287211.001	Mercury	mg/L	0.0001	<0.0001

PAH (Polynuclear Aromatic Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result
LB287090.001		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)	%	-	49
		2-fluorobiphenyl (Surrogate)	%	-	50
		d14-p-terphenyl (Surrogate)	%	-	67

Trace Metals (Dissolved) in Water by ICPMS

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

Sample Number	Parameter	Units	LOR	Result
LB287085.001	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
LB287090.001	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
LB287101.001	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	<0.5
		Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		o-xylene	µg/L	0.5	<0.5
	Polycyclic VOCs	Naphthalene (VOC)*	µg/L	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	103
		d8-toluene (Surrogate)	%	-	112
		Bromofluorobenzene (Surrogate)	%	-	115

Volatile Petroleum Hydrocarbons in Water

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

Sample Number		Parameter	Units	LOR	Result
LB287101.001		TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	103
		d8-toluene (Surrogate)	%	-	112
		Bromofluorobenzene (Surrogate)	%	-	115

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 give a different calculated RPD.

Mercury (dissolved) in Water

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE251679.001	LB287211.014	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	0
SE251760.014	LB287211.024	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	22

Trace Metals (Dissolved) in Water by ICPMS

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE251689.002	LB287085.014	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	181	0
		Copper	µg/L	1	1	1	89	2
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	3	3	45	1
		Zinc	µg/L	5	22	22	38	0

TRH (Total Recoverable Hydrocarbons) in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE251689.002	LB287090.023		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 %
SE251528.004	LB287101.023	Monocyclic	Benzene	µg/L	0.5	0	0	200	0
		Aromatic	Toluene	µg/L	0.5	0.030833160	40.0311447302	200	0
			Ethylbenzene	µg/L	0.5	0.008492420	40.0065858174	200	0
			m/p-xylene	µg/L	1	0.019522309	30.0185990375	200	0
			o-xylene	µg/L	0.5	0.008946986	40.0089597645	200	0
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	0.053987493	40.0369792468	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.8885599340	9.0431086416	30	9
			d8-toluene (Surrogate)	µg/L	-	10.4002220320	0.9099288183	30	5
			Bromofluorobenzene (Surrogate)	µg/L	-	9.1175941237	11.0089191724	30	19
		Totals	Total BTEX	µg/L	3	0	0	200	0
SE251689.001	LB287101.022	Monocyclic	Benzene	µg/L	0.5	<0.5	0.1447009817	200	0
		Aromatic	Toluene	µg/L	0.5	<0.5	0.2101189595	200	0
			Ethylbenzene	µg/L	0.5	<0.5	0.0313211150	200	0
			m/p-xylene	µg/L	1	<1	0.0879805247	200	0
			o-xylene	µg/L	0.5	<0.5	0.0435993899	200	0
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	0.0960395904	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.6	9.2900590226	30	4
			d8-toluene (Surrogate)	µg/L	-	10.8	10.6658684228	30	1
			Bromofluorobenzene (Surrogate)	µg/L	-	11.4	10.4762472789	30	8
		Totals	Total BTEX	µg/L	3	<3	0	200	0

Volatile Petroleum Hydrocarbons in Water

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE251528.004	LB287101.023		TRH C6-C10	µg/L	50	3.6148749476	0	200	0
			TRH C6-C9	µg/L	40	4.0959737888	0	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.8885599340	9.0431086416	30	9
			d8-toluene (Surrogate)	µg/L	-	10.4002220320	0.9099288183	30	5
			Bromofluorobenzene (Surrogate)	µg/L	-	9.1175941237	11.0089191724	30	19
		VPH F Bands	Benzene (F0)	µg/L	0.5	0	0	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	3.6148749476	0	200	0
SE251689.001	LB287101.022		TRH C6-C10	µg/L	50	<50	0	200	0
			TRH C6-C9	µg/L	40	<40	0	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.6	9.2900590226	30	4
			d8-toluene (Surrogate)	µg/L	-	10.8	10.6658684228	30	1

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 give a different calculated RPD.

