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Ongoing Groundwater Monitoring Report (October 2021 to March 2022)

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Glossary of Terms and Abbreviations

Abbreviation	Description
AGJV	Aurecon & GHD Design Joint Venture
ADWG	Australian Drinking Water Guidelines
AHD	Australian Height Datum
ANZECC & ARMCANZ	Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ)
BOD	Biological Oxygen Demand
BTEXN	Benzene, Toluene, Ethylbenzene, Xylene and Naphthalene
CBD	Central Business District
CGWMP	Construction Groundwater Monitoring Plan
CSM	Central Station Main Works
COPC	Contaminants of Potential Concern
DO	Dissolved Oxygen
EC	Electrical Conductivity
GILs	Groundwater Investigation Levels
HSL	Health Screening Level
LOR	Laing O'Rourke
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council
NEPM	National Environmental Protection Measure
NHMRC	National Health and Medical Research Council
NRAR	Natural Resources Access Regulator
OCP	Organochlorine Pesticides
OPP	Organophosphorus Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
QA/QC	Quality Assurance/Quality Control
RSA	Rail Services Australia
RPD	Relative percentage difference
SWL	Standing Water Level
TDS	Total Dissolved Solids
TRH	Total Recoverable Hydrocarbons
TSS	Total Suspended Solids

1 Introduction

AGJV Pty Ltd (AGJV) was commissioned by Laing O'Rourke (LOR) to undertake a groundwater monitoring program for selected groundwater wells at Central Station, as part of the Sydney Metro Central Station Main (CSM) works project.

LOR has identified three separate project work areas for the CSM project, these include:

- The Metro Station Box works
- The Central Walk and Eastern Entrance
- The Sydney Yard project access area

The approximate boundaries of the CSM project areas are presented in **Figure 1, Appendix A.**

A construction groundwater management plan (CGWMP) (LOR, September 2021) has been prepared for the CSM project and approved by the Natural Resources Access Regulator (NRAR). The CGWMP includes a groundwater monitoring program to establish the pre-construction, during construction and post construction groundwater conditions. The groundwater monitoring requirements are detailed in Section 7 of the CGWMP. Section 10 of the CGWMP also requires that the groundwater monitoring program be reviewed and amended on an annual basis to ensure it remains consistent with project priorities.

The groundwater monitoring program conducted to date includes:

- Baseline monitoring period:
  - Report one: September 2018 to February 2019
- Baseline / construction monitoring period:
  - Report two: March 2019 to September 2019 (includes baseline for the deeper monitoring wells and construction for the shallow monitoring wells)
- Construction monitoring period:
  - Report three: October 2019 to March 2020
  - Report four: April 2020 to September 2020
  - Report five: October 2020 to March 2021
  - Report six: April 2021 to September 2021

This report has been prepared to document the seventh groundwater monitoring period, undertaken between October 2021 and March 2022 as part of the ongoing groundwater monitoring program for the construction phase of the project. It is noted that this report will take into consideration the previous monitoring periods to compare the current monitoring period with both the previous monitoring periods and the baseline monitoring period.

1.1 Objectives

The objectives of this groundwater monitoring program are to:

- Characterise the post-baseline groundwater conditions including groundwater levels and groundwater quality within and surrounding the CSM project area during construction.
- Comply with the groundwater monitoring program outlined in the CGWMP, which has been approved by NRAR.
- Assess any impacts the construction phase of the project has had on groundwater quality and groundwater levels. Baseline data and relevant public health and environmental water quality

criteria will be compared against the ongoing groundwater conditions within the project boundary to make this assessment.

1.2 Scope of work

The scope of work completed by AGJV is summarised below:

- Gauging of up to 15 monitoring wells on a monthly basis for six months. Constraints encountered, with regards to well access, during the monitoring program are discussed in **Section 2**.
- Collection and analysis of groundwater samples from the monitoring wells on a monthly basis for six months.
- Submission of groundwater samples to National Association of Testing Authorities (NATA) accredited laboratories for chemical analysis for a range of contaminants of potential concern (COPC) including: pH, total suspended solids (TSS), total dissolved solids (TDS), heavy metals; benzene, toluene, ethylbenzene and xylene (BTEX); total recoverable hydrocarbons (TRH); polycyclic aromatic hydrocarbons (PAH); phenols; cyanide; ammonia; ferrous iron, manganese and major anions and cations (chloride, sulfate, ammonia, nitrate, sodium, calcium, potassium and magnesium).
- Collection of groundwater depth data from data loggers located in five monitoring wells (CSM_BH02, CSM_BH04, CSM_BH06, SRT_BH047 and CSM_BH10S).
- Preparation of this report.

1.3 Limitations

AGJV's limitations to the assessment are provided in **Section 9.**

The table presented in **Table B1, Appendix B,** indicates that although the number of functioning groundwater monitoring wells used throughout this monitoring period have remained relatively stable, three wells were destroyed between October 2020 to March 2021. This has the potential to limit characterisation of construction impacts against baseline conditions for these wells and has created data gaps to the east and south of the monitoring area.

Three new wells were installed between April 2021 to September 2021 to address these data gaps.

In addition, in January 2022, four of the five wells targeting the gasworks were destroyed through construction works. This has the potential to limit the monitoring of contaminant migration in the gasworks area.

Further to this, the number of wells sampled differs to that presented in Table-7.1 of the CGWMP (LOR, September 2021) and is outlined in **Section 2.4**.

2 Status of groundwater monitoring program

2.1 Groundwater monitoring between September 2018 and September 2021

The groundwater data collected between the September 2018 and September 2021 are presented in the following reports:

- AGJV. (June 2019). *Sydney Metro - Central Station Main Works - Groundwater Baseline Monitoring (September 2018 to February 2019) - SMCSWCSM-DJV-EW-00-COR-GE-000001.* Sydney: Aurecon GHD Joint Venture.
- AGJV. (January 2020). *Sydney Metro - Central Station Main Works - Groundwater Baseline Monitoring (April 2019 to September 2019) - SMCSWCSM-DJV-EW-00-PLN-GE-000003*. Sydney: Aurecon GHD Joint Venture.
- AGJV. (June 2020). *Sydney Metro - Central Station Main Works – Ongoing Groundwater Monitoring (October 2019 to March 2020) - SMCSWCSM-DJV-EW-00-PLN-GE-000233*. Sydney: Aurecon GHD Joint Venture.
- AGJV. (December 2020). *Sydney Metro - Central Station Main Works – Ongoing Groundwater Monitoring (April to September 2020) - SMCSWCSM-DJV-EW-00-PLN-GE-000234*. Sydney: Aurecon GHD Joint Venture.
- AGJV (May 2021). *Sydney Metro - Central Station Main Works – Ongoing Groundwater Monitoring (October 2020 to March 2021) - SMCSWCSM-DJV-EW-00-REP-GE-000235*. Sydney: Aurecon GHD Joint Venture.
- AGJV (January 2022). *Sydney Metro – Central Station Main Works – Ongoing Groundwater Monitoring (April 2021 to September 2021) - SMCSWCSM-DJV-EW-00-REP-GE-000236.* Sydney: Aurecon GHD Joint Venture.

2.2 Overview of the groundwater program

The groundwater baseline monitoring program for CSM commenced in September 2018, as per the CGWMP. The first six monthly baseline monitoring period was completed in February 2019 (AGJV, June 2019) and due to a number of constraints six shallow monitoring wells were available post baseline monitoring.

The second six monthly monitoring period was completed between April 2019 and September 2019 (AGJV, January 2020). During March 2019 five deep monitoring wells and an additional two shallow monitoring wells were installed. Therefore, the report represents the baseline monitoring for the deep monitoring wells as only shallow construction activities had begun and the construction phase for the shallow monitoring wells. Of note, a tunnel boring machine (TBM) passed through the site during this monitoring period.

In addition to this, LOR uncovered a former gasholder which was identified during heritage excavation and piling works at the south-western corner of the Metro Box footprint in April 2019. Five additional groundwater monitoring wells were installed by ADE in April and August 2019 in the vicinity of the former gasholder to assess the potential groundwater impacts. GASW_BH7 and GASW_BH10 are positioned within the gasworks former gasholder, GASW_BH23 and GASW_BH25A are within the former gasholder footprint and GASW_BH11 is outside the former gasholder footprint. These monitoring wells were incorporated into the ongoing groundwater monitoring program from June 2019 (GASW_BH7, GASW_BH10 and GASW_BH11) and September 2019 onwards (GASW_BH23 and

GASW_BH25A). It should be noted that the latter two shallow monitoring wells (GASW_BH23 and GASW_BH25A) are unlikely to be representative of the broader shallow groundwater aquifer, given the gasholder structure (brick wall and concrete / puddle clay base) may act as an aquitard.

The third (AGJV, June 2020), fourth (AGJV, December 2020), fifth (AGJV, May 2021) and sixth (AGJV, January 2022) six monthly monitoring reports were completed between October 2019 and March 2020, April 2020 and September 2020, October 2020 and March 2021, and April 2021 and September 2021, respectively, documenting groundwater conditions during the construction phase of the project.

A number of constraints have been encountered throughout the current and previous monitoring periods in relation to availability, access and condition of monitoring wells. Monitoring wells have been destroyed and new monitoring wells have been installed. These are discussed in this report and the AGJV reports mentioned above, and are summarised in **Table B1, Appendix B.**

2.3 Analytical suite changes

Analysis of polychlorinated biphenyls (PCBs), organochlorine pesticides (OCPs) and organophosphorus pesticides (OPPs) was conducted between September 2018 and June 2020. These analytes have not been included in the analytical scope since June 2020 due to the consistent absence of detections. In December 2019, cyanide and polycyclic aromatic hydrocarbons (PAH) compounds were analysed as trace rather than standard detection limits to improve the clarity of assessment for these analytes.

There were no changes to the analytical suite during this monitoring period.

2.4 CGWMP monitoring wells amendments

Due to the destruction and replacement of monitoring wells as the construction progresses, the following variations in Table 2-1 of sampling locations throughout the project entirety are noted as compared to those listed in **Table 7.1** of the latest CGWMP (LOR, September 2021):

Table 2-1 – Summary of monitoring wells removed from the monitoring program

Monitoring wells removed from the monitoring program	Targeted aquifer	Status
CSM_BH05	Deep aquifer	Destroyed (August 2019)
SRT_BH063	Shallow aquifer	Destroyed (February 2020)
SRT_CBH015	Shallow aquifer	Destroyed (January 2020)
SRT_CBH017	Shallow aquifer	Destroyed (February 2020)
SRT_BH059	Shallow aquifer	Destroyed (January 2021)
CSM_BH09S	Shallow aquifer	Destroyed (January 2021)
CSM_BH11S	Shallow aquifer	Destroyed (March 2021)
GASW_BH7	Shallow aquifer	Destroyed (January 2022)
GASW_BH11	Shallow aquifer	Destroyed (January 2022)
GASW_BH23A	Shallow aquifer	Destroyed (January 2022)
GASW_BH25A	Shallow aquifer	Destroyed (January 2022)

The following Table 2-2 shows the monitoring wells that have been added to the monitoring program throughout the entirety of the project.

Table 2-2 – Summary of monitoring wells added to the monitoring program

Monitoring wells added to the monitoring program	Targeted aquifer	Status
GASW_BH7 – since destroyed (see Table 7.1 above)	Shallow aquifer	Sampled from June 2019, Became dry from April 2020. Monitoring well targeting gasworks.
GASW_BH10	Deep aquifer	Sampled from June 2019. Monitoring well targeting gasworks.
GASW_BH11 – since destroyed (see Table 7.1 above)	Shallow aquifer	Sampled from June 2019. Monitoring well targeting gasworks.
GASW_BH23 – since destroyed (see Table 7.1 above)	Shallow aquifer	Sampled from September 2019. Monitoring well targeting gasworks.
GASW_BH25A – since destroyed (see Table 7.1 above)	Shallow aquifer	Sampled from September 2019. Monitoring well targeting gasworks.
CSM_BH11S -since destroyed (see Table 7.1 above)	Shallow aquifer	Installed prior to September 2020 monitoring event. Dry well, water was not encountered. Monitoring well providing coverage to the north east
SRT_BH050	Shallow aquifer	Sampled from March 2020. Monitoring well providing coverage to the west.
SRT_BH052	Shallow aquifer	Sampled from October 2018. Monitoring well providing coverage to the north west.
CSM_BH12S	Shallow aquifer	Sampled from April 2021. New well providing coverage to the south of metro box (replacement of destroyed CSM-BH09S).
CSM_BH14S	Shallow aquifer	Sampled from September 2021. New well providing coverage to the south west of CSM project area (replacement of destroyed shallow wells on suburban platforms).
CSM_BH13	Deep aquifer	Sampled from September 2021. New well providing coverage to the west of CSM project area (replacement of destroyed SRT_BH063)

2.5 Construction works

The construction of the Metro box works (MBW) has being undertaken in stages:

- Enabling works: the demolition of the platforms and preparation earthworks.
- MBW excavation works commenced with piling works, including perimeter piles and plunge columns, to support the MBW excavation.
- MBW excavation.
- Installation of metro infrastructure and final fit out of Metro Station.

MBW excavations occurred over several stages within the MBW footprint. The MBW excavation was supported by the perimeter in-situ bored piles, which during the MBW excavation works were exposed at the excavation walls and the excavation wall was subsequently shotcreted to stabilise and secure the excavation walls. MBW excavation works were completed in May 2021. A program of works undertaken in presented in Table 2-3.

Table 2-3 – Construction program of works

Stage of works	Date commenced	Date completed
Enabling works	17 October 2018	13 December 2018
Piling works	10 December 2018	15 August 2019
MBW excavation works	11 February 2019	May 2021
Installation of metro infrastructure and final fit out of Metro Station	February 2019 (alongside MBW excavation works)	On-going

AGJV noted that the tunnel boring machines passed beneath the CSM project excavation during July and August 2019. The TBM would have been at depths of 15 to 20 m below ground level (top of invert of tunnels is -0.6 RL). The TBM movement had significant impact on the groundwater levels and is further discussed in the AGJV (January 2020) report and **Section 5.3.**

The MBW designs have been amended due to the discovery of the gasworks area, and resultant human health risk assessment (AGJV, 2020a). The revised designed included:

- A partial cut off structure which included increasing the shotcrete liner from 150 mm thickness to 250 mm with inclusion of a waterproof admixture and steel fibres to manage crack control. The expected extent of this works was proposed to be at least two shotcrete panels beyond the visually assessed extent of contaminated fill and the full depth of the pile retention wall (underside of the Concourse Floor Slab).
- A sika waterproof liner located over the internal side of the shotcrete liner and tapped in place to reduce further seepage.
- Drainage separation works that included preferential drainage of groundwater from behind the shotcrete walls using more resistant cupro nickel slotted pipe.

The on-site groundwater treatment facility was decommissioned in February 2022 and all groundwater collected as part of the dewatering of the Metro Box is now piped to the Line Wide Water treatment plant (WTP) at Marrickville.

3 Basis for assessment

3.1 Relevant guidelines

The framework for the contamination assessment made herein, was developed in accordance with guidelines “made or approved”, by the NSW EPA under Section 105 of the *Contaminated Land Management Act, 1997*. These guidelines include, but are not limited to the following:

- Consultants Reporting on Contaminated Land: Contaminated Land Guidelines, NSW EPA (NSW EPA, 2020).
- NSW EPA Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (NSW EPA, 2015).
- National Environment Protection (Assessment of Site Contamination) Amendment Measure (No.1) (NEPM), National Environment Protection Council - NEPC (NEPC, 2013).
- Guidelines for Managing Risks in Recreational Water, National Health and Medical Research Council (NHMRC, 2008).
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australian and New Zealand Environment and Conservation Council & Agriculture and Resource Management Council of Australia and New Zealand (ANZECC & ARMCANZ, 2000a).

3.2 On-site human health screening levels

The NEPM Health Screening Levels (HSLs) for petroleum hydrocarbons for commercial / industrial land use in sand (NEPC, 2013) have been adopted (HSL D). This criterion was adopted to characterise the risk posed to CSM construction workers and future metro infrastructure users and operation / maintenance workers from potential hydrocarbon vapour intrusion from potentially impacted groundwater. AGJV noted that NEMP HSLs are more stringent than other published screening criteria for petroleum hydrocarbons (i.e. CRC CARE guidelines for intrusive maintenance workers via vapour intrusion and direct contact pathways).

Recreational guidelines, in reference to National Health and Medical Research Council (NHMRC, 2008) have been used as a conservative screening tool for on-site intrusive maintenance workers coming into direct contact with groundwater. These guidelines are associated with incidental ingestion of water and are generally based on incidental consumption of 200 millilitres (mL) of impacted water per day, as opposed to two litres (L) per day which the Australian Drinking Water Guidelines (ADWG) (version 3.6 Updated March 2021) are based on (NHMRC, 2011). As stated in the NEPM (NEPC, 2013), recreational criteria have been adopted by applying a multiplication factor of ten to ADWG health-based criteria (NHMRC, 2011).

On this basis, criteria are expected to be more representative of the type of exposure that will occur to construction and maintenance workers during construction and operation of the project. Commercial users of the metro/commuters have not been considered as it is assumed these receptors will not come into contact with the groundwater.

3.3 Off-site human health

No potable water abstractions have been identified in hydraulic connection with groundwater beneath the CSM. The project area is also supplied by reticulated town water. Therefore, drinking water guidelines have not been considered for off-site human health receptors.

The nearest ecological receptor is located approximately one kilometre (km) north-west of the CSM (Cockle Bay and Blackwattle Bay). Potentially impacted groundwater has the potential to attenuate across this distance, however groundwater will be treated before being discharged into these Bay's during dewatering activities. These water bodies are primarily associated with recreational boating and potential fishing activities only, and as such, recreational criteria, in reference to NHMRC (2008) and ADWG (NHMRC, 2011), have been adopted.

3.4 Ecological criteria

Based on the site hydrogeology and client-supplied information, treated groundwater from the project will be discharged to the aquatic systems of Cockle Bay and/or Blackwattle Bay located approximately 1 km north-west of the project area. As such, NEPM Groundwater Investigation Levels (GILs) for protection of marine water ecosystems have been adopted (NEPC, 2013). GILs comprise screening criteria outlined in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000a). It is noted that the ANZECC & ARMCANZ has since been updated (ANZG, 2018), and therefore, the ANZG (2018) guidelines have been adopted.

For assessment of pH values in groundwater, the trigger value for estuaries in NSW have been adopted from Volume 2 of ANZECC & ARMCANZ (ANZECC & ARMCANZ, 2000b). Screening criteria for estuaries was adopted as this was considered to be most representative of the receiving water environment (being Cockle Bay and/or Blackwattle Bay).

3.5 Aggressivity assessment criteria

The exposure classification criteria for concrete piles and steel piles presented in Australian Standard AS 2159-2009 *Piling – Design and installation* (Standards Australia, 2009) have been selected for assessing aggressivity of the groundwater.

3.6 Ochre potential assessment criteria

The criteria adopted for the assessment of ochre formation were based on Stuyt, Dierickx & Martinez Beltran (2005), and focused on ferrous iron concentrations in groundwater. These criteria state:

- Ferrous iron concentrations less than 1 mg/L indicate that ochre formation potential is negligible.
- Ferrous iron concentrations between 1 and 5 mg/L indicate that ochre formation potential is small.
- Ferrous iron concentrations between 5 and 10 mg/L indicate that ochre formation potential is moderate.
- Ferrous iron concentrations between 10 and 25 mg/L indicate that ochre formation potential is high.
- Ferrous iron concentrations more than 25 mg/L indicate that ochre formation potential is very high.

3.7 Groundwater drawdown

The groundwater-related management and mitigation measures in Chatswood to Sydenham Environmental Impact Statement (EIS) and Revised Environmental Mitigation Measures (REMM), as stated in the REMM (AGJV, 2020), include:

REMM GWG1	A detailed geotechnical model for the project would be developed and progressively updated during design and construction. The detailed geotechnical model would include: ▪ Assessment of the potential for damage to structures, services, basements and other sub-surface elements through settlement or strain ▪ Predicted changes to groundwater levels, including at nearby water supply works. Where building damage risk is rated as moderate or higher (as per the CIRIA 1996 risk-based criteria), a structural assessment of the affected buildings / structures would be carried out and specific measures implemented to address the risk of damage. With each progressive update of the geotechnical model the potential for exceedance of the following target changes to groundwater levels would be reviewed: ▪ Less than 2.0 metres – general target. ▪ Less than 4.0 metres – where deep building foundations present. ▪ Less than 1.0 metre – residual soils. ▪ Less than 0.5 metre – residual soils (Blues Point) (fill / Aeolian sand). Where a significant exceedance of target changes to groundwater levels are predicted at surrounding land uses and nearby water supply works, an appropriate groundwater monitoring program would be developed and implemented. The program would aim to confirm no adverse impacts on groundwater levels or to appropriately manage any impacts. Monitoring at any specific location would be subject to the status of the water supply work and agreement with the landowner. The geotechnical model and groundwater monitoring program would be developed in consultation with the Department of Primary Industries (Water).

This report includes an assessment of groundwater drawdown related to CSM works in **Section 5.3**.

4 Field investigation

4.1 Groundwater sampling dates

Groundwater sampling was conducted at accessible groundwater monitoring wells on the following dates:

- Event 37 – 27 to 29 October 2021
- Event 38 – 23 to 25 November 2021
- Event 39 – 14 to 16 December 2021
- Event 40 – 18 to 19 January 2022
- Event 41 – 8 to 10 February 2022
- Event 42 – 16 to 18 March 2022

4.2 Groundwater monitoring well status

The groundwater monitoring wells sampled during the current six-monthly program are presented in **Table B1, Appendix B**. The location of these monitoring wells is displayed in **Figure 1, Appendix A**.

Four wells were destroyed during the current monitoring period due to ongoing construction in the Sydney Yard. These wells targeted the shallow ground aquifer surrounding the gasworks:

- GASW_BH7, sampled from June 2019 and has been dry since April 2020. Destroyed in January 2022.
- GASW_BH11, sampled since June 2019 and destroyed in January 2022.
- GASW_BH23, sampled since September 2019 and destroyed in January 2022.
- GASW_BH25A, sampled since September 2019 and destroyed in January 2022.

4.3 Groundwater level gauging and monitoring methodology

The method used to gauge the monitoring wells is described below:

- Prior to gauging the standing water level (SWL) within each well, monitoring wells were left to stand for approximately five minutes to stabilise with atmospheric conditions.
- The depth of the SWL, depth of well and non-aqueous phase liquids (NAPL), if present, was measured at each monitoring well using an electronic interface probe (IP). All measurements were recorded from the top of the well casing.

During this monitoring period, data loggers present within the following wells were used to measure groundwater levels across the monitoring period:

- CSM_BH10S, a shallow monitoring well on Eddy Avenue.
- SRT_BH047, a shallow monitoring well on platforms 6/7.
- CSM_BH02, a deep monitoring well on platforms 10/11.
- CSM_BH04, a deep monitoring well on Eddy Avenue.
- CSM_BH06, a deep monitoring well on Ambulance Avenue.

The groundwater levels at these monitoring wells are graphed in **Appendix C**.

4.4 Groundwater sampling methodology

Representative groundwater samples were collected from monitoring wells using the following sampling techniques:

- Each well was purged using low-flow sampling techniques (peristaltic pump or low-flow bladder pump) with dedicated Teflon-free, low-density polyethylene (LDPE) tubing. The pump inlet tube was placed in the well screen at each location, with length of tubing within each well recorded.
- Field parameters (pH, electrical conductivity (EC), oxygen reduction potential (ORP), dissolved oxygen (DO) and temperature) were measured and recorded during purging to ensure that extracted groundwater was representative of the surrounding groundwater conditions. When field parameters reached equilibrium, i.e. consecutive measurements within 10% of each other for EC, ORP, DO and pH, groundwater was deemed representative of conditions and samples were collected.
- Visual and olfactory observations were recorded, in particular, the absence or presence of a hydrocarbon sheen or odour recorded during purging.
- Retrieved groundwater samples were immediately placed into laboratory-supplied bottles suitable for requested analyses.
- Sample bottles were filled directly from the pump with a minimal amount of air contact, with vials for volatile organic analysis filled completely to minimise headspace. Samples that were to be analysed for dissolved metals were field filtered with a dedicated filter prior to placing the sample into the sample bottle.
- The containers were labelled with the project number, sample identification, date collected and sampler's initials.
- Following the collection of each sample, the bottles were placed immediately into ice-filled coolers for preservation prior to and during transportation to a National Association of Testing Authorities (NATA) accredited laboratory.
- Samples were accompanied with chain of custody documentation to the primary laboratory and were submitted within holding times appropriate for the analysis required.
- Dedicated disposable sampling equipment (i.e. tubing, bailers, filters, nitrile gloves etc.) were disposed of after each well. Reusable sampling equipment (i.e. interface probe) was decontaminated using a mixture of laboratory-supplied phosphorus-free detergent solution and potable water, and rinsed with potable tap water between each sampling location.

Calibration certificates for equipment used throughout the monitoring program are provided in **Appendix D**. Groundwater purging sheets documenting the sampling procedure at each groundwater well are included in **Appendix E.**

4.5 Groundwater analysis

The analytical schedule for groundwater is presented in **Table B3, Appendix B**. In summary the primary groundwater samples were analysed as follows:

- Eight heavy metals (arsenic, cadmium, chromium, copper, mercury, nickel, lead, zinc).
- Ferrous iron and manganese.
- Total recoverable hydrocarbons (TRH) and TRH with silica gel clean up.
- Benzene, toluene, ethylbenzene, xylene, naphthalene (BTEXN).
- Phenols.
- Trace polycyclic aromatic hydrocarbons (PAH).
- Trace cyanide.

- Ammonia.
- Total dissolved solids (TDS) and total suspended solids (TSS).
- pH
- Anions and cations.

Field intra- and inter-laboratory duplicate samples were collected and submitted for laboratory analysis for heavy metals, TRH, BTEXN and trace PAH during each monitoring event. Trip blanks and trip spike samples were submitted with each batch of samples, and were analysed for BTEX and volatile TRH. One rinsate sample was collected per monitoring event from reusable equipment and analysed for heavy metals.

Analysis of groundwater samples were undertaken by NATA accredited laboratories (Eurofins-MGT and ALS Environmental) for the required analysis.

5 Monitoring results

5.1 Introduction

The primary aim of this section is to present the findings of the current six-monthly monitoring period (October 2021 to March 2022) as compared to the baseline monitoring periods.

5.2 Field observations

During sampling, no visual signs of contamination (such as sheens) were observed, however, organic and hydrocarbon odours were noted in the following wells:

- CSM_BH04 (organic odour noted in January 2022)
- CSM_BH06 (hydrocarbon odour noted in October 2021)
- CSM_BH10S (slight organic odour noted in November 2021, hydrocarbon odour and slight sheen noted in December 2021)
- SRT_BH047 (sulphurous odour noted in December 2021)
- SRT_BH050 (slight sheen noted in November 2021, January, and February 2022.
- SRT_BH052 (sulphurous odour noted in December 2021)

Field observations are summarised in **Table B5, Appendix B**. The groundwater purging sheets are included in **Appendix E**.

5.3 Groundwater levels and trends

5.3.1 Gauging results – shallow aquifer monitoring wells

The groundwater gauging data for shallow wells is presented in **Table B4, Appendix B.**

The depth to groundwater in the shallow groundwater aquifer ranged between 1.465 metres below the top of casing 9 (mbTOC) in GASW_BH25A (October 2021) and 7.160 mbTOC in GASW_BH11 (October 2021). The groundwater elevations of the shallow aquifer ranger between 11.143 mAHD in CSM_BH10S (October 2021) and 20.334 in CSM_BH14S (November 2021).

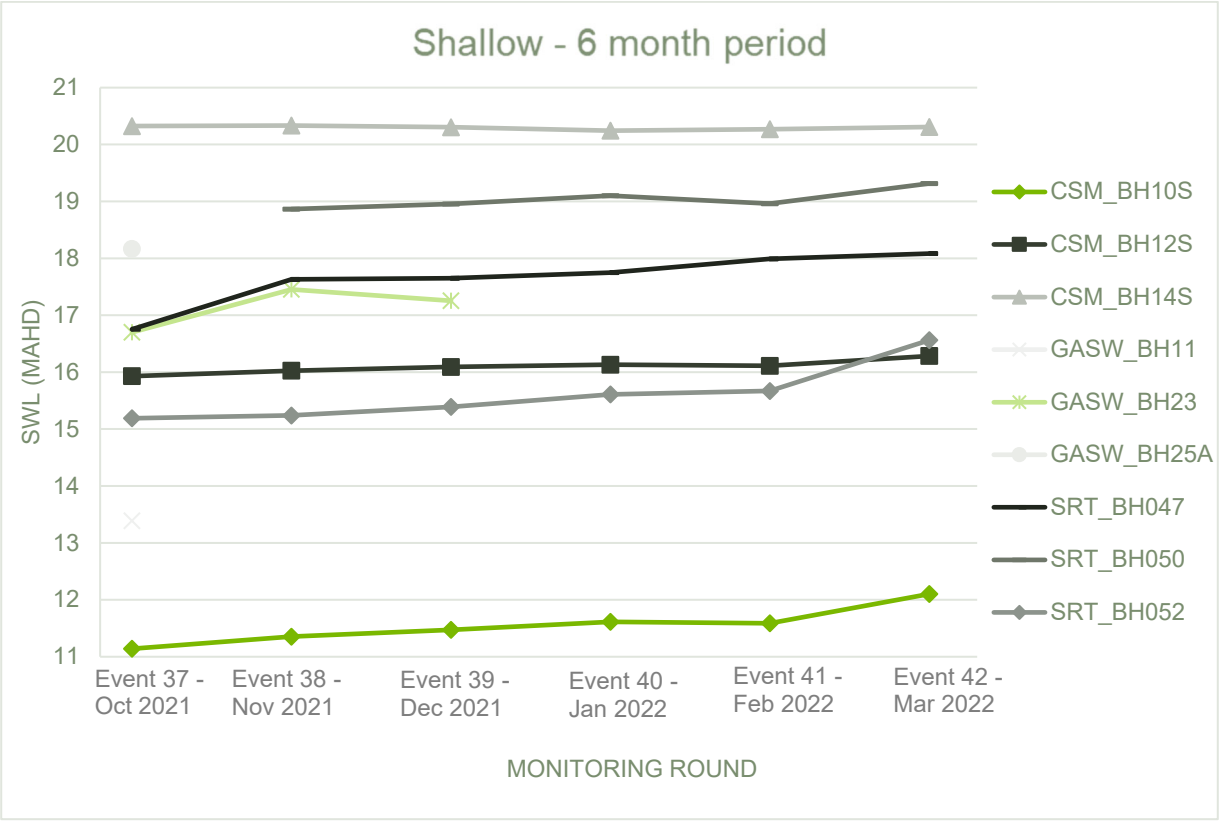


Figure 1 - Standing water level – Shallow aquifer monitoring wells

As presented in Figure 1, indicates that most monitoring wells showing a slight increase across the monitoring period. The March 2022 monitoring event was undertaken after a significant amount of rainfall in February 2022. This is reflected in the increase of groundwater elevations recorded in March 2022.

Monitoring well GASW_BH7 was gauged dry for the six-month monitoring period and has not been included in Figure 1. Monitoring wells GASW_BH11 and GASW_BH25A were gauged in the October 2021 monitoring event, though became inaccessible after this event due to construction works. GASW_BH7, GASW_BH11, GASW_BH23A and GASW_BH25A were destroyed by construction works in January 2022.

The inferred shallow aquifer groundwater flow direction is presented in **Figure 2, Appendix A** and appears to flow broadly to the north-east and south-west.

5.3.2 Gauging results – deep aquifer monitoring wells

The groundwater gauging data for deep wells is presented in **Table B4, Appendix B.**

The depth to groundwater in the deeper groundwater aquifer ranged between 17.465 mbTOC in CSM_BH08 (March 2022) and 26.335 mbTOC in CSM_BH06 (October 2021). As presented in Figure 2 below, the groundwater elevation of the deep aquifer ranged between -6.096 mAHD in CSM_BH04 (November 2021) and 5.207 mAHD in CSM_BH13 (October 2021).