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE251689.001	LB287101.022	Surrogates	Bromofluorobenzene (Surrogate)	µg/L	-	11.4	10.476247278	30	8
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	0.1447009817	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	0	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 %
LB287090.002		Naphthalene	µg/L	0.1	43	40	60 - 140	109
		Acenaphthylene	µg/L	0.1	50	40	60 - 140	126
		Acenaphthene	µg/L	0.1	48	40	60 - 140	119
		Phenanthrene	µg/L	0.1	49	40	60 - 140	122
		Anthracene	µg/L	0.1	50	40	60 - 140	125
		Fluoranthene	µg/L	0.1	53	40	60 - 140	132
		Pyrene	µg/L	0.1	56	40	60 - 140	140
		Benzo(a)pyrene	µg/L	0.1	50	40	60 - 140	126
	Surrogates	d5-nitrobenzene (Surrogate)	µg/L	-	0.2	0.5	40 - 130	47
		2-fluorobiphenyl (Surrogate)	µg/L	-	0.3	0.5	40 - 130	58
		d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	79

Trace Metals (Dissolved) in Water by ICPMS

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB287085.002		Arsenic	µg/L	1	20	20	80 - 120	98
		Cadmium	µg/L	0.1	20	20	80 - 120	101
		Chromium	µg/L	1	20	20	80 - 120	100
		Copper	µg/L	1	20	20	80 - 120	101
		Lead	µg/L	1	20	20	80 - 120	102
		Nickel	µg/L	1	21	20	80 - 120	103
		Zinc	µg/L	5	21	20	80 - 120	103

TRH (Total Recoverable Hydrocarbons) in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB287090.002		TRH C10-C14	µg/L	50	1000	1200	60 - 140	84
		TRH C15-C28	µg/L	200	1200	1200	60 - 140	101
		TRH C29-C36	µg/L	200	1300	1200	60 - 140	112
	TRH F Bands	TRH >C10-C16	µg/L	60	1100	1200	60 - 140	91
		TRH >C16-C34 (F3)	µg/L	500	1300	1200	60 - 140	112
		TRH >C34-C40 (F4)	µg/L	500	650	600	60 - 140	109

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB287101.002	Monocyclic	Benzene	µg/L	0.5	53	45.45	60 - 140	118
	Aromatic	Toluene	µg/L	0.5	55	45.45	60 - 140	120
		Ethylbenzene	µg/L	0.5	51	45.45	60 - 140	112
		m/p-xylene	µg/L	1	99	90.9	60 - 140	109
		o-xylene	µg/L	0.5	49	45.45	60 - 140	109
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.8	10	60 - 140	118
		d8-toluene (Surrogate)	µg/L	-	12.8	10	70 - 130	128
		Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10	70 - 130	107

Volatile Petroleum Hydrocarbons in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB287101.002		TRH C6-C10	µg/L	50	900	946.63	60 - 140	95
		TRH C6-C9	µg/L	40	780	818.71	60 - 140	95
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	11.8	10	60 - 140	118
		d8-toluene (Surrogate)	µg/L	-	12.8	10	70 - 130	128
		Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10	70 - 130	107
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	590	639.67	60 - 140	92

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 (dissolved) in Water

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE251650.025	LB287211.004	Mercury	mg/L	0.0001	0.0020	0.006	0.008	100

Trace Metals (Dissolved) in Water by ICPMS

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE251639.001	LB287085.004	Arsenic	µg/L	1	21	0.147	20	105
		Cadmium	µg/L	0.1	21	0.041	20	103
		Chromium	µg/L	1	21	0.063	20	103
		Copper	µg/L	1	22	1.059	20	103
		Lead	µg/L	1	21	0.023	20	104
		Nickel	µg/L	1	21	0.236	20	106
		Zinc	µg/L	5	42	22.203	20	101