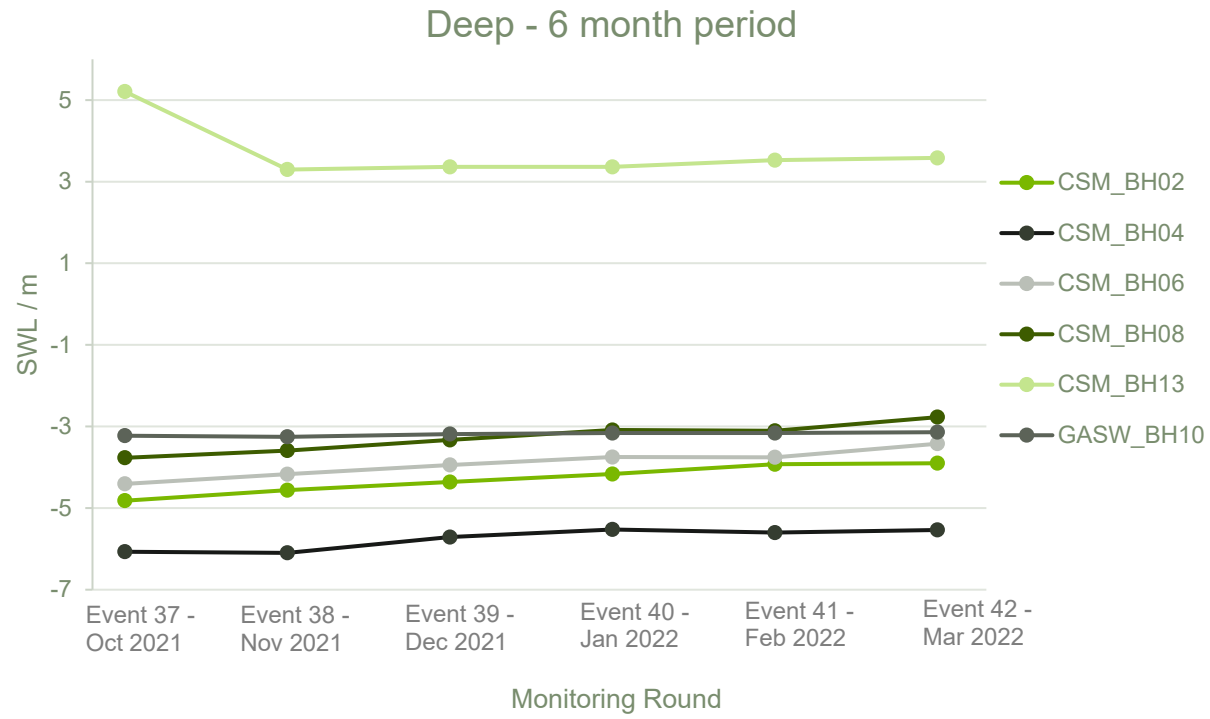


Figure 2 - Standing water level (m AHD) – All deep aquifer monitoring wells

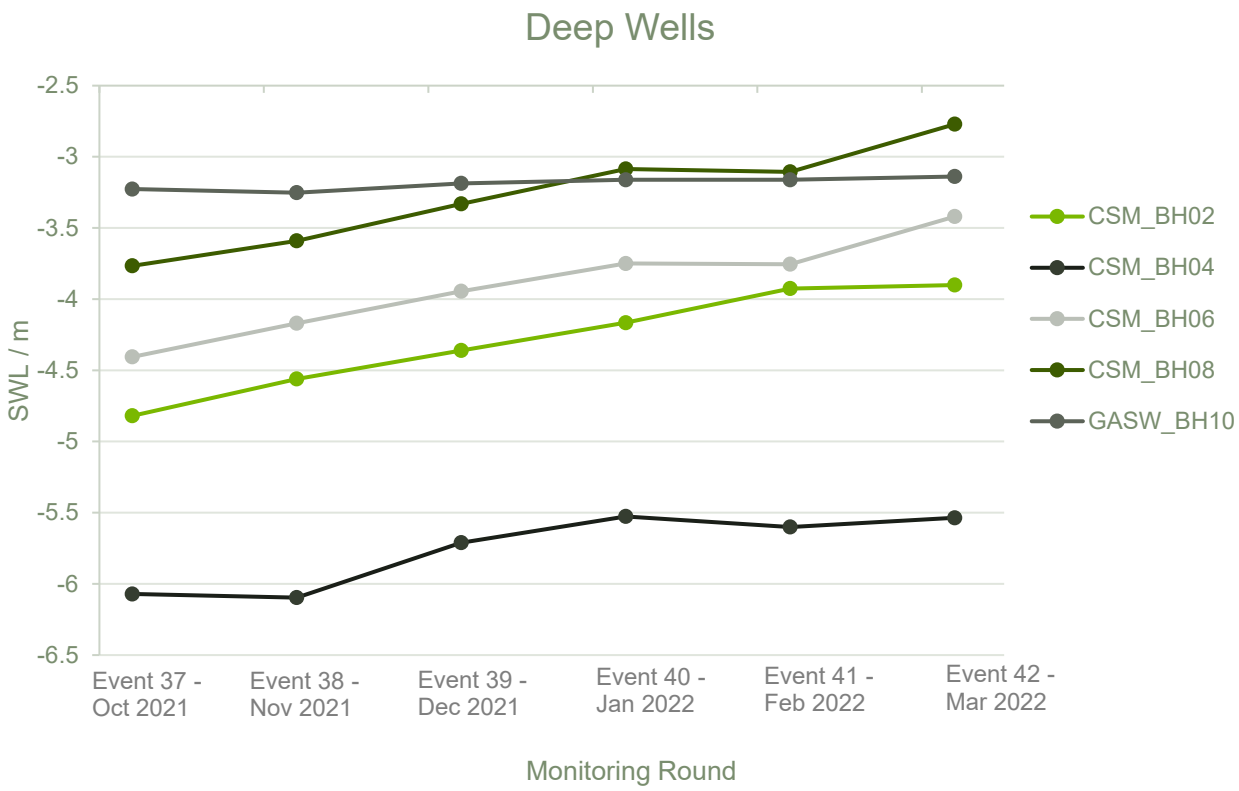


Figure 3 - Standing water level (m AHD) – Deep aquifer monitoring wells excluding CSM_BH13 to highlight increase

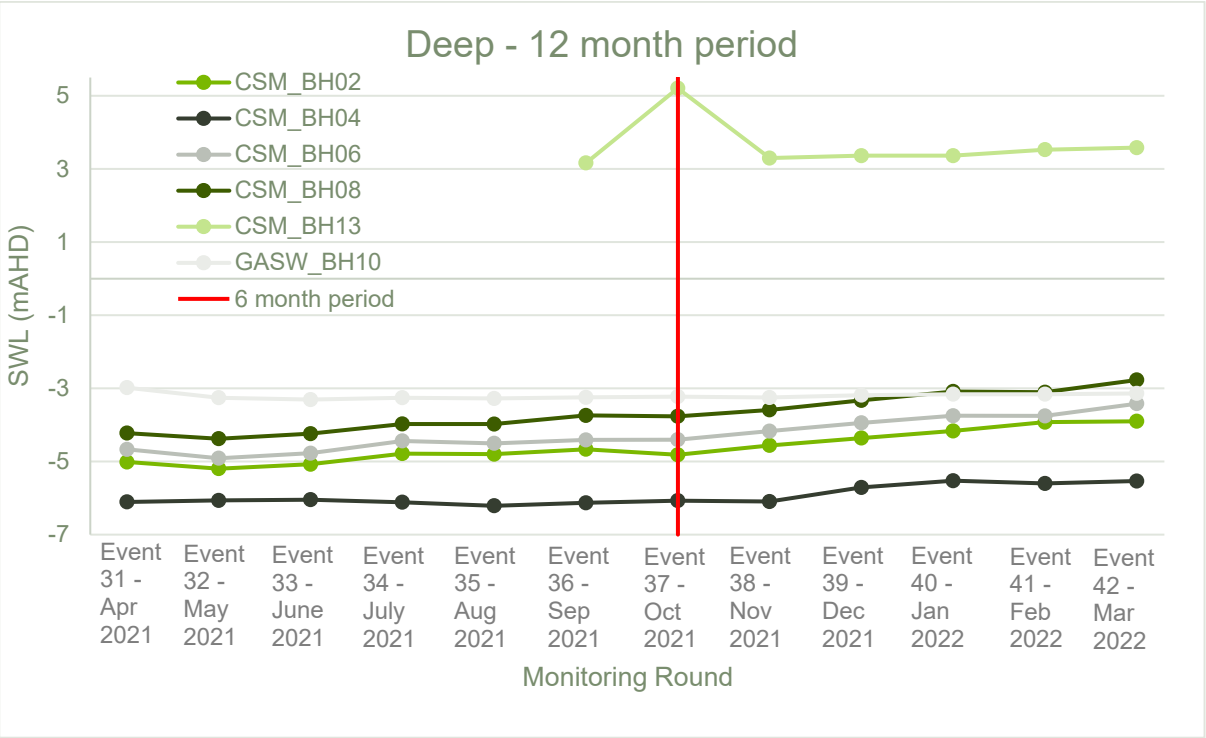


Figure 4 - Standing water level (m AHD) - Deep aquifer monitoring wells April 2021 to March 2022

As presented in Figure 2, the groundwater elevation at all sampled monitoring wells was observed to increase during the current monitoring period, in particular, from November 2021 onwards. This could be attributed to the significantly higher than average rainfall recorded monthly for all months from November 2021 to March 2022. Figure 3, excluding CSM_BH13, has been included to further highlight the groundwater level increase over the current monitoring period.

The groundwater level in GASW_BH10 appears to be relatively stable throughout the monitoring period, whilst the other wells shown in Figure 2 show a slight to significant increase, ranging from 0.420 m in CSM_BH13 to 1.005 m in CSM_BH04.

CSM_BH13 was observed to have a significant decrease in groundwater elevation in November 2021, though when compared with Figure 2, it can be deduced that the October 2021 observation is abnormally high. The trend observed in CSM_BH13 from September 2021 to November 2021 is not observed in the other deep aquifer groundwater wells, and therefore the observation for CSM_BH13 in October 2021 may be an outlier.

Groundwater levels at CSM_BH04 have remained lower than the other deeper bores and this is discussed further in Section 5.3.4.2. The groundwater level observed in the well CSM_BH13 appears to be significantly higher compared to the other deep wells nearby, with an approximate 7 metre difference in water level from nearby CSM_BH06 observed March 2022. Over the November 2021 to March 2022 period, these two wells were observed to show groundwater elevation increase, though at different levels, with an approximate increase of 0.29 m and 0.75 m observed in CSM_BH13 and CSM_BH06 respectively.

The inferred deep aquifer groundwater flow direction is presented in **Figure 3, Appendix A** and is broadly to the north-east to south-east.

5.3.3 Groundwater levels – gas works

The groundwater levels within the gasworks area were observed to have fluctuated within the shallow aquifer at GASW_BH23. GASW_BH25A (inside the gasworks area) and GASW_BH11 (outside the gasworks area) were inaccessible from October 2021 onwards and therefore cannot be used to

discuss groundwater level for this monitoring period. All three wells targeting the shallow aquifer, GASW_BH23, GASW_BH25A and GASW_BH11 were destroyed in January 2022.

The groundwater level has remained stable at GASW_BH10 throughout the monitoring period. GASW_BH10, targeting the deep aquifer, is the last remaining well targeting the gasworks.

5.3.4 Data loggers

The groundwater levels recorded by groundwater data loggers are presented with the daily rainfall data from Bureau of Meteorology Sydney Botanic Gardens weather station (066006) in Appendix C. The rapid decline and recovery in groundwater elevations at the time of manual gauging are associated with groundwater sampling works and do not reflect the background groundwater conditions.

5.3.4.1 CSM_BH02

CSM_BH02 is a deep monitoring well screened within sandstone.

Groundwater levels at CSM_BH02 generally ranged between -4.923 and -3.546 m AHD by data logger during the current monitoring period. Groundwater level data was only available from August 2019 onwards and therefore does not report the groundwater levels when the TBM was going through. The data reports the groundwater levels recovering after the TBM went through. From March to May 2021, the groundwater levels dropped below the data logger level and the groundwater levels were not recorded. The data logger level was readjusted during the May 2021 monitoring event.

During the current monitoring period, groundwater levels were observed to increase slightly from the lowest level recorded in May 2021 to stabilise around approximately -3.8 m AHD in March 2022. Groundwater levels have not returned to the levels observed before the abrupt drop in December 2020. This is likely due to de-watering activities associated with the Metro Box excavation causing groundwater drawdown in this well.

Groundwater levels at CSM_BH02 spiked on 8 March 2022, which corresponds with a series of rainfall events from February to March 2022 gradually increasing groundwater level, however, the groundwater levels did not respond to all rainfall events indicating a limited connection with rainfall directly on the site. Previous monitoring rounds did not record a connection between the deep monitoring well and rainfall events, potential changes to site conditions and dewatering activities may be impacting on the groundwater levels observed during the recent rainfall event.

5.3.4.2 CSM_BH04

CSM_BH04 is a deep monitoring well screened within sandstone.

The groundwater levels at CSM_BH04 generally ranged between -6.146 and -5.315 m AHD by data logger during the current monitoring period.

The groundwater levels have not recovered to the levels prior to the TBM in 2019. The groundwater level remain approximately 2 to 3 m lower than prior initial groundwater levels. This well is located to the north near Eddy Avenue and has a well depth of 35 m. There are two potential possibilities as to the groundwater levels not recovering after the TBM. They include:

- After the TBM moved through the grouting may have been incomplete in one of the sections and has become a conduit to the geological structure (dyke) located to the north of Eddy Avenue.
- The cross passage (XP21) located approximately 90 m to the north may be extracting groundwater from the area with CSM_BH04 within the cone of depression. The construction of the cross passages is likely to create a sink and be unlined for large period. The cross passage was constructed between 30 August 2019 and 16 November 2019 and the groundwater levels start to stabilise around this time.

Groundwater levels at CSM_BH04 did not respond to rainfall events indicating a reduced connection with rainfall on site.

5.3.4.3 CSM_BH06

CSM_BH06 is a deep monitoring well screened within sandstone.

The groundwater levels at CSM_BH06 ranged between -3.909 and -3.241 m AHD during the current monitoring period. From February to May 2021, the groundwater levels dropped below the data logger level and the groundwater levels were not recorded. The data logger level was readjusted during the May 2021 monitoring event.

The groundwater levels have not returned to the levels observed prior to the abrupt drop following the December 2020 monitoring event. This is likely due to de-watering activities associated with the Metro Box excavation causing groundwater drawdown in this well. However, de-watering from the sumps of the Metro Box will continue in perpetuity and therefore groundwater levels will not return to the observed levels prior to construction.

Groundwater levels at CSM_BH06 spiked on 8 March 2022, which corresponds with a series of rainfall events from February to March 2022. However, the groundwater levels did not respond to all rainfall events indicating a limited connection with rainfall directly on the site. Previous monitoring rounds did not show a connection between the deep monitoring well and rainfall events, potential changes to site conditions and dewatering activities could be impacting on the groundwater levels observed during the recent rainfall event.

5.3.4.4 CSM_BH10S

CSM_BH10S is a shallow well with the well screened within residual soil (clayey sand and sandy clay).

The data logger was retrieved from SRT-CBH017 prior to being destroyed, and relocated to CSM_BH10S, where it has been recording data since January 2020.

The groundwater levels at CSM_BH10S ranged between 11.282 and 12.385 m AHD during the current monitoring period. The groundwater levels at CSM_BH10S have responded to rainfall events, as conveyed through a spike on 8 March 2022 coinciding with a series of rainfall events from February to March 2022.

There did not appear to be a clear fall in groundwater elevations associated with ongoing excavation of the Metro Box to the top of bedrock and therefore limited hydraulic connection between the shallow and deeper aquifers.

5.3.4.5 SRT_BH047

SRT_BH047 is a shallow monitoring well with the well screened across sandstone and laminate / residual soil.

The groundwater levels at SRT_BH047 generally ranged between 16.948 and 18.776 m AHD during the current monitoring period, and between 15.5 m AHD and 18.5 m AHD during the monitoring period between September 2018 and September 2021. The groundwater levels at SRT_BH047 have responded to rainfall events, as conveyed through a spike on 8 March 2022 coinciding with a series of rainfall events from February to March 2022.

5.3.5 Assessment of groundwater drawdown

The following groundwater monitoring well locations have been selected for assessment given that these monitoring wells have been gauged or installed with a data logger across a relatively long period of time (i.e. a minimum six months) and on the boundary of the Central Station footprint. These wells are considered to represent the groundwater levels of the surrounding areas.

These groundwater monitoring locations are shown in **Figure 1, Appendix A**.

Graphs showing the groundwater levels retrieved from data loggers and obtained during sampling events by gauging are included in **Appendix C**. Graphs showing the groundwater levels obtained during all sampling events by gauging are included in **Appendix C**.

Table 5-1 – Assessment of groundwater drawdown at selected monitoring wells

Well ID	Location	Well depth and targeting aquifer	Monitoring period	Data source	Monitoring findings
CSM_BH02	On the southern end of platforms 10 and 11, and immediately west of Metro Box footprint	35 m targeting aquifer with sandstone	August 2019 to September 2021	Gauging / Data logger	Groundwater levels ranged between -5.266 and -4.180 m AHD by data logger (excluding sampling response) and between -5.196 and -4.666 m AHD by gauging during the current monitoring period. The groundwater levels at CSM_BH02 between December 2020 and May 2021 decreased by over 6.0 m. Groundwater levels were relatively stable at CSM_BH02 prior to December 2020. The groundwater levels at CSM_BH02 were only available from the data logger from the end of August 2019. Data before that was lost due to the significant decline of groundwater levels likely caused by undermining of the TBM and technical issues with the data logger. Based on the manual available data, groundwater levels at CSM_BH02 had steadily recovered following impact by the TBM. Groundwater levels during the current monitoring period increased by less than 1.0 m and have not recovered to the groundwater levels observed prior to the abrupt drop in December 2020, likely due to the ongoing dewatering activities associated with the ongoing draining of the Metro Box.
CSM_BH04	On Eddy Avenue and north of Metro Box footprint and Central Station footprint	35 m targeting aquifer with sandstone	April 2019 to September 2021	Gauging / Data logger	Groundwater levels ranged between -6.225 and -5.870 m AHD by data logger (excluding sampling response) and between -6.211 and -6.046 m AHD by gauging during the current monitoring period. Groundwater levels had a slight increase during the current monitoring period

Well ID	Location	Well depth and targeting aquifer	Monitoring period	Data source	Monitoring findings
					Groundwater levels were relatively stable at CSM_BH04 at the start of the monitoring period until the tunnel boring machine moved through CSM project area in July 2019, resulting in groundwater drawdown of approximately 7 m (data logger). Groundwater levels have steadily recovered, however remain approximately 2-3 m lower than initial groundwater levels measured in April 2019.
CSM_BH06	On Institute Drive East of Metro Box footprint and south of Central Walk footprint	35 m targeting aquifer with sandstone	April 2019 to September 2021	Gauging / Data logger	Groundwater levels ranged between -4.918 and -3.261 m AHD by data logger (excluding sampling response) and between -4.91 and -3.85 m AHD by gauging during the current monitoring period. The groundwater levels during the current monitoring period, according to data logger information, increased approximately 1 m from May 2021 to August 2021. Groundwater levels at CSM_BH06 were relatively stable at the start of the monitoring period until the TBM moved through CSM project area in July 2019 which resulted drawdown of groundwater level of about 3 m. Groundwater levels had steadily recovered until a sharp decline in groundwater levels by approximately 5.0 m that occurred after the December 2020 event. The groundwater levels have not recovered to the level prior to December 2020, likely due to the ongoing dewatering activities associated with the Metro Box.
CSM_BH08	On Ambulance Drive west of Metro Box footprint / Central Station footprint	35 m / aquifer within sandstone	April 2019 to September 2021	Gauging	Groundwater levels ranged between -4.376 and -3.741 m AHD during the current monitoring period. Groundwater levels were slightly increasing during the current monitoring period. Groundwater levels fluctuated by approximately 5.0 m during the monitoring period

Well ID	Location	Well depth and targeting aquifer	Monitoring period	Data source	Monitoring findings
					between December 2020 and March 2021. Groundwater levels were relatively stable at the start of the monitoring period until the tunnel boring machine passed Central Station in July 2019 which resulted drawdown of groundwater level of about 3 m. Then the groundwater levels have slowly recovered and stabilised to initial groundwater levels until December 2020 5.0 m decline due to the excavation of the Metro box.
GASW_BH10	In Sydney Yard within the uncovered gasworks footprint and immediately west of Metro Box footprint	25 m / aquifer with sandstone	June 2019 to September 2021	Gauging	Groundwater levels ranged between - 3.307 and -2.979 m AHD at the start of the monitoring period. Groundwater levels were stable during the current monitoring period. Groundwater levels fluctuated by approximately 4 m during the monitoring period between December 2020 and March 2021. Groundwater levels ranged between -3.127 and 8.118 m AHD during the overall monitoring period. However, AGJV consider the first gauged water level of 8.118 m AHD did not represent the equilibrium groundwater conditions. From the second monitoring event in July 2019, the groundwater levels fluctuated within a range less than 1.65 m prior to the decline in December 2020.
SRT_BH047	On platforms 6 / 7 west of Metro Box footprint	7 m / aquifer between residual soil and bedrock sandstone	September 2018 to September 2021	Gauging / Data logger	Groundwater levels ranged between 15.708 and 17.945 m AHD by data logger (excluding sampling response) and between 16.13 and 17.36 m AHD by gauging during the current monitoring period. The groundwater levels at SRT_BH047 fluctuated by approximately 1.0 m during the current monitoring period.

Well ID	Location	Well depth and targeting aquifer	Monitoring period	Data source	Monitoring findings
					Groundwater levels responded to rainfall. Groundwater level fluctuation during the overall monitoring period was approximately 2.5 m.
SRT_BH052	On platforms 6 /7 west of Metro Box footprint	8 m / aquifer with sandstone	October 2018 to September 2021	Gauging	Groundwater levels ranged between 15.07 and 15.28 m AHD during the current monitoring period, and 15.03 and 16.4 m AHD during the entire monitoring period. Fluctuations were less than 1.0 m during the current monitoring period. Groundwater level increased during the overall monitoring period was approximately 1.5 m and is likely due to the increase rainfall.
CSM_BH10S	On Eddy Avenue and north of Metro Box footprint and Central Station footprint	10 m / aquifer within residual soil	April 2019 to September 2021	Gauging / Datalogger from January 2020	Groundwater levels ranged between 11.038 and 11.999 m AHD (excluding sampling response) by data logger and between 11.188 and 11.573 m AHD by gauging during the current monitoring period. The groundwater levels during the current monitoring period, according to data logger information, increased by approximately 1.0 m. Groundwater levels at this monitoring location remained relatively stable between 11 – 12 m AHD, while fluctuations were observed less than 1 m throughout the entire monitoring period after the initial monitoring point.

Based on the information presented in Table 5-1, groundwater within the shallow aquifer in wells surrounding Central Station / CSM footprint suggested a drawdown of generally less than 2.5 m. Groundwater levels in the deep aquifer within bedrock in wells surrounding Central Station / CSM project footprint suggested a drawdown of approximately 5 m since December 2020.

During this monitoring period, groundwater levels are recovery and have increased in both the shallow and deep aquifers. The increase in the deep aquifer is most likely from the groundwater recovery from the metro box excavation and some impact from the increase in rainfall from January through to March this year. The increase in the shallow aquifer is from rainfall.

Based on these, AGJV consider that the groundwater drawdown by CSM works are within the acceptable range stated in Section 3.7 of this report.

5.4 Field measured groundwater quality parameters

The field measured groundwater quality parameters are summarised in **Table B5**, **Appendix B**. The field purging sheets are included in **Appendix E**.

The measured temperature, electrical conductivity and pH at monitoring well locations were relatively consistent across the monitoring period. It is noted that the oxidation / reduction potential fluctuated across the monitoring period and was similar in shallow and deep monitoring wells. Dissolved oxygen showed some variation between each monitoring period. The electrical conductivity at all locations was generally indicative of fresh water.

5.5 Laboratory analytical results

The results have been discussed separately relative to the adopted criteria in the following sections. The laboratory results are presented in **Table B2 and Table B3, Appendix B** and the laboratory reports are provided in **Appendix F**.

The following section discusses the laboratory analytical results during the current monitoring period (October 2021 to March 2022), relative to the adopted criteria. All monitoring data from the current and previous monitoring periods are included in **Table B2, Appendix B**. Monitoring data from the current monitoring period only are presented in **Table B3, Appendix B,** and discussed below.

5.5.1 Human health and ecological screening criteria

Heavy Metals

Copper and zinc had multiple exceedances of the adopted ecological screening criterion, whilst nickel and chromium had one exceedance. Copper had exceedances in at least one monitoring period for the wells CSM_BH02, CSM_BH04, CSM_BH06, CSM_BH08, CSM_BH13, GASW_BH10, GASW_BH23, SRT_BH047, SRT_BH050, and SRT_BH052. Zinc had exceedances in at least one monitoring period for the wells CSM_BH02, CSM_BH04, CSM_BH06, CSM_BH08, CSM_BH12S, CSM_BH13, GASW_BH23, SRT_BH047 and SRT_BH050.

A slight chromium exceedance was recorded in SRT_BH047 for the December 2021 monitoring period. There was also a slight nickel exceedance recorded in CSM_BH04 for the February 2022 monitoring period.

Total Cyanide

Multiple wells had one exceedance of the adopted ecological screening criterion for total cyanide. In total there were 9 exceedances across wells CSM_BH02, CSM_BH04, CSM_BH06, CSM_BH08, CSM_BH10S, CSM_BH12S, GASW_BH23 and SRT_BH047. Only CSM_BH10S contained more than one exceedance across the monitoring period, with a total of two exceedances.

It should be noted that four exceedances were recorded in the November 2021 monitoring period, and three exceedances were recorded in the December 2021 monitoring period.

TRH, BTEXN and PAH

The majority of the groundwater samples submitted for analysis reported concentrations of TRH fractions (with silica gel clean-up) below the laboratory limit of reporting. Reported detections above the limit of reporting were noted for TRH fractions >C_{10} to C_{16} (2 detections) and >C_{16} to C_{34} (7

detections) (with silica gel clean-up) in six wells across the project area. These wells were CSM_BH13, CSM_BH14S, GASW_BH10, GASW_BH23, SRT_BH047 and SRT_BH052. Detections are considered indicative of impact associated with the gasworks. There are unlimited values or no criteria for heavier TRH factions in relation to vapour intrusion.

Exceedances of adopted screening criteria were noted in the following instances:

- Concentrations of benzene in all groundwater samples collected from GASW_BH23 and GASW_BH25A exceeded adopted recreational human health criteria across the current monitoring period. events.
- Detections of toluene, ethylbenzene in xylene were reported in the one groundwater sample collected for GASW_BH25A in the current monitoring period. GASW_BH23 had one sample with a detection of ethylbenzene. Toluene was detected in concentrations just above the laboratory detection limit (1 µg/L) in four other wells, though these detections were only for the March 2022 monitoring period. These wells were CSM_BH10S, SRT_BH047, SRT_BH050 and SRT_BH052.
- The majority of groundwater samples reported concentrations of benzo(a)pyrene below the laboratory limit of reporting. Three samples collected from CSM_BH08 (two primary samples and one duplicate) had detections, with two of these samples exceeding the adopted recreational human health criteria. One of the two samples, collected in December 2021, also exceeded the adopted ecological criteria (0.2 µg/L) with a value of 0.63 µg/L.

Phenols

The majority of groundwater samples submitted for analysis reported concentrations of phenols below the laboratory detection limit. There were two detections of phenol for the current monitoring period, occurring in GASW_BH10 for the February and March 2022 monitoring rounds. These were below the adopted assessment criteria.

Ammonia

The majority of groundwater monitoring wells reported concentrations of ammonia above the laboratory detection limit (0.01 mg/L). There was one exceedance of the adopted ecological criteria (0.91 mg/L) occurring in SRT_BH047 for the March monitoring round with a value of 2.4 mg/L. This result is an anomalous result within the data set for the site. The highest previous result from the whole site for ammonia was 1.3 mg/L at GASW_BH23 in February 2020 and the highest previous result for SRT_BH047 was 0.24 mg/L in July 2020. The laboratory was not able to provide comment on the validity of this sample.

5.5.2 Statistical analysis – comparison to baseline conditions

The 20th and 80th percentiles of cyanide, ammonia, copper, manganese, nickel, zinc, benzene, TRH (F1) and TRH (F2) fraction were calculated. Percentiles were calculated at monitoring well locations for selected COPCs. The 20th percentile is the value (or score) below which 20% of the observations are found. Equivalently, 80% of the observations are found above the 20th percentile. Table 5-2 presents percentiles for the current monitoring period (October 2021 to March 2022) against the baseline (shallow from September 2018 to February 2019 and deep from April to September 2019). The **BOLD** numbers on the tables show where the current period percentiles have exceeded the baseline percentiles.

The new well CSM_BH12S is located near the destroyed well CSM_BH09S and targets the same aquifer. Hence the percentiles for CSM_BH12S has been compared to the baseline percentiles for CSM_BH09S, although slight variations could be expected.

Three additional wells have been included in the percentiles calculations which were not in the previous report and have no baseline monitoring period. Two of these wells, CSM_BH13 and CSM_BH14S are relatively new and have been sampled since September 2021. SRT_BH050 has

either been dry or not enough water in the well to sample since February 2020 when it was first added to the monitoring program.

Table 5-2 - 20th and 80th percentiles of COPC at monitoring well locations

Cyanide (Total)					
Adopted guideline:	**On-site health: N/A**				
	Off-site ecological: 0.004 mg/L				
	Off-site health: 0.8 mg/L				
Site ID	Current period (mg/L)			Monitoring period Baseline (mg/L)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	6	**0.0020**	0.0020	0.0025	0.0050
CSM_BH04	6	**0.0020**	**0.0040**	0.0025	0.0025
CSM_BH06	6	**0.0020**	**0.0040**	0.0025	0.0025
CSM_BH08	6	**0.0020**	**0.0040**	0.0025	0.0025
CSM_BH10S	6	**0.0020**	**0.0050**	0.0025	0.0025
CSM_BH12S	6	**0.0020**	0.0020	0.0025	0.0025
CSM_BH13	6	0.0020	0.0020	-	-
CSM_BH14S	6	0.0020	0.0020	-	-
GASW_BH10	6	**0.0020**	0.0020	0.0025	0.0035
GASW_BH11	1	**0.0020**	0.0020	0.0025	0.0067
GASW_BH23	3	**0.0020**	0.0038	0.0339	0.0978
GASW_BH25A	1	**0.0020**	0.0020	0.0522	0.1362
SRT_BH047	6	**0.0020**	**0.0040**	0.0025	0.0025
SRT_BH050	4	0.0020	0.0022	-	-
SRT_BH052	6	**0.0020**	0.0020	0.0025	0.0025

Ammonia					
Adopted guideline:	**On-site health: N/A**				
	Off-site ecological: 0.91 mg/L				
	Off-site health: N/A				
Site ID	Current period (mg/L)			Monitoring period Baseline (mg/L)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	6	0.005	0.020	0.005	0.050
CSM_BH04	6	0.010	**0.040**	0.005	0.005
CSM_BH06	6	0.005	**0.070**	0.005	0.020
CSM_BH08	6	0.020	**0.040**	0.005	0.030
CSM_BH10S	6	0.005	**0.050**	0.005	0.005
CSM_BH12S	6	0.020	0.030	0.040	0.100
CSM_BH13	6	0.005	0.030	-	-
CSM_BH14S	6	0.005	0.005	-	-
GASW_BH10	6	0.005	0.030	0.005	0.076
GASW_BH11	1	0.190	**0.190**	0.008	0.030
GASW_BH23	3	**0.218**	0.416	0.494	0.866
GASW_BH25A	1	**0.240**	0.240	0.426	0.480
SRT_BH047	6	0.005	**0.110**	0.005	0.005
SRT_BH050	4	0.005	0.023	-	-
SRT_BH052	6	0.005	**0.030**	0.005	0.005

Copper (Filtered)					
Adopted guideline:	**On-site health: N/A**				
	Off-site ecological: 0.0013 mg/L				
	Off-site health: 20 mg/L				
Site ID	Current period (mg/L)			Monitoring period Baseline (mg/L)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	7	0.0005	**0.0030**	0.0005	0.0005
CSM_BH04	7	0.0005	0.0018	0.0005	0.0030
CSM_BH06	6	0.0020	**0.0220**	0.0005	0.0096
CSM_BH08	8	0.0005	**0.0068**	0.0005	0.0008
CSM_BH10S	9	0.0005	0.0005	0.0010	0.0030
CSM_BH12S	7	0.0005	0.0005	0.0005	0.0020
CSM_BH13	7	0.0008	0.0046	-	-
CSM_BH14S	7	0.0005	0.0009	-	-
GASW_BH10	6	0.0005	**0.0020**	0.0005	0.0005
GASW_BH11	1	0.0010	0.0010	0.0005	0.0030
GASW_BH23	3	0.0005	0.0005	0.0005	0.0014
GASW_BH25A	1	0.0030	**0.0030**	0.0005	0.0020
SRT_BH047	7	**0.0014**	0.0038	0.0064	0.0204
SRT_BH050	4	0.0014	0.0038	-	-
SRT_BH052	7	**0.0005**	0.0017	0.0120	0.0630

Manganese (Filtered)					
Adopted guideline:	**On-site health: N/A**				
	Off-site ecological: N/A				
	Off-site health: 5 mg/L				
Site ID	Current period (mg/L)			Monitoring period Baseline (mg/L)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	6	**0.0130**	0.2500	0.2000	0.3300
CSM_BH04	6	0.3900	**0.4700**	0.3000	0.4400
CSM_BH06	6	0.2300	**0.4100**	0.2100	0.2800
CSM_BH08	6	0.3800	**0.4300**	0.3200	0.3700
CSM_BH10S	6	0.5700	**0.6100**	0.4300	0.5100
CSM_BH12S	6	**0.5800**	**0.8100**	0.6400	0.7900
CSM_BH13	6	0.5200	0.6000	-	-
CSM_BH14S	6	0.0025	0.0140	-	-
GASW_BH10	6	**0.1000**	0.1200	0.1696	0.3840
GASW_BH11	1	**0.0860**	0.0860	0.2000	0.2380
GASW_BH23	3	0.1980	0.3120	0.0408	0.3180
GASW_BH25A	1	**0.0025**	0.0025	0.1816	0.3064
SRT_BH047	6	0.0150	**0.0330**	0.0005	0.0084
SRT_BH050	4	0.0142	0.0284	-	-
SRT_BH052	6	**0.0060**	0.0230	0.0144	0.0318

Nickel (Filtered)					
Adopted guideline:	**On-site health: N/A**				
	Off-site ecological: 0.07 mg/L				
	Off-site health: 0.2 mg/L				
Site ID	Current period (mg/L)			Monitoring period Baseline (mg/L)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	7	**0.0052**	0.0096	0.0060	0.0120
CSM_BH04	7	0.0116	**0.0518**	0.0100	0.0290
CSM_BH06	6	**0.0030**	0.0160	0.0122	0.0200
CSM_BH08	8	**0.0024**	**0.0424**	0.0042	0.0124
CSM_BH10S	9	0.0020	0.0020	0.0020	0.0020
CSM_BH12S	7	0.0112	**0.0214**	0.0060	0.0090
CSM_BH13	7	0.0110	0.0310	-	-
CSM_BH14S	7	0.0005	0.0005	-	-
GASW_BH10	6	**0.0005**	0.0010	0.0184	0.0424
GASW_BH11	1	**0.0010**	0.0010	0.0020	0.0020
GASW_BH23	3	**0.0005**	0.0005	0.0014	0.0032
GASW_BH25A	1	**0.0005**	0.0005	0.0011	0.0026
SRT_BH047	7	0.0030	0.0040	0.0020	0.0048
SRT_BH050	4	0.0005	0.0020	-	-
SRT_BH052	7	**0.0005**	0.0009	0.0040	0.0080

Zinc (Filtered)					
Adopted guideline:	**On-site health: N/A**				
	Off-site ecological: 0.008 mg/L				
	Off-site health: N/A				
Site ID	Current period (mg/L)			Monitoring period Baseline (mg/L)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	7	**0.0025**	**0.0230**	0.0070	0.0110
CSM_BH04	7	0.0110	**0.1202**	0.0025	0.1000
CSM_BH06	6	0.0050	**0.2200**	0.0410	0.0732
CSM_BH08	8	**0.0025**	**0.1380**	0.0144	0.0382
CSM_BH10S	9	**0.0025**	0.0039	0.0060	0.0110
CSM_BH12S	7	0.0478	**0.0904**	0.0360	0.0480
CSM_BH13	7	0.0082	0.4694	-	-
CSM_BH14S	7	0.0025	0.0025	-	-
GASW_BH10	6	0.0025	0.0060	0.0025	0.0206
GASW_BH11	1	0.0630	**0.0630**	0.0142	0.0220
GASW_BH23	3	0.0154	0.0286	0.0025	0.3310
GASW_BH25A	1	0.0025	0.0025	0.0025	0.0025
SRT_BH047	7	0.0260	0.0336	0.0066	0.0374
SRT_BH050	4	0.0078	0.0120	-	-
SRT_BH052	7	**0.0025**	0.0053	0.0060	0.0860

Benzene					
Adopted guideline:	**On-site health (vapour intrusion): 5000 µg/L**				
	Off-site ecological: 700 µg/L				
	Off-site health: 10 µg/L				
Site ID	Current period (mg/L)			Monitoring period Baseline (mg/L)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	7	0.5	0.5	0.5	0.5
CSM_BH04	7	0.5	0.5	0.5	0.5
CSM_BH06	6	0.5	0.5	0.5	0.5
CSM_BH08	8	0.5	0.5	0.5	0.5
CSM_BH10S	9	0.5	0.5	0.5	0.5
CSM_BH12S	7	0.5	0.5	0.5	0.5
CSM_BH13	7	0.5	0.5	-	-
CSM_BH14S	7	0.5	0.5	-	-
GASW_BH10	6	0.5	0.5	0.5	2.0
GASW_BH11	1	0.5	0.5	0.5	0.5
GASW_BH23	3	**14.6**	29.6	1654.0	1900.0
GASW_BH25A	1	70.0	70.0	8160.0	15180.0
SRT_BH047	7	0.5	0.5	0.5	0.5
SRT_BH050	5	0.5	0.5	-	-
SRT_BH052	7	0.5	0.5	0.5	0.5

TRH F1					
Adopted guideline:	**On-site health (vapour intrusion): 6000 µg/L**				
	Off-site ecological: n/a				
	Off-site health: n/a				
Site ID	Current period (µg/L)			Monitoring period Baseline (µg/L)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	7	10	10	10	10
CSM_BH04	6	10	10	10	10
CSM_BH06	6	10	10	10	10
CSM_BH08	8	10	10	10	10
CSM_BH10S	9	10	10	10	10
CSM_BH12S	7	10	10	10	10
CSM_BH13	7	10	10	-	-
CSM_BH14S	7	10	28	-	-
GASW_BH10	6	10	10	10	22
GASW_BH11	1	10	10	10	10
GASW_BH23	3	**14**	26	100	1720
GASW_BH25A	1	**90**	90	1244	3884
SRT_BH047	7	10	10	10	10
SRT_BH050	5	10	10	-	-
SRT_BH052	7	10	10	10	10

TRH F2					
Adopted guideline:	**On-site health (vapour intrusion): Non limiting**				
	Off-site ecological: n/a				
	Off-site health: n/a				
Site ID	Current period (µg/L)			Monitoring period Baseline (µg/L)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	7	25	25	25	25
CSM_BH04	6	25	25	25	25
CSM_BH06	6	25	25	25	25
CSM_BH08	8	25	25	25	25
CSM_BH10S	9	25	25	25	25
CSM_BH12S	7	25	25	25	50
CSM_BH13	7	25	25	-	-
CSM_BH14S	7	25	25	-	-
GASW_BH10	6	25	**1100**	40	304
GASW_BH11	1	25	25	148	344
GASW_BH23	3	25	25	312	372
GASW_BH25A	1	25	25	328	1372
SRT_BH047	7	25	25	25	25
SRT_BH050	5	25	25	-	-
SRT_BH052	7	25	25	25	25

TDS					
Adopted guideline:	**On-site health: N/A**				
	Off-site ecological: N/A				
	Off-site health: N/A				
Site ID	Current period (mg/L)			Monitoring period Baseline (mg/L)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	6	**240**	470	434	562
CSM_BH04	6	**140**	260	248	318
CSM_BH06	6	500	570	470	600
CSM_BH08	6	280	350	274	364
CSM_BH10S	6	150	170	148	246
CSM_BH12S	6	**350**	370	390	460
CSM_BH13	6	590	660	-	-
CSM_BH14S	6	110	150	-	-
GASW_BH10	5	630	688	600	956
GASW_BH11	1	240	**240**	186	218
GASW_BH23	3	342	432	670	712
GASW_BH25A	1	**130**	130	400	703
SRT_BH047	6	**130**	180	262	360
SRT_BH050	4	130	164	-	-
SRT_BH052	6	**150**	240	246	282

pH (Lab)					
Adopted guideline:	**On-site health: N/A**				
	Off-site ecological: N/A				
	Off-site health: N/A				
Site ID	Current period (pH)			Monitoring period Baseline (pH)	
	N*	20th %ile	80th %ile	20th %ile	80th %ile
CSM_BH02	6	**7.4**	7.9	7.8	8.1
CSM_BH04	6	6.7	7.2	6.7	7.5
CSM_BH06	6	7.1	7.1	7.1	8.0
CSM_BH08	6	**6.8**	**8.1**	7.2	7.5
CSM_BH10S	6	6.1	**6.8**	6.1	6.6
CSM_BH12S	6	6.6	**7.6**	6.6	6.9
CSM_BH13	6	7.1	7.5	-	-
CSM_BH14S	6	6.9	7.7	-	-
GASW_BH10	5	**7.2**	**7.9**	7.3	7.7
GASW_BH11	1	7.7	**7.7**	6.3	6.5
GASW_BH23	3	7.5	7.7	7.5	7.8
GASW_BH25A	1	**7.4**	7.4	7.5	8.1
SRT_BH047	6	**6.1**	6.4	7.7	8.1
SRT_BH050	4	4.8	4.9	-	-
SRT_BH052	6	**6.3**	6.9	7.7	7.9

Cyanide

The majority of calculated percentiles for the concentrations of cyanide in the current monitoring period are below the adopted ecological and human health criteria. There are slight exceedances of the ecological criteria at the 80th percentile in some wells. This can be attributed to the fact that concentrations have been reported at the laboratory limit of reporting (0.004 mg/L), which is equivalent to the exceedance concentration for the adopted ecological criteria.

Additionally, the cyanide concentrations at the 20th percentile are lower than the baseline monitoring period, though this is due to the change of the laboratory limit of reporting from 0.005 mg/L to 0.004 mg/L since the baseline monitoring period was completed.

Cyanide concentrations in the gasworks area are shown to be almost at the laboratory limit of detection, which is significantly lower than the baseline monitoring period. This decrease may have been from the capping of the area which has reduced water infiltration.

Ammonia

The ammonia concentrations in seven of the wells for this monitoring period are higher the baseline monitoring period. These observations are consistent with the previous monitoring period. Two of these wells, GASW_BH11 and SRT_BH047, have values at the 80th percentile which exceed the adopted ecological criteria (0.91 mg/L). It should be noted that GASW_BH11 only has one set of data for this current monitoring period as the well became inaccessible. This increase may have been attributed to the excavation of the MBW and changes to the groundwater regime.

Metals

Concentrations of copper, zinc, nickel and manganese in the current monitoring period are higher than the 80th percentile of the baseline monitoring period for a number of wells. There are exceedances in the adopted ecological criteria for copper (0.0013 mg/L) and zinc (0.008 mg/L) in various wells. It should be noted that the concentrations of copper and zinc in the baseline monitoring period for these

wells also exceeded the adopted ecological criteria, though the values reported in the current monitoring period are slightly higher.

Manganese concentrations reported at the 80th percentile in the current monitoring period are higher than the baseline period across wells CSM_BH04, CSM_BH06, CSM_BH08, CSM_BH10S, CSM_BH12S and SRT_BH047. In addition, three of the four wells targeting the gasworks reported significantly lower concentrations than the baseline monitoring period, as indicated by the lower values reported at the 20th percentile. There are no exceedances of the adopted criteria for manganese concentrations.

For nickel concentrations, there were no exceedances of the adopted ecological criteria. Several of the wells, including all of the wells targeting the gasworks, reported concentrations at the 20th percentile lower than that of the baseline monitoring period, indicating a general reduction of nickel concentrations across the site.

Benzene, TRH F1, TRH F2

There are no exceedances of the adopted ecological and human health criteria for benzene, TRH F1 and TRH F2. Benzene and TRH F1 have no exceedances of the baseline 80th percentiles and therefore there has been no change due to the construction works.

It should be noted that the concentrations of benzene reported at the 20th and 80th percentiles for this monitoring period, 14.6 mg/L and 29.6 mg/L respectively, is significantly lower than the baseline monitoring period of 1654 mg/L and 1900 mg/L, respectively.

The TRH F1 concentrations have remained stable across the wells, except for GASW_BH23 and GASW_BH25A which have shown a significant decrease in concentrations compares to the baseline period. There was an exceedance of the 80th percentile of the baseline period for TRH F2 observed in GASW_BH10.

Total dissolved solids (TDS)

TDS has shown a decrease in concentrations for this current monitoring period when compared to the baseline monitoring period, except in GASW_BH11 which is slightly higher at the 80th percentile.

pH (Lab)

The pH levels have remained consistent during this monitoring period. When compared to the baseline there has been a slight reduction in the pH values in the wells CSM_BH02, CSM_BH08, SRT_BH047 and SRT_BH052. A lowering of the pH (more acidic) can encourage the solubility of heavy metals and may explain the fluctuations in metal concentrations.

SRT_BH050 has usually been dry in previous monitoring periods and hence there is no available baseline data to compare to. It should be noted that the pH is much lower than the other platform wells, SRT_BH047 and SRT_BH052 which have shown a decrease in pH compared to the baseline monitoring period.

5.5.3 Aggressivity

Concentrations of sulfate, chloride and pH have been compared against the adopted aggressivity criteria and displayed in **Table B6 and Table B7, Appendix B**. The results have remained mostly consistent and suggest that existing groundwater may present a non-aggressive to moderate risk to concrete structures intersecting groundwater. The reported groundwater quality is expected to be non-aggressive to steel piles with the exception at CSM_BH10S, SRT_BH050 and SRT_BH052, where groundwater presents a non-aggressive to mild risk to steel structures due to the lower pH at these areas.

5.5.4 Precipitation (Formation of Ochre)

Ferrous iron and manganese were analysed in groundwater samples and results are included in **Table B3**, **Appendix B.**

Ferrous iron concentrations ranged from below the laboratory reporting limits (0.05 mg /L) to a maximum concentration of 11 mg/L at GASW_BH23. Comparison of the current results against the criteria outlined in **Section 3.6**, suggests that there is a negligible to moderate potential for ochre formation. In particular, there is moderate potential for ochre formation in wells CSM_BH08, CSM_BH12S and GASW_BH23. The results have fluctuated throughout the monitoring period.

Manganese concentrations ranged from less than the laboratory reporting limit (0.005 mg/L) to 0.81 mg/L (not field filtered) at CSM_BH12S.

5.5.5 Summary of statistical analysis

Overall, there has been no major changes in the COPC concentrations due to construction. Ammonia levels have shown increase over the previous and current monitoring period, though no increase between the periods and majority of the increase remain below the ecological criterion. The ammonia levels should be re-assessed within the next monitoring round to assess if there have been further increases with particular SRT_BH047 that latest result was significantly elevated from the rest of the dataset (from less than detection to 2.4 mg/L).

6 Quality assurance and quality control assessment results

6.1 Field program

As part of the AGJV QA/QC program, one intra-laboratory duplicate and one inter-laboratory duplicate sample was analysed during each monitoring event. Duplicate samples were analysed for heavy metals, TRH, BTEXN and PAH. It is noted that for some results, reported concentrations were below the laboratory limit of reporting and as a result, it was not possible to calculate relative percentage difference (RPD's) for these samples. For analytes with detected concentrations, RPDs were within the acceptable range, with the exception of exceedances shown in **Table B8, Appendix B** and discussed below.

Elevated RPDs were reported between the following primary and duplicate samples:

- CSM_BH08/QC01 in zinc (62%), benz(a)anthracene (181%), benzo(a)pyrene (181%), benzo[b+j]fluoranthene (190%), benzo(k)fluoranthene (187%), benzo(g,h,i)perylene (190%), chrysene (181%), fluoranthene (181%), indendo (1,2,3,-c,d)pyrene (181%), phenanthrene (181%), pyrene (187%)

These elevated RPDs were mostly for PAHs and the results of the primary sample are within the range of previous results. The primary samples results are the highest and the one used for the assessment.

One rinsate sample was collected during each monitoring round and analysed for heavy metals. Concentrations of all rinsate samples collected during this monitoring period were below the laboratory limit of reporting with the exception of one sample in February for copper. Copper was reported at the laboratory limit of detection. Overall these results indicate that cross contamination of samples did not occur.

One set of water trip blank and trip spikes were analysed as part of each monitoring event during the current monitoring period. Concentrations of the trip blank samples were reported below the laboratory limit of reporting. The results of the trip spike have been reviewed by AGJV and were found to be within the acceptable criteria (70-130%).

The rinsate, trip spike and trip blank analytical results are summarised in **Table B9, Appendix B**. Laboratory analytical reports are included in **Appendix F**.

6.2 Laboratory program

Holding times

Laboratory analytes were generally all extracted within the laboratory's required holding times for chemical analysis, as presented on laboratory reports in **Appendix F**, except for in November 2021 and March 2022. This is with the exception of pH (Lab) that has a holding time of less than one day. These exceptions have been listed below.

- November 2021: Total Recoverable Hydrocarbons – 1999 NEPM Fractions, total Recoverable Hydrocarbons – 2013 NEPM Fractions, Total Recoverable Hydrocarbons, Eurofins Suite B6 (filtered metals) Total Recoverable Hydrocarbons – 2013 NEPM Fractions Phenols (halogenated), Phenols (non-halogenated), TRH – 2013 NEPM Fractions (after silica gel clean-up), TRH – 1999 NEPM Fractions (after silica gel clean-up), Polycyclic Aromatic Hydrocarbons (trace level), Ferrous Iron – Fe2+, Total Suspended Solids Dried at 103-105°C, Alkalinity (speciated)
- December 2021: Metals (eight species suite)
- January 2022: Polycyclic Aromatic Hydrocarbons (trace level), Ferrous Iron – Fe2+
- March 2022: Total Recoverable Hydrocarbons – 1999 NEPM Fractions, Eurofins Suite B6 (filtered metals) Total Recoverable Hydrocarbons – 2013 NEPM Fractions, Phenols (halogenated), Phenols (non-halogenated), TRH – 2013 NEPM Fractions (after silica gel clean-up), TRH – 1999 NEPM Fractions (after silica gel clean-up), Polycyclic Aromatic Hydrocarbons (trace level), Ferrous Iron – Fe2+

Laboratory program

The NATA certified laboratories used for this assessment (Eurofins Sydney and Australian Laboratory Services) undertook their own quality assurance and quality control procedures for sample analysis. AGJV has reviewed the internal laboratory control data provided within the laboratory reports, which are attached as **Appendix F**. It is noted comments have been provided by the laboratory where a failure result was reported in laboratory QA/QC procedures.

6.3 Discussion

Despite the elevated RPDs in one of a primary and duplicate sample for certain PAH compounds and some holding time exceedances, the results of the QA/QC program are considered to provide an acceptable degree of confidence in the analytical program completed. Overall, the analytical data set is considered valid and acceptable for assessing the contamination status of the site.

7 Findings, conclusions and recommendations

7.1 Findings and conclusions

In accordance with the objectives detailed in **Section 1.1** of this report, and based on the information contained within this monitoring program, the following findings are noted (subject to the limitations outlined in **Section 9**).

- Due to the destruction and replacement of monitoring wells as the construction progresses, the following variations in sampling locations are noted as compared to those listed in **Table 7.1** of the latest CGWMP (LOR, September 2021):
- With the construction of the MBW a number of monitoring wells to the east and south, and additionally wells targeting gasworks, have been destroyed

The groundwater elevation data, as presented in **Section 5.3.5**, suggests there are two distinct aquifers at the site, located in the overlying unconsolidated materials (the shallow aquifer) and within the Hawkesbury Sandstone (the deep aquifer). This statement is supported by the following evidence:

- A difference greater than 5 m in groundwater elevations between the shallow and deeper aquifers.
- A difference in response to rainfall events between wells screened within the shallow and deep aquifers. Shallow wells displayed an immediate response to rainfall events, whereas deep wells displayed a delayed and smaller response.

Groundwater flow direction within the shallow aquifer system is toward the north-east and south-west. It appears this is generally consistent with the general fall in topography and towards harbour areas. Groundwater flow direction in the deeper aquifer appears to be to the north-east and towards harbour areas. The groundwater flow directions in the deep and shallow aquifer have been consistent throughout the monitoring program.

The groundwater elevation data also indicates that groundwater drawdown in the shallow and deeper aquifer at the boundary of the CSM project area are within the acceptable range specified in the project EIS and REMM (AGJV, 2020).The excessive drawdown in the deep aquifer has started to recover following reduction or conclusion of dewatering activities.

The groundwater quality sampling results suggest the following:

- Concentrations of copper, manganese, nickel and zinc have an increasing trend during this monitoring period and have exceeded the baseline percentiles in groundwater at some wells. However, they are fluctuating and with increasing spikes which may be due to the lowering of pH as older groundwater is migrating with the drawdown of the groundwater at the MBW.
- Ammonia concentrations have increased during this monitoring period compared against the baseline. This may have been caused by the changes in the groundwater regime due to the construction works. However, the current levels are well below the ecological screening criterion adopted for this project with the exception of the ammonia result at SRT_BH047 in March 2021.
- TRH (with silica gel cleanup) results were detected above the laboratory limit of reporting in groundwater samples across eight monitoring wells. These detections were low and are considered to be indicative of low level impact associated with the former gasworks. Groundwater at GASW_BH10 had an elevated concentration of TRH F2 for the March event and should be reassessed in the next monitoring period to ascertain whether this was an anomaly or a trend.
- Benzene, benzo(a)pyrene and toluene impacts, as well as manganese, reported above recreational criteria during the entire monitoring period (September 2018 to March 2022) may

present a potential contact risk for on-site intrusive maintenance workers, although it is noted that the adopted criteria are conservative.

- Concentrations of benzene in GASW_BH23 and GASW_BH25A exceeded recreational human health criteria for across the current monitoring period. Exceedances of this criteria have also been reported in GASW_BH23 and GASW_BH25A during previous monitoring events, though at significantly higher concentrations.
- There is a negligible to moderate potential for ochre formation throughout the site, particularly within the vicinity of the former gasworks holder, given ferrous iron concentrations were reported between 6 and 11 mg/L at GASW_BH23 in the current monitoring period and up to 6 mg/L during the previous monitoring period. There is potential for ochre formation at CSM_BH08 and CSM_BH12S, with maximum ferrous iron concentrations reported at 6.3 mg/L and 9.3 mg/L respectively.
- There does not appear to be an ongoing emergence of groundwater quality impacts associated with the construction works. This is understandable given that groundwater flow is directed into excavation, where it is being collected and treated.

7.2 Recommendations

Based on the findings of the current groundwater monitoring period and consideration of findings from the previous monitoring periods, AGJV recommend:

- Continued monitoring and factual reporting on a six-monthly basis in accordance with the CGWMP. With the finishing of all major excavations groundwater quality monitoring is occurring on a quarterly event with groundwater gauging to continue monthly. This will need to be updated within the CGWMP and approved by the relevant authorities.
- Ammonia concentrations should be reassessed next monitoring period to ascertain if there further increases in concentrations or just fluctuation through changes to the groundwater regime. Sampling of SRT_BH047 during the next round to include a duplicate to confirm the high ammonia result from March 2021.
- Excessive drawdown in the deep aquifer is expected to recover following reduction or conclusion of dewatering activities. This data should be provided to the relevant AGJV groundwater movement specialist for further consideration as there is the potential to be outside the relevant drawdown criteria.
- Sydney Metro should provide groundwater monitoring results to the contractor of the construction and operational water treatment plant for the treatment of groundwater when required.
- CGWMP should be updated to reflect the current monitoring locations and laboratory analysis of the groundwater monitoring program.

8 References

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9 Limitations

It is noted that AGJV does not rely on any data collected and reported by other consultants.

This report has been prepared by AGJV for LOR and may only be used and relied on by LOR for the purpose agreed between AGJV and LOR as set out in section 1 of this report.

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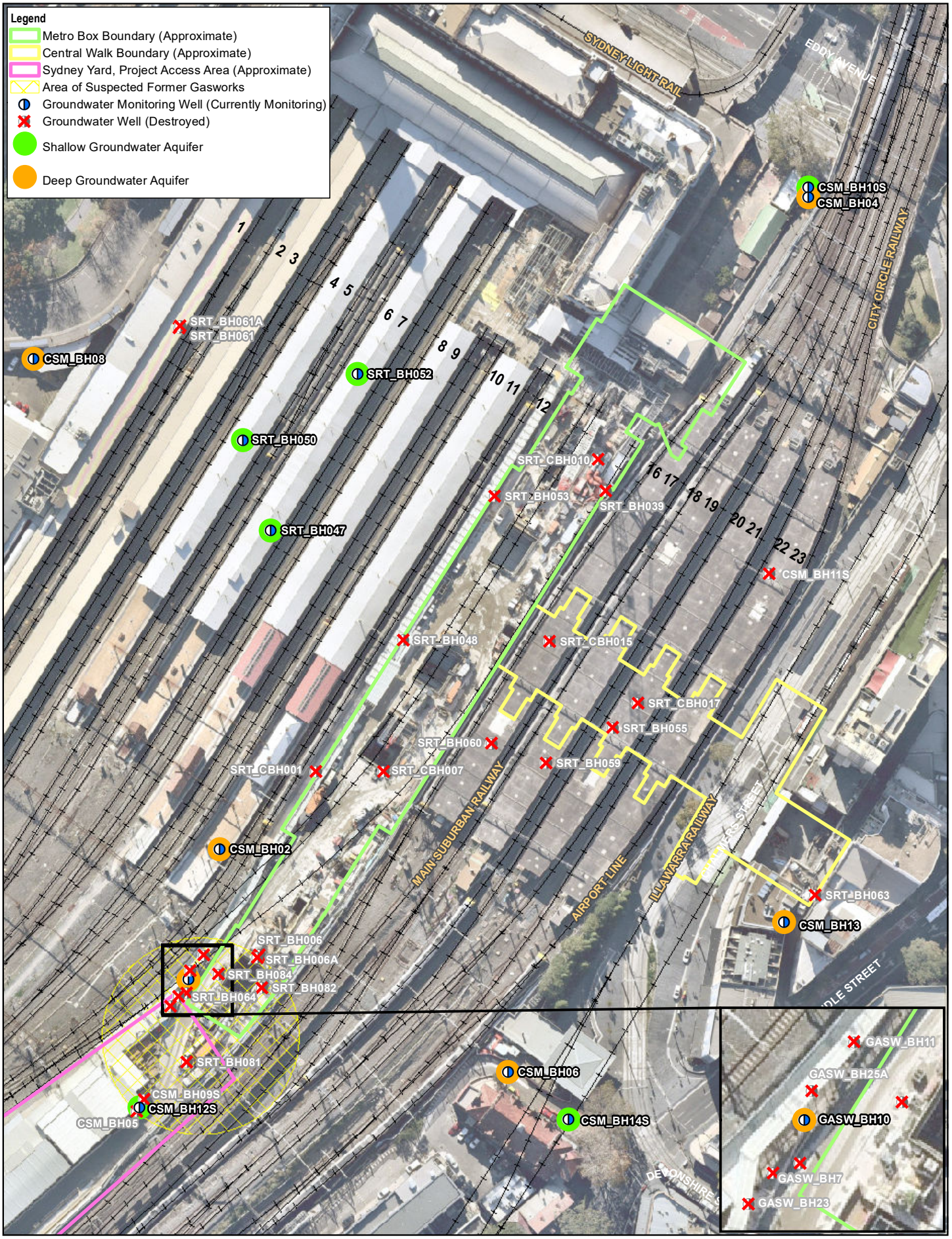
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Appendices

Appendix A
Figures



Paper Size ISO A4

0 10 20 30 40

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

AGJV

Laing O'Rourke
Central Station Main Works
Groundwater Monitoring

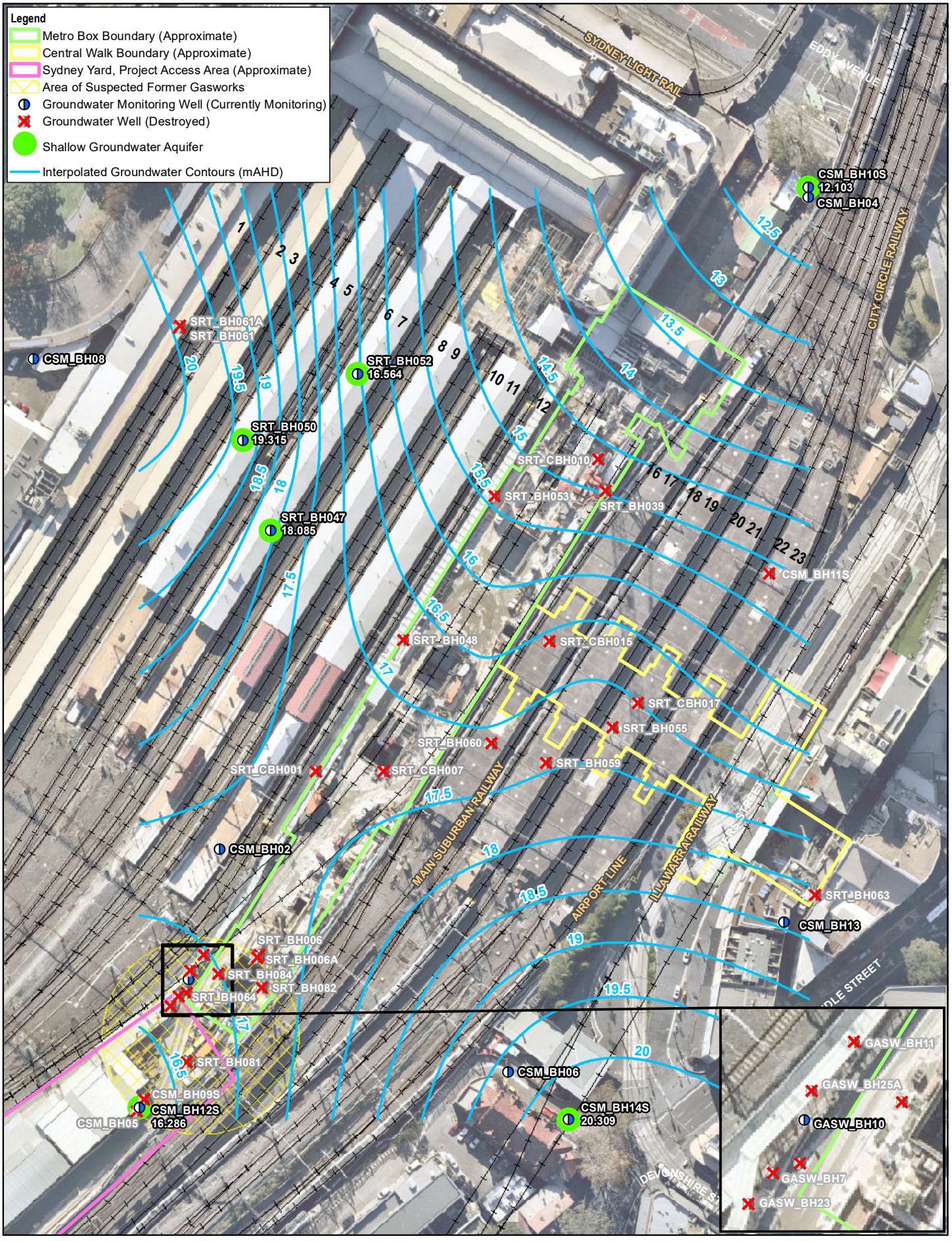
Monitoring Well Locations (March 2022)

Project No. 21-27234
Revision No. -
Date 28/03/2022

Figure 1

C:\GIS_Local\21-27234 Central

Data source: . Created by: tnham



Paper Size ISO A4

0 10 20 30 40

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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AGJV

Laing O'Rourke
Central Station Main Works
Groundwater Monitoring

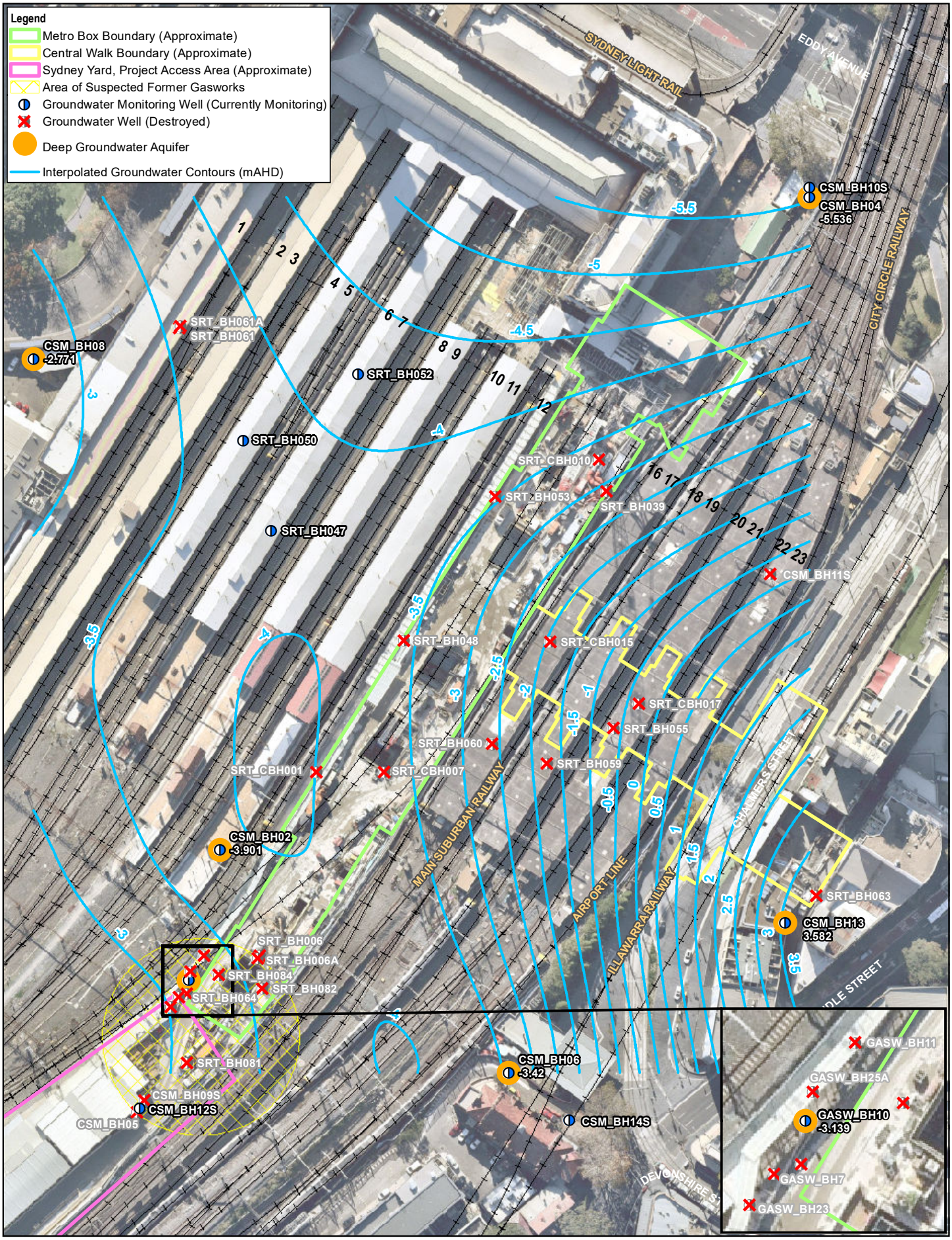
Interpolated Groundwater Contours - March 2022 (Shallow Aquifer)

Project No. 21-27234
Revision No. -
Date 28/03/2022

Figure 2

C:\GIS_Local\21-27234 Central Station\Maps\Deliverables\21_27234_CONTAMINATION_Z039_CSM_Groundwater_ShallowContours_R42_Mar2022.mxd
Print date: 28 Mar 2022 - 17:07

Data source: . Created by: tnham



Paper Size ISO A4

0 10 20 30 40

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

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Laing O'Rourke
Central Station Main Works
Groundwater Monitoring

Interpolated Groundwater Contours - March 2022 (Deep Aquifer)

Project No. 21-27234
Revision No. -
Date 28/03/2022

Figure 3

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Data source: . Created by: tnham

Appendix B
Tables

Well ID	Approx. Location	Targeted Aquifer	Datalogger	Event 1 Sept 2018	Event 2 Oct 2018	Event 3 Nov 2018	Event 4 Dec 2018	Event 5 Jan 2019	Event 6 Feb 2019	Event 7 April 2019	Event 8 May 2019	Event 9 June 2019	Event 10 July 2019	Event 11 Aug 2019	Event 12 Sept 2019	Round 13 Oct 2019
SRT_BH006	Sydney Yard	Deep		Not Found / Destroyed												
SRT_BH006A	Sydney Yard	Shallow		Not Found / Destroyed												
SRT_BH039	Track 15	Deep		Sampled	Sampled	Destroyed										
SRT_BH047	Platform 6/7	Shallow	Logger + Baro	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
SRT_BH048	Platform 12/13	Shallow		Sampled	Sampled	Sampled	Destroyed									
SRT_BH050	Platform 4/5	Shallow														
SRT_BH052	Platform 6/7	Shallow		Covered by Hoarding	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
SRT_BH053	Platform 12/13	Deep		Sampled	Sampled	Covered by Hoarding	Destroyed									
SRT_BH055	Platform 20/21	Shallow		Dry												
SRT_BH059	Platform 18/19	Shallow			Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
SRT_BH060	Platform 16/17	Shallow														
SRT_BH063	Offsite Randle Lane	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	No Access	No Access
SRT_BH064	Sydney Yard	Shallow		Sampled	Not Found / Destroyed											
SRT_BH081	Sydney Yard	Shallow			Not Found / Destroyed											
SRT_BH082	Sydney Yard	Shallow			Sampled	Sampled	Not Found / Destroyed									
SRT_BH084	Sydney Yard	Shallow		Not Found / Destroyed												
SRT_CBH001	Platform 12/13	Shallow		Sampled	Sampled	Sampled	Destroyed									
SRT_CBH007	Platform 14/15	Shallow		Sampled	Destroyed											
SRT_CBH015	Platform 16/17	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
SRT_CBH017	Platform 20/21	Shallow	Logger	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH02	Platform 10/11	Deep	Logger							Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH04	Eddy Ave Driveway	Deep	Logger							Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH05	Sydney Yard	Deep								Sampled	Sampled	Sampled	Sampled	Destroyed		
CSM_BH06	Institute Drive	Deep	Logger							Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH08	Ambulance Ave	Deep								Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH09S	Sydney Yard	Shallow								Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH10S	Eddy Ave Driveway	Shallow	Logger							Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH11S	Platform 22	Shallow														
CSM_BH12S	Sydney Yard	Shallow														
CSM_BH13	Randle Lane	Deep														
CSM_BH14S	Institute Drive	Shallow														
GASW_BH7	Sydney Yard Gasworks	Shallow										Sampled	Sampled	Sampled	Sampled	Sampled
GASW_BH10	Sydney Yard Gasworks	Deep										Sampled	Sampled	Sampled	Sampled	Sampled
GASW_BH11	Sydney Yard Gasworks	Shallow										Sampled	Sampled	Sampled	Sampled	Sampled
GASW_BH23	Sydney Yard Gasworks	Shallow													Sampled	Sampled
GASW_BH25A	Sydney Yard Gasworks	Shallow													Sampled	Sampled

	Well Sampled
	Not Sampled
	Not scheduled / available for sampling
	Grab sample taken / Dry

Well ID	Approx. Location	Targeted Aquifer	Datalogger	Round 14 Nov 2019	Round 15 Dec 2019	Round 16 Jan 2020	Round 17 Feb 2020	Round 18 Mar 2020	Round 19 Apr 2020	Round 20 May 2020	Round 21 Jun 2020	Round 22 Jul 2020	Round 23 Aug 2020	Round 24 Sept 2020	Round 25 Oct 2020	Round 26 Nov 2020
SRT_BH006	Sydney Yard	Deep														
SRT_BH006A	Sydney Yard	Shallow														
SRT_BH039	Track 15	Deep														
SRT_BH047	Platform 6/7	Shallow	Logger + Baro	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
SRT_BH048	Platform 12/13	Shallow														
SRT_BH050	Platform 4/5	Shallow					No Sample	Grab Sampled	Grab Sampled	DRY	Grab Sampled	Grab Sampled	Grab Sampled	DRY	DRY	Grab Sampled
SRT_BH052	Platform 6/7	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
SRT_BH053	Platform 12/13	Deep														
SRT_BH055	Platform 20/21	Shallow					Destroyed									
SRT_BH059	Platform 18/19	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Grab Sampled	Sampled	Sampled	Sampled	Grab Sampled	Grab Sampled
SRT_BH060	Platform 16/17	Shallow					No Sample	Grab Sampled	Grab Sampled	Destroyed						
SRT_BH063	Offsite Randle Lane	Shallow		No Access	No Access	No Access	Destroyed									
SRT_BH064	Sydney Yard	Shallow														
SRT_BH081	Sydney Yard	Shallow														
SRT_BH082	Sydney Yard	Shallow														
SRT_BH084	Sydney Yard	Shallow														
SRT_CBH001	Platform 12/13	Shallow														
SRT_CBH007	Platform 14/15	Shallow														
SRT_CBH015	Platform 16/17	Shallow		Sampled	Sampled	Destroyed										
SRT_CBH017	Platform 20/21	Shallow	Logger	Sampled	Sampled	Sampled	Destroyed									
CSM_BH02	Platform 10/11	Deep	Logger	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH04	Eddy Ave Driveway	Deep	Logger	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH05	Sydney Yard	Deep														
CSM_BH06	Institute Drive	Deep	Logger	Sampled	Sampled	No Access	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH08	Ambulance Ave	Deep		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH09S	Sydney Yard	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH10S	Eddy Ave Driveway	Shallow	Logger	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH11S	Platform 22	Shallow												DRY	DRY	DRY
CSM_BH12S	Sydney Yard	Shallow														
CSM_BH13	Randle Lane	Deep														
CSM_BH14S	Institute Drive	Shallow														
GASW_BH7	Sydney Yard Gasworks	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
GASW_BH10	Sydney Yard Gasworks	Deep		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
GASW_BH11	Sydney Yard Gasworks	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Grab Sampled	Grab Sampled
GASW_BH23	Sydney Yard Gasworks	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Sampled	Grab Sampled
GASW_BH25A	Sydney Yard Gasworks	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Grab Sampled	Sampled	Sampled

	Well Sampled
	Not Sampled
	Not scheduled / available for sampling
	Grab sample taken / Dry

Well ID	Approx. Location	Targeted Aquifer	Datalogger	Round 27 Dec 2020	Round 28 Jan 2021	Round 29 Feb 2021	Round 30 Mar 2021	Round 31 Apr 2021	Round 32 May 2021	Round 33 Jun 2021	Round 34 Jul 2021	Round 35 Aug 2021	Round 36 Sept 2021	Round 37 Oct 2021	Round 38 Nov 2021
SRT_BH006	Sydney Yard	Deep													
SRT_BH006A	Sydney Yard	Shallow													
SRT_BH039	Track 15	Deep													
SRT_BH047	Platform 6/7	Shallow	Logger + Baro	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
SRT_BH048	Platform 12/13	Shallow													
SRT_BH050	Platform 4/5	Shallow		Grab Sampled	DRY	Grab Sampled	Grab Sampled	Grab Sampled	DRY	DRY	Grab Sampled	DRY	DRY	DRY	Grab Sampled
SRT_BH052	Platform 6/7	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
SRT_BH053	Platform 12/13	Deep													
SRT_BH055	Platform 20/21	Shallow													
SRT_BH059	Platform 18/19	Shallow		No Access	Destroyed										
SRT_BH060	Platform 16/17	Shallow													
SRT_BH063	Offsite Randle Lane	Shallow													
SRT_BH064	Sydney Yard	Shallow													
SRT_BH081	Sydney Yard	Shallow													
SRT_BH082	Sydney Yard	Shallow													
SRT_BH084	Sydney Yard	Shallow													
SRT_CBH001	Platform 12/13	Shallow													
SRT_CBH007	Platform 14/15	Shallow													
SRT_CBH015	Platform 16/17	Shallow													
SRT_CBH017	Platform 20/21	Shallow	Logger												
CSM_BH02	Platform 10/11	Deep	Logger	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH04	Eddy Ave Driveway	Deep	Logger	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH05	Sydney Yard	Deep													
CSM_BH06	Institute Drive	Deep	Logger	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH08	Ambulance Ave	Deep		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH09S	Sydney Yard	Shallow		Sampled	Destroyed										
CSM_BH10S	Eddy Ave Driveway	Shallow	Logger	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH11S	Platform 22	Shallow		DRY	DRY	DRY	Destroyed								
CSM_BH12S	Sydney Yard	Shallow						Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
CSM_BH13	Randle Lane	Deep											Sampled	Sampled	Sampled
CSM_BH14S	Institute Drive	Shallow											Sampled	Sampled	Sampled
GASW_BH7	Sydney Yard Gasworks	Shallow		DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
GASW_BH10	Sydney Yard Gasworks	Deep		Sampled	Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled
GASW_BH11	Sydney Yard Gasworks	Shallow		Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled	No Access
GASW_BH23	Sydney Yard Gasworks	Shallow		Grab Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Grab Sampled	Sampled	Grab Sampled	Sampled	Sampled	Sampled
GASW_BH25A	Sydney Yard Gasworks	Shallow		Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Grab Sampled	Sampled	Sampled	Sampled	Sampled	No Access