VOCs in Water

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

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE251547.001	LB287101.024	Monocyclic	Benzene	µg/L	0.5	0	45.45	75
		Aromatic	Toluene	µg/L	0.5	0.08471593578	45.45	80
			Ethylbenzene	µg/L	0.5	0.00777322061	45.45	80
			m/p-xylene	µg/L	1	0.01852672036	90.9	80
			o-xylene	µg/L	0.5	0.00756518480	45.45	79
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	0.04432040956	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.18784282117	-	107
			d8-toluene (Surrogate)	µg/L	-	8.65620172231	-	121
			Bromofluorobenzene (Surrogate)	µg/L	-	9.47591296426	-	108
		Totals	Total BTEX	µg/L	3	0	-	-

Volatile Petroleum Hydrocarbons in Water

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

QC Sample	Sample Number		Parameter	Units	LOR	Original	Spike	Recovery%
SE251547.001	LB287101.024		TRH C6-C10	µg/L	50	12.6735230303	946.63	67
			TRH C6-C9	µg/L	40	12.8255555374	818.71	67
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.18784282117	-	107
			d8-toluene (Surrogate)	µg/L	-	8.65620172231	-	121
			Bromofluorobenzene (Surrogate)	µg/L	-	9.47591296426	-	108
		VPH F	Benzene (F0)	µg/L	0.5	0	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	12.6735230303	639.67	66

MATRIX SPIKE DUPLICATES

SE251689 R0

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 end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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CERTIFICATE OF ANALYSIS 329644

Client Details

Client	EI Australia
Attention	Anthony Lo
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details

Your Reference	**E25559, 17 Oxford Street, Paddington**
Number of Samples	1 Water
Date samples received	03/08/2023
Date completed instructions received	03/08/2023

Analysis Details

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

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

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

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

Report Details

Date results requested by	08/08/2023
Date of Issue	08/08/2023

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Results Approved By
Dragana Tomas, Senior Chemist
Loren Bardwell, Development Chemist
Steven Luong, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Water		
Our Reference		329644-1
Your Reference	UNITS	QT1
Date Sampled		02/08/2023
Type of sample		Water
Date extracted	-	04/08/2023
Date analysed	-	07/08/2023
TRH C_6 - C_9	µg/L	<10
TRH C_6 - C_{10}	µg/L	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	101
Surrogate toluene-d8	%	99
Surrogate 4-BFB	%	99

svTRH (C10-C40) in Water		
Our Reference		329644-1
Your Reference	UNITS	QT1
Date Sampled		02/08/2023
Type of sample		Water
Date extracted	-	07/08/2023
Date analysed	-	07/08/2023
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	<100
TRH C_{29} - C_{36}	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	<50
TRH >C_{10} - C_{16}	µg/L	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50
TRH >C_{16} - C_{34}	µg/L	<100
TRH >C_{34} - C_{40}	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	<50
Surrogate o-Terphenyl	%	65

HM in water - dissolved		
Our Reference		329644-1
Your Reference	UNITS	QT1
Date Sampled		02/08/2023
Type of sample		Water
Date prepared	-	04/08/2023
Date analysed	-	04/08/2023
Arsenic-Dissolved	µg/L	<1
Cadmium-Dissolved	µg/L	<0.1
Chromium-Dissolved	µg/L	<1
Copper-Dissolved	µg/L	4
Lead-Dissolved	µg/L	<1
Mercury-Dissolved	µg/L	<0.05
Nickel-Dissolved	µg/L	3
Zinc-Dissolved	µg/L	24

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS. Please note for Bromine and Iodine, any forms of these elements that are present are included together in the one result reported for each of these two elements.
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-W1	[NT]
Date extracted	-			04/08/2023	[NT]	[NT]	[NT]	[NT]	04/08/2023	[NT]
Date analysed	-			07/08/2023	[NT]	[NT]	[NT]	[NT]	07/08/2023	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	93	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	93	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate toluene-d8	%		Org-023	99	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate 4-BFB	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			07/08/2023	1	07/08/2023	07/08/2023		07/08/2023	[NT]
Date analysed	-			07/08/2023	1	07/08/2023	07/08/2023		07/08/2023	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	1	<50	<50	0	103	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	1	<100	<100	0	107	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	1	<100	<100	0	100	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	1	<50	<50	0	103	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	1	<100	<100	0	107	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	1	<100	<100	0	100	[NT]
Surrogate o-Terphenyl	%		Org-020	94	1	65	72	10	66	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			04/08/2023	[NT]	[NT]	[NT]	[NT]	04/08/2023	[NT]
Date analysed	-			04/08/2023	[NT]	[NT]	[NT]	[NT]	04/08/2023	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	89	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	96	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Dissolved Metals: no filtered, preserved sample was received, therefore the unpreserved sample was filtered through 0.45µm filter at the lab.
Note: there is a possibility some elements may be underestimated.