	Well Sampled
	Not Sampled
	Not scheduled / available for sampling
	Grab sample taken / Dry

Well ID	Approx. Location	Targeted Aquifer	Datalogger	Round 39 Dec 2021	Round 40 Jan 2022	Round 41 Feb 2022	Round 42 Mar 2022
SRT_BH006	Sydney Yard	Deep					
SRT_BH006A	Sydney Yard	Shallow					
SRT_BH039	Track 15	Deep					
SRT_BH047	Platform 6/7	Shallow	Logger + Baro	Sampled	Sampled	Sampled	Sampled
SRT_BH048	Platform 12/13	Shallow					
SRT_BH050	Platform 4/5	Shallow		Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled
SRT_BH052	Platform 6/7	Shallow		Sampled	Sampled	Sampled	Sampled
SRT_BH053	Platform 12/13	Deep					
SRT_BH055	Platform 20/21	Shallow					
SRT_BH059	Platform 18/19	Shallow					
SRT_BH060	Platform 16/17	Shallow					
SRT_BH063	Offsite Randle Lane	Shallow					
SRT_BH064	Sydney Yard	Shallow					
SRT_BH081	Sydney Yard	Shallow					
SRT_BH082	Sydney Yard	Shallow					
SRT_BH084	Sydney Yard	Shallow					
SRT_CBH001	Platform 12/13	Shallow					
SRT_CBH007	Platform 14/15	Shallow					
SRT_CBH015	Platform 16/17	Shallow					
SRT_CBH017	Platform 20/21	Shallow	Logger				
CSM_BH02	Platform 10/11	Deep	Logger	Sampled	Sampled	Sampled	Sampled
CSM_BH04	Eddy Ave Driveway	Deep	Logger	Sampled	Sampled	Sampled	Sampled
CSM_BH05	Sydney Yard	Deep					
CSM_BH06	Institute Drive	Deep	Logger	Sampled	Sampled	Sampled	Sampled
CSM_BH08	Ambulance Ave	Deep		Sampled	Sampled	Sampled	Sampled
CSM_BH09S	Sydney Yard	Shallow					
CSM_BH10S	Eddy Ave Driveway	Shallow	Logger	Sampled	Sampled	Sampled	Sampled
CSM_BH11S	Platform 22	Shallow					
CSM_BH12S	Sydney Yard	Shallow		Sampled	Sampled	Sampled	Sampled
CSM_BH13	Randle Lane	Deep		Sampled	Sampled	Sampled	Sampled
CSM_BH14S	Institute Drive	Shallow		Sampled	Sampled	Sampled	Sampled
GASW_BH7	Sydney Yard Gasworks	Shallow		DRY	Destroyed		
GASW_BH10	Sydney Yard Gasworks	Deep		Grab Sampled	Grab Sampled	Grab Sampled	Grab Sampled
GASW_BH11	Sydney Yard Gasworks	Shallow		No Access	Destroyed		
GASW_BH23	Sydney Yard Gasworks	Shallow		Sampled	Destroyed		
GASW_BH25A	Sydney Yard Gasworks	Shallow		No Access	Destroyed		

	Well Sampled
	Not Sampled
	Not scheduled / available for sampling
	Grab sample taken / Dry

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
CSM_BH02	CSM_BH02	16/04/2019	Normal	651825	-	-	-	<0.005	<10	110	-	-	-	9.2	-	11	-	2.7	-	61	-	51	44	-	-	-	-	0.05	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	14/05/2019	Normal	656080	8.5	410	3,300	0.005	11	240	-	-	-	43	-	26	-	3.2	-	64	-	68	38	-	-	-	-	0.12	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	06/06/2019	Normal	660130	7.8	470	970	<0.005	<10	290	-	-	-	48	-	36	-	6.6	-	110	-	150	35	-	-	-	-	0.04	<0.02	0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	30/07/2019	Normal	669059	8	550	42,000	0.092	<10	350	-	-	-	50	-	43	-	5.8	-	120	-	500	24	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	29/08/2019	Normal	674722	7.9	610	6,400	<0.005	<10	320	-	-	-	49	-	40	-	5.7	-	120	-	190	25	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.002
CSM_BH02	CSM_BH02	26/09/2019	Normal	679636	7.8	440	3,100	<0.005	<10	310	-	-	-	44	-	37	-	4.8	-	110	-	160	31	-	-	-	-	0.03	0.06	0.002	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	17/10/2019	Normal	683453	7.9	530	4,400	<0.005	<10	290	-	-	-	48	-	39	-	5.7	-	120	-	500	28	-	-	-	-	0.06	0.04	0.002	<0.0002	<0.001	0.010
CSM_BH02	CSM_BH02	13/11/2019	Normal	688512	7.9	620	4,600	<0.005	<10	330	-	-	-	50	-	42	-	5.5	-	120	-	520	29	-	-	-	-	0.02	0.03	0.002	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	17/12/2019	Normal	694466	8.1	290	2,800	<0.004	<10	280	-	-	-	33	-	30	-	5.0	-	78	-	150	34	-	-	-	-	0.02	0.16	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	21/01/2020	Normal	698379	4.8	560	2,200	<0.004	<10	320	-	-	-	41	-	37	-	11	-	120	-	180	28	-	-	-	-	0.02	<0.02	0.002	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	25/02/2020	Normal	704673	8.3	540	1,600	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09	-	<0.001	<0.0002	<0.001	0.002
CSM_BH02	CSM_BH02	25/02/2020	Normal	706746	-	-	-	-	<10	290	-	-	-	49	-	37	-	10	-	100	-	190	34	-	-	-	-	-	0.04	-	-	-	-
CSM_BH02	CSM_BH02	18/03/2020	Normal	708508	7.0	870	1,800	0.008	<10	310	-	-	-	43	-	39	-	7.2	-	110	-	150	32	-	-	-	-	0.05	0.04	<0.001	<0.0002	<0.001	0.009
CSM_BH02	CSM_BH02	14/04/2020	Normal	714027	6.6	490	2,000	<0.004	<10	380	-	-	-	63	-	51	-	8.6	-	150	-	190	28	-	-	-	-	0.05	<0.02	<0.001	<0.0002	<0.001	0.002
CSM_BH02	CSM_BH02	19/05/2020	Normal	720682	7.5	660	1,600	<0.004	<10	410	-	-	-	44	-	38	-	5.1	-	110	-	150	29	-	-	-	-	0.03	0.09	0.001	<0.0002	<0.001	0.010
CSM_BH02	CSM_BH02	18/06/2020	Normal	726825	7.4	470	1,000	0.004	<10	390	-	-	-	<5	-	<5	-	<5	-	11	-	160	29	-	-	-	-	0.03	<0.02	0.002	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH02	18/06/2020	Field_D	726825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.002	<0.0002	<0.001	0.003
CSM_BH02	CSM_BH02	15/07/2020	Normal	732590	6.4	1,000	1,600	0.020	<10	270	<20	270	-	38	-	37	-	7.4	-	110	-	160	32	-	-	-	-	<0.01	-	0.003	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	18/08/2020	Normal	738860	6.9	350	980	<0.004	<10	240	-	-	-	26	-	19	-	<5	-	53	-	47	37	-	-	-	-	<0.01	0.03	<0.001	<0.0002	<0.001	0.006
CSM_BH02	CSM_BH02	14/09/2020	Normal	744463	7.9	420	1,100	<0.004	<10	240	<20	240	200	35	-	28	-	<5	-	92	-	85	34	-	-	-	-	0.05	-	0.001	<0.0002	<0.001	0.003
QC02	CSM_BH02	14/09/2020	Field_D	744463	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.002	<0.0002	<0.001	0.002
CSM_BH02	CSM_BH02	27/10/2020	Normal	753369	7.1	300	2,800	<0.004	<10	240	<20	240	230	41	-	32	-	7.1	-	86	-	110	46	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.005
CSM_BH02	CSM_BH02	19/11/2020	Normal	758435	7.8	490	1,000	<0.004	<10	260	-	-	180	28	-	28	-	11	-	98	-	120	31	-	-	-	-	<0.01	0.08	0.001	<0.0002	<0.001	0.003
CSM_BH02	CSM_BH02	23/12/2020	Normal	765715	6.6	190	980	<0.004	<10	140	-	-	-	12	-	12	-	4.1	-	56	-	44	38	-	-	-	-	<0.01	0.05	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	27/01/2021	Normal	770782	7.1	330	740	0.010	<10	160	<20	160	240	36	-	36	-	<5	-	62	-	51	45	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH02	27/01/2021	Field_D	770782	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	0.002	<0.001
CSM_BH02	CSM_BH02	18/02/2021	Normal	775277	7.2	560	12,000	<0.004	<10	330	<20	330	240	35	-	38	-	6.5	-	100	-	180	27	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	0.012
CSM_BH02	CSM_BH02	17/03/2021	Normal	781353	7.6	280	5,500	<0.004	<10	2,000	<20	2,000	140	23	-	20	-	3.0	-	69	-	83	36	-	-	-	-	0.18	-	<0.001	<0.0002	<0.001	0.003
CSM_BH02	CSM_BH02	27/04/2021	Normal	791517	5.8	520	27,000	<0.004	<10	300	<20	300	410	61	-	62	-	13	-	100	-	160	25	-	-	-	-	0.17	-	0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	25/05/2021	Normal	799115	7.3	580	7,700	<0.004	<10	360	<20	360	280	45	-	41	-	<5	-	120	-	190	31	-	-	-	-	0.06	-	<0.001	<0.0002	<0.001	0.004
CSM_BH02	CSM_BH02	15/06/2021	Normal	803914	7.6	560	1,200	<0.004	<10	290	<20	290	340	63	-	43	-	7.7	-	130	-	160	31	-	-	-	-	0.13	-	<0.001	<0.0002	<0.001	<0.001
CSM-BH02	CSM_BH02	12/07/2021	Normal	810513	8.4	560	3,000	<0.004	<10	300	<20	300	460	50	-	81	-	4.8	-	110	-	150	30	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	09/08/2021	Normal	816445	7.7	490	780	<0.004	<20	160	<20	160	180	37	-	21	-	3.5	-	92	-	92	32	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	0.003
CSM_BH02	CSM_BH02	28/09/2021	Normal	829222	6.9	260	1,800	<0.004	<10	120	<20	120	100	14	-	<0.5	-	<0.5	-	<0.5	-	56	36	-	-	-	-	0.13	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	27/10/2021	Normal	836474	7.8	<10	18,000	<0.004	<10	190	<20	190	340	47	-	55	-	4.1	-	85	-	100	33	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.003
CSM BH02	CSM_BH02	25/11/2021	Normal	846135	7.2	340	2,400	0.15	<10	250	<20	250	210	35	-	30	-	4.8	-	92	-	130	26	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	14/12/2021	Normal	851006	8.5	520	630	<0.004	21	290	<20	310	250	41	-	36	-	5.1	-	99	-	160	28	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	0.003
CSM_BH02	CSM_BH02	18/01/2022	Normal	856960	7.5	240	2,400	<0.004	<10	330	<20	330	290	46	-	42	-	7.2	-	120	-	150	20	-	-	-	-	<0.01	-	<0.001	<0.0002	0.001	0.003
QC01	CSM_BH02	18/01/2022	Field_D	856960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.002
CSM_BH02	CSM_BH02	10/02/2022	Normal	862315	7.9	260	1,300	<0.004	<10	100	<20	100	81	11	-	13	-	3.0	-	59	-	43	35	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	18/03/2022	Normal	872459	7.4	470	630	<0.004	<10	340	<20	340	230	35	-	34	-	5.5	-	100	-	140	24	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	16/04/2019	Normal	651825	-	-	-	<0.005	<10	91	-	-	-	5.8	-	11	-	2.5	-	69	-	65	55	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	13/05/2019	Normal	656080	7.3	260	3,700	<0.005	<10	85	-	-	-	5.2	-	9.5	-	2.4	-	66	-	56	56	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.004
CSM_BH04	CSM_BH04	11/06/2019	Normal	660130	6.7	200	2,700	<0.005	<10	86	-	-	-	4.5	-	11	-	2.4	-	69	-	63	56	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	30/07/2019	Normal	669059	7	280	6,500	0.035	<10	100	-	-	-	9	-	15	-	3	-	79	-	110	38	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	29/08/2019	Normal	674722	6.5	290	630	<0.005	<10	120	-	-	-	6.3	-	12	-	2.2	-	72	-	55	45	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.003
CSM_BH04	CSM_BH04	26/09/2019	Normal	679636	8.5	430	260	<0.005	16	300	-	-	-	6.5	-	11	-	3.1	-	150	-	74	33	-	-	-	-	0.06	<0.02	<0.001	<0.0002	<0.001	<0.001

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
CSM_BH04	CSM_BH04	17/10/2019	Normal	683453	9.6	570	290	<0.005	150	240	-	-	-	5.9	-	8.8	-	4.8	-	200	-	110	34	-	-	-	-	0.22	0.15	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH04	17/10/2019	Field_D	683453	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	13/11/2019	Normal	688512	8.0	410	350	<0.005	<10	270	-	-	-	6.9	-	12	-	4.2	-	140	-	71	39	-	-	-	-	0.09	<0.02	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH04	13/11/2019	Interlab_D	ES1937682	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	0.0001	<0.001	<0.001
CSM_BH04	CSM_BH04	17/12/2019	Normal	694466	7.0	140	1,000	<0.004	<10	120	-	-	-	8.5	-	14	-	3.1	-	62	-	89	37	-	-	-	-	0.02	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	21/01/2020	Normal	698379	6.3	310	880	<0.004	<10	100	-	-	-	180	-	190	-	170	-	230	-	95	44	-	-	-	-	0.02	<0.02	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH04	21/01/2020	Field_D	698379	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	25/02/2020	Normal	704673	7.3	310	2,500	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	25/02/2020	Normal	706746	-	-	-	-	<10	110	-	-	-	8.2	-	15	-	13	-	71	-	140	38	-	-	-	-	-	<0.02	-	-	-	-
QC02	CSM_BH04	25/02/2020	Field_D	704673	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	18/03/2020	Normal	708508	6.3	210	1,300	0.006	<10	100	-	-	-	10	-	17	-	5.5	-	65	-	90	38	-	-	-	-	0.11	<0.02	<0.001	<0.0002	<0.001	0.001
CSM_BH04	CSM_BH04	14/04/2020	Normal	714027	5.9	260	950	<0.004	<10	110	-	-	-	9.5	-	18	-	5.0	-	92	-	140	34	-	-	-	-	0.11	2.6	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	20/05/2020	Normal	720682	6.3	260	2,000	<0.004	<10	130	-	-	-	8.8	-	16	-	<5	-	77	-	76	35	-	-	-	-	<0.01	<0.02	<0.01	<0.002	<0.01	<0.01
CSM_BH04	CSM_BH04	18/06/2020	Normal	726825	6.8	310	450	<0.004	<10	200	-	-	-	<5	-	<5	-	<5	-	8.7	-	77	37	-	-	-	-	0.04	<0.02	<0.001	<0.0002	<0.001	0.005
CSM_BH04	CSM_BH04	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	15/07/2020	Normal	732590	6.4	430	420	0.005	<10	110	<20	110	-	9.1	-	16	-	5.1	-	69	-	58	46	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.002
CSM_BH04	CSM_BH04	17/08/2020	Normal	738860	6.5	260	940	<0.004	<10	110	-	-	-	6.3	-	13	-	<5	-	51	-	71	40	-	-	-	-	<0.01	0.02	<0.001	<0.0002	<0.001	0.001
QC01	CSM_BH04	17/08/2020	Interlab_D	ES2028968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH04	CSM_BH04	14/09/2020	Normal	744463	6.7	260	330	<0.004	<10	95	<20	95	73	7.4	-	13	-	<5	-	70	-	73	34	-	-	-	-	0.13	-	<0.001	<0.0002	<0.001	0.083
CSM_BH04	CSM_BH04	27/10/2020	Normal	753369	6.4	220	1,500	<0.004	<10	88	<20	88	120	14	-	21	-	6.6	-	69	-	120	50	-	-	-	-	0.07	-	<0.001	<0.0002	<0.001	0.010
CSM_BH04	CSM_BH04	19/11/2020	Normal	758435	6.8	250	250	<0.004	<10	90	-	-	91	11	-	15	-	<5	-	69	-	84	25	-	-	-	-	<0.01	<0.02	0.001	<0.0002	<0.001	0.003
QC02	CSM_BH04	19/11/2020	Field_D	758435	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.003
CSM_BH04	CSM_BH04	23/12/2020	Normal	765715	6.0	330	17,000	<0.004	<10	99	-	-	-	58	-	66	-	16	-	58	-	110	29	-	-	-	-	0.13	<0.02	<0.001	<0.0002	<0.001	0.002
CSM_BH04	CSM_BH04	27/01/2021	Normal	770782	7.1	320	190	0.004	<10	110	<20	110	85	8.2	-	16	-	<5	-	85	-	110	53	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH04	27/01/2021	Interlab_D	ES2102832	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	0.008
CSM_BH04	CSM_BH04	17/02/2021	Normal	775277	5.7	190	340	<0.004	<10	100	<20	100	68	5.3	-	13	-	4.0	-	61	-	83	44	-	-	-	-	0.02	-	<0.001	<0.0002	0.001	0.005
QC01	CSM_BH04	17/02/2021	Field_D	775277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.002
CSM_BH04	CSM_BH04	17/03/2021	Normal	781353	7.3	230	370	<0.004	<10	1,900	<20	1,900	68	6.8	-	12	-	2.6	-	70	-	69	56	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	0.002
QC02	CSM_BH04	17/03/2021	Interlab_D	ES2109792	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH04	CSM_BH04	27/04/2021	Normal	791517	5.4	260	1,200	<0.004	<10	100	<20	100	120	14	-	20	-	4.3	-	64	-	82	33	-	-	-	-	0.07	-	<0.001	<0.0002	0.004	0.003
CSM_BH04	CSM_BH04	25/05/2021	Normal	799115	6.8	280	1,200	<0.004	<10	98	<20	98	84	8.6	-	15	-	<5	-	66	-	94	32	-	-	-	-	0.08	-	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH04	25/05/2021	Interlab_D	ES2119803	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH04	CSM_BH04	15/06/2021	Normal	803914	6.6	290	1,300	<0.004	<10	100	<20	100	85	8.2	-	16	-	2.7	-	68	-	74	43	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH04	15/06/2021	Field_D	803914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM-BH04	CSM_BH04	12/07/2021	Normal	810513	7.8	280	350	<0.004	<10	120	<20	120	79	8.0	-	14	-	2.8	-	72	-	66	38	-	-	-	-	0.10	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH04	12/07/2021	Field_D	810513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	09/08/2021	Normal	816445	7.3	290	390	<0.004	<20	88	<20	88	85	11	-	14	-	6.2	-	69	-	76	38	-	-	-	-	0.06	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH04	09/08/2021	Field_D	816445	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	28/09/2021	Normal	829222	6.5	260	460	<0.004	<10	88	<20	88	81	7.3	-	15	-	2.5	-	69	-	78	38	-	-	-	-	<0.1	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	27/10/2021	Normal	836474	7.2	80	6,400	0.004	<10	87	<20	87	100	10	-	19	-	2.5	-	73	-	90	34	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	<0.001
CSM BH04	CSM_BH04	23/11/2021	Normal	846135	7.0	280	510	<0.004	<10	110	<20	110	62	6.1	-	11	-	2.9	-	68	-	63	50	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	0.001
CSM_BH04	CSM_BH04	14/12/2021	Normal	851006	7.6	140	1,300	0.005	<10	92	<20	92	95	10	-	17	-	2.8	-	55	-	87	22	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	18/01/2022	Normal	856960	6.5	260	1,200	<0.004	<10	120	<20	120	120	13	-	21	-	6.0	-	69	-	72	28	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	0.002
QC02	CSM_BH04	18/01/2022	Interlab_D	ES2201646	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH04	CSM_BH04	09/02/2022	Normal	862315	6.8	260	1,100	<0.004	<10	100	<20	100	92	9.1	-	17	-	3.3	-	72	-	93	32	-	-	-	-	0.01	-	0.003	0.0003	0.003	0.003
CSM_BH04	CSM_BH04	16/03/2022	Normal	872459	6.7	260	330	<0.004	<10	120	<20	120	76	8.2	-	13	-	2.9	-	69	-	71	36	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH05	CSM_BH05	17/04/2019	Normal	651825	-	-	-	<0.005	<10	230	-	-	-	30	-	23	-	6.0	-	140	-	130	78	-	-	-	-	<0.01	<0.02	0.002	<0.0002	<0.001	<0.001

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
CSM_BH05	CSM_BH05	13/05/2019	Normal	656080	8.2	560	620	<0.005	<10	220	-	-	-	33	-	29	-	6.2	-	130	-	190	54	-	-	-	-	<0.01	<0.02	0.001	<0.0002	<0.001	<0.001
CSM_BH05	CSM_BH05	11/06/2019	Normal	660130	7.4	520	110	<0.005	<10	240	-	-	-	44	-	39	-	8.0	-	150	-	220	50	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.001
CSM_BH05	CSM_BH05	29/07/2019	Normal	669059	7.2	500	930	0.025	<10	170	-	-	-	28	-	30	-	6.3	-	120	-	160	50	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH06	CSM_BH06	18/04/2019	Normal	651825	-	-	-	<0.005	<10	180	-	-	-	42	-	31	-	5.6	-	110	-	180	29	-	-	-	-	<0.01	0.03	<0.001	<0.0002	<0.001	0.009
CSM_BH06	CSM_BH06	14/05/2019	Normal	656080	8.0	580	250	<0.005	<10	190	-	-	-	41	-	35	-	5.1	-	100	-	220	23	-	-	-	-	0.02	<0.02	0.002	<0.0002	<0.001	<0.001
QC02	CSM_BH06	14/05/2019	Field_D	656080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.002	<0.0002	<0.001	<0.001
CSM_BH06	CSM_BH06	06/06/2019	Normal	660130	7.2	490	240	<0.005	<10	190	-	-	-	43	-	34	-	6.8	-	120	-	210	27	-	-	-	-	0.08	0.03	0.004	<0.0002	<0.001	<0.001
QC04	CSM_BH06	08/06/2019	Field_D	660130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.004	<0.0002	<0.001	<0.001
CSM_BH06	CSM_BH06	30/07/2019	Normal	669059	7.3	600	960	0.029	<10	180	-	-	-	39	-	35	-	4.9	-	110	-	180	22	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH06	CSM_BH06	28/08/2019	Normal	674722	8.0	600	810	<0.005	<10	210	-	-	-	41	-	34	-	5.2	-	110	-	200	22	-	-	-	-	<0.01	0.03	<0.001	<0.0002	<0.001	0.010
CSM_BH06	CSM_BH06	26/09/2019	Normal	679636	6.9	390	180	<0.005	<10	150	-	-	-	29	-	22	-	4.4	-	71	-	140	15	-	-	-	-	<0.01	0.09	<0.001	<0.0002	0.007	0.043
CSM_BH06	CSM_BH06	17/10/2019	Normal	683453	7.2	550	91	<0.005	<10	190	-	-	-	39	-	32	-	4.9	-	96	-	170	21	-	-	-	-	0.04	<0.02	<0.001	<0.0002	0.003	0.015
CSM_BH06	CSM_BH06	13/11/2019	Normal	688512	7.4	570	66	<0.005	<10	200	-	-	-	43	-	35	-	5.1	-	100	-	210	26	-	-	-	-	0.03	<0.02	0.001	<0.0002	<0.001	0.013
CSM_BH06	CSM_BH06	17/12/2019	Normal	694466	7.0	590	62	<0.004	<10	180	-	-	-	32	-	30	-	5.1	-	83	-	570	26	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.031
QC01	CSM_BH06	17/12/2019	Field_D	694466	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.031
CSM_BH06	CSM_BH06	25/02/2020	Normal	704673	7.7	560	69	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	0.002	<0.0002	<0.001	0.010
CSM_BH06	CSM_BH06	25/02/2020	Normal	706746	-	-	-	-	<10	140	-	-	-	37	-	33	-	<5	-	120	-	590	31	-	-	-	-	-	0.02	-	-	-	-
CSM_BH06	CSM_BH06	16/03/2020	Normal	708508	6.3	430	110	0.005	<10	120	-	-	-	28	-	30	-	4.6	-	110	-	220	24	-	-	-	-	0.05	<0.02	0.002	<0.0002	<0.001	0.002
QC01	CSM_BH06	16/03/2020	Interlab_D	ES2009232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	<0.0001	<0.001	0.006
CSM_BH06	CSM_BH06	14/04/2020	Normal	714027	5.9	540	86	<0.004	<10	150	-	-	-	41	-	39	-	6.7	-	140	-	250	28	-	-	-	-	0.07	<0.02	0.002	<0.0002	<0.001	0.005
QC01	CSM_BH06	14/04/2020	Interlab_D	ES2012716	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.002	<0.0001	0.001	0.017
CSM_BH06	CSM_BH06	19/05/2020	Normal	720682	6.7	390	57	<0.004	<10	150	-	-	-	28	-	28	-	4.2	-	100	-	180	28	-	-	-	-	0.11	<0.02	0.002	<0.0002	<0.001	0.005
CSM_BH06	CSM_BH06	18/06/2020	Normal	726825	6.6	470	210	<0.004	<10	180	-	-	-	<5	-	<5	-	<5	-	11	-	190	21	-	-	-	-	0.05	<0.02	0.002	<0.0002	<0.001	<0.001
CSM_BH06	CSM_BH06	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	15/07/2020	Normal	732590	6.6	610	120	<0.004	<10	130	<20	130	-	27	-	27	-	4.5	-	110	-	240	28	-	-	-	-	<0.01	-	0.002	<0.0002	0.001	0.016
CSM_BH06	CSM_BH06	18/08/2020	Normal	738860	6.6	490	97	<0.004	<10	120	-	-	-	20	-	23	-	<5	-	89	-	200	21	-	-	-	-	0.02	<0.02	0.002	<0.0002	<0.001	0.005
CSM_BH06	CSM_BH06	14/09/2020	Normal	744463	7.0	440	200	<0.004	<10	86	<20	86	140	20	-	22	-	<5	-	96	-	200	20	-	-	-	-	0.09	-	0.002	<0.0002	<0.001	0.002
CSM_BH06	CSM_BH06	27/10/2020	Normal	753369	6.6	390	120	<0.004	<10	110	<20	110	180	26	-	28	-	4.4	-	120	-	310	37	-	-	-	-	0.13	-	0.002	<0.0002	<0.001	0.019
CSM_BH06	CSM_BH06	19/11/2020	Normal	758435	6.6	470	230	<0.004	<10	96	-	-	160	19	-	27	-	5.8	-	110	-	270	25	-	-	-	-	0.02	<0.02	0.002	<0.0002	<0.001	0.002
CSM_BH06	CSM_BH06	22/12/2020	Normal	765715	6.4	430	2,500	<0.004	<10	91	-	-	-	17	-	25	-	4.7	-	110	-	240	24	-	-	-	-	0.03	<0.02	<0.001	<0.0002	<0.001	0.006
CSM_BH06	CSM_BH06	27/01/2021	Normal	770782	6.6	630	43	<0.004	<10	170	<20	170	240	39	-	34	-	<5	-	110	-	480	44	-	-	-	-	0.04	-	0.002	<0.0002	0.004	0.002
CSM_BH06	CSM_BH06	18/02/2021	Normal	775277	6.4	410	350	<0.004	<10	150	<20	150	190	25	-	30	-	5.2	-	98	-	410	25	-	-	-	-	0.06	-	<0.001	<0.0002	<0.001	0.025
CSM_BH06	CSM_BH06	17/03/2021	Normal	781353	7.4	510	90	<0.004	<10	1,900	<20	1,900	200	32	-	30	-	4.3	-	99	-	220	33	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	0.042
CSM_BH06	CSM_BH06	27/04/2021	Normal	791517	5.7	330	50	<0.004	<10	140	<20	140	210	34	-	31	-	4.6	-	110	-	240	25	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	0.006
CSM_BH06	CSM_BH06	25/05/2021	Normal	799115	6.7	560	130	<0.004	<10	150	<20	150	190	26	-	30	-	<5	-	110	-	220	28	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.018
QC01	CSM_BH06	25/05/2021	Field_D	799115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.019
CSM_BH06	CSM_BH06	16/06/2021	Normal	803914	7.1	580	200	<0.004	<10	140	<20	140	210	32	-	32	-	4.5	-	110	-	240	29	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.008
CSM-BH06	CSM_BH06	12/07/2021	Normal	810513	8.3	580	260	<0.004	<10	150	<20	150	220	32	-	34	-	4.6	-	110	-	300	28	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.006
CSM_BH06	CSM_BH06	09/08/2021	Normal	816445	7	560	320	<0.004	<20	120	<20	120	370	62	-	52	-	4.5	-	120	-	200	26	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.028
CSM_BH06	CSM_BH06	29/09/2021	Normal	829222	6.3	470	680	<0.004	<10	140	<20	140	190	26	-	30	-	5.1	-	110	-	210	30	-	-	-	-	0.16	-	<0.001	<0.0002	<0.001	0.013
CSM_BH06	CSM_BH06	28/10/2021	Normal	836474	7.9	500	120	0.004	<10	140	<20	140	220	33	-	34	-	4.4	-	110	-	220	27	-	-	-	-	0.07	-	<0.001	<0.0002	<0.001	0.009
CSM BH06	CSM_BH06	25/11/2021	Normal	846135	7.1	500	190	0.011	<10	150	<20	150	200	32	-	30	-	4.9	-	97	-	230	21	-	-	-	-	0.07	-	<0.001	<0.0002	<0.001	0.002
CSM_BH06	CSM_BH06	15/12/2021	Normal	851006	7.6	510	920	<0.004	<10	130	<20	130	200	31	-	30	-	5.1	-	94	-	240	23	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.002
CSM_BH06	CSM_BH06	27/01/2022	Normal	858641	7.8	570	160	0.004	<10	150	<20	150	480	34	-	38	-	6.2	-	110	-	190	24	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.013
CSM_BH06	CSM_BH06	09/02/2022	Normal	862315	7.1	600	340	<0.004	<10	170	<20	170	230	34	-	34	-	5.2	-	120	-	200	30	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.065
CSM_BH06	CSM_BH06	17/03/2022	Normal	872459	7.4	520	65	<0.004	<10	160	<20	160	190	26	-	29	-	5.4	-	110	-	200	21	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.022
CSM_BH08	CSM_BH08	18/04/2019	Normal	651825	-	-	-	<0.005	<10	120	-	-	-	13	-	16	-	4.1	-	79	-	93	41	-	-	-	-	0.06	<0.02	<0.001	<0.0002	<0.001	<0.001

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																										
QC02	CSM_BH08	18/04/2019	Field_D	651825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	15/05/2019	Normal	656080	7.9	310	180	<0.005	<10	120	-	-	-	11	-	16	-	3.3	-	71	-	92	42	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	06/06/2019	Normal	660130	7.2	250	73	<0.005	<10	110	-	-	-	49	-	28	-	11	-	71	-	90	42	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
QC03	CSM_BH08	06/06/2019	Interlab_D	ES1917968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH08	CSM_BH08	30/07/2019	Normal	669059	7.3	350	6.2	0.019	<10	190	-	-	-	19	-	22	-	4.4	-	83	-	110	37	-	-	-	-	0.02	0.06	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	29/08/2019	Normal	674722	7.4	420	34	<0.005	<10	160	-	-	-	17	-	23	-	4.3	-	93	-	110	32	-	-	-	-	0.03	<0.02	<0.001	<0.0002	<0.001	0.021
CSM_BH08	CSM_BH08	26/09/2019	Normal	679636	7.2	280	35	<0.005	<10	130	-	-	-	11	-	17	-	3.1	-	78	-	94	41	-	-	-	-	0.02	<0.02	<0.001	<0.0002	<0.001	0.001
CSM_BH08	CSM_BH08	18/10/2019	Normal	683453	7.5	330	9.4	<0.005	<10	99	-	-	-	11	-	15	-	3.4	-	75	-	120	43	-	-	-	-	0.03	0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	13/11/2019	Normal	688512	7.5	310	5.9	<0.005	<10	100	-	-	-	11	-	15	-	3.5	-	77	-	100	43	-	-	-	-	0.01	0.03	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	16/12/2019	Normal	694466	7.1	250	8.8	<0.004	<10	110	-	-	-	11	-	13	-	3.7	-	59	-	110	48	-	-	-	-	<0.01	0.10	<0.001	<0.0002	<0.001	0.005
CSM_BH08	CSM_BH08	21/01/2020	Normal	698379	6.4	260	10	<0.004	<10	110	-	-	-	9.5	-	14	-	3.1	-	68	-	160	47	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.001
CSM_BH08	CSM_BH08	25/02/2020	Normal	704673	6.7	340	15	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	25/02/2020	Normal	706746	-	-	-	-	<10	110	-	-	-	12	-	16	-	<5	-	84	-	93	45	-	-	-	-	-	0.05	-	-	-	-
CSM_BH08	CSM_BH08	18/03/2020	Normal	708508	6.4	270	130	0.005	<10	85	-	-	-	8.9	-	14	-	3.4	-	77	-	92	45	-	-	-	-	0.08	0.03	<0.001	<0.0002	<0.001	0.001
CSM_BH08	CSM_BH08	14/04/2020	Normal	714027	6.0	300	120	<0.004	<10	120	-	-	-	12	-	17	-	6.4	-	95	-	120	40	-	-	-	-	0.08	0.20	<0.001	<0.0002	<0.001	0.002
CSM_BH08	CSM_BH08	18/05/2020	Normal	720682	6.4	230	11	<0.004	<10	100	-	-	-	9.0	-	13	-	3.1	-	72	-	79	42	-	-	-	-	0.02	0.07	<0.001	<0.0002	<0.001	0.007
QC01	CSM_BH08	18/05/2020	Interlab_D	ES2017182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	0.002
CSM_BH08	CSM_BH08	17/06/2020	Normal	726825	6.7	290	290	<0.004	<10	140	-	-	-	<5	-	<5	-	<5	-	6.6	-	49	120	-	-	-	-	0.03	0.27	<0.001	<0.0002	<0.001	0.002
CSM_BH08	CSM_BH08	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	17/06/2020	Interlab_D	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH08	CSM_BH08	15/07/2020	Normal	732590	6.9	410	17	<0.004	<10	150	<20	150	-	14	-	18	-	3.7	-	79	-	90	46	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	0.009
QC01	CSM_BH08	15/07/2020	Interlab_D	ES2024606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH08	CSM_BH08	19/08/2020	Normal	738860	6.7	290	6.7	<0.004	<10	120	-	-	-	9.4	-	12	-	<5	-	61	-	84	46	-	-	-	-	0.02	0.35	<0.001	<0.0002	<0.001	0.005
CSM_BH08	CSM_BH08	14/09/2020	Normal	744463	6.9	280	14	<0.004	<10	94	<20	94	71	8.3	-	12	-	<5	-	67	-	84	48	-	-	-	-	0.19	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH08	14/09/2020	Interlab_D	ES2032425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH08	CSM_BH08	27/10/2020	Normal	753369	5.6	250	15	<0.004	<10	97	<20	97	89	17	-	12	-	7.2	-	79	-	110	60	-	-	-	-	0.02	-	<0.001	<0.0002	0.001	0.008
QC01	CSM_BH08	27/10/2020	Field_D	753369	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	0.001	0.009
QC02	CSM_BH08	27/10/2020	Interlab_D	ES2037870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	0.0002	0.001	0.146
CSM_BH08	CSM_BH08	19/11/2020	Normal	758435	6.6	260	75	<0.004	<10	110	-	-	84	10	-	14	-	<5	-	82	-	95	32	-	-	-	-	0.01	0.04	<0.001	<0.0002	<0.001	0.006
BD01	CSM_BH08	21/12/2020	Field_D	765715	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.001
CSM_BH08	CSM_BH08	21/12/2020	Normal	765715	6.1	290	96	<0.004	<10	100	-	-	-	9.0	-	12	-	3.1	-	74	-	92	50	-	-	-	-	0.01	0.12	<0.001	<0.0002	<0.001	0.002
SD01	CSM_BH08	21/12/2020	Interlab_D	ES2100056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	0.001
CSM_BH08	CSM_BH08	28/01/2021	Normal	770782	7.2	300	37	<0.004	<10	99	<20	99	78	10	-	13	-	<5	-	75	-	75	57	-	-	-	-	0.02	-	<0.001	0.0002	<0.001	0.15
CSM_BH08	CSM_BH08	19/02/2021	Normal	775277	6.8	300	430	<0.004	<10	140	<20	140	100	12	-	17	-	4.6	-	76	-	130	43	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	0.007
CSM_BH08	CSM_BH08	17/03/2021	Normal	781353	7.4	310	270	<0.004	<10	2,000	<20	2,000	98	12	-	16	-	3.5	-	78	-	100	46	-	-	-	-	0.09	-	<0.001	<0.0002	<0.001	0.006
QC01	CSM_BH08	17/03/2021	Field_D	781353	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	27/04/2021	Normal	791517	5.3	250	38	<0.004	<10	100	<20	100	110	15	-	17	-	4.0	-	83	-	110	47	-	-	-	-	0.15	-	<0.001	<0.0002	0.001	0.007
QC02	CSM_BH08	27/04/2021	Interlab_D	ES2115835	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	0.0001	<0.001	0.007
CSM_BH08	CSM_BH08	27/05/2021	Normal	799115	7.2	380	50	<0.004	<10	140	<20	140	110	13	-	19	-	<5	-	94	-	130	46	-	-	-	-	0.13	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	15/06/2021	Normal	803914	6.9	360	11	<0.004	<10	99	<20	99	120	15	-	20	-	4.0	-	82	-	100	46	-	-	-	-	0.06	-	<0.001	<0.0002	<0.001	0.001
QC02	CSM_BH08	15/06/2021	Interlab_D	ES2122606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	0.002
CSM-BH08	CSM_BH08	12/07/2021	Normal	810513	6.7	340	20	<0.004	<10	110	<20	110	110	13	-	19	-	3.8	-	86	-	110	44	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	10/08/2021	Normal	816445	7.4	340	9	<0.004	<20	96	<20	96	120	15	-	20	-	4	-	88	-	120	45	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH08	10/08/2021	Interlab_D	ES2129447	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH08	CSM_BH08	28/09/2021	Normal	829222	7.0	350	1,000	<0.004	<10	100	<20	100	150	21	-	24	-	3.9	-	88	-	120	48	-	-	-	-	0.10	-	<0.001	<0.0002	<0.001	0.003
QC02	CSM_BH08	28/09/2021	Interlab_D	EM2119579	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH08	CSM_BH08	27/10/2021	Normal	836474	8.1	280	20	0.004	<10	110	<20	110	110	13	-	18	-	4.1	-	83	-	110	89	-	-	-	-	0.24	-	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH08	27/10/2021	Interlab_D	ES2139173	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
CSM BH08	CSM_BH08	24/11/2021	Normal	846135	5.8	150	110	<0.004	<10	99	<20	99	72	8.5	-	12	-	3.9	-	68	-	93	35	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	0.010
QC01	CSM_BH08	24/11/2021	Field_D	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.015
CSM_BH08	CSM_BH08	16/12/2021	Normal	851006	8.1	350	550	<0.004	<10	120	<20	120	110	12	-	18	-	4.2	-	75	-	110	47	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	18/01/2022	Normal	856960	7.1	420	96	0.27	<10	140	<20	140	120	13	-	21	-	4.4	-	97	-	110	38	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	0.002
CSM_BH08	CSM_BH08	10/02/2022	Normal	862315	8.0	350	320	<0.004	<10	120	<20	120	120	13	-	20	-	4.6	-	92	-	110	44	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	17/03/2022	Normal	872459	6.8	350	6.7	<0.004	<10	160	<20	160	100	9.8	-	19	-	4.4	-	85	-	100	44	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH09S	CSM_BH09S	17/04/2019	Normal	651825	-	-	-	<0.005	<10	38	-	-	-	13	-	11	-	7.1	-	120	-	79	270	-	-	-	-	0.20	0.59	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH09S	17/04/2019	Interlab_D	ES1912362	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH09S	CSM_BH09S	13/05/2019	Normal	656080	7.4	460	66	<0.005	<10	76	-	-	-	6.2	-	7.3	-	4.5	-	100	-	57	190	-	-	-	-	0.10	<0.02	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH09S	13/05/2019	Interlab_D	ES1914810	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH09S	CSM_BH09S	11/06/2019	Normal	660130	6.6	390	46	<0.005	<10	66	-	-	-	12	-	8.7	-	7.2	-	130	-	72	210	-	-	-	-	0.10	0.31	<0.001	<0.0002	<0.001	<0.001
CSM_BH09S	CSM_BH09S	29/07/2019	Normal	669059	6.7	460	58	0.01	<10	59	-	-	-	7.8	-	8.5	-	4.7	-	120	-	88	210	-	-	-	-	0.08	<0.02	<0.001	<0.0002	<0.001	0.002
QC01	CSM_BH09S	29/07/2019	Interlab_D	ES1924197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	0.005
CSM_BH09S	CSM_BH09S	28/08/2019	Normal	674722	6.8	440	87	<0.005	<10	61	-	-	-	5.1	-	6.6	-	3.6	-	110	-	49	160	-	-	-	-	0.04	<0.02	<0.001	<0.0002	<0.001	0.001
QC01	CSM_BH09S	28/08/2019	Interlab_D	EM1914568	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH09S	CSM_BH09S	25/09/2019	Normal	679636	6.6	390	49	<0.005	<10	49	-	-	-	6.4	-	7.9	-	3.4	-	120	-	56	220	-	-	-	-	0.03	0.32	<0.001	<0.0002	<0.001	0.002
QC01	CSM_BH09S	25/09/2019	Interlab_D	ES1931406	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	0.001
CSM_BH09S	CSM_BH09S	16/10/2019	Normal	683453	6.7	420	37	<0.005	<10	39	-	-	-	6.1	-	8.0	-	3.5	-	110	-	100	200	-	-	-	-	0.02	0.18	<0.001	<0.0002	<0.001	0.002
CSM_BH09S	CSM_BH09S	14/11/2019	Normal	688512	7.0	400	55	<0.005	<10	55	-	-	-	5.5	-	8.4	-	3.4	-	110	-	65	180	-	-	-	-	0.03	<0.02	<0.001	<0.0002	<0.001	0.002
CSM_BH09S	CSM_BH09S	16/12/2019	Normal	694466	6.7	380	48	<0.004	<10	75	-	-	-	4.1	-	6.7	-	2.7	-	88	-	48	150	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH09S	16/12/2019	Interlab_D	ES1941823	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH09S	CSM_BH09S	21/01/2020	Normal	698379	6.1	340	28	<0.004	<10	77	-	-	-	3.7	-	6.2	-	2.6	-	97	-	46	160	-	-	-	-	0.05	0.02	<0.001	<0.0002	<0.001	0.002
CSM_BH09S	CSM_BH09S	24/02/2020	Normal	704673	7.1	370	21	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH09S	CSM_BH09S	24/02/2020	Normal	706746	-	-	-	-	<10	76	-	-	-	3.3	-	6.4	-	<5	-	110	-	52	150	-	-	-	-	-	<0.02	-	-	-	-
QC01	CSM_BH09S	24/02/2020	Interlab_D	ES2006512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH09S	CSM_BH09S	17/03/2020	Normal	708508	6.1	330	59	0.005	<10	60	-	-	-	3.3	-	6.9	-	3.0	-	100	-	46	120	-	-	-	-	0.05	<0.02	0.001	<0.0002	<0.001	0.009
CSM_BH09S	CSM_BH09S	16/04/2020	Normal	714027	5.8	320	74	<0.004	<10	79	-	-	-	4.0	-	8.0	-	5.1	-	130	-	59	130	-	-	-	-	0.07	<0.02	<0.001	<0.0002	<0.001	0.001
CSM_BH09S	CSM_BH09S	20/05/2020	Normal	720682	6.4	250	140	<0.004	<10	82	-	-	-	3.0	-	5.2	-	2.5	-	97	-	47	120	-	-	-	-	0.05	<0.02	<0.001	<0.0002	<0.001	<0.001
CSM_BH09s	CSM_BH09S	19/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	19/06/2020	Normal	726825	6.6	320	53	<0.004	<10	100	-	-	-	<5	-	6.1	-	<5	-	110	-	48	120	-	-	-	-	0.05	<0.02	<0.001	<0.0002	<0.001	0.010
CSM_BH09S	CSM_BH09S	16/07/2020	Normal	732590	6.4	420	190	0.014	<10	87	<20	87	-	3.6	-	7.6	-	3.5	-	110	-	49	130	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.002
QC02	CSM_BH09S	16/07/2020	Field_D	732590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH09S	CSM_BH09S	18/08/2020	Normal	738860	6.4	360	57	<0.004	<10	59	-	-	-	<5	-	6.1	-	<5	-	83	-	52	140	-	-	-	-	0.03	<0.02	<0.001	<0.0002	<0.001	0.002
QC02	CSM_BH09S	18/08/2020	Field_D	738860	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.001
CSM_BH09S	CSM_BH09S	16/09/2020	Normal	744463	6.5	350	91	<0.004	<10	59	<20	59	35	<5	-	6.4	-	<5	-	89	-	51	130	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	0.015
CSM_BH09S	CSM_BH09S	28/10/2020	Normal	753369	6.3	280	98	<0.004	<10	59	<20	59	41	3.6	-	7.7	-	3.0	-	110	-	69	190	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	0.11
CSM_BH09S	CSM_BH09S	20/11/2020	Normal	758435	6.4	370	41	<0.004	<10	56	-	-	47	<5	-	8.5	-	<5	-	110	-	55	120	-	-	-	-	0.02	<0.02	0.001	<0.0002	<0.001	0.012
CSM_BH09S	CSM_BH09S	21/12/2020	Normal	765715	6.3	370	84	<0.004	<10	63	-	-	-	3.8	-	7.9	-	2.8	-	110	-	60	170	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.086
CSM_BH10S	CSM_BH10S	16/04/2019	Normal	651825	-	-	-	<0.005	<10	23	-	-	-	3.4	-	5.5	-	3.1	-	49	-	38	85	-	-	-	-	<0.01	1.6	<0.001	<0.0002	<0.001	0.002
CSM_BH10S	CSM_BH10S	13/05/2019	Normal	656080	6.6	270	210	<0.005	<10	<20	-	-	-	4.0	-	5.6	-	3.3	-	45	-	130	350	-	-	-	-	<0.01	1.7	<0.001	<0.0002	<0.001	0.003
CSM_BH10S	CSM_BH10S	11/06/2019	Normal	660130	5.9	140	210	<0.005	<10	<20	-	-	-	3.7	-	6.1	-	4.8	-	42	-	37	66	-	-	-	-	0.06	2.3	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	30/07/2019	Normal	669059	6.7	220	200	0.014	<10	35	-	-	-	6.9	-	6.4	-	3.6	-	38	-	36	61	-	-	-	-	<0.01	2.3	<0.001	<0.0002	<0.001	0.003
CSM_BH10S	CSM_BH10S	29/08/2019	Normal	674722	6.1	240	170	<0.005	<10	20	-	-	-	3.9	-	5.5	-	2.9	-	39	-	19	57	-	-	-	-	<0.01	2.0	<0.001	<0.0002	<0.001	0.004
CSM_BH10S	CSM_BH10S	25/09/2019	Normal	679636	6.6	150	140	<0.005	<10	25	-	-	-	3.9	-	5.4	-	2.3	-	34	-	20	56	-	-	-	-	<0.01	1.8	<0.001	<0.0002	<0.001	0.001
CSM_BH10S	CSM_BH10S	16/10/2019	Normal	683453	6.5	190	210	<0.005	<10	20	-	-	-	3.5	-	5.3	-	2.5	-	34	-	70	55	-	-	-	-	<0.01	1.6	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH10S	16/10/2019	Interlab_D	ES1934142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH10S	CSM_BH10S	14/11/2019	Normal	688512	6.2	170	69	<0.005	<10	<20	-	-	-	3.4	-	5.1	-	2.3	-	35	-	45	56	-	-	-	-	<0.01	1.1	<0.001	<0.0002	<0.001	<0.001

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																										
QC02	CSM_BH10S	14/11/2019	Field_D	688512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	17/12/2019	Normal	694466	6.1	200	260	<0.004	<10	21	-	-	-	3.2	-	4.6	-	2.3	-	18	-	16	54	-	-	-	-	<0.01	0.89	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	20/01/2020	Normal	698379	6.0	160	77	<0.004	<10	<20	-	-	-	2.9	-	4.6	-	2.1	-	27	-	16	55	-	-	-	-	0.02	0.93	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH10S	20/01/2020	Interlab_D	ES2001825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH10S	CSM_BH10S	25/02/2020	Normal	704673	6.7	200	97	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.003
CSM_BH10S	CSM_BH10S	25/02/2020	Normal	706746	-	-	-	-	<10	22	-	-	-	<5	-	6.6	-	<5	-	34	-	24	55	-	-	-	-	-	1.5	-	-	-	-
CSM_BH10S	CSM_BH10S	17/03/2020	Normal	708508	5.7	170	53	0.005	<10	25	-	-	-	4.4	-	6.0	-	3.0	-	31	-	23	58	-	-	-	-	0.03	1.7	<0.001	<0.0002	<0.001	0.001
QC02	CSM_BH10S	17/03/2020	Field_D	708508	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	15/04/2020	Normal	714027	7.4	180	44	<0.004	<10	67	-	-	-	18	-	7.5	-	6.0	-	40	-	33	47	-	-	-	-	0.02	1.8	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH10S	15/04/2020	Field_D	714027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	18/05/2020	Normal	720682	6.3	150	160	<0.004	<10	57	-	-	-	13	-	6.0	-	3.1	-	30	-	19	51	-	-	-	-	0.01	2.1	<0.001	<0.0002	<0.001	0.003
QC02	CSM_BH10S	20/05/2020	Field_D	720682	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.002	<0.01	0.011
CSM_BH10S	CSM_BH10S	19/06/2020	Normal	726825	6.7	240	150	<0.004	<10	130	-	-	-	30	-	7.9	-	5.2	-	33	-	23	49	-	-	-	-	0.01	3.8	<0.001	<0.0002	<0.001	0.022
CSM_BH10S	CSM_BH10S	19/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	15/07/2020	Normal	732590	5.9	210	360	0.007	<10	34	<20	34	-	12	-	14	-	9.9	-	32	-	22	56	-	-	-	-	0.06	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	17/08/2020	Normal	738860	6.1	180	920	<0.004	<10	40	-	-	-	6.5	-	5.5	-	<5	-	27	-	23	62	-	-	-	-	<0.01	2.1	<0.001	<0.0002	<0.001	0.011
CSM_BH10S	CSM_BH10S	15/09/2020	Normal	744463	6.3	170	270	<0.004	<10	22	<20	22	32	<5	-	5.3	-	<5	-	35	-	23	62	-	-	-	-	0.08	-	<0.001	<0.0002	<0.001	0.088
CSM_BH10S	CSM_BH10S	27/10/2020	Normal	753369	5.1	170	7,900	<0.004	<10	43	<20	43	120	16	-	19	-	12	-	33	-	39	100	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.006
CSM_BH10S	CSM_BH10S	18/11/2020	Normal	758435	6.2	160	710	<0.004	<10	28	-	-	52	6.0	-	9.0	-	11	-	37	-	51	41	-	-	-	-	<0.01	1.9	0.001	<0.0002	0.003	0.004
QC01	CSM_BH10S	23/11/2020	Interlab_D	ES2041428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	0.0004	<0.001	0.087
CSM_BH10S	CSM_BH10S	21/12/2020	Normal	765715	5.9	150	1,700	<0.004	<10	29	-	-	-	8.1	-	8.1	-	5.3	-	35	-	25	58	-	-	-	-	<0.01	1.9	<0.001	<0.0002	<0.001	0.002
CSM_BH10S	CSM_BH10S	28/01/2021	Normal	770782	6.2	210	340	<0.004	<10	26	<20	26	43	5.8	-	7.0	-	<5	-	36	-	22	73	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.001
CSM_BH10S	CSM_BH10S	17/02/2021	Normal	775277	5.6	110	230	<0.004	<10	24	<20	24	32	3.4	-	5.7	-	3.3	-	30	-	47	55	-	-	-	-	0.11	-	<0.001	<0.0002	<0.001	0.18
QC02	CSM_BH10S	17/02/2021	Interlab_D	ES2105795	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	0.004
CSM_BH10S	CSM_BH10S	17/03/2021	Normal	781353	6.7	110	1,500	<0.004	<10	1,300	<20	1,300	42	6.3	-	6.3	-	2.9	-	34	-	23	72	-	-	-	-	0.31	-	<0.001	0.0002	<0.001	0.13
CSM_BH10S	CSM_BH10S	27/04/2021	Normal	791517	5.8	150	150	<0.004	<10	21	<20	21	38	5.0	-	6.1	-	3.0	-	34	-	21	51	-	-	-	-	0.13	-	<0.001	<0.0002	<0.001	0.001
QC01	CSM_BH10S	27/04/2021	Field_D	791517	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	26/05/2021	Normal	799115	6.3	190	140	<0.004	<10	24	<20	24	38	<5	-	6.3	-	<5	-	36	-	23	52	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	15/06/2021	Normal	803914	6.7	180	160	<0.004	<10	25	<20	25	47	6.8	-	7.3	-	2.7	-	34	-	24	57	-	-	-	-	0.15	-	<0.001	<0.0002	<0.001	<0.001
CSM-BH10S	CSM_BH10S	12/07/2021	Normal	810513	6.7	170	160	<0.004	<10	<20	<20	<20	37	4.8	-	6.2	-	2.3	-	31	-	24	55	-	-	-	-	0.18	-	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH10S	12/07/2021	Interlab_D	ES2125823	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH10S	CSM_BH10S	10/08/2021	Normal	816445	6.4	170	100	<0.004	<20	<20	<20	<20	36	4.3	-	6.3	-	2.5	-	31	-	25	54	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.002
CSM_BH10S	CSM_BH10S	28/09/2021	Normal	829222	5.9	170	750	<0.004	<10	<20	<20	<20	31	3.4	-	5.5	-	2.2	-	33	-	23	55	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	0.002
CSM_BH10S	CSM_BH10S	27/10/2021	Normal	836474	6.9	140	78	<0.004	<10	<20	<20	<20	35	3.9	-	6.2	-	2.5	-	33	-	24	89	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM BH10S	CSM_BH10S	23/11/2021	Normal	846135	6.4	150	42	0.005	<10	25	<20	25	45	7.7	-	6.4	-	2.8	-	26	-	27	50	-	-	-	-	0.06	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	14/12/2021	Normal	851006	6.8	150	29	<0.004	<10	<20	<20	<20	40	4.9	-	6.8	-	2.8	-	26	-	25	60	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH10S	14/12/2021	Field_D	851006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	18/01/2022	Normal	856960	6.1	170	47	<0.004	<10	26	<20	26	41	4.6	-	7.1	-	2.9	-	36	-	21	45	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	0.002
CSM_BH10S	CSM_BH10S	09/02/2022	Normal	862315	6.6	170	42	<0.004	<10	25	<20	25	41	4.9	-	7.0	-	3.2	-	37	-	24	50	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH10S	09/02/2022	Interlab_D	ES2204819	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH10S	CSM_BH10S	16/03/2022	Normal	872459	5.8	150	32	0.006	<10	35	<20	35	41	5.3	-	6.6	-	2.9	-	30	-	24	51	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH10S	16/03/2022	Field_D	872459	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH12S	CSM_BH12S	27/04/2021	Normal	791517	6.4	170	920	<0.004	<10	91	<20	91	31	3.3	-	5.5	-	5.2	-	110	-	54	100	-	-	-	-	0.24	-	0.004	<0.0002	<0.001	<0.001
CSM_BH12S	CSM_BH12S	26/05/2021	Normal	799115	6.9	370	100	<0.004	<10	100	<20	100	22	<5	-	<5	-	<5	-	110	-	67	110	-	-	-	-	0.06	-	0.003	<0.0002	<0.001	<0.001
CSM_BH12S	CSM_BH12S	17/06/2021	Normal	803914	7.5	370	390	<0.004	<10	85	<20	85	29	2.6	-	5.4	-	2.4	-	100	-	55	110	-	-	-	-	0.09	-	0.003	<0.0002	<0.001	<0.001
CSM-BH12S	CSM_BH12S	12/07/2021	Normal	810513	7.7	360	140	<0.004	<10	78	<20	78	27	2.5	-	5.0	-	2.1	-	100	-	57	120	-	-	-	-	0.06	-	0.003	<0.0002	<0.001	<0.001
CSM_BH12S	CSM_BH12S	10/08/2021	Normal	816445	7.3	400	89	<0.004	<20	56	<20	56	33	2.8	-	6.3	-	2.2	-	120	-	65	150	-	-	-	-	0.29	-	0.003	<0.0002	<0.001	<0.001

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
CSM_BH12S	CSM_BH12S	28/09/2021	Normal	829222	6.4	390	75	<0.004	<10	60	<20	60	33	2.2	-	6.8	-	1.9	-	120	-	76	170	-	-	-	-	<0.1	-	0.002	<0.0002	<0.001	<0.001
CSM_BH12S	CSM_BH12S	28/10/2021	Normal	836474	7.5	300	74	<0.004	<10	60	<20	60	32	2.3	-	6.5	-	2.1	-	120	-	74	160	-	-	-	-	0.12	-	0.002	<0.0002	<0.001	<0.001
CSM BH12S	CSM_BH12S	24/11/2021	Normal	846135	6.6	370	66	0.005	<10	60	<20	60	31	2.1	-	6.3	-	2.1	-	100	-	80	140	-	-	-	-	0.03	-	0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH12S	24/11/2021	Interlab_D	ES2144215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH12S	CSM_BH12S	14/12/2021	Normal	851006	7.7	350	120	<0.004	<10	59	<20	59	29	2	-	5.9	-	2.1	-	99	-	73	130	-	-	-	-	0.02	-	0.002	<0.0002	<0.001	<0.001
CSM_BH12S	CSM_BH12S	18/01/2022	Normal	856960	6.7	380	84	<0.004	<10	64	<20	64	32	1.9	-	6.7	-	2.4	-	130	-	69	120	-	-	-	-	0.03	-	0.002	<0.0002	<0.001	0.002
CSM_BH12S	CSM_BH12S	08/02/2022	Normal	862315	7.6	370	87	<0.004	<10	78	<20	78	28	1.7	-	5.6	-	2.2	-	120	-	67	120	-	-	-	-	0.03	-	0.002	<0.0002	<0.001	<0.001
CSM_BH12S	CSM_BH12S	18/03/2022	Normal	872459	6.3	360	70	<0.004	<10	92	<20	92	27	2.1	-	5.3	-	2.0	-	110	-	66	130	-	-	-	-	<0.01	-	0.003	<0.0002	<0.001	<0.001
CSM_BH13	CSM_BH13	29/09/2021	Normal	829222	7.8	570	110	<0.004	<10	180	<20	180	210	51	-	19	-	6.4	-	130	-	230	43	-	-	-	-	<0.1	-	<0.001	<0.0002	<0.001	0.001
CSM_BH13	CSM_BH13	28/10/2021	Normal	836474	7.1	780	78	<0.004	<10	180	<20	180	260	60	-	26	-	5.3	-	140	-	210	51	-	-	-	-	0.12	-	0.001	<0.0002	<0.001	<0.001
CSM BH13	CSM_BH13	25/11/2021	Normal	846135	7.5	630	43	<0.004	<10	170	<20	170	220	50	-	22	-	5.7	-	110	-	230	40	-	-	-	-	0.03	-	0.001	<0.0002	<0.001	0.003
CSM_BH13	CSM_BH13	15/12/2021	Normal	851006	7.5	590	99	<0.004	<10	200	<20	200	250	57	-	27	-	6	-	120	-	210	40	-	-	-	-	<0.01	-	0.001	<0.0002	<0.001	0.002
QC02	CSM_BH13	15/12/2021	Interlab_D	ES2146398	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	<0.0001	<0.001	<0.001
CSM_BH13	CSM_BH13	27/01/2022	Normal	858641	7.5	660	630	0.004	<10	270	<20	270	520	59	-	29	-	6.2	-	120	-	190	40	-	-	-	-	<0.01	-	0.001	<0.0002	<0.001	0.007
CSM_BH13	CSM_BH13	10/02/2022	Normal	862315	8.1	640	68	<0.004	<10	180	<20	180	230	50	-	27	-	5.4	-	130	-	220	38	-	-	-	-	0.01	-	0.004	0.0003	0.002	0.005
CSM_BH13	CSM_BH13	17/03/2022	Normal	872459	7.0	520	39	<0.004	<10	130	<20	130	180	35	-	23	-	4.9	-	140	-	190	33	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.002
CSM_BH14S	CSM_BH14S	29/09/2021	Normal	829222	7.1	110	3.4	<0.004	<10	40	<20	40	48	15	-	2.6	-	1.6	-	13	-	28	13	-	-	-	-	0.07	-	<0.001	<0.0002	<0.001	0.002
CSM_BH14S	CSM_BH14S	28/10/2021	Normal	836474	6.9	150	8.6	<0.004	<10	45	<20	45	58	17	-	3.6	-	1.8	-	13	-	26	13	-	-	-	-	0.09	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH14S	28/10/2021	Field_D	836474	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM BH14S	CSM_BH14S	25/11/2021	Normal	846135	6.9	82	9.6	<0.004	<10	46	<20	46	55	17	-	3.0	-	1.8	-	11	-	25	7.4	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.004
CSM_BH14S	CSM_BH14S	15/12/2021	Normal	851006	7.5	110	<5	<0.004	<10	43	<20	43	56	17	-	3.1	-	1.7	-	9.8	-	25	5.4	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH14S	CSM_BH14S	27/01/2022	Normal	858641	7.7	150	14	<0.004	<10	54	<20	54	83	21	-	4.7	-	3.0	-	18	-	24	<5	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH14S	CSM_BH14S	09/02/2022	Normal	862315	7.7	160	<5	<0.004	<10	64	<20	64	74	22	-	4.6	-	2.5	-	17	-	26	8.9	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.001
CSM_BH14S	CSM_BH14S	17/03/2022	Normal	872459	7.2	110	6.9	<0.004	<10	90	<20	90	73	22	-	4.5	-	2.6	-	12	-	16	6.4	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH7	GASW_BH7	05/06/2019	Normal	659250	5.6	310	28	<0.005	<10	35	<20	35	-	27	-	5.1	-	1.2	-	61	-	38	140	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
QC01	GASW_BH7	05/06/2019	Interlab_D	ES1917381	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	0.0001	0.001	<0.001
GASW_BH7	GASW_BH7	30/07/2019	Normal	669059	3.9	280	20	0.006	<10	<20	-	-	-	5.4	-	4.8	-	0.8	-	63	-	41	150	-	-	-	-	0.03	<0.02	<0.001	<0.0002	<0.001	0.007
GASW_BH7	GASW_BH7	28/08/2019	Normal	674722	3.5	330	14	<0.005	<10	<20	-	-	-	3.7	-	4.8	-	0.7	-	64	-	29	150	-	-	-	-	0.03	<0.02	<0.001	<0.0002	<0.001	0.019
GASW_BH7	GASW_BH7	25/09/2019	Normal	679636	3.5	260	27	<0.005	<10	<20	-	-	-	4.3	-	4.2	-	0.5	-	69	-	35	160	-	-	-	-	0.02	0.05	<0.001	<0.0002	<0.001	0.007
GASW_BH7	GASW_BH7	16/10/2019	Normal	683453	3.6	310	19	<0.005	<10	<20	-	-	-	2.7	-	4.3	-	0.5	-	63	-	49	160	-	-	-	-	0.03	<0.02	<0.001	<0.0002	<0.001	0.004
GASW_BH7	GASW_BH7	14/11/2019	Normal	688512	4.0	280	8.3	<0.005	<10	<20	-	-	-	2.7	-	4.2	-	0.6	-	65	-	28	150	-	-	-	-	0.02	0.04	<0.001	<0.0002	<0.001	0.003
GASW_BH7	GASW_BH7	16/12/2019	Normal	694466	3.5	260	18	<0.004	<10	<20	-	-	-	3.1	-	3.4	-	0.6	-	47	-	68	150	-	-	-	-	0.04	<0.02	<0.001	<0.0002	<0.001	0.008
GASW_BH7	GASW_BH7	22/01/2020	Normal	698379	3.7	550	33	<0.004	<10	<20	-	-	-	3.8	-	3.9	-	0.6	-	57	-	100	150	-	-	-	-	0.04	<0.02	<0.001	<0.0002	<0.001	0.009
GASW_BH7	GASW_BH7	24/02/2020	Normal	704673	3.8	340	28	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	0.002
GASW_BH7	GASW_BH7	24/02/2020	Normal	706746	-	-	-	-	<10	<20	-	-	-	<5	-	5.1	-	<5	-	60	-	40	140	-	-	-	-	-	0.02	-	-	-	-
GASW_BH7	GASW_BH7	17/03/2020	Normal	708508	3.9	180	67	0.005	<10	<20	-	-	-	1.8	-	5.1	-	1.0	-	54	-	25	110	-	-	-	-	0.09	<0.02	<0.001	<0.0002	<0.001	0.012
GASW_BH10	GASW_BH10	05/06/2019	Normal	659250	7.8	560	84	0.005	<10	310	<20	310	-	44	-	34	-	18	-	130	-	150	42	-	-	-	-	0.02	-	0.002	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	30/07/2019	Normal	669059	7	610	150	<0.005	<10	330	-	-	-	48	-	43	-	9.7	-	130	-	160	<5	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	28/08/2019	Normal	674722	7.7	1,100	260	<0.005	<10	440	-	-	-	41	-	40	-	29	-	150	-	170	<5	-	-	-	-	0.16	<0.02	0.002	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	26/09/2019	Normal	679636	7.4	920	290	<0.005	<10	450	-	-	-	71	-	52	-	15	-	150	-	180	<5	-	-	-	-	<0.01	<0.02	0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	17/10/2019	Normal	683453	7.4	830	280	<0.005	<10	370	-	-	-	67	-	47	-	9.4	-	130	-	170	<5	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	13/11/2019	Normal	688512	7.1	930	200	<0.005	<10	440	-	-	-	82	-	58	-	15	-	150	-	730	<5	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	16/12/2019	Normal	694466	6.7	1,200	64	<0.004	<10	520	-	-	-	88	-	67	-	14	-	140	-	110	<5	-	-	-	-	0.05	<0.02	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	21/01/2020	Normal	698379	6.8	890	170	<0.004	<10	560	-	-	-	110	-	72	-	17	-	150	-	910	<5	-	-	-	-	0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	24/02/2020	Normal	704673	7.8	1,100	85	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	24/02/2020	Normal	706746	-	-	-	-	<10	530	-	-	-	95	-	54	-	21	-	170	-	200	<5	-	-	-	-	-	<0.02	-	-	-	-
GASW_BH10	GASW_BH10	18/03/2020	Normal	708508	6.5	1,000	250	0.005	<10	460	-	-	-	98	-	56	-	15	-	140	-	190	<2	-	-	-	-	0.02	<0.02	0.002	<0.0002	<0.001	<0.001