Appendix H - Completion Report for Dewatering Work

Clear form Print

Application to surrender a water supply work approval

Please refer to the accompanying guide to the Application to surrender a water supply work approval under *Section 108 of the Water Management Act 2000 (WMA)*.

What you need to do

Before filling in this form, applicants are advised to read the guide for an application to surrender a water supply work approval, which has step-by-step instructions on each section.

Please complete the form with a black/blue ink pen and use BLOCK letters. You can also type directly in this form. Once completed, please print and sign the form.

Submit your application form

- by post to **WaterNSW, PO Box 398, Parramatta NSW 2124**, or
- email a scanned copy to Customer.Helpdesk@waternsw.com.au

If there is not enough space in the form, please attach additional pages to the back of the form.

WaterNSW customers are encouraged to book a phone appointment with us to discuss your water licensing enquiries. Visit waternsw.com.au/licensing

Section A: Water supply work approval to be surrendered

Complete this section with the details of the water supply work approval to be surrendered and the date of surrender (must be the date the application is submitted or a future date). An example of a type of work can be a bore, dam or a pump.

A1 Water supply work approval number	A2 Date to be surrendered
A3 Type of work to be surrendered	
A4 Reason for surrender	

Section B: Water supply work approval holder/s details

List ALL holders of the water supply work approval that is to be surrendered and all holders must sign the declaration (Section F). See the guide for further information. If there are more than four holders, photocopy/print additional copies of Section B complete it and attach it to this form. Please note that applications submitted via email must include the email addresses of all listed applicants.

Holder

B1 Title (Mr, Mrs, Ms)	B2 Surname	
B3 Given name(s)		
B4 Company/corporation name *(if applicable)*		
B5 ACN *(if applicable)*	B6 ABN *(if you do not hold an ACN and are an organisation incorporated in NSW you must provide an ABN and a copy of your certificate of incorporation)*	
B7 Position held *(if applicable)*		
B8 Name of company representative *(if applicable)*		
B9 Postal address		
B10 Suburb	B11 State	B12 Postcode
B13 Phone	B14 Mobile phone	
B15 Email		

Additional holder (if applicable)

B16 Title (Mr, Mrs, Ms)	B17 Surname	
B18 Given name(s)		
B19 Company/corporation name *(if applicable)*		
B20 ACN *(if applicable)*	B21 ABN *(if you do not hold an ACN and are an organisation incorporated in NSW you must provide an ABN and a copy of your certificate of incorporation)*	
B22 Position held *(if applicable)*		
B23 Name of company representative *(if applicable)*		
B24 Postal address		
B25 Suburb	B26 State	B27 Postcode
B28 Phone	B29 Mobile phone	
B30 Email		

Additional holder (if applicable)

B31 Title (Mr, Mrs, Ms)	B32 Surname	
B33 Given name(s)		
B34 Company/corporation name *(if applicable)*		
B35 ACN *(if applicable)*	B36 ABN *(if you do not hold an ACN and are an organisation incorporated in NSW you must provide an ABN and a copy of your certificate of incorporation)*	
B37 Position held *(if applicable)*		
B38 Name of company representative *(if applicable)*		
B39 Postal address		
B40 Suburb	B41 State	B42 Postcode
B43 Phone	B44 Mobile phone	
B45 Email		

Section C: Nominated contact person

Note: If there is only one holder, you do not need to complete this section. If there are multiple holders and this section has not been completed, WaterNSW will assume the first holder listed on the form is the nominated contact person.