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
GASW_BH10	GASW_BH10	14/04/2020	Normal	714027	6.4	950	240	<0.004	<10	490	-	-	-	110	-	66	-	17	-	180	-	360	<5	-	-	-	-	0.10	<0.02	<0.001	<0.0002	<0.001	0.001
GASW_BH10	GASW_BH10	19/05/2020	Normal	720682	7.0	760	980	<0.004	<10	580	-	-	-	100	-	65	-	14	-	160	-	160	<5	-	-	-	-	<0.01	<0.02	<0.01	<0.002	<0.01	<0.01
GASW_BH10	GASW_BH10	18/06/2020	Normal	726825	6.6	840	590	<0.004	<10	950	-	-	-	94	-	62	-	12	-	150	-	190	<5	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	15/07/2020	Normal	732590	6.9	840	570	<0.004	<10	630	<20	630	-	110	-	69	-	14	-	150	-	190	5.4	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	17/08/2020	Normal	738860	7.0	880	430	<0.004	<10	650	-	-	-	78	-	51	-	9.1	-	110	-	180	<5	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.002
GASW_BH10	GASW_BH10	14/09/2020	Normal	744463	7.2	760	390	<0.004	<10	530	<20	530	420	83	-	50	-	9.0	-	120	-	190	<5	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	27/10/2020	Normal	753369	6.9	730	530	<0.004	<10	580	<20	580	470	95	-	57	-	12	-	140	-	310	10	-	-	-	-	<0.01	-	0.001	<0.0002	<0.001	0.002
GASW_BH10	GASW_BH10	19/11/2020	Normal	758435	7.7	820	200	<0.004	<10	540	-	-	380	73	-	49	-	12	-	140	-	170	<5	-	-	-	-	<0.01	<0.02	0.001	<0.0002	<0.001	0.002
GASW_BH10	GASW_BH10	23/12/2020	Normal	765715	6.9	780	880	<0.004	<10	610	-	-	-	96	-	55	-	12	-	140	-	210	2.1	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	27/01/2021	Normal	770782	7.4	840	2,600	<0.004	<10	590	<20	590	510	110	-	60	-	12	-	140	-	200	<5	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.002
GASW_BH10	GASW_BH10	18/02/2021	Normal	775277	6.8	650	37,000	<0.004	<10	520	<20	520	340	60	-	47	-	11	-	110	-	200	<5	-	-	-	-	0.12	-	0.003	<0.0002	<0.001	0.085
GASW_BH10	GASW_BH10	17/03/2021	Normal	781353	7.9	620	17,000	<0.004	<10	2,200	<20	2,200	450	100	-	46	-	10	-	120	-	170	<5	-	-	-	-	0.16	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	27/04/2021	Normal	791517	6.9	760	3,300	<0.004	<10	570	<20	570	630	160	-	56	-	13	-	130	-	160	<2	-	-	-	-	0.04	-	0.003	<0.0002	0.001	<0.001
GASW_BH10	GASW_BH10	25/05/2021	Normal	799115	7.5	810	49	0.004	<10	600	<20	600	380	83	-	42	-	11	-	130	-	170	<5	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	15/06/2021	Normal	803914	8.1	760	8,700	<0.004	<10	610	<20	610	450	98	-	49	-	12	-	130	-	170	<5	-	-	-	-	0.13	-	<0.001	<0.0002	<0.001	<0.001
GASW-BH10	GASW_BH10	12/07/2021	Normal	810513	8.2	820	220	<0.004	<10	490	<20	490	430	90	-	51	-	10	-	130	-	170	<5	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	10/08/2021	Normal	816445	7.6	760	11	<0.004	<20	430	<20	430	400	90	-	42	-	11	-	120	-	180	<5	-	-	-	-	0.18	-	0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	29/09/2021	Normal	829222	7.4	690	1,600	<0.004	<10	440	<20	440	380	83	-	41	-	11	-	120	-	190	<5	-	-	-	-	0.02	-	0.002	<0.0002	<0.001	0.004
GASW_BH10	GASW_BH10	29/10/2021	Normal	836474	7.8	660	1,100	<0.004	<10	400	<20	400	410	90	-	44	-	12	-	120	-	170	8.7	-	-	-	-	0.06	-	0.001	<0.0002	<0.001	<0.001
GASW BH10	GASW_BH10	24/11/2021	Normal	846135	7.2	660	6,500	<0.004	<10	450	<20	450	340	81	-	34	-	11	-	100	-	180	<5	-	-	-	-	0.03	-	0.002	<0.0002	<0.001	0.019
GASW_BH10	GASW_BH10	14/12/2021	Normal	851006	-	-	-	<0.004	-	-	-	-	390	83	-	43	-	10	-	110	-	-	-	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	18/01/2022	Normal	856960	7.7	590	290	<0.004	<10	440	<20	440	370	77	-	44	-	9.8	-	120	-	240	<2	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	0.002
GASW_BH10	GASW_BH10	08/02/2022	Normal	862315	8.1	800	4,200	<0.004	<10	390	<20	390	370	76	-	43	-	10	-	130	-	180	<5	-	-	-	-	<0.01	-	0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	18/03/2022	Normal	872459	7.0	640	1,400	<0.004	<10	480	<20	480	300	64	-	34	-	11	-	110	-	190	<5	-	-	-	-	<0.01	-	0.002	<0.0002	<0.001	<0.001
GASW_BH11	GASW_BH11	05/06/2019	Normal	659250	6.1	210	300	0.013	<10	71	<20	71	-	5.1	-	8.0	-	2.7	-	57	-	43	42	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
QC02	GASW_BH11	05/06/2019	Field_D	659250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH11	GASW_BH11	30/07/2019	Normal	669059	6.3	210	44	<0.005	<10	70	-	-	-	4.4	-	8.4	-	2	-	56	-	100	59	-	-	-	-	0.03	<0.02	<0.001	<0.0002	<0.001	<0.001
GASW_BH11	GASW_BH11	28/08/2019	Normal	674722	6.6	250	22	<0.005	<10	55	-	-	-	5.3	-	7.1	-	1.7	-	52	-	39	48	-	-	-	-	0.01	<0.02	<0.001	<0.0002	<0.001	0.003
GASW_BH11	GASW_BH11	25/09/2019	Normal	679636	6.3	130	28	<0.005	<10	41	-	-	-	4.7	-	6.7	-	1.3	-	45	-	37	46	-	-	-	-	0.03	<0.02	<0.001	<0.0002	<0.001	0.003
GASW_BH11	GASW_BH11	16/10/2019	Normal	683453	6.5	200	11	<0.005	<10	37	-	-	-	4.5	-	6.3	-	1.4	-	46	-	74	50	-	-	-	-	0.04	<0.02	<0.001	<0.0002	<0.001	0.003
GASW_BH11	GASW_BH11	14/11/2019	Normal	688512	6.5	170	1,600	<0.005	<10	53	-	-	-	5.0	-	7.0	-	1.9	-	50	-	97	51	-	-	-	-	0.02	<0.02	<0.001	<0.0002	<0.001	0.001
GASW_BH11	GASW_BH11	16/12/2019	Normal	694466	6.2	180	28	<0.004	<10	55	-	-	-	4.1	-	6.0	-	1.6	-	48	-	68	54	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.005
GASW_BH11	GASW_BH11	22/01/2020	Normal	698379	6.1	180	120	<0.004	<10	38	-	-	-	7.7	-	4.7	-	1.6	-	38	-	81	52	-	-	-	-	0.02	<0.02	<0.001	<0.0002	<0.001	0.002
GASW_BH11	GASW_BH11	24/02/2020	Normal	704673	6.8	290	200	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	-	0.001	<0.0002	<0.001	0.003
GASW_BH11	GASW_BH11	24/02/2020	Normal	706746	-	-	-	-	<10	96	-	-	-	27	-	6.1	-	<5	-	34	-	44	48	-	-	-	-	-	0.02	-	-	-	-
GASW_BH11	GASW_BH11	17/03/2020	Normal	708508	6.0	190	300	0.005	<10	240	-	-	-	15	-	6.3	-	3.3	-	41	-	44	44	-	-	-	-	0.06	<0.02	0.002	<0.0002	<0.001	0.013
GASW_BH11	GASW_BH11	16/04/2020	Normal	714027	6.3	320	8,000	<0.004	<10	270	-	-	-	26	-	6.7	-	4.9	-	49	-	77	39	-	-	-	-	0.26	<0.02	0.002	<0.0002	<0.001	0.012
GASW_BH11	GASW_BH11	20/05/2020	Normal	720682	6.8	270	1,800	<0.004	<10	200	-	-	-	27	-	6.9	-	<5	-	47	-	35	46	-	-	-	-	0.32	<0.02	<0.01	<0.002	<0.01	0.015
GASW_BH11	GASW_BH11	19/06/2020	Normal	726825	6.6	220	1,200	<0.004	<10	96	-	-	-	7.4	-	5.5	-	<5	-	44	-	36	42	-	-	-	-	0.08	0.05	<0.001	<0.0002	<0.001	0.011
GASW_BH11	GASW_BH11	16/07/2020	Normal	732590	6.3	650	2,100	<0.004	<10	47	<20	47	-	18	-	13	-	6.2	-	45	-	39	51	-	-	-	-	0.02	-	0.002	<0.0002	<0.001	0.084
GASW_BH11	GASW_BH11	17/08/2020	Normal	738860	6.9	220	3,900	<0.004	<10	170	-	-	-	14	-	<5	-	<5	-	27	-	27	25	-	-	-	-	0.06	0.03	<0.001	<0.0002	<0.001	0.015
GASW_BH11	GASW_BH11	16/09/2020	Normal	744463	6.7	260	6,100	<0.004	<10	120	<20	120	43	8.6	-	5.3	-	<5	-	37	-	37	45	-	-	-	-	0.12	-	<0.001	<0.0002	<0.001	0.010
GASW_BH11	GASW_BH11	27/10/2020	Normal	753369	6.6	180	920	<0.004	<10	86	<20	86	110	22	-	12	-	5.9	-	53	-	74	73	-	-	-	-	0.13	-	<0.001	<0.0002	<0.001	0.012
GASW_BH11	GASW_BH11	20/11/2020	Normal	758435	7.1	190	790	<0.004	<10	81	-	-	88	18	-	10	-	9.6	-	47	-	76	34	-	-	-	-	0.03	0.04	0.001	<0.0002	<0.001	0.016
GASW_BH11	GASW_BH11	21/12/2020	Normal	765715	6.6	270	5,100	<0.004	<10	96	-	-	-	29	-	12	-	6.6	-	50	-	47	52	-	-	-	-	0.10	0.11	<0.001	<0.0002	<0.001	0.004
GASW_BH11	GASW_BH11	28/01/2021	Normal	770782	8.0	350	1,600	<0.004	<10	150	<20	150	130	38	-	7.9	-	<5	-	44	-	34	47	-	-	-	-	0.06	-	0.005	0.0006	<0.001	0.14
GASW_BH11	GASW_BH11	17/02/2021	Normal	775277	6.6	200	2,600	<0.004	<10	120	<20	120	100	29	-	7.0	-	8.1	-	31	-	50	26	-	-	-	-	0.37	-	<0.001	<0.0002	<0.001	0.15

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
GASW_BH11	GASW_BH11	18/03/2021	Normal	781353	7.4	210	7,200	<0.004	<10	1,800	<20	1,800	73	20	-	5.8	-	2.6	-	36	-	34	31	-	-	-	-	0.35	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH11	GASW_BH11	27/04/2021	Normal	791517	6.3	180	260	<0.004	<10	57	<20	57	63	13	-	7.5	-	3.6	-	40	-	36	37	-	-	-	-	0.27	-	<0.001	<0.0002	<0.001	0.001
GASW_BH11	GASW_BH11	26/05/2021	Normal	799115	6.8	210	360	<0.004	<10	74	<20	74	32	4.6	-	4.9	-	1.4	-	36	-	42	39	-	-	-	-	0.16	-	<0.001	<0.0002	<0.001	0.001
GASW_BH11	GASW_BH11	16/06/2021	Normal	803914	7.3	220	2,700	<0.004	<10	71	<20	71	38	5.7	-	5.7	-	1.7	-	36	-	38	41	-	-	-	-	0.24	-	<0.001	<0.0002	<0.001	<0.001
GASW-BH11	GASW_BH11	12/07/2021	Normal	810513	7.6	390	1,000	<0.004	<10	82	<20	82	38	6.6	-	5.1	-	1.5	-	34	-	39	40	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH11	GASW_BH11	10/08/2021	Normal	816445	7.5	280	2.2	<0.004	<20	150	<20	150	76	19	-	6.9	-	2.2	-	34	-	41	38	-	-	-	-	0.14	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH11	GASW_BH11	28/09/2021	Normal	829222	7.1	220	480	<0.004	<10	110	<20	110	54	13	-	4.2	-	2.0	-	33	-	37	45	-	-	-	-	0.19	-	<0.001	<0.0002	<0.001	0.001
GASW_BH11	GASW_BH11	28/10/2021	Normal	836474	7.7	240	280	<0.004	<10	95	<20	95	240	76	-	11	-	1.9	-	34	-	74	56	-	-	-	-	0.19	-	<0.001	<0.0002	<0.001	0.001
BH23	GASW_BH23	23/08/2019	Normal	ES1926979	7.34	719	484	0.081	<1	139	<1	139	-	-	139	-	8	-	30	-	56	19	-	389	10.8	11.4	2.77	0.86	-	0.006	<0.0001	<0.001	<0.001
GW-BR1	GASW_BH23	23/08/2019	Field_D	ES1926979	7.68	678	1,200	0.109	<1	129	<1	129	-	-	137	-	10	-	29	-	54	20	-	327	10.7	9.95	3.86	0.87	-	0.004	<0.0001	<0.001	<0.001
GASW_BH23	GASW_BH23	25/09/2019	Normal	679636	7.6	640	480	<0.005	<10	180	-	-	-	160	-	14	-	13	-	39	-	19	380	-	-	-	-	0.25	<0.02	0.004	<0.0002	<0.001	0.002
GASW_BH23	GASW_BH23	16/10/2019	Normal	683453	7.7	710	25	0.006	<10	190	-	-	-	150	-	12	-	11	-	31	-	45	330	-	-	-	-	0.52	<0.02	0.004	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	14/11/2019	Normal	688512	8.1	710	23	0.026	<10	210	-	-	-	170	-	14	-	19	-	48	-	33	320	-	-	-	-	0.66	<0.02	0.004	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	16/12/2019	Normal	694466	11	290	2.4	0.013	86	<20	-	-	-	37	-	<0.5	-	15	-	50	-	35	97	-	-	-	-	0.27	0.97	0.005	<0.0002	0.003	0.002
GASW_BH23	GASW_BH23	22/01/2020	Normal	698379	8.1	580	10	0.012	<10	3,000	-	-	-	130	-	11	-	12	-	32	-	21	270	-	-	-	-	0.72	<0.02	0.005	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	24/02/2020	Normal	704673	8.1	420	780	0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3	-	0.005	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	24/02/2020	Normal	706746	-	-	-	-	<10	320	-	-	-	120	-	12	-	25	-	61	-	70	120	-	-	-	-	-	0.03	-	-	-	-
GASW_BH23	GASW_BH23	17/03/2020	Normal	708508	7.1	360	28	0.009	<10	160	-	-	-	82	-	6.8	-	8.7	-	25	-	13	120	-	-	-	-	0.31	<0.02	0.005	<0.0002	<0.001	0.001
GASW_BH23	GASW_BH23	16/04/2020	Normal	714027	-	-	-	0.079	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.98	-	0.011	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	20/05/2020	Normal	720682	-	-	-	<0.004	-	-	-	-	-	80	-	<5	-	20	-	37	-	-	-	-	-	-	-	0.50	-	0.007	<0.0002	<0.001	0.008
GASW_BH23	GASW_BH23	17/06/2020	Normal	726825	7.6	380	1,400	0.008	<10	410	-	-	-	82	-	5.5	-	14	-	30	-	18	54	-	-	-	-	<0.01	<0.02	0.003	<0.0002	<0.001	0.011
GASW_BH23	GASW_BH23	16/07/2020	Normal	732590	7.2	860	6,100	<0.004	<10	540	<20	540	-	330	-	24	-	25	-	33	-	20	180	-	-	-	-	0.14	-	0.002	<0.0002	<0.001	0.008
GASW_BH23	GASW_BH23	17/08/2020	Normal	738860	7.4	390	1,100	0.010	<10	340	-	-	-	80	-	6.2	-	12	-	23	-	15	79	-	-	-	-	0.07	<0.02	0.003	<0.0002	<0.001	0.005
GASW_BH23	GASW_BH23	15/09/2020	Normal	744463	-	-	-	0.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	-	0.002	<0.0002	<0.001	0.070
GASW_BH23	GASW_BH23	26/10/2020	Normal	753369	7.2	270	51	<0.004	<10	110	<20	110	230	81	-	5.6	-	10	-	25	-	29	240	-	-	-	-	0.06	-	<0.001	<0.0002	<0.001	0.016
GASW_BH23	GASW_BH23	18/11/2020	Normal	758435	7.8	610	88	0.010	<10	480	-	-	380	140	-	11	-	20	-	36	-	24	69	-	-	-	-	0.06	<0.02	0.005	<0.0002	<0.001	0.004
GASW_BH23	GASW_BH23	21/12/2020	Normal	765715	7.4	690	140	0.013	<10	400	-	-	-	180	-	10	-	22	-	37	-	26	190	-	-	-	-	0.11	<0.02	0.003	<0.0002	<0.001	0.003
GASW_BH23	GASW_BH23	28/01/2021	Normal	770782	8.2	550	8.4	<0.004	<10	230	<20	230	340	120	-	10.0	-	9.5	-	22	-	55	160	-	-	-	-	0.04	-	<0.001	0.0002	<0.001	0.018
GASW_BH23	GASW_BH23	17/02/2021	Normal	775277	7.1	390	29	<0.004	<10	220	<20	220	490	190	-	7.3	-	10	-	29	-	15	170	-	-	-	-	0.40	-	0.004	<0.0002	<0.001	0.008
GASW_BH23	GASW_BH23	18/03/2021	Normal	781353	8.0	320	22	<0.004	<10	1,700	<20	1,700	220	76	-	6.4	-	7.3	-	22	-	32	98	-	-	-	-	0.30	-	0.003	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	27/04/2021	Normal	791517	7.3	490	19	0.010	<10	290	<20	290	340	130	-	7.4	-	11	-	27	-	15	110	-	-	-	-	0.40	-	0.004	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	26/05/2021	Normal	799115	7.9	410	10	0.009	<10	260	<20	260	280	100	-	6.9	-	9.0	-	25	-	23	89	-	-	-	-	0.57	-	0.003	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	16/06/2021	Normal	803914	8.1	380	430	<0.004	<10	270	<20	270	270	93	-	8.7	-	17	-	40	-	28	33	-	-	-	-	0.61	-	0.003	<0.0002	<0.001	<0.001
GASW-BH23	GASW_BH23	12/07/2021	Normal	810513	8.2	2,300	16	<0.004	<10	160	<20	160	220	73	-	8.3	-	5.6	-	17	-	11	96	-	-	-	-	0.32	-	0.001	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	10/08/2021	Normal	816445	7.9	240	4,600	<0.004	<20	150	<20	150	330	120	-	9.7	-	15	-	32	-	14	51	-	-	-	-	0.54	-	0.003	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	29/09/2021	Normal	829222	7.9	230	22	0.004	<10	230	<20	230	330	110	-	10.0	-	7.4	-	22	-	13	150	-	-	-	-	0.43	-	0.002	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	28/10/2021	Normal	836474	7.5	480	16	<0.004	<10	250	<20	250	390	140	-	10	-	10	-	20	-	54	160	-	-	-	-	0.52	-	0.003	<0.0002	<0.001	<0.001
GASW BH23	GASW_BH23	23/11/2021	Normal	846135	7.6	360	16	0.005	<10	190	<20	190	270	91	-	9.7	-	6.7	-	20	-	11	110	-	-	-	-	0.19	-	0.002	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	14/12/2021	Normal	851006	7.7	330	13	<0.004	<10	160	<20	160	230	81	-	6.1	-	5.9	-	15	-	12	79	-	-	-	-	0.26	-	0.002	<0.0002	<0.001	<0.001
BH25a	GASW_BH25A	23/08/2019	Normal	ES1926979	7.28	686	245	0.163	<1	100	<1	100	-	-	169	-	9	-	6	-	28	18	-	392	10.5	10.7	0.58	0.48	-	0.002	<0.0001	<0.001	<0.001
GW-SR1	GASW_BH25A	23/08/2019	Interlab_D	673339	8.0	770	270	0.096	<10	120	-	-	-	180	-	11	-	6.5	-	31	-	15	420	-	-	-	-	0.48	0.11	0.002	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	25/09/2019	Normal	679636	7.5	460	21	0.023	<10	97	-	-	-	97	-	6.1	-	6.6	-	47	-	26	260	-	-	-	-	0.39	<0.02	0.006	<0.0002	<0.001	0.003
GASW_BH25a	GASW_BH25A	16/10/2019	Normal	683453	8.1	360	37	0.009	<10	110	-	-	-	67	-	4.4	-	5.5	-	28	-	48	140	-	-	-	-	0.42	0.03	0.005	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	14/11/2019	Normal	688512	8.3	410	53	0.032	<10	120	-	-	-	86	-	5.5	-	6.8	-	31	-	85	180	-	-	-	-	0.46	<0.02	0.006	<0.0002	<0.001	0.008
GASW_BH25A	GASW_BH25A	16/12/2019	Normal	694466	8.2	450	21	0.074	<10	110	-	-	-	100	-	5.6	-	7.9	-	30	-	25	230	-	-	-	-	0.74	<0.02	0.006	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	22/01/2020	Normal	698379	6.6	430	130	0.16	<10	180	-	-	-	84	-	5.9	-	6.1	-	20	-	15	130	-	-	-	-	0.23	<0.02	0.012	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	24/02/2020	Normal	704673	7.2	380	340	0.055	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17	-	0.011	<0.0002	<0.001	<0.001

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																										
GASW_BH25A	GASW_BH25A	24/02/2020	Normal	706746	-	-	-	-	<10	170	-	-	-	81	-	5.8	-	<5	-	20	-	63	97	-	-	-	-	-	<0.02	-	-	-	-
GASW_BH25a	GASW_BH25A	17/03/2020	Normal	708508	7.3	220	16	0.032	<10	99	-	-	-	41	-	3.1	-	4.2	-	20	-	11	47	-	-	-	-	0.27	0.13	0.008	<0.0002	<0.001	0.008
GASW_BH25A	GASW_BH25A	16/04/2020	Normal	714027	6.3	250	120	0.14	<10	160	-	-	-	76	-	5.3	-	7.7	-	27	-	26	43	-	-	-	-	0.61	<0.02	0.010	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	20/05/2020	Normal	720682	7.2	180	800	0.025	<10	190	-	-	-	64	-	<5	-	5.2	-	23	-	13	38	-	-	-	-	0.25	<0.02	0.012	<0.0002	<0.001	0.001
GASW_BH25A	GASW_BH25A	19/06/2020	Normal	726825	7.3	190	210	0.034	<10	190	-	-	-	53	-	<5	-	<5	-	19	-	10.0	46	-	-	-	-	0.01	<0.02	0.009	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	16/07/2020	Normal	732590	7.6	290	56	0.007	<10	150	<20	150	-	81	-	6.2	-	4.2	-	20	-	17	120	-	-	-	-	0.24	-	0.004	<0.0002	<0.001	0.020
GASW_BH25A	GASW_BH25A	17/08/2020	Normal	738860	7.1	290	150	0.050	<10	170	-	-	-	56	-	<5	-	<5	-	15	-	12	71	-	-	-	-	<0.01	<0.02	0.006	<0.0002	<0.001	0.052
GASW_BH25A	GASW_BH25A	16/09/2020	Normal	744463	7.9	340	520	0.082	<10	230	<20	230	210	75	-	<5	-	<5	-	20	-	14	41	-	-	-	-	0.41	-	0.009	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	27/10/2020	Normal	753369	7.3	360	13	0.004	<10	140	<20	140	360	130	-	11	-	4.7	-	23	-	27	380	-	-	-	-	0.14	-	0.002	<0.0002	<0.001	0.052
GASW_BH25A	GASW_BH25A	20/11/2020	Normal	758435	7.4	390	1,900	0.031	<10	210	-	-	400	140	-	11	-	9.8	-	21	-	62	110	-	-	-	-	<0.01	<0.02	0.008	<0.0002	<0.001	0.007
GASW_BH25A	GASW_BH25A	21/12/2020	Normal	765715	7.5	510	39	0.010	<10	200	-	-	-	130	-	9.9	-	4.9	-	23	-	20	240	-	-	-	-	0.24	<0.02	0.003	<0.0002	<0.001	0.005
GASW_BH25A	GASW_BH25A	28/01/2021	Normal	770782	8.2	290	57	<0.004	<10	120	<20	120	160	50	-	<5	-	5.4	-	29	-	67	60	-	-	-	-	<0.01	-	0.003	<0.0002	0.001	0.015
GASW_BH25A	GASW_BH25A	17/02/2021	Normal	775277	7.6	180	9.8	<0.004	<10	120	<20	120	110	39	-	3.4	-	3.8	-	21	-	28	34	-	-	-	-	<0.01	-	0.003	<0.0002	<0.001	0.15
GASW_BH25A	GASW_BH25A	18/03/2021	Normal	781353	7.8	160	41	<0.004	<10	1,900	<20	1,900	130	47	-	3.9	-	3.6	-	18	-	26	41	-	-	-	-	0.11	-	0.002	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	27/04/2021	Normal	791517	7.5	320	15	0.005	<10	210	<20	210	240	84	-	6.1	-	4.1	-	19	-	13	54	-	-	-	-	0.37	-	0.004	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	26/05/2021	Normal	799115	8.2	310	4.1	0.005	<10	220	<20	220	220	77	-	6.2	-	3.8	-	18	-	11	54	-	-	-	-	0.33	-	0.003	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	15/06/2021	Normal	803914	8.3	310	19	0.005	<10	170	<20	170	220	79	-	6.2	-	3.9	-	20	-	16	54	-	-	-	-	0.30	-	0.002	<0.0002	<0.001	<0.001
GASW-BH25A	GASW_BH25A	12/07/2021	Normal	810513	8.1	170	4.1	<0.004	<10	96	<20	96	98	34	-	3.4	-	2.5	-	14	-	5,000	660	-	-	-	-	0.03	-	0.003	<0.0002	<0.001	0.003
GASW_BH25A	GASW_BH25A	10/08/2021	Normal	816445	7.9	230	9.2	<0.004	<20	150	<20	150	170	61	-	4.7	-	3.4	-	15	-	21	35	-	-	-	-	0.35	-	0.003	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	29/09/2021	Normal	829222	7.3	140	5.6	<0.004	<10	71	<20	71	70	25	-	2.2	-	2.6	-	14	-	21	19	-	-	-	-	0.28	-	0.005	<0.0002	<0.001	0.004
GASW_BH25A	GASW_BH25A	28/10/2021	Normal	836474	7.4	130	5.4	<0.004	<10	72	<20	72	84	29	-	2.7	-	2.8	-	13	-	38	19	-	-	-	-	0.24	-	0.004	<0.0002	<0.001	0.003
QA02	SRT_BH039	07/09/2018	Interlab_D	ES1826658	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	0.003	0.014
SRT-BH039	SRT_BH039	07/09/2018	Normal	616629	-	-	-	0.007	80	<20	-	-	-	460	-	<0.5	-	160	-	140	-	28	940	-	-	-	-	0.70	1.3	<0.001	<0.0002	0.003	0.030
SRT-BH039	SRT_BH039	25/10/2018	Normal	624838	-	-	-	<0.005	70	<20	-	-	-	460	-	<0.5	-	110	-	98	-	45	720	-	-	-	-	1.0	0.05	<0.001	<0.0002	0.001	0.008
QA02	SRT_BH039	26/10/2018	Interlab_D	ES1832040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	0.001	0.002
SRT-BH047	SRT_BH047	06/09/2018	Normal	616629	-	-	-	<0.005	<10	140	-	-	-	64	-	8.1	-	1.0	-	34	-	27	7.6	-	-	-	-	<0.01	21	<0.001	<0.0002	<0.001	0.018
SRT-BH047	SRT_BH047	25/10/2018	Normal	624838	-	-	-	<0.005	<10	160	-	-	-	58	-	6.1	-	0.9	-	32	-	25	14	-	-	-	-	<0.01	18	<0.001	<0.0002	<0.001	0.004
SRT_BH047	SRT_BH047	26/11/2018	Normal	629922	-	-	-	<0.005	<10	170	-	-	-	53	-	6.9	-	0.9	-	31	-	39	12	-	-	-	-	<0.01	17	<0.001	<0.0002	<0.001	0.022
SRT_BH047	SRT_BH047	18/12/2018	Normal	634274	-	-	-	<0.005	<10	63	-	-	-	35	-	8.0	-	1.6	-	31	-	33	16	-	-	-	-	<0.01	22	<0.001	<0.0002	<0.001	0.021
SRT_BH047	SRT_BH047	17/01/2019	Normal	636542	-	-	-	0.020	<10	190	-	-	-	61	-	6.8	-	0.9	-	29	-	23	11	-	-	-	-	<0.01	19	<0.001	<0.0002	<0.001	0.016
SRT_BH047	SRT_BH047	20/02/2019	Normal	641720	-	-	-	<0.005	<10	100	-	-	-	26	-	6.6	-	1.3	-	53	-	26	12	-	-	-	-	<0.01	19	<0.001	<0.0002	<0.001	0.018
SRT_BH047	SRT_BH047	16/04/2019	Normal	651825	-	-	-	<0.005	<10	62	-	-	-	24	-	9.6	-	1.8	-	37	-	33	15	-	-	-	-	<0.01	25	<0.001	<0.0002	<0.001	0.002
SRT_BH047	SRT_BH047	14/05/2019	Normal	656080	8.1	360	40	<0.005	<10	120	-	-	-	51	-	9.7	-	1.2	-	34	-	43	11	-	-	-	-	<0.01	23	<0.001	<0.0002	<0.001	0.002
SRT_BH047	SRT_BH047	07/06/2019	Normal	660130	8.0	230	48	<0.005	<10	98	-	-	-	37	-	10	-	1.1	-	35	-	26	11	-	-	-	-	<0.01	23	<0.001	<0.0002	<0.001	<0.001
SRT-BH047	SRT_BH047	31/07/2019	Normal	669059	7.6	270	65	0.008	<10	88	-	-	-	43	-	11	-	1.6	-	35	-	50	13	-	-	-	-	<0.01	22	<0.001	<0.0002	<0.001	<0.001
SRT_BH047	SRT_BH047	30/08/2019	Normal	674722	8.1	360	51	<0.005	<10	120	-	-	-	50	-	8.6	-	0.9	-	33	-	22	10	-	-	-	-	<0.01	22	<0.001	<0.0002	<0.001	0.003
SRT_BH047	SRT_BH047	27/09/2019	Normal	679636	7.7	270	22	<0.005	<10	140	-	-	-	51	-	8.0	-	0.8	-	31	-	25	11	-	-	-	-	<0.01	21	<0.001	<0.0002	<0.001	<0.001
SRT_BH047	SRT_BH047	18/10/2019	Normal	683453	7.8	340	68	<0.005	<10	92	-	-	-	50	-	7.4	-	0.8	-	30	-	34	11	-	-	-	-	<0.01	15	<0.001	<0.0002	<0.001	0.002
SRT_BH047	SRT_BH047	15/11/2019	Normal	688512	8.3	330	89	<0.005	<10	120	-	-	-	54	-	8.8	-	1.0	-	32	-	52	9.5	-	-	-	-	<0.01	21	<0.001	<0.0002	<0.001	0.002
SRT_BH047	SRT_BH047	18/12/2019	Normal	694466	8.3	290	100	<0.004	<10	130	-	-	-	49	-	9.2	-	0.9	-	16	-	46	12	-	-	-	-	0.02	19	<0.001	<0.0002	<0.001	0.001
SRT_BH047	SRT_BH047	20/01/2020	Normal	698379	7.7	340	1,700	<0.004	<10	240	-	-	-	49	-	9.7	-	0.8	-	26	-	60	11	-	-	-	-	0.03	22	<0.001	<0.0002	<0.001	0.004
SRT_BH047	SRT_BH047	26/02/2020	Normal	704673	7.7	170	<1	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.004
SRT_BH047	SRT_BH047	26/02/2020	Normal	706746	-	-	-	-	<10	49	-	-	-	19	-	9.5	-	<5	-	26	-	83	27	-	-	-	-	-	23	-	-	-	-
SRT_BH047	SRT_BH047	16/03/2020	Normal	708508	7.0	230	14	<0.004	<10	60	-	-	-	29	-	9.6	-	1.4	-	29	-	25	15	-	-	-	-	0.11	22	<0.001	<0.0002	<0.001	0.003
SRT_BH047	SRT_BH047	15/04/2020	Normal	714027	6.5	320	9.2	<0.004	<10	130	-	-	-	46	-	11	-	1.0	-	38	-	64	11	-	-	-	-	0.03	20	<0.001	<0.0002	<0.001	0.011
SRT_BH047	SRT_BH047	18/05/2020	Normal	720682	6.9	210	13	<0.004	<10	110	-	-	-	36	-	12	-	<5	-	30	-	22	13	-	-	-	-	0.02	21	<0.01	<0.002	<0.01	<0.01
SRT_BH047	SRT_BH047	17/06/2020	Normal	726825	6.9	230	9.2	<0.004	<10	85	-	-	-	34	-	10.0	-	<5	-	28	-	24	13	-	-	-	-	<0.01	20	<0.001	<0.0002	<0.001	0.002

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																										
SRT_BH047	SRT_BH047	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/07/2020	Normal	732590	7.5	320	6.2	<0.004	<10	120	<20	120	-	44	-	10	-	0.9	-	29	-	25	16	-	-	-	-	0.24	-	<0.001	<0.0002	<0.001	0.009
SRT_BH047	SRT_BH047	19/08/2020	Normal	738860	7.6	290	33	<0.004	<10	120	-	-	-	35	-	8.0	-	<5	-	22	-	22	11	-	-	-	-	<0.01	18	<0.001	<0.0002	<0.001	0.001
SRT_BH047	SRT_BH047	15/09/2020	Normal	744463	7.9	290	49	<0.004	<10	95	<20	95	150	43	-	9.7	-	<5	-	27	-	22	10	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.008
SRT_BH047	SRT_BH047	26/10/2020	Normal	753369	7.6	200	14	<0.004	<10	96	<20	96	150	42	-	11	-	0.8	-	30	-	41	47	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.11
SRT_BH047	SRT_BH047	18/11/2020	Normal	758435	6.9	260	48	<0.004	<10	80	-	-	120	27	-	12	-	<5	-	28	-	57	15	-	-	-	-	<0.01	19	<0.001	<0.0002	<0.001	0.003
SRT_BH047	SRT_BH047	22/12/2020	Normal	765715	7.3	220	65	<0.004	<10	82	-	-	-	31	-	10	-	1.1	-	27	-	24	14	-	-	-	-	0.01	19	<0.001	<0.0002	<0.001	0.003
SRT_BH047	SRT_BH047	29/01/2021	Normal	770782	7.4	300	36	<0.004	<10	78	<20	78	120	32	-	11	-	<5	-	29	-	43	29	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.024
SRT_BH047	SRT_BH047	17/02/2021	Normal	775277	6.2	110	<5	<0.004	<10	21	<20	21	60	11	-	7.7	-	0.8	-	24	-	37	14	-	-	-	-	0.19	-	<0.001	<0.0002	<0.001	0.15
SRT_BH047	SRT_BH047	18/03/2021	Normal	781353	6.7	190	97	<0.004	<10	1,200	<20	1,200	62	11	-	8.7	-	0.8	-	25	-	84	28	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
SRT_BH047	SRT_BH047	27/04/2021	Normal	791517	6.5	270	20	<0.004	<10	27	<20	27	77	16	-	9.3	-	0.9	-	24	-	19	11	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	0.009
SRT_BH047	SRT_BH047	27/05/2021	Normal	799115	7.1	250	13	<0.004	<10	48	<20	48	120	33	-	8.2	-	<5	-	26	-	21	11	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
SRT_BH047	SRT_BH047	17/06/2021	Normal	803914	6.9	190	34	<0.004	<10	<20	<20	<20	88	18	-	10	-	0.9	-	26	-	21	12	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	<0.001
SRT-BH047	SRT_BH047	12/07/2021	Normal	810513	6.8	180	29	<0.004	<10	<20	<20	<20	73	14	-	9.4	-	0.7	-	20	-	5,000	790	-	-	-	-	0.21	-	<0.001	<0.0002	<0.001	0.001
SRT_BH047	SRT_BH047	11/08/2021	Normal	816445	7.3	230	170	<0.004	<20	29	<20	29	75	15	-	9.3	-	0.7	-	20	-	21	12	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	0.001
QC01	SRT_BH047	30/09/2021	Field_D	829222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001
SRT_BH047	SRT_BH047	30/09/2021	Normal	829222	6.3	160	33	<0.004	<10	<20	<20	<20	49	6.6	-	8.0	-	0.6	-	21	-	18	13	-	-	-	-	<0.2	-	<0.001	<0.0002	<0.001	0.005
SRT_BH047	SRT_BH047	29/10/2021	Normal	836474	6.4	220	26	0.004	<10	<20	<20	<20	81	18	-	8.6	-	0.7	-	23	-	20	21	-	-	-	-	0.11	-	<0.001	<0.0002	<0.001	0.001
SRT BH047	SRT_BH047	24/11/2021	Normal	846135	6.1	180	34	0.004	<10	<20	<20	<20	43	5.0	-	7.4	-	0.6	-	18	-	20	14	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.003
SRT_BH047	SRT_BH047	16/12/2021	Normal	851006	6.6	140	68	0.005	<10	<20	<20	<20	43	5.4	-	7.1	-	0.6	-	17	-	18	14	-	-	-	-	<0.01	-	<0.001	<0.0002	0.005	0.005
SRT_BH047	SRT_BH047	19/01/2022	Normal	856960	6.1	130	19	<0.004	<10	<20	<20	<20	43	4.8	-	7.6	-	0.7	-	22	-	16	12	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.004
QC01	SRT_BH047	08/02/2022	Field_D	862315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.003
SRT_BH047	SRT_BH047	08/02/2022	Normal	862315	6.4	130	5.0	<0.004	<10	<20	<20	<20	43	5.0	-	7.5	-	1.2	-	24	-	17	26	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.003
SRT_BH047	SRT_BH047	16/03/2022	Normal	872459	5.7	120	19	<0.004	<10	<20	<20	<20	42	5.4	-	7.0	-	0.7	-	19	-	17	12	-	-	-	-	2.4	-	<0.001	<0.0002	<0.001	<0.001
SRT-BH048	SRT_BH048	06/09/2018	Normal	616629	-	-	-	<0.005	<10	130	-	-	-	19	-	6.2	-	2.7	-	56	-	34	47	-	-	-	-	<0.01	0.09	<0.001	<0.0002	<0.001	0.045
SRT-BH048	SRT_BH048	25/10/2018	Normal	624838	-	-	-	<0.005	<10	<20	-	-	-	3.7	-	1.8	-	1.6	-	39	-	34	48	-	-	-	-	<0.01	0.12	<0.001	<0.0002	<0.001	0.13
SRT_BH048	SRT_BH048	26/11/2018	Normal	629922	-	-	-	<0.005	<10	27	-	-	-	5.2	-	2.5	-	1.6	-	36	-	51	49	-	-	-	-	<0.01	0.10	<0.001	<0.0002	<0.001	0.045
SRT_BH050	SRT_BH050	16/03/2020	Normal	708508	5.6	270	210	0.006	<10	<20	-	-	-	17	-	3.1	-	6.1	-	13	-	10	48	-	-	-	-	0.08	7.1	0.001	<0.0002	<0.001	0.003
SRT_BH050	SRT_BH050	15/04/2020	Normal	714027	3.9	130	480	<0.004	<10	<20	-	-	-	18	-	2.5	-	7.2	-	17	-	52	45	-	-	-	-	0.04	0.26	<0.001	<0.0002	<0.001	0.002
SRT_BH050	SRT_BH050	17/06/2020	Normal	726825	4.2	140	370	<0.004	<10	<20	-	-	-	14	-	<5	-	5.1	-	13	-	11	44	-	-	-	-	0.02	7.2	<0.001	<0.0002	<0.001	0.011
SRT_BH050	SRT_BH050	17/07/2020	Normal	732590	-	-	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.091
SRT_BH050	SRT_BH050	19/08/2020	Normal	738860	-	-	-	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.009
SRT_BH050	SRT_BH050	18/11/2020	Normal	758435	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.11
SRT_BH050	SRT_BH050	22/12/2020	Normal	765715	-	140	11,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.15
SRT_BH050	SRT_BH050	17/02/2021	Normal	775277	5.2	-	-	<0.004	<10	<20	<20	<20	75	23	-	4.4	-	11	-	11	-	25	41	-	-	-	-	0.16	-	<0.001	<0.0002	<0.001	0.008
SRT_BH050	SRT_BH050	18/03/2021	Normal	781353	5.2	-	-	<0.004	<10	250	<20	250	50	15	-	3.1	-	5.2	-	13	-	49	56	-	-	-	-	0.41	-	<0.001	<0.0002	<0.001	<0.001
SRT-BH050	SRT_BH050	12/07/2021	Normal	810513	-	-	-	0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.004
SRT BH050	SRT_BH050	25/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	15/12/2021	Normal	851006	4.7	100	1,400	<0.004	<10	<20	<20	<20	54	17	-	3.1	-	5.6	-	11	-	11	44	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.005
SRT_BH050	SRT_BH050	19/01/2022	Normal	856960	4.9	170	95	<0.005	<10	<20	<20	<20	58	17	-	3.5	-	5.5	-	14	-	12	35	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	0.003
SRT_BH050	SRT_BH050	08/02/2022	Normal	862315	4.9	160	73	<0.004	<10	<20	<20	<20	54	16	-	3.2	-	5.6	-	16	-	9.9	44	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.002
SRT_BH050	SRT_BH050	16/03/2022	Normal	872459	5.0	150	30	<0.004	<10	<20	<20	<20	74	25	-	3.0	-	5.9	-	11	-	11	40	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
SRT-BH052	SRT_BH052	25/10/2018	Normal	624838	-	-	-	<0.005	<10	38	-	-	-	14	-	3.7	-	1.0	-	41	-	22	20	-	-	-	-	<0.01	10	<0.001	<0.0002	<0.001	0.063
SRT_BH052	SRT_BH052	26/11/2018	Normal	629922	-	-	-	<0.005	<10	73	-	-	-	18	-	3.7	-	1.0	-	40	-	41	27	-	-	-	-	<0.01	9.2	<0.001	<0.0002	<0.001	0.022
SRT_BH052	SRT_BH052	18/12/2018	Normal	634274	-	-	-	<0.005	<10	35	-	-	-	17	-	4.1	-	1.1	-	38	-	43	18	-	-	-	-	<0.01	10	<0.001	<0.0002	<0.001	0.018
SRT_BH052	SRT_BH052	17/01/2019	Normal	636542	-	-	-	0.020	<10	47	-	-	-	18	-	4.5	-	1.0	-	39	-	42	27	-	-	-	-	<0.01	9.1	<0.001	<0.0002	<0.001	0.32
SRT_BH052	SRT_BH052	20/02/2019	Normal	641720	-	-	-	<0.005	61	130	-	-	-	14	-	3.6	-	1.6	-	60	-	42	28	-	-	-	-	<0.01	6.2	<0.001	<0.0002	<0.001	0.006

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
SRT_BH052	SRT_BH052	16/04/2019	Normal	651825	-	-	-	<0.005	90	140	-	-	-	3.0	-	1.5	-	1.7	-	130	-	45	21	-	-	-	-	<0.01	5.2	<0.001	<0.0002	<0.001	0.002
SRT_BH052	SRT_BH052	14/05/2019	Normal	656080	7.7	230	110	<0.005	<10	90	-	-	-	23	-	5.2	-	1.5	-	47	-	56	26	-	-	-	-	<0.01	8.3	<0.001	<0.0002	<0.001	0.002
SRT_BH052	SRT_BH052	07/06/2019	Normal	660130	8.1	250	550	<0.005	<10	140	-	-	-	37	-	6.9	-	1.3	-	48	-	39	29	-	-	-	-	<0.01	6.4	<0.001	<0.0002	<0.001	<0.001
SRT-BH052	SRT_BH052	31/07/2019	Normal	669059	7.6	270	100	0.006	<10	110	-	-	-	30	-	6.3	-	1.6	-	47	-	42	29	-	-	-	-	<0.01	6.9	<0.001	<0.0002	<0.001	0.001
SRT_BH052	SRT_BH052	30/08/2019	Normal	674722	7.8	330	160	<0.005	<10	110	-	-	-	36	-	6.8	-	1.8	-	45	-	38	30	-	-	-	-	<0.01	6.7	<0.001	<0.0002	0.002	0.003
SRT_BH052	SRT_BH052	27/09/2019	Normal	679636	7.8	250	58	<0.005	<10	140	-	-	-	26	-	5.7	-	1.2	-	41	-	38	33	-	-	-	-	<0.01	6.8	<0.001	<0.0002	<0.001	0.002
SRT_BH052	SRT_BH052	18/10/2019	Normal	683453	7.6	280	65	<0.005	<10	78	-	-	-	37	-	3.0	-	1.3	-	40	-	39	26	-	-	-	-	<0.01	5.9	0.002	<0.0002	<0.001	0.002
SRT_BH052	SRT_BH052	15/11/2019	Normal	688512	7.6	240	64	<0.005	<10	78	-	-	-	23	-	4.5	-	1.5	-	43	-	49	31	-	-	-	-	<0.01	6.9	<0.001	<0.0002	<0.001	0.018
SRT_BH052	SRT_BH052	18/12/2019	Normal	694466	8.3	280	85	<0.004	<10	140	-	-	-	30	-	4.8	-	1.7	-	27	-	83	36	-	-	-	-	0.01	4.4	<0.001	<0.0002	<0.001	0.002
SRT_BH052	SRT_BH052	20/01/2020	Normal	698379	6.9	270	54	<0.004	<10	81	-	-	-	49	-	5.1	-	1.5	-	37	-	78	35	-	-	-	-	0.02	5.6	0.003	<0.0002	<0.001	0.001
SRT_BH052	SRT_BH052	26/02/2020	Normal	704673	7.5	170	110	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.004
SRT_BH052	SRT_BH052	26/02/2020	Normal	706746	-	-	-	-	<10	28	-	-	-	9.3	-	<5	-	<5	-	37	-	96	17	-	-	-	-	-	11	-	-	-	-
SRT_BH052	SRT_BH052	16/03/2020	Normal	708508	6.2	100	210	0.005	<10	28	-	-	-	8.7	-	4.1	-	2.0	-	38	-	35	15	-	-	-	-	0.07	11	<0.001	<0.0002	<0.001	0.002
SRT_BH052	SRT_BH052	15/04/2020	Normal	714027	7.8	210	120	<0.004	<10	61	-	-	-	13	-	3.3	-	0.9	-	49	-	52	15	-	-	-	-	0.03	<0.1	<0.001	<0.0002	<0.001	0.012
SRT_BH052	SRT_BH052	18/05/2020	Normal	720682	6.5	260	210	<0.004	<10	75	-	-	-	29	-	<5	-	<5	-	50	-	40	30	-	-	-	-	<0.01	8.4	<0.01	<0.002	<0.01	<0.01
SRT_BH052	SRT_BH052	17/06/2020	Normal	726825	7.8	220	2,000	<0.004	<10	260	-	-	-	25	-	5.7	-	<5	-	45	-	41	29	-	-	-	-	<0.01	8.7	<0.001	<0.0002	<0.001	0.017
SRT_BH052	SRT_BH052	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/07/2020	Normal	732590	6.7	270	110	<0.004	<10	74	<20	74	-	19	-	4.9	-	2.3	-	50	-	45	34	-	-	-	-	0.16	-	<0.001	<0.0002	0.001	0.002
SRT_BH052	SRT_BH052	19/08/2020	Normal	738860	6.4	200	99	<0.004	<10	37	-	-	-	9.7	-	<5	-	<5	-	32	-	38	18	-	-	-	-	<0.01	10	<0.001	<0.0002	<0.001	0.12
SRT_BH052	SRT_BH052	15/09/2020	Normal	744463	7.6	270	1,100	<0.004	<10	86	<20	86	74	24	-	<5	-	<5	-	44	-	45	35	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	0.007
SRT_BH052	SRT_BH052	26/10/2020	Normal	753369	6.9	190	310	<0.004	<10	71	<20	71	90	26	-	6.0	-	3.2	-	56	-	69	56	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	0.069
SRT_BH052	SRT_BH052	18/11/2020	Normal	758435	6.7	210	260	<0.004	<10	56	-	-	65	18	-	5.1	-	<5	-	48	-	80	30	-	-	-	-	<0.01	8.0	0.001	<0.0002	<0.001	0.005
SRT_BH052	SRT_BH052	22/12/2020	Normal	765715	6.9	250	89	<0.004	<10	75	-	-	-	21	-	4.8	-	2.1	-	49	-	50	34	-	-	-	-	<0.01	7.0	<0.001	<0.0002	<0.001	<0.001
SRT_BH052	SRT_BH052	29/01/2021	Normal	770782	7.6	250	830	<0.004	<10	110	<20	110	81	24	-	<5	-	<5	-	50	-	46	55	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.001
SRT_BH052	SRT_BH052	17/02/2021	Normal	775277	6.3	130	150	<0.004	<10	37	<20	37	35	7.9	-	3.7	-	1.8	-	39	-	49	26	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.016
SRT_BH052	SRT_BH052	18/03/2021	Normal	781353	7.1	180	370	<0.004	<10	1,400	<20	1,400	52	13	-	4.5	-	1.4	-	43	-	42	33	-	-	-	-	0.12	-	<0.001	<0.0002	<0.001	<0.001
SRT_BH052	SRT_BH052	27/04/2021	Normal	791517	6.7	230	730	<0.004	<10	93	<20	93	140	45	-	7.3	-	2.5	-	44	-	39	24	-	-	-	-	0.11	-	<0.001	<0.0002	<0.001	<0.001
SRT_BH052	SRT_BH052	27/05/2021	Normal	799115	7.0	230	52	<0.004	<10	47	<20	47	31	12	-	<5	-	<5	-	49	-	45	34	-	-	-	-	0.15	-	<0.001	<0.0002	<0.001	<0.001
SRT_BH052	SRT_BH052	17/06/2021	Normal	803914	7.1	230	110	<0.004	<10	47	<20	47	62	16	-	5.3	-	1.6	-	47	-	48	39	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
SRT-BH052	SRT_BH052	12/07/2021	Normal	810513	7.5	300	130	<0.004	<10	53	<20	53	62	17	-	5.0	-	1.7	-	46	-	47	36	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
SRT_BH052	SRT_BH052	11/08/2021	Normal	816445	7.4	560	650	<0.004	<20	84	<20	84	58	17	-	4.2	-	1.6	-	50	-	48	36	-	-	-	-	0.26	-	<0.001	<0.0002	<0.001	0.006
SRT_BH052	SRT_BH052	30/09/2021	Normal	829222	6.8	230	25	<0.004	<10	57	<20	57	48	13	-	3.6	-	1.5	-	47	-	47	40	-	-	-	-	0.30	-	<0.001	<0.0002	<0.001	<0.001
SRT_BH052	SRT_BH052	29/10/2021	Normal	836474	6.7	240	190	<0.004	<10	40	<20	40	48	13	-	3.6	-	1.8	-	49	-	48	40	-	-	-	-	0.08	-	<0.001	<0.0002	<0.001	<0.001
SRT BH052	SRT_BH052	24/11/2021	Normal	846135	6.9	240	44	<0.004	<10	39	<20	39	46	13	-	3.5	-	1.8	-	43	-	48	36	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
SRT_BH052	SRT_BH052	16/12/2021	Normal	851006	7.2	130	41	<0.004	<10	24	<20	24	60	17	-	4	-	1.8	-	43	-	42	23	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.006
SRT_BH052	SRT_BH052	19/01/2022	Normal	856960	6.3	180	81	<0.004	<10	<20	<20	<20	29	5.4	-	3.8	-	1.4	-	40	-	32	12	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	0.002
SRT_BH052	SRT_BH052	08/02/2022	Normal	862315	6.8	200	18	<0.004	<10	<20	<20	<20	32	6.7	-	3.8	-	1.3	-	43	-	40	28	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	<0.001
QC02	SRT_BH052	16/03/2022	Interlab_D	ES2209602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
SRT_BH052	SRT_BH052	16/03/2022	Normal	872459	5.6	150	5.4	0.004	<10	<20	<20	<20	30	5.8	-	3.8	-	0.8	-	38	-	40	15	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
SRT-BH053	SRT_BH053	06/09/2018	Normal	616629	-	-	-	<0.005	<10	72	-	-	-	6.3	-	6.1	-	2.6	-	37	-	32	28	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.23
SRT-BH053	SRT_BH053	25/10/2018	Normal	624838	-	-	-	<0.005	<10	52	-	-	-	5.1	-	4.9	-	2.5	-	33	-	26	27	-	-	-	-	<0.01	0.39	<0.001	<0.0002	<0.001	0.004
SRT-BH059	SRT_BH059	25/10/2018	Normal	624838	-	-	-	<0.005	<10	180	-	-	-	63	-	7.9	-	6.6	-	12	-	13	17	-	-	-	-	<0.01	3.5	<0.001	<0.0002	0.001	0.018
SRT_BH059	SRT_BH059	26/11/2018	Normal	629922	-	-	-	<0.005	<10	210	-	-	-	58	-	7.4	-	5.5	-	9.0	-	34	13	-	-	-	-	<0.01	2.3	<0.001	<0.0002	0.001	0.042
SRT_BH059	SRT_BH059	17/12/2018	Normal	634274	-	-	-	<0.005	<10	170	-	-	-	70	-	5.7	-	7.6	-	11	-	10	24	-	-	-	-	<0.01	7.9	<0.001	<0.0002	<0.001	0.056
SRT_BH059	SRT_BH059	18/01/2019	Normal	636542	-	-	-	0.017	<10	170	-	-	-	64	-	6.1	-	5.9	-	9.5	-	8.1	13	-	-	-	-	<0.01	2.8	<0.001	<0.0002	<0.001	0.040
SRT_BH059	SRT_BH059	20/02/2019	Normal	641720	-	-	-	<0.005	<10	170	-	-	-	69	-	7.7	-	6.7	-	14	-	11	12	-	-	-	-	<0.01	2.5	<0.001	<0.0002	<0.001	<0.001
SRT_BH059	SRT_BH059	17/04/2019	Normal	651825	-	-	-	<0.005	<10	200	-	-	-	49	-	6.0	-	5.8	-	8.2	-	9.7	15	-	-	-	-	<0.01	2.5	<0.001	<0.0002	<0.001	0.001

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
SRT_BH059	SRT_BH059	15/05/2019	Normal	656080	8.1	270	21	<0.005	<10	210	-	-	-	65	-	6.9	-	7.1	-	11	-	22	27	-	-	-	-	<0.01	3.2	<0.001	<0.0002	<0.001	0.006
SRT_BH059	SRT_BH059	07/06/2019	Normal	660130	7.7	230	8.9	<0.005	<10	210	-	-	-	72	-	7.4	-	9.0	-	13	-	18	18	-	-	-	-	<0.01	5.2	<0.001	<0.0002	<0.001	<0.001
SRT-BH059	SRT_BH059	31/07/2019	Normal	669059	7.8	270	8.3	<0.005	<10	200	-	-	-	62	-	9.4	-	6.6	-	13	-	26	17	-	-	-	-	<0.01	3.1	<0.001	<0.0002	0.001	<0.001
SRT_BH059	SRT_BH059	30/08/2019	Normal	674722	7.9	290	13	<0.005	<10	170	-	-	-	60	-	6.4	-	6.7	-	11	-	8.0	15	-	-	-	-	<0.01	3.5	<0.001	<0.0002	0.001	0.028
SRT_BH059	SRT_BH059	27/09/2019	Normal	679636	8.0	200	120	<0.005	<10	190	-	-	-	60	-	6.6	-	5.7	-	11	-	10	13	-	-	-	-	<0.01	3.2	<0.001	<0.0002	<0.001	0.007
SRT_BH059	SRT_BH059	18/10/2019	Normal	683453	8.1	250	4.9	<0.005	<10	170	-	-	-	59	-	6.0	-	5.9	-	10	-	22	11	-	-	-	-	<0.01	2.4	<0.001	<0.0002	<0.001	0.003
SRT_BH059	SRT_BH059	15/11/2019	Normal	688512	8.0	270	3.6	<0.005	<10	180	-	-	-	61	-	8.2	-	6.1	-	11	-	43	14	-	-	-	-	<0.01	2.1	<0.001	<0.0002	<0.001	<0.001
SRT_BH059	SRT_BH059	18/12/2019	Normal	694466	7.9	260	15	<0.004	<10	210	-	-	-	56	-	8.0	-	6.6	-	15	-	12	13	-	-	-	-	0.02	1.9	<0.001	<0.0002	<0.001	0.001
SRT_BH059	SRT_BH059	20/01/2020	Normal	698379	6.4	220	7.5	<0.004	<10	180	-	-	-	63	-	6.3	-	7.6	-	7.8	-	59	20	-	-	-	-	<0.01	6.1	<0.001	<0.0002	<0.001	0.002
SRT_BH059	SRT_BH059	26/02/2020	Normal	704673	8.2	170	1.8	<0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.027
SRT_BH059	SRT_BH059	26/02/2020	Normal	706746	-	-	-	-	<10	170	-	-	-	57	-	5.4	-	7.4	-	10	-	22	27	-	-	-	-	-	4.4	-	-	-	-
SRT_BH059	SRT_BH059	16/03/2020	Normal	708508	7.0	180	20	0.005	<10	150	-	-	-	52	-	5.2	-	7.3	-	9.7	-	9.5	12	-	-	-	-	0.02	2.3	0.001	<0.0002	<0.001	0.009
SRT_BH059	SRT_BH059	15/04/2020	Normal	714027	6.7	210	31	<0.004	<10	180	-	-	-	69	-	6.5	-	8.5	-	12	-	57	5.9	-	-	-	-	0.05	1.4	<0.001	<0.0002	<0.001	0.002
SRT_BH059	SRT_BH059	18/05/2020	Normal	720682	7.2	140	34	<0.004	<10	320	-	-	-	59	-	9.8	-	7.3	-	15	-	7.0	14	-	-	-	-	<0.01	1.9	<0.01	<0.002	<0.01	0.012
SRT_BH059	SRT_BH059	17/06/2020	Normal	726825	7.6	270	210	0.004	<10	290	-	-	-	55	-	9.4	-	7.0	-	16	-	8.7	16	-	-	-	-	<0.01	1.8	<0.001	<0.0002	0.001	0.014
SRT_BH059	SRT_BH059	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/07/2020	Normal	732590	7.3	330	41	<0.004	-	-	-	-	-	57	-	10	-	7.5	-	19	-	11	23	-	-	-	-	<0.01	-	<0.001	<0.0002	0.002	0.007
SRT_BH059	SRT_BH059	18/08/2020	Normal	738860	7.3	240	350	<0.004	<10	210	-	-	-	44	-	8.1	-	5.6	-	13	-	9.2	22	-	-	-	-	<0.01	1.4	<0.001	<0.0002	0.002	0.010
SRT_BH059	SRT_BH059	15/09/2020	Normal	744463	7.8	250	970	<0.004	<10	180	<20	180	160	50	-	8.7	-	5.7	-	17	-	7.5	21	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	0.13
SRT_BH059	SRT_BH059	26/10/2020	Normal	753369	7.6	230	690	<0.004	<10	200	<20	200	390	120	-	20	-	7.9	-	19	-	14	44	-	-	-	-	0.04	-	<0.001	<0.0002	0.002	0.009
SRT_BH059	SRT_BH059	18/11/2020	Normal	758435	7.9	240	220	<0.004	<10	150	-	-	160	51	-	8.0	-	6.7	-	18	-	44	27	-	-	-	-	<0.01	1.8	0.001	<0.0002	0.002	0.014
SRT_BH060	SRT_BH060	16/03/2020	Normal	708508	7.4	270	370	0.007	<10	32	-	-	-	41	-	2.7	-	5.9	-	12	-	31	30	-	-	-	-	0.05	4.1	0.001	<0.0002	<0.001	0.024
SRT_BH060	SRT_BH060	15/04/2020	Normal	714027	8.0	280	34,000	<0.004	-	-	-	-	-	38	-	2.3	-	9.6	-	18	-	73	39	-	-	-	-	0.04	7.0	<0.001	<0.0002	<0.001	0.008
SRT-BH063	SRT_BH063	06/09/2018	Normal	616629	-	-	-	<0.005	<10	330	-	-	-	66	-	38	-	5.8	-	82	-	72	45	-	-	-	-	<0.01	0.15	<0.001	<0.0002	<0.001	0.014
SRT-BH063	SRT_BH063	25/10/2018	Normal	624838	-	-	-	<0.005	<10	270	-	-	-	50	-	30	-	5.5	-	68	-	53	53	-	-	-	-	<0.01	0.09	<0.001	<0.0002	<0.001	0.12
SRT_BH063	SRT_BH063	26/11/2018	Normal	629922	-	-	-	<0.005	<10	320	-	-	-	48	-	31	-	5.0	-	63	-	68	52	-	-	-	-	<0.01	0.10	<0.001	<0.0002	<0.001	0.027
QA02	SRT_BH063	27/11/2018	Interlab_D	ES1835581	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	0.002
QA01	SRT_BH063	17/12/2018	Field_D	634274	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.002
SRT_BH063	SRT_BH063	17/12/2018	Normal	634274	-	-	-	<0.005	<10	290	-	-	-	58	-	33	-	6.4	-	75	-	76	56	-	-	-	-	<0.01	0.24	<0.001	<0.0002	<0.001	0.003
QA01	SRT_BH063	17/01/2019	Field_D	636542	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.004
SRT_BH063	SRT_BH063	17/01/2019	Normal	636542	-	-	-	0.018	<10	290	-	-	-	57	-	32	-	5.4	-	70	-	68	52	-	-	-	-	<0.01	0.13	<0.001	<0.0002	<0.001	0.047
QA02	SRT_BH063	21/02/2019	Interlab_D	ES1905610	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	<0.0001	0.001	0.004
SRT_BH063	SRT_BH063	21/02/2019	Normal	641720	-	-	-	<0.005	<10	250	-	-	-	51	-	33	-	5.8	-	73	-	71	61	-	-	-	-	<0.01	0.13	<0.001	<0.0002	<0.001	0.029
SRT_BH063	SRT_BH063	18/04/2019	Normal	651825	-	-	-	<0.005	<10	310	-	-	-	54	-	36	-	6.1	-	70	-	74	58	-	-	-	-	<0.01	0.10	<0.001	<0.0002	<0.001	0.055
SRT_BH063	SRT_BH063	15/05/2019	Normal	656080	8.2	460	20	<0.005	<10	340	-	-	-	50	-	33	-	5.7	-	62	-	89	49	-	-	-	-	<0.01	<0.02	<0.001	<0.0002	<0.001	0.005
SRT_BH063	SRT_BH063	07/06/2019	Normal	660130	7.4	360	41	<0.005	<10	310	-	-	-	55	-	30	-	6.8	-	71	-	77	48	-	-	-	-	<0.01	0.40	<0.001	<0.0002	<0.001	0.002
SRT-BH063	SRT_BH063	29/07/2019	Normal	669059	7	460	33	<0.005	<10	300	-	-	-	54	-	35	-	5.7	-	68	-	66	51	-	-	-	-	<0.01	0.07	<0.001	<0.0002	<0.001	0.003
SRT_BH063	SRT_BH063	28/08/2019	Normal	674722	7.8	470	56	<0.005	<10	310	-	-	-	55	-	35	-	5.8	-	68	-	66	50	-	-	-	-	<0.01	0.34	<0.001	<0.0002	<0.001	0.010
SRT-BH064	SRT_BH064	06/09/2018	Normal	616629	-	-	-	0.028	34	46	-	-	-	5.7	-	0.7	-	18	-	63	-	23	58	-	-	-	-	<0.01	2.3	0.005	<0.0002	<0.001	0.024
QA01	SRT_BH082	25/10/2018	Field_D	624838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
SRT-BH082	SRT_BH082	25/10/2018	Normal	624838	-	-	-	<0.005	<10	<20	-	-	-	2.9	-	4.0	-	1.3	-	27	-	16	36	-	-	-	-	<0.01	0.34	<0.001	<0.0002	<0.001	<0.001
QA01	SRT_BH082	26/11/2018	Field_D	629922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.073
SRT_BH082	SRT_BH082	26/11/2018	Normal	629922	-	-	-	<0.005	<10	<20	-	-	-	2.3	-	3.6	-	1.1	-	25	-	38	31	-	-	-	-	<0.01	0.36	<0.001	<0.0002	<0.001	0.007
QA01	SRT_CBH001	06/09/2018	Field_D	616629	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.041
SRT-CBH001	SRT_CBH001	06/09/2018	Normal	616629	-	-	-	<0.005	<10	22	-	-	-	8.7	-	6.8	-	1.8	-	24	-	17	34	-	-	-	-	<0.01	9.2	<0.001	<0.0002	<0.001	0.003
SRT-CBH001	SRT_CBH001	25/10/2018	Normal	624838	-	-	-	<0.005	<10	<20	-	-	-	5.9	-	4.4	-	1.6	-	24	-	17	32	-	-	-	-	<0.01	7.1	<0.001	<0.0002	<0.001	0.13
SRT_CBH001	SRT_CBH001	26/11/2018	Normal	629922	-	-	-	<0.005	<10	<20	-	-	-	6.6	-	4.9	-	1.6	-	21	-	35	32	-	-	-	-	<0.01	7.8	<0.001	<0.0002	<0.001	0.042

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
SRT-CBH007	SRT_CBH007	06/09/2018	Normal	616629	-	-	-	0.012	<10	<20	-	-	-	1.4	-	3.0	-	1.7	-	25	-	9.7	46	-	-	-	-	<0.01	1.9	<0.001	<0.0002	<0.001	0.36
SRT-CBH015	SRT_CBH015	07/09/2018	Normal	616629	-	-	-	<0.005	<10	32	-	-	-	4.0	-	5.7	-	3.8	-	27	-	11	79	-	-	-	-	<0.01	4.3	<0.001	<0.0002	<0.001	0.038
SRT-CBH015	SRT_CBH015	25/10/2018	Normal	624838	-	-	-	<0.005	<10	49	-	-	-	3.1	-	4.8	-	3.2	-	35	-	9.8	49	-	-	-	-	<0.01	2.7	<0.001	<0.0002	<0.001	0.034
SRT_CBH015	SRT_CBH015	26/11/2018	Normal	629922	-	-	-	<0.005	<10	30	-	-	-	2.9	-	5.3	-	3.8	-	24	-	11	45	-	-	-	-	<0.01	3.5	<0.001	<0.0002	<0.001	<0.001
QA02	SRT_CBH015	17/12/2018	Interlab_D	ES1838345	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	0.0001	<0.001	<0.001
SRT_CBH015	SRT_CBH015	17/12/2018	Normal	634274	-	-	-	<0.005	<10	33	-	-	-	3.4	-	5.0	-	3.6	-	28	-	12	52	-	-	-	-	<0.01	3.7	<0.001	<0.0002	<0.001	0.019
QA02	SRT_CBH015	18/01/2019	Interlab_D	ES1901871	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	0.0002	<0.001	0.037
SRT_CBH015	SRT_CBH015	18/01/2019	Normal	636542	-	-	-	0.019	<10	30	-	-	-	3.2	-	5.4	-	3.4	-	24	-	12	47	-	-	-	-	<0.01	3.1	<0.001	<0.0002	<0.001	0.002
SRT_CBH015	SRT_CBH015	20/02/2019	Normal	641720	-	-	-	<0.005	<10	30	-	-	-	2.5	-	4.4	-	3.1	-	23	-	13	49	-	-	-	-	<0.01	3.0	<0.001	<0.0002	<0.001	0.001
SRT_CBH015	SRT_CBH015	17/04/2019	Normal	651825	-	-	-	<0.005	<10	39	-	-	-	4.0	-	5.8	-	3.9	-	30	-	16	52	-	-	-	-	<0.01	3.5	<0.001	<0.0002	<0.001	0.001
SRT_CBH015	SRT_CBH015	15/05/2019	Normal	656080	6.5	140	1.7	<0.005	<10	34	-	-	-	2.7	-	5.3	-	3.5	-	29	-	13	48	-	-	-	-	0.03	3.0	<0.001	<0.0002	<0.001	0.007
SRT_CBH015	SRT_CBH015	07/06/2019	Normal	660130	6.1	96	1.6	<0.005	<10	26	-	-	-	2.2	-	4.8	-	3.3	-	27	-	29	47	-	-	-	-	0.03	3.3	<0.001	<0.0002	<0.001	<0.001
QC02	SRT_CBH015	31/07/2019	Field_D	669059	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
SRT-CBH015	SRT_CBH015	31/07/2019	Normal	669059	6	130	5.1	<0.005	<10	22	-	-	-	2.6	-	5.7	-	3.8	-	22	-	37	42	-	-	-	-	<0.01	3.2	<0.001	<0.0002	<0.001	<0.001
QC02	SRT_CBH015	30/08/2019	Field_D	674722	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.002
SRT_CBH015	SRT_CBH015	30/08/2019	Normal	674722	6.3	180	10	<0.005	<10	25	-	-	-	2.7	-	5.7	-	4.0	-	23	-	9.5	49	-	-	-	-	<0.01	2.3	<0.001	<0.0002	<0.001	0.002
SRT_CBH015	SRT_CBH015	27/09/2019	Normal	679636	6.3	120	5.1	<0.005	<10	28	-	-	-	2.7	-	5.1	-	3.2	-	24	-	10	47	-	-	-	-	<0.01	2.7	<0.001	<0.0002	<0.001	0.005
SRT_CBH015	SRT_CBH015	18/10/2019	Normal	683453	6.3	150	10	<0.005	<10	23	-	-	-	2.8	-	5.3	-	3.5	-	19	-	15	39	-	-	-	-	<0.01	3.0	<0.001	<0.0002	<0.001	0.001
SRT_CBH015	SRT_CBH015	15/11/2019	Normal	688512	6.3	140	2.9	<0.005	<10	22	-	-	-	3.1	-	5.6	-	3.5	-	19	-	64	41	-	-	-	-	0.02	2.8	<0.001	<0.0002	<0.001	0.001
SRT_CBH015	SRT_CBH015	18/12/2019	Normal	694466	6.1	120	39	<0.004	<10	25	-	-	-	3.0	-	5.3	-	3.4	-	18	-	14	45	-	-	-	-	0.06	2.4	<0.001	<0.0002	<0.001	<0.001
SRT-CBH017	SRT_CBH017	07/09/2018	Normal	616629	-	-	-	<0.005	<10	78	-	-	-	16	-	8.1	-	3.5	-	19	-	9.7	21	-	-	-	-	<0.01	0.20	<0.001	<0.0002	<0.001	0.038
SRT-CBH017	SRT_CBH017	25/10/2018	Normal	624838	-	-	-	<0.005	<10	65	-	-	-	13	-	6.0	-	2.9	-	14	-	8.8	19	-	-	-	-	<0.01	0.62	<0.001	<0.0002	<0.001	0.081
SRT_CBH017	SRT_CBH017	26/11/2018	Normal	629922	-	-	-	<0.005	<10	84	-	-	-	15	-	6.7	-	2.7	-	13	-	16	18	-	-	-	-	<0.01	0.38	<0.001	<0.0002	<0.001	0.12
SRT_CBH017	SRT_CBH017	17/12/2018	Normal	634274	-	-	-	<0.005	<10	42	-	-	-	19	-	9.0	-	3.2	-	17	-	11	17	-	-	-	-	<0.01	2.5	<0.001	<0.0002	<0.001	0.003
SRT_CBH017	SRT_CBH017	18/01/2019	Normal	636542	-	-	-	0.017	<10	44	-	-	-	13	-	6.7	-	2.7	-	12	-	7.9	12	-	-	-	-	<0.01	1.9	<0.001	<0.0002	<0.001	0.002
QA01	SRT_CBH017	20/02/2019	Field_D	641720	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	0.002	<0.001
SRT_CBH017	SRT_CBH017	20/02/2019	Normal	641720	-	-	-	<0.005	<10	32	-	-	-	8.7	-	5.0	-	2.7	-	9.6	-	15	16	-	-	-	-	<0.01	3.1	<0.001	<0.0002	<0.001	0.032
SRT_CBH017	SRT_CBH017	17/04/2019	Normal	651825	-	-	-	<0.005	<10	44	-	-	-	9.6	-	4.9	-	3.2	-	9.2	-	8.8	15	-	-	-	-	<0.01	3.1	<0.001	<0.0002	<0.001	0.001
SRT_CBH017	SRT_CBH017	15/05/2019	Normal	656080	6.7	88	16	<0.005	<10	30	-	-	-	10	-	6.8	-	3.0	-	11	-	19	17	-	-	-	-	<0.01	4.4	<0.001	<0.0002	<0.001	0.003
SRT_CBH017	SRT_CBH017	07/06/2019	Normal	660130	6.8	81	8.8	<0.005	<10	52	-	-	-	7.1	-	6.5	-	3.1	-	15	-	12	19	-	-	-	-	0.03	1.9	<0.001	<0.0002	<0.001	<0.001
SRT-CBH017	SRT_CBH017	31/07/2019	Normal	669059	6.8	130	79	<0.005	<10	59	-	-	-	11	-	9.8	-	3.4	-	20	-	50	23	-	-	-	-	<0.01	0.48	<0.001	<0.0002	<0.001	0.002
SRT_CBH017	SRT_CBH017	30/08/2019	Normal	674722	7.0	180	3.8	<0.005	<10	67	-	-	-	12	-	9.6	-	3.4	-	19	-	13	26	-	-	-	-	<0.01	0.32	<0.001	<0.0002	<0.001	0.005
QC02	SRT_CBH017	27/09/2019	Field_D	679636	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.001
SRT_CBH017	SRT_CBH017	27/09/2019	Normal	679636	7.1	120	2.0	<0.005	<10	66	-	-	-	12	-	9.6	-	3.1	-	20	-	16	30	-	-	-	-	<0.01	0.38	<0.001	<0.0002	<0.001	0.001
SRT_CBH017	SRT_CBH017	18/10/2019	Normal	683453	7.1	150	2.3	<0.005	<10	63	-	-	-	11	-	9.1	-	3.2	-	21	-	15	32	-	-	-	-	<0.01	0.33	<0.001	<0.0002	<0.001	0.017
SRT_CBH017	SRT_CBH017	15/11/2019	Normal	688512	7.2	150	5.1	<0.005	<10	77	-	-	-	14	-	11	-	3.6	-	24	-	50	30	-	-	-	-	<0.01	0.19	<0.001	<0.0002	<0.001	<0.001
SRT_CBH017	SRT_CBH017	18/12/2019	Normal	694466	7.0	150	9.6	<0.004	<10	78	-	-	-	13	-	10	-	3.5	-	21	-	13	31	-	-	-	-	0.02	0.31	<0.001	<0.0002	<0.001	<0.001
SRT_CBH017	SRT_CBH017	20/01/2020	Normal	698379	6.2	200	49	<0.004	<10	110	-	-	-	12	-	10	-	2.8	-	20	-	85	34	-	-	-	-	0.01	0.03	<0.001	<0.0002	<0.001	0.014