If a third party is acting on behalf of the water supply work approval holders and they are to be considered the nominated contact, their details must be provided below.

C1 Title (Mr, Mrs, Ms)	C2 Surname	
C3 Given name(s)		
C4 Company/corporation name *(if applicable)*		
C5 ACN *(if applicable)*	C6 ABN *(if you do not hold an ACN and are an organisation incorporated in NSW you must provide an ABN and a copy of your certificate of incorporation)*	
C7 Position held *(if applicable)*		
C8 Name of company representative *(if applicable)*		
C9 Postal address		
C10 Suburb	C11 State	C12 Postcode
C13 Phone	C14 Mobile phone	
C15 Email		

Listing a nominated contact person assists us in processing your application where there are multiple holders. We may need to contact the nominated contact person to discuss the details contained in your application. In addition, any request for additional information about your application will be sent to the nominated contact person. Any information provided by the nominated contact person will be relied upon by WaterNSW in considering this application. A delay in responding to any such request may result in your application being further delayed or refused.

The rights and liabilities arising in relation to this application is shared by all applicants and not limited to the nominated contact person. Any changes to any details of an application for a surrender (except for minor changes to contact details of an applicant) or withdrawal of the application must be in writing and signed and dated by all holders. Further, the Notice of decision issued in relation to your application will be sent to all applicants.

Section D: Nominated water access licence

Provide details below of any water access licences attached to this water supply work approval. If there is a nominated water access licence and you wish to continue to take water using this water access licence another water supply work will need to be nominated. To nominate a new water supply work approval use this form.

Nominated water access licence

D1 Nominated water access licence number

Section E: Decommission of water supply works

To surrender a water supply work approval the work/s must be unable to be used to take water unless it is exempt. For further information on exemptions, visit waternsw.com.au/approvals and scroll down to the section on exceptions. Refer to the guide for surrender an approval for information on the action to be taken for decommissioning different types of works.

For bores

All constructed bores have been approved for decommissioning (where required under the Water Sharing Plan (WSP), or relevant information provided. All bores are to be decommissioned in line with the minimum construction requirement for water bores in Australia.

Note: A Bore Construction Report (previously known as a 'Form A') is to be lodged for all decommissioned bores. I/We, the applicant/s, understand and acknowledge that.

Please tick which is applicable.

- ☐ Bore has not been constructed
- ☐ Bore unable to be located on property and statutory declaration provided
- ☐ Bore has been constructed and decommissioned in line with the requirements outlined in the guide to the application and a Bore construction report (Form A) has been submitted by the Driller

Other works

For all other constructed water supply work approvals **including pumps, pipes and dam**, the work has been decommissioned unless exempt. Please tick which is applicable.

- ☐ Work/s have not been constructed
- ☐ Constructed work/s have been decommissioned
- ☐ Constructed works are exempt from requiring an approval

What specific exemption are you claiming? (Please provide justification for the works in their current shape/form/capacity or advise of any proposed modifications).

Section F: Declaration of application

- Each applicant should sign Section F.
- If there are more than two applicants, photocopy/print multiple copies of the entire form after Sections A to E have been completed (before anyone signs Section F).

Section F must be fully completed and signed by each holder of the water supply work approval that is being surrendered. If it is not fully completed, WaterNSW will return the application to the applicant/s as an invalid application. Please refer to the accompanying guide for surrendering a water supply work approval.

If there are multiple holders, please ensure that you retain signed copies of the completed application form for your records. It is an offence, under section 344 of the *Water Management Act 2000*, to make a statement that you know to be false or misleading in, or in connection with, this application. I/We, the undersigned applicants, acknowledge and agree:

1. that I/we apply to surrender the water supply work approval as described in this application and all works included on the approval have been decommissioned unless exempt.
2. that this application will be determined in accordance with the *Water Management Act 2000* and any associated regulations or guidelines as in force from time to time, and that no right or entitlement shall arise pending determination of this application.
3. that the authorised contact person (where applicable) has my permission to act for and on my behalf in relation to any aspect of this application unless otherwise notified by us, and that WaterNSW will rely on information provided by the authorised contact person in its consideration of this application.
4. that the authorised contact person (where applicable) has my permission to act for and on my behalf in relation to any aspect of this application unless otherwise notified by us, and that WaterNSW will rely on information provided by the authorised contact person in its consideration of this application.
5. that all information contained in this application is accurate, true and complete in every detail and that the State will rely on such information.
6. that I/we have read and understood the information contained in the WaterNSW privacy statement (below).
7. that by entering a mobile phone number and/or email address, you consent to WaterNSW communicating with you electronically in relation to this application. Unless you indicate otherwise, all correspondence will be sent via email or SMS.
8. that WaterNSW may collect, use, and disclose my personal information as outlined in the WaterNSW privacy statement (below) and I consent to WaterNSW collecting, using and disclosing my personal information in accordance with the WaterNSW privacy statement.
9. that I/we consent to WaterNSW sharing my personal information with NSW Government agencies or State-Owned Corporations from time to time.
10. that the State does not provide any legal, financial, or technical advice in connection with this application and that any such advice, if required, is to be obtained independently.
11. that details about any approval arising out of this application will be recorded in the publicly available Water Register pursuant to the *Water Management Act 2000*.

12. that if this application is incomplete, it will not be accepted; and that more information may be requested if it is considered that it would be relevant to the consideration of this application.

I/We, the undersigned, apply for an approval described above for the nature and purpose specified in the application. I/We state that the information provided for the purpose of this application is accurate and true.

For applications made by individuals:

Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date

For applications made by a corporation:

Executed for and on behalf of the applicant in accordance with section 127 of the *Corporations Act 2001 (Cth)* (if a company) or by its duly authorised officer (for other types of corporations):

Name of corporation			
ACN *(if applicable)*	ABN (*If you do not hold an ACN and are an organisation incorporated in NSW you must provide an ABN.)*		
Position of signatory *(Tick the appropriate box)*	☐ company director	☐ sole director	
	☐ duly authorised officer	☐ company secretary	
Name of signatory	Signature	Date	
Position of signatory *(Tick the appropriate box)*	☐ company director	☐ sole director	
	☐ duly authorised officer	☐ company secretary	
Name of signatory	Signature	Date	

Privacy statement

The personal information you provide on this form will be used and protected in accordance with WaterNSW Privacy policy. It is being collected by WaterNSW and will be used for purposes related to assessing and processing your application, or in connection with the operation of any approval granted, or for research-related purposes such as customer surveys. It may be used from time to time to contact you about services WaterNSW provides.

WaterNSW will not disclose your personal information to anybody else unless authorised by law. The provision of this information is voluntary. However, if you choose not to provide the requested information, we will not be able to process your application. You have the right to request access to, and correct details of, your personal information held by WaterNSW. Further information regarding privacy can be obtained from our website at waternsw.com.au

If an approval is granted, the *Water Management Act 2000* requires that various details relating to the approval are to be recorded in the Register of Water Approvals kept by the Minister. Information recorded in the register is publicly available.

Offences and penalties

It is an offence, under section 344 of the *Water Management Act 2000*, to make a statement that you know to be false or misleading in, or in connection with, this application.

A corporation found guilty of an offence against section 344 is liable to a penalty not exceeding $2.002 million. An individual found guilty of an offence against section 344 is liable to a penalty not exceeding $500,500. An access licence or approval may be suspended or cancelled under the *Water Management Act 2000* in certain circumstances. These include if the holder of the licence or approval is convicted of an offence under that Act.

Completion report for dewatering work

Providing a completion report is a condition of the approval and a copy of the completed form **must** be supplied **when or before you surrender the approval** to finalise the dewatering activity. You cannot surrender the approval without it.

All the information to be supplied is specified within this form.

To complete the form, you will be required to gather data at the commencement of works and during the dewatering activity.

How to use this form

Use this form to record and report groundwater taken by aquifer interference activities[1]

Section A to E:

These sections require information on the following:

Approval held, dewatering duration/groundwater source, details of person taking water, activity description and location.

Section F to I:

For these sections you will be required to gather data at the commencement of works and during the dewatering activity.

Information to enter includes:
Summary of total water taken, record of metered volumes taken, summary of water level measurements from monitoring bores and water testing undertaken.

Note:

- Information must be supplied in accordance with approval held, refer to approval.
- To measure volumes, a meter must be used[7].
- Excel soft copies of measurement data may also be required. Please ensure these are provided in accordance with the instructions shown in that section.

Section J:

Complete form declaration.

Refer to the end of the form for information on:

- Returning completed forms and any attachments
- Where to get help
- Privacy Statement
- Notes section

Section A: Approval held

Report submission date	
Dewatering approval number	
Approval expiry date	
Date received (Office use only)	

Section B: Dewatering duration / groundwater source

Dewatering duration	Days/Weeks/Months/Years
Dewatering start date	
Dewatering end date	
Groundwater source[2]	

Section C: Details of person taking water[3]

Full name		
Company/organisation (including ACN/ABN)		
Postal address		
Suburb	State	Postcode
Phone number		
Email		

Section D: Activity description

Project name
Describe the activity/s resulting in groundwater being taken[4]
Describe the means by which the groundwater is being taken[5]
Is your dewatering activity exempt from obtaining a water access licence under the *Water Management (General) Regulation 2018* ☐ Yes ☐ No
If no, please provide your water access licence number

Section E: Activity location

Address		
Suburb	State	Postcode

or

Lot / Deposited Plan / Section

or

GPS coordinates[6] *(for example, 32.25316 S 148.60022 E)*

Section F: Summary of total water taken

Provide the below in accordance to approval held. **Important**: a meter must be used to measure volumes[7].

1. Duration of dewatering (pumping)[8] either a) or b):		
a) ☐ for water year	1 July	**to** 30 June
b) ☐ during dewatering period	From	**to**

2. Total volume pumped in either **a)**, **b)** or **c)** units[9]		
a) ☐ in Litres		L
b) ☐ in Kilolitres		kL
c) ☐ in Megalitres		ML

Section G: Record of metered volumes taken

Complete this section to record **metered** volumes taken. Either **daily** or **weekly** readings are required.

Refer to the conditions of your approval and the exemption (if applicable) to determine the reading frequency you need to provide.

Notes:

- A meter must be used to measure volumes[7].
- Please update the table required.
- If entries are longer than 5 lines, provide an Excel spreadsheet soft copy with the data. If a soft copy is provided - use the same headings and naming conventions as per the required daily or weekly table following.

Daily

Are any attachments included? ☐ Yes ☐ No
If yes, provide attachment name/s

Meter brand type		**Meter serial number**	

Start date and time	**Start meter reading**	**End date and time**	**End meter reading**	**Volume taken**	**Units** (L, kL, ML)	**Date and time record made**

Weekly

If entries are longer than 5 lines, provide an Excel spreadsheet soft copy with the data. If provided in soft copy - use the same headings and naming conventions as per the table below.

Are any attachments included? ☐ Yes ☐ No	
If yes, provide attachment name/s	

Meter brand type		**Meter serial number**	

Week ending	**Start date and time**	**Start meter reading**	**End date and time**	**End meter reading**	**Volume taken**	**Units** (L, kL, ML)	**Date and time record made**

Section H: Summary of water level measurements from monitoring bores

Refer to the approval you hold to determine if required. If required, enter information in the table below and provide all measurement data separately in an Excel spreadsheet (soft copy).

If automatic loggers are used, the default Excel output soft copy, will be accepted provided it includes all the relevant measurement data and units.

If automatic loggers are not used, the Excel output soft copy must include as a minimum the following:

- Bore ID
- Date
- Time
- Water level measurement (m below MP)
- Measuring point description
- Measuring point RL (m AHD)
- Comments.

Are any attachments included? ☐ Yes ☐ No	
If yes, provide attachment name/s	

Bore ID	Measuring point RL (m AHD)	Depth to water before dewatering (m)	Depth to water during dewatering (m)	Depth to water after dewatering (m)	File name of measurements spreadsheet attached
For Example: MB1	*1.000*	*0.5*	*4.0*	*0.6*	*MB1.xlsx*

Section I: Water testing undertaken

Information supporting these entries must be captured and supplied as an attachment in Excel soft copy form:

Are any attachments included?	☐ Yes	☐ No
If yes, provide attachment name/s		

a) Range in pH measured		
b) Range in electrical conductivity (Salinity) in (µS/cm)		
c) Any other exceedance of water quality criteria?	☐ Yes (specify below)	☐ No

Exceedance(s)

Section J: Declaration

I declare all information contained in this record is accurate, true and complete.

Signature	Date	
Name/Company officeholder		
Position	Phone	
Address		
Suburb	State	Postcode
Email		

Giving false or misleading information is a serious offence under Part 5A of the *Crimes Act 1900*. It is an offence under section 91J of the *Water Management Act 2000* for a person to make a statement or furnish information in or in connection with a metering record required to be kept that the person knows to be false or misleading in a material particular.

Privacy statement

The personal information that is provided in this form will be managed by WaterNSW in accordance with its Privacy Procedure, or other such Policy document as updated from time to time. The information provided in this form is being collected and used for purposes relating to the Record confirmation of specified matters before water is taken described in this form to the *Water Management Act 2000* (NSW). The information provided in this form may be disclosed to public authorities and other authorised parties as required.

If you choose not to provide the requested information in this form, you may not be able to take water and you may be in breach of the *Water Management Act 2000*. You have the right to request access to, and correct details of, your personal information held by WaterNSW. Further information regarding privacy can be obtained from waternsw.com.au/privacy.

Returning completed forms

Please return your completed form/s and any attachments to:
Customer.Helpesk@waternsw.com.au
In the subject line: Dewatering completion report - Approval (Approval reference number)
or

WaterNSW
PO Box 398
Parramatta NSW 2124

Where to get help

Further information is available at:
waternsw.com.au/dewatering | 1300 662 077 | Customer.Helpdesk@waternsw.com.au

Notes

1. **Aquifer interference activity** has the same meaning as set out in the Dictionary to the *Water Management Act 2000* which is an activity involving any of the following:
   a. the penetration of an aquifer,
   b. the interference with water in an aquifer,
   c. the obstruction of the flow of water in an aquifer,
   d. the taking of water from an aquifer in the course of carrying out mining, or any other activity prescribed by the regulations,
   e. the disposal of water taken from an aquifer as referred to in paragraph d).
2. Refer to your approval for the **groundwater source** you are taking water from.
3. For infrastructure or construction projects this may be the **applicants' representative** for example a contractor.
4. **Describe the activity/s taking groundwater** while conducting the aquifer interference activity, and the number of works involved.
   For example:
   - extraction using a battery of 15 spear points to dewater a building construction site
   - groundwater extracted from a permanent sump in a building basement
   - groundwater extracted from a trench or excavation
5. Examples of the **means by which the groundwater is taken** include surface pump, airlift, downhole/submersible pump, bailer, water removed with ground materials, water freely draining from a cutting, pit seepage / inflow, evaporation from artificial lake that has filled from groundwater. Where several means of take are involved please identify the number and type of each.
6. Please provide GPS coordinates as longitude and latitude in decimal degrees.
7. Metering equipment must be used to measure volumes. Metering equipment consists of a meter and a data logger. **Telemetry is not required.** However, other metering equipment and standards may be specified by a condition of the water supply work approval.
   In the **event metering equipment becomes faulty**, you must report within 24 hours to WaterNSW at waternsw.com.au/s91i. An offence applies under section 91IA of the *Water Management Act 2000* for failing to report faulty metering equipment within 24 hours.
8. For Section F - I: Duration of dewatering (pumping) is elapsed time between the start and end dates for a period of continuous take. If the period of take extends over more than one water year, annual reporting may be required. This record must be retained for five years.
9. Record the **total volume of groundwater taken** in the water year/s for the groundwater source in either litres (L), kilolitres (kL) or megalitres (ML).