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																								
CSM_BH02	CSM_BH02	16/04/2019	Normal	651825	-	<0.001	-	0.20	<0.0001	0.012	0.006	1.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH02	CSM_BH02	14/05/2019	Normal	656080	-	<0.001	-	0.55	<0.0001	0.012	0.010	1.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	06/06/2019	Normal	660130	-	<0.001	-	0.33	<0.0001	0.009	0.016	0.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	60	60	200	100	360	<50	<100	<100
CSM_BH02	CSM_BH02	30/07/2019	Normal	669059	-	<0.001	-	0.13	<0.0001	0.004	0.007	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	29/08/2019	Normal	674722	-	<0.001	-	0.24	<0.0001	0.006	0.007	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	26/09/2019	Normal	679636	-	<0.001	-	0.26	<0.0001	0.015	0.011	1.2	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	17/10/2019	Normal	683453	-	<0.001	-	0.33	<0.0001	0.028	0.048	1.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	13/11/2019	Normal	688512	-	<0.001	-	0.29	<0.0001	0.025	0.010	1.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	17/12/2019	Normal	694466	-	<0.001	-	0.19	<0.0001	0.009	0.012	0.68	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	21/01/2020	Normal	698379	-	<0.001	-	0.26	<0.0001	0.027	0.010	1.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	25/02/2020	Normal	704673	-	<0.001	-	0.12	<0.0001	0.021	0.008	0.10	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	260	260	300	<100	560	<50	<100	<100
CSM_BH02	CSM_BH02	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/03/2020	Normal	708508	-	<0.001	-	0.091	<0.0001	0.009	0.041	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH02	CSM_BH02	14/04/2020	Normal	714027	-	<0.001	-	0.090	<0.0001	0.004	0.015	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	19/05/2020	Normal	720682	-	<0.001	-	0.63	<0.0001	0.014	0.035	1.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	18/06/2020	Normal	726825	-	<0.001	-	0.35	<0.0001	0.023	0.008	3.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH02	18/06/2020	Field_D	726825	-	<0.001	-	-	<0.0001	0.025	0.032	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH02	CSM_BH02	15/07/2020	Normal	732590	-	<0.001	-	0.30	<0.0001	0.027	0.016	3.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH02	CSM_BH02	18/08/2020	Normal	738860	-	0.002	-	0.13	<0.0001	0.013	0.046	0.09	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	14/09/2020	Normal	744463	-	<0.001	-	0.49	<0.0001	0.019	0.014	2.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH02	14/09/2020	Field_D	744463	-	<0.001	-	-	<0.0001	0.020	0.014	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH02	CSM_BH02	27/10/2020	Normal	753369	-	<0.001	-	0.040	<0.0001	0.007	0.024	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	19/11/2020	Normal	758435	-	<0.001	-	0.044	<0.0001	0.004	0.022	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	23/12/2020	Normal	765715	-	<0.001	0.36	-	<0.0001	0.009	0.015	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	27/01/2021	Normal	770782	-	<0.001	-	0.13	<0.0001	0.003	0.015	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH02	27/01/2021	Field_D	770782	-	<0.001	-	-	<0.0001	0.003	0.011	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH02	CSM_BH02	18/02/2021	Normal	775277	25	<0.001	0.45	-	<0.0001	0.007	0.012	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	300	300	100	500	900	300	100	500
CSM_BH02	CSM_BH02	17/03/2021	Normal	781353	-	<0.001	-	0.11	0.0001	0.008	0.017	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	27/04/2021	Normal	791517	-	<0.001	4.3	-	<0.0001	0.019	0.044	0.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	25/05/2021	Normal	799115	-	<0.001	-	0.37	<0.0001	0.010	0.020	0.33	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	15/06/2021	Normal	803914	-	<0.001	-	0.10	<0.0001	0.019	0.020	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM-BH02	CSM_BH02	12/07/2021	Normal	810513	-	<0.001	-	0.094	<0.0001	0.005	0.015	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	09/08/2021	Normal	816445	-	<0.001	-	0.068	<0.0001	0.01	0.021	0.13	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	28/09/2021	Normal	829222	-	<0.001	-	0.059	<0.0001	0.033	0.010	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	27/10/2021	Normal	836474	-	<0.001	-	0.25	<0.0001	0.004	0.011	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH02	CSM_BH02	25/11/2021	Normal	846135	-	<0.001	0.63	-	<0.0001	0.005	<0.005	0.09	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	14/12/2021	Normal	851006	-	<0.001	-	0.005	<0.0001	0.012	0.13	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	18/01/2022	Normal	856960	-	<0.001	-	0.013	<0.0001	0.007	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH02	18/01/2022	Field_D	856960	-	<0.001	-	-	<0.0001	0.006	<0.005	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH02	CSM_BH02	10/02/2022	Normal	862315	-	0.002	-	0.10	<0.0001	0.008	<0.005	0.23	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	18/03/2022	Normal	872459	-	<0.001	-	0.018	<0.0001	0.010	0.026	0.13	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	16/04/2019	Normal	651825	-	<0.001	-	0.36	<0.0001	0.010	<0.005	11	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	13/05/2019	Normal	656080	-	<0.001	-	0.30	<0.0001	0.029	0.29	0.12	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	11/06/2019	Normal	660130	-	<0.001	-	0.44	<0.0001	0.023	0.051	7.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	<100	200	<50	<100	<100
CSM_BH04	CSM_BH04	30/07/2019	Normal	669059	-	<0.001	-	0.42	<0.0001	0.018	0.025	1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	29/08/2019	Normal	674722	-	<0.001	-	0.45	<0.0001	0.037	0.10	2.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	26/09/2019	Normal	679636	-	<0.001	-	0.18	<0.0001	0.002	<0.005	0.10	<1	2	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
CSM_BH04	CSM_BH04	17/10/2019	Normal	683453	-	<0.001	-	0.048	<0.0001	0.001	<0.005	0.08	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH04	17/10/2019	Field_D	683453	-	<0.001	-	-	<0.0001	0.001	<0.005	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	13/11/2019	Normal	688512	-	<0.001	-	0.33	<0.0001	0.010	<0.005	2.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH04	13/11/2019	Interlab_D	ES1937682	-	<0.001	-	-	<0.0001	0.010	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	17/12/2019	Normal	694466	-	<0.001	-	0.32	<0.0001	0.021	0.014	9.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	21/01/2020	Normal	698379	-	<0.001	-	0.37	<0.0001	0.007	0.041	8.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH04	21/01/2020	Field_D	698379	-	<0.001	-	-	<0.0001	0.008	0.041	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	<100	200	-	-	-
CSM_BH04	CSM_BH04	25/02/2020	Normal	704673	-	<0.001	-	0.34	<0.0001	0.025	0.021	9.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	25/02/2020	Field_D	704673	-	<0.001	-	-	<0.0001	0.026	0.021	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	300	<100	300	-	-	-
CSM_BH04	CSM_BH04	18/03/2020	Normal	708508	-	<0.001	-	0.33	<0.0001	0.007	0.026	17	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	14/04/2020	Normal	714027	-	<0.001	-	0.35	<0.0001	0.006	0.018	7.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	20/05/2020	Normal	720682	-	<0.01	-	1.7	<0.001	0.026	<0.05	8.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	18/06/2020	Normal	726825	-	<0.001	-	0.40	0.0001	0.033	0.085	5.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	15/07/2020	Normal	732590	-	<0.001	-	0.43	<0.0001	0.038	0.018	1.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	60	60	100	<100	160	50	<100	<100
CSM_BH04	CSM_BH04	17/08/2020	Normal	738860	-	<0.001	-	0.51	<0.0001	0.048	0.039	3.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH04	17/08/2020	Interlab_D	ES2028968	-	<0.001	-	-	<0.0001	0.043	0.035	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	14/09/2020	Normal	744463	-	0.003	-	0.44	<0.0001	0.032	0.11	5.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	27/10/2020	Normal	753369	-	<0.001	-	0.33	<0.0001	0.037	0.093	5.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	19/11/2020	Normal	758435	-	<0.001	-	0.33	<0.0001	0.010	0.097	7.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH04	19/11/2020	Field_D	758435	-	<0.001	-	-	<0.0001	0.010	0.053	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	23/12/2020	Normal	765715	-	<0.001	7.4	-	<0.0001	0.046	0.070	8.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	27/01/2021	Normal	770782	-	<0.001	-	0.46	<0.0001	0.019	0.034	4.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH04	27/01/2021	Interlab_D	ES2102832	-	<0.001	-	-	<0.0001	0.014	0.028	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	17/02/2021	Normal	775277	24	<0.001	0.57	-	<0.0001	0.024	0.016	3.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	70	70	200	200	470	<50	<100	<100
QC01	CSM_BH04	17/02/2021	Field_D	775277	-	<0.001	-	-	<0.0001	0.023	0.013	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	17/03/2021	Normal	781353	-	<0.001	-	0.42	<0.0001	0.026	0.027	3.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH04	17/03/2021	Interlab_D	ES2109792	-	<0.001	-	-	<0.0001	0.023	0.023	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	27/04/2021	Normal	791517	-	<0.001	1.2	-	<0.0001	0.046	0.084	3.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	25/05/2021	Normal	799115	-	<0.001	-	0.40	<0.0001	0.057	0.064	5.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH04	25/05/2021	Interlab_D	ES2119803	-	<0.001	-	-	<0.0001	0.059	0.059	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	15/06/2021	Normal	803914	-	<0.001	-	0.40	<0.0001	0.025	0.054	6.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	50	50	100	<100	150	<50	<100	<100
QC01	CSM_BH04	15/06/2021	Field_D	803914	-	<0.001	-	-	<0.0001	0.026	0.057	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM-BH04	CSM_BH04	12/07/2021	Normal	810513	-	<0.001	-	0.37	<0.0001	0.041	0.031	10	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH04	12/07/2021	Field_D	810513	-	<0.001	-	-	<0.0001	0.042	0.030	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	09/08/2021	Normal	816445	-	<0.001	-	0.41	<0.0001	0.036	0.036	3.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH04	09/08/2021	Field_D	816445	-	<0.001	-	-	<0.0001	0.038	0.041	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	28/09/2021	Normal	829222	-	<0.001	-	0.47	<0.0001	0.039	0.017	3.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	27/10/2021	Normal	836474	-	<0.001	-	0.47	<0.0001	0.011	0.015	3.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH04	CSM_BH04	23/11/2021	Normal	846135	-	<0.001	0.70	-	<0.0001	0.014	0.046	1.6	<1	<1	<1	<1	<2	<3	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/12/2021	Normal	851006	-	<0.001	-	0.39	<0.0001	0.01	0.23	6.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	18/01/2022	Normal	856960	-	<0.001	-	0.35	<0.0001	0.051	0.008	3.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	<100	200	<50	<100	<100
QC02	CSM_BH04	18/01/2022	Interlab_D	ES2201646	-	<0.001	-	-	<0.0001	0.052	0.010	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	09/02/2022	Normal	862315	-	0.003	-	0.40	<0.0001	0.10	0.081	4.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	16/03/2022	Normal	872459	-	<0.001	-	0.41	<0.0001	0.027	0.13	3.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH05	CSM_BH05	17/04/2019	Normal	651825	-	<0.001	-	0.36	<0.0001	0.011	0.011	1.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	900	200	1,100	<50	<100	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																								
CSM_BH05	CSM_BH05	13/05/2019	Normal	656080	-	<0.001	-	0.37	<0.0001	0.008	0.027	0.99	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH05	CSM_BH05	11/06/2019	Normal	660130	-	<0.001	-	0.44	<0.0001	0.005	0.023	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH05	CSM_BH05	29/07/2019	Normal	669059	-	<0.001	-	0.45	<0.0001	0.011	0.024	1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	18/04/2019	Normal	651825	-	<0.001	-	0.28	<0.0001	0.014	0.032	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	300	<100	300	<50	<100	<100
CSM_BH06	CSM_BH06	14/05/2019	Normal	656080	-	<0.001	-	0.25	<0.0001	0.011	0.054	2.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH06	14/05/2019	Field_D	656080	-	<0.001	-	-	<0.0001	0.011	0.053	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH06	CSM_BH06	06/06/2019	Normal	660130	-	<0.001	-	0.28	<0.0001	0.020	0.050	2.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
QC04	CSM_BH06	08/06/2019	Field_D	660130	-	<0.001	-	-	<0.0001	0.020	0.052	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH06	CSM_BH06	30/07/2019	Normal	669059	-	<0.001	-	0.21	<0.0001	0.019	0.035	0.56	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	28/08/2019	Normal	674722	-	<0.001	-	0.23	<0.0001	0.019	0.086	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	26/09/2019	Normal	679636	-	<0.001	-	0.17	<0.0001	0.036	0.094	0.59	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	17/10/2019	Normal	683453	-	<0.001	-	0.36	<0.0001	0.027	0.14	2.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	13/11/2019	Normal	688512	-	<0.001	-	0.33	<0.0001	0.053	0.024	2.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	17/12/2019	Normal	694466	-	<0.001	-	0.29	<0.0001	0.026	0.054	2.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH06	17/12/2019	Field_D	694466	-	<0.001	-	-	<0.0001	0.027	0.056	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	300	<100	300	-	-	-
CSM_BH06	CSM_BH06	25/02/2020	Normal	704673	-	<0.001	-	0.28	<0.0001	0.010	0.067	6.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	16/03/2020	Normal	708508	-	<0.001	-	0.34	<0.0001	0.006	0.041	5.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
QC01	CSM_BH06	16/03/2020	Interlab_D	ES2009232	-	<0.001	-	-	<0.0001	0.005	0.038	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH06	CSM_BH06	14/04/2020	Normal	714027	-	<0.001	-	0.27	<0.0001	0.007	0.054	5.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH06	14/04/2020	Interlab_D	ES2012716	-	<0.001	-	-	<0.0001	0.012	0.098	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH06	CSM_BH06	19/05/2020	Normal	720682	-	<0.001	-	0.31	<0.0001	0.022	0.011	6.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	18/06/2020	Normal	726825	-	<0.001	-	0.37	<0.0001	0.004	0.036	8.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	15/07/2020	Normal	732590	-	0.001	-	0.29	<0.0001	0.085	0.17	4.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH06	CSM_BH06	18/08/2020	Normal	738860	-	<0.001	-	0.38	<0.0001	0.015	0.056	7.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	14/09/2020	Normal	744463	-	<0.001	-	0.40	<0.0001	0.017	0.043	8.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	27/10/2020	Normal	753369	-	<0.001	-	0.33	<0.0001	0.018	0.085	6.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	19/11/2020	Normal	758435	-	<0.001	-	0.44	<0.0001	0.007	0.078	9.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	22/12/2020	Normal	765715	-	<0.001	0.74	-	<0.0001	0.017	0.041	11	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	27/01/2021	Normal	770782	-	<0.001	-	0.28	<0.0001	0.017	0.053	6.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	18/02/2021	Normal	775277	19	<0.001	0.38	-	<0.0001	0.010	0.038	3.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	130	130	<100	<100	130	130	<100	<100
CSM_BH06	CSM_BH06	17/03/2021	Normal	781353	-	<0.001	-	0.27	<0.0001	0.010	0.093	0.60	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	27/04/2021	Normal	791517	-	<0.001	0.30	-	<0.0001	0.046	0.053	0.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	25/05/2021	Normal	799115	-	<0.001	-	0.44	<0.0001	0.012	0.066	2.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH06	25/05/2021	Field_D	799115	-	<0.001	-	-	<0.0001	0.012	0.069	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	100	<100	100	-	-	-
CSM_BH06	CSM_BH06	16/06/2021	Normal	803914	-	<0.001	-	0.37	<0.0001	0.055	0.063	1.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM-BH06	CSM_BH06	12/07/2021	Normal	810513	-	<0.001	-	0.45	<0.0001	0.010	0.042	2.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	09/08/2021	Normal	816445	-	<0.001	-	0.43	<0.0001	0.011	0.13	1.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	29/09/2021	Normal	829222	-	<0.001	-	0.38	<0.0001	0.034	0.067	2.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	28/10/2021	Normal	836474	-	<0.001	-	0.41	<0.0001	0.005	0.040	0.75	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH06	CSM_BH06	25/11/2021	Normal	846135	-	<0.001	0.21	-	<0.0001	0.003	0.005	0.35	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	15/12/2021	Normal	851006	-	<0.001	-	0.51	<0.0001	0.016	0.26	1.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	27/01/2022	Normal	858641	-	<0.001	-	0.27	<0.0001	0.003	<0.005	0.97	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	09/02/2022	Normal	862315	-	<0.001	-	0.23	<0.0001	0.061	0.22	1.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	17/03/2022	Normal	872459	-	<0.001	-	0.38	<0.0001	0.009	0.094	0.73	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	18/04/2019	Normal	651825	-	<0.001	-	0.34	<0.0001	0.007	0.020	6.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																								
QC02	CSM_BH08	18/04/2019	Field_D	651825	-	<0.001	-	-	<0.0001	0.007	0.015	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	15/05/2019	Normal	656080	-	<0.001	-	0.30	<0.0001	0.003	0.015	5.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	06/06/2019	Normal	660130	-	<0.001	-	0.37	<0.0001	0.006	0.041	3.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
QC03	CSM_BH08	06/06/2019	Interlab_D	ES1917968	-	<0.001	-	-	<0.0001	0.006	0.034	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	30/07/2019	Normal	669059	-	<0.001	-	0.34	<0.0001	0.021	0.011	4.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	29/08/2019	Normal	674722	-	<0.001	-	0.40	<0.0001	0.016	0.16	6.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	26/09/2019	Normal	679636	-	<0.001	-	0.32	<0.0001	0.002	0.014	6.2	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	18/10/2019	Normal	683453	-	<0.001	-	0.30	<0.0001	0.003	0.013	6.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	13/11/2019	Normal	688512	-	<0.001	-	0.29	<0.0001	0.007	<0.005	5.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	16/12/2019	Normal	694466	-	<0.001	-	0.25	<0.0001	0.008	0.032	5.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	21/01/2020	Normal	698379	-	<0.001	-	0.31	<0.0001	0.003	0.022	5.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	25/02/2020	Normal	704673	-	<0.001	-	0.29	<0.0001	0.001	0.015	4.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/03/2020	Normal	708508	-	<0.001	-	0.29	<0.0001	0.002	0.028	3.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	14/04/2020	Normal	714027	-	<0.001	-	0.31	<0.0001	0.002	0.019	4.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	18/05/2020	Normal	720682	-	<0.001	-	0.29	<0.0001	0.005	0.015	4.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH08	18/05/2020	Interlab_D	ES2017182	-	<0.001	-	-	<0.0001	0.005	0.023	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	17/06/2020	Normal	726825	-	<0.001	-	0.29	<0.0001	0.014	0.020	4.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	17/06/2020	Interlab_D	ES2021404	-	<0.001	-	-	<0.0001	0.010	0.016	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	15/07/2020	Normal	732590	-	<0.001	-	0.25	<0.0001	0.015	0.034	3.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
QC01	CSM_BH08	15/07/2020	Interlab_D	ES2024606	-	<0.001	-	-	<0.0001	0.016	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	19/08/2020	Normal	738860	-	<0.001	-	0.31	<0.0001	0.004	0.015	4.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	50	50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	14/09/2020	Normal	744463	-	<0.001	-	0.30	<0.0001	0.004	0.012	5.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH08	14/09/2020	Interlab_D	ES2032425	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	27/10/2020	Normal	753369	-	<0.001	-	0.21	<0.0001	0.020	0.21	3.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH08	27/10/2020	Field_D	753369	-	<0.001	-	-	<0.0001	0.022	0.24	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
QC02	CSM_BH08	27/10/2020	Interlab_D	ES2037870	-	0.008	-	-	<0.0001	0.030	0.312	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	19/11/2020	Normal	758435	-	<0.001	-	0.28	<0.0001	0.018	0.054	4.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
BD01	CSM_BH08	21/12/2020	Field_D	765715	-	<0.001	-	-	<0.0001	0.023	0.045	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	21/12/2020	Normal	765715	-	<0.001	0.29	-	<0.0001	0.024	0.045	3.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SD01	CSM_BH08	21/12/2020	Interlab_D	ES2100056	-	<0.001	-	-	<0.0001	0.022	0.048	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	28/01/2021	Normal	770782	-	0.004	-	0.29	<0.0001	0.028	0.18	4.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	19/02/2021	Normal	775277	32	<0.001	1.7	-	<0.0001	0.002	<0.005	4.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	100	100	<50	<100	100
CSM_BH08	CSM_BH08	17/03/2021	Normal	781353	-	<0.001	-	0.39	<0.0001	0.005	0.024	4.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH08	17/03/2021	Field_D	781353	-	<0.001	-	-	<0.0001	0.005	0.024	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	27/04/2021	Normal	791517	-	0.001	0.52	-	<0.0001	0.087	0.16	4.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH08	27/04/2021	Interlab_D	ES2115835	-	<0.001	-	-	<0.0001	0.093	0.191	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	27/05/2021	Normal	799115	-	<0.001	-	0.40	<0.0001	0.004	0.023	1.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	15/06/2021	Normal	803914	-	<0.001	-	0.33	<0.0001	0.028	0.031	6.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH08	15/06/2021	Interlab_D	ES2122606	-	<0.001	-	-	<0.0001	0.031	0.039	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM-BH08	CSM_BH08	12/07/2021	Normal	810513	-	<0.001	-	0.34	<0.0001	0.023	0.024	5.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	10/08/2021	Normal	816445	-	<0.001	-	0.39	<0.0001	0.06	0.032	6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH08	10/08/2021	Interlab_D	ES2129447	-	<0.001	-	-	<0.0001	0.050	0.029	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	28/09/2021	Normal	829222	-	<0.001	-	0.42	<0.0001	0.019	0.025	5.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH08	28/09/2021	Interlab_D	EM2119579	-	<0.001	-	-	<0.0001	0.017	0.008	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	27/10/2021	Normal	836474	-	<0.001	-	0.39	<0.0001	0.002	<0.005	6.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH08	27/10/2021	Interlab_D	ES2139173	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																								
CSM BH08	CSM_BH08	24/11/2021	Normal	846135	-	<0.001	0.46	-	<0.0001	0.057	0.090	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH08	24/11/2021	Field_D	846135	-	0.001	-	-	<0.0001	0.046	0.17	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	16/12/2021	Normal	851006	-	<0.001	-	0.43	<0.0001	0.003	0.3	4.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	18/01/2022	Normal	856960	-	<0.001	-	0.32	<0.0001	0.032	<0.005	5.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	10/02/2022	Normal	862315	-	<0.001	-	0.38	<0.0001	0.037	0.034	5.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	17/03/2022	Normal	872459	-	<0.001	-	0.42	<0.0001	0.007	0.043	6.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH09S	CSM_BH09S	17/04/2019	Normal	651825	-	<0.001	-	0.83	<0.0001	0.009	0.042	9.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
QC01	CSM_BH09S	17/04/2019	Interlab_D	ES1912362	-	<0.001	-	-	<0.0001	0.008	0.042	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	13/05/2019	Normal	656080	-	<0.001	-	0.54	<0.0001	0.004	0.019	7.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH09S	13/05/2019	Interlab_D	ES1914810	-	<0.001	-	-	<0.0001	0.005	0.018	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	11/06/2019	Normal	660130	-	<0.001	-	0.78	<0.0001	0.009	0.054	3.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	29/07/2019	Normal	669059	-	<0.001	-	0.64	<0.0001	0.006	0.036	7.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH09S	29/07/2019	Interlab_D	ES1924197	-	<0.001	-	-	<0.0001	0.007	0.040	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	28/08/2019	Normal	674722	-	<0.001	-	0.65	<0.0001	0.008	0.045	4.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH09S	28/08/2019	Interlab_D	EM1914568	-	<0.001	-	-	<0.0001	0.009	0.041	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	25/09/2019	Normal	679636	-	<0.001	-	0.79	<0.0001	0.009	0.056	4.7	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH09S	25/09/2019	Interlab_D	ES1931406	-	<0.001	-	-	<0.0001	0.008	0.048	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	16/10/2019	Normal	683453	-	<0.001	-	0.87	<0.0001	0.009	0.040	4.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH09S	CSM_BH09S	14/11/2019	Normal	688512	-	<0.001	-	0.88	<0.0001	0.008	0.041	6.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH09S	CSM_BH09S	16/12/2019	Normal	694466	-	<0.001	-	0.73	<0.0001	0.006	0.031	6.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH09S	16/12/2019	Interlab_D	ES1941823	-	<0.001	-	-	<0.0001	0.006	0.037	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	21/01/2020	Normal	698379	-	<0.001	-	0.71	<0.0001	0.004	0.023	7.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH09S	CSM_BH09S	24/02/2020	Normal	704673	-	<0.001	-	0.60	<0.0001	0.002	0.014	7.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH09S	CSM_BH09S	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	24/02/2020	Interlab_D	ES2006512	-	<0.001	-	-	<0.0001	0.003	0.011	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	17/03/2020	Normal	708508	-	<0.001	-	0.67	<0.0001	0.008	0.047	5.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	16/04/2020	Normal	714027	-	<0.001	-	0.82	<0.0001	0.005	0.028	9.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH09S	CSM_BH09S	20/05/2020	Normal	720682	-	<0.001	-	0.81	<0.0001	0.003	0.010	8.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH09s	CSM_BH09S	19/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	19/06/2020	Normal	726825	-	<0.001	-	0.70	<0.0001	0.009	0.058	8.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH09S	CSM_BH09S	16/07/2020	Normal	732590	-	<0.001	-	0.80	<0.0001	0.007	0.025	6.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
QC02	CSM_BH09S	16/07/2020	Field_D	732590	-	<0.001	-	-	<0.0001	0.007	0.025	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	18/08/2020	Normal	738860	-	<0.001	-	1.2	<0.0001	0.011	0.051	6.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH09S	18/08/2020	Field_D	738860	-	<0.001	-	-	<0.0001	0.011	0.051	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH09S	CSM_BH09S	16/09/2020	Normal	744463	-	<0.001	-	0.89	<0.0001	0.006	0.031	7.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH09S	CSM_BH09S	28/10/2020	Normal	753369	-	0.001	-	0.89	<0.0001	0.017	0.10	5.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH09S	CSM_BH09S	20/11/2020	Normal	758435	-	<0.001	-	1.1	<0.0001	0.009	0.049	5.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	100	<100	100	<50	<100	<100
CSM_BH09S	CSM_BH09S	21/12/2020	Normal	765715	-	0.002	1.3	-	<0.0001	0.022	0.15	5.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	16/04/2019	Normal	651825	-	<0.001	-	0.52	<0.0001	0.002	0.006	<0.5	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	13/05/2019	Normal	656080	-	<0.001	-	0.43	<0.0001	0.002	0.011	0.13	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	11/06/2019	Normal	660130	-	<0.001	-	0.49	<0.0001	0.001	0.006	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	30/07/2019	Normal	669059	-	<0.001	-	0.41	<0.0001	0.002	0.011	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	29/08/2019	Normal	674722	-	<0.001	-	0.48	<0.0001	0.002	0.014	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	25/09/2019	Normal	679636	-	<0.001	-	0.51	<0.0001	0.002	0.009	<0.05	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	16/10/2019	Normal	683453	-	<0.001	-	0.53	<0.0001	0.002	<0.005	0.11	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH10S	16/10/2019	Interlab_D	ES1934142	-	<0.001	-	-	<0.0001	0.001	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	14/11/2019	Normal	688512	-	<0.001	-	0.47	<0.0001	0.002	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	400	400	<100	<100	400	<50	<100	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																								
QC02	CSM_BH10S	14/11/2019	Field_D	688512	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	17/12/2019	Normal	694466	-	<0.001	-	0.45	<0.0001	0.002	0.006	0.16	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	20/01/2020	Normal	698379	-	<0.001	-	0.49	<0.0001	0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH10S	20/01/2020	Interlab_D	ES2001825	-	<0.001	-	-	<0.0001	<0.001	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	25/02/2020	Normal	704673	-	<0.001	-	0.51	<0.0001	<0.001	<0.005	0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	17/03/2020	Normal	708508	-	<0.001	-	0.54	<0.0001	0.002	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
QC02	CSM_BH10S	17/03/2020	Field_D	708508	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	15/04/2020	Normal	714027	-	<0.001	-	0.46	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH10S	15/04/2020	Field_D	714027	-	<0.001	-	-	<0.0001	<0.001	<0.005	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	18/05/2020	Normal	720682	-	<0.001	-	0.50	<0.0001	0.001	<0.005	0.12	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH10S	20/05/2020	Field_D	720682	-	<0.01	-	-	<0.001	<0.01	<0.05	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	19/06/2020	Normal	726825	-	0.001	-	0.41	<0.0001	0.008	0.059	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	19/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	15/07/2020	Normal	732590	-	<0.001	-	0.43	<0.0001	0.014	0.006	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	100	<100	100	<50	<100	<100
CSM_BH10S	CSM_BH10S	17/08/2020	Normal	738860	-	<0.001	-	0.60	<0.0001	0.003	0.009	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	15/09/2020	Normal	744463	-	0.003	-	0.51	<0.0001	0.010	0.086	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	27/10/2020	Normal	753369	-	<0.001	-	0.61	<0.0001	0.015	0.14	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	<100	200	<50	<100	<100
CSM_BH10S	CSM_BH10S	18/11/2020	Normal	758435	-	0.004	-	0.57	<0.0001	0.002	0.006	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH10S	23/11/2020	Interlab_D	ES2041428	-	0.003	-	-	<0.0001	0.013	0.153	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	21/12/2020	Normal	765715	-	<0.001	0.71	-	<0.0001	0.002	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	28/01/2021	Normal	770782	-	<0.001	-	0.58	<0.0001	0.002	0.12	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	17/02/2021	Normal	775277	4.0	0.002	0.57	-	<0.0001	0.012	0.075	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	150	150	200	200	550	80	<100	<100
QC02	CSM_BH10S	17/02/2021	Interlab_D	ES2105795	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	17/03/2021	Normal	781353	-	0.006	-	0.50	<0.0001	0.031	0.23	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	27/04/2021	Normal	791517	-	<0.001	0.56	-	<0.0001	0.002	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH10S	27/04/2021	Field_D	791517	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	26/05/2021	Normal	799115	-	<0.001	-	0.55	<0.0001	0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	110	110	700	<100	810	<50	100	<100
CSM_BH10S	CSM_BH10S	15/06/2021	Normal	803914	-	<0.001	-	0.52	<0.0001	0.002	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM-BH10S	CSM_BH10S	12/07/2021	Normal	810513	-	<0.001	-	0.49	<0.0001	0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH10S	12/07/2021	Interlab_D	ES2125823	-	<0.001	-	-	<0.0001	0.001	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	10/08/2021	Normal	816445	-	<0.001	-	0.58	<0.0001	0.002	0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	28/09/2021	Normal	829222	-	<0.001	-	0.60	<0.0001	0.002	0.018	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	27/10/2021	Normal	836474	-	<0.001	-	0.59	<0.0001	0.002	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH10S	CSM_BH10S	23/11/2021	Normal	846135	-	<0.001	0.58	-	<0.0001	0.002	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	14/12/2021	Normal	851006	-	<0.001	-	0.64	<0.0001	0.002	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH10S	14/12/2021	Field_D	851006	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	18/01/2022	Normal	856960	-	<0.001	-	0.47	<0.0001	<0.001	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	09/02/2022	Normal	862315	-	<0.001	-	0.57	<0.0001	0.002	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH10S	09/02/2022	Interlab_D	ES2204819	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	16/03/2022	Normal	872459	-	<0.001	-	0.61	<0.0001	0.002	0.007	0.14	<1	2	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH10S	16/03/2022	Field_D	872459	-	<0.001	-	-	<0.0001	0.002	0.006	-	<1	2	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH12S	CSM_BH12S	27/04/2021	Normal	791517	-	<0.001	0.65	-	<0.0001	0.009	0.033	3.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH12S	CSM_BH12S	26/05/2021	Normal	799115	-	<0.001	-	0.48	<0.0001	0.016	0.052	5.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	60	60	600	<100	660	<50	<100	<100
CSM_BH12S	CSM_BH12S	17/06/2021	Normal	803914	-	<0.001	-	0.36	<0.0001	0.009	0.025	7.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM-BH12S	CSM_BH12S	12/07/2021	Normal	810513	-	<0.001	-	0.45	<0.0001	0.014	0.054	6.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH12S	CSM_BH12S	10/08/2021	Normal	816445	-	<0.001	-	0.68	<0.0001	0.025	0.099	7.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
CSM_BH12S	CSM_BH12S	28/09/2021	Normal	829222	-	<0.001	-	0.91	<0.0001	0.032	0.13	7.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH12S	CSM_BH12S	28/10/2021	Normal	836474	-	<0.001	-	0.84	<0.0001	0.027	0.11	8.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH12S	CSM_BH12S	24/11/2021	Normal	846135	-	<0.001	0.81	-	<0.0001	0.022	0.094	5.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH12S	24/11/2021	Interlab_D	ES2144215	-	<0.001	-	-	<0.0001	0.019	0.076	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH12S	CSM_BH12S	14/12/2021	Normal	851006	-	<0.001	-	0.67	<0.0001	0.016	0.065	7.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH12S	CSM_BH12S	18/01/2022	Normal	856960	-	<0.001	-	0.53	<0.0001	0.011	0.051	4.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH12S	CSM_BH12S	08/02/2022	Normal	862315	-	<0.001	-	0.58	<0.0001	0.009	0.031	9.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH12S	CSM_BH12S	18/03/2022	Normal	872459	-	<0.001	-	0.63	<0.0001	0.012	0.047	7.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH13	CSM_BH13	29/09/2021	Normal	829222	-	<0.001	-	0.43	<0.0001	0.007	0.007	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH13	CSM_BH13	28/10/2021	Normal	836474	-	<0.001	-	0.52	<0.0001	0.011	0.017	2.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH13	CSM_BH13	25/11/2021	Normal	846135	-	<0.001	0.60	-	<0.0001	0.012	0.007	0.50	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	700	<100	700	<50	600	<100
CSM_BH13	CSM_BH13	15/12/2021	Normal	851006	-	<0.001	-	0.67	<0.0001	0.038	0.66	3.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH13	15/12/2021	Interlab_D	ES2146398	-	<0.001	-	-	<0.0001	0.033	0.572	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH13	CSM_BH13	27/01/2022	Normal	858641	-	<0.001	-	0.45	<0.0001	0.010	0.009	4.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH13	CSM_BH13	10/02/2022	Normal	862315	-	0.002	-	0.54	<0.0001	0.011	0.008	3.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH13	CSM_BH13	17/03/2022	Normal	872459	-	<0.001	-	0.52	<0.0001	0.023	0.059	7.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH14S	CSM_BH14S	29/09/2021	Normal	829222	-	<0.001	-	<0.005	<0.0001	<0.001	0.016	<0.05	<1	<1	<1	<1	<2	<3	-	<10	40	40	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH14S	CSM_BH14S	28/10/2021	Normal	836474	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	0.08	<1	<1	<1	<1	<2	<3	-	<10	40	40	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH14S	28/10/2021	Field_D	836474	-	<0.001	-	-	<0.0001	<0.001	<0.005	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM BH14S	CSM_BH14S	25/11/2021	Normal	846135	-	<0.001	0.012	-	<0.0001	<0.001	<0.005	0.07	<1	<1	<1	<1	<2	<3	-	<10	30	30	<50	<50	300	<100	300	<50	300	<100
CSM_BH14S	CSM_BH14S	15/12/2021	Normal	851006	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	20	20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH14S	CSM_BH14S	27/01/2022	Normal	858641	-	<0.001	-	0.006	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH14S	CSM_BH14S	09/02/2022	Normal	862315	-	<0.001	-	0.014	<0.0001	0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	20	20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH14S	CSM_BH14S	17/03/2022	Normal	872459	-	<0.001	-	0.028	<0.0001	<0.001	<0.005	0.17	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH7	GASW_BH7	05/06/2019	Normal	659250	-	<0.001	-	0.30	<0.0001	0.002	0.039	5.4	1	<1	<1	<1	<2	<3	-	<10	<20	<20	630	630	400	<100	1,030	<50	<100	<100
QC01	GASW_BH7	05/06/2019	Interlab_D	ES1917381	-	<0.001	-	-	<0.0001	0.002	0.040	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	380	380	210	<100	590	-	-	-
GASW_BH7	GASW_BH7	30/07/2019	Normal	669059	-	0.001	-	0.12	<0.0001	0.003	0.059	17	9	<1	<1	<1	<2	<3	-	<10	20	30	140	140	<100	<100	140	<50	<100	<100
GASW_BH7	GASW_BH7	28/08/2019	Normal	674722	-	0.002	-	0.13	<0.0001	0.006	0.078	19	27	<1	<1	<1	<2	<3	-	<10	20	50	450	450	200	<100	650	<50	<100	<100
GASW_BH7	GASW_BH7	25/09/2019	Normal	679636	-	0.003	-	0.11	<0.0001	0.002	0.064	12	70	6	<1	1	<2	<3	-	<10	30	110	840	840	400	<100	1,240	240	<100	<100
GASW_BH7	GASW_BH7	16/10/2019	Normal	683453	-	0.003	-	0.11	<0.0001	0.002	0.033	14	91	8	<1	1	<2	<3	-	<10	80	180	810	810	400	<100	1,210	190	<100	<100
GASW_BH7	GASW_BH7	14/11/2019	Normal	688512	-	0.002	-	0.098	<0.0001	0.002	0.036	16	130	8	1	2	3	4	-	<10	120	260	300	300	<100	<100	300	<50	<100	<100
GASW_BH7	GASW_BH7	16/12/2019	Normal	694466	-	0.002	-	0.081	<0.0001	0.004	0.063	14	120	3	1	2	3	5	-	<10	20	150	180	180	<100	<100	180	<50	<100	<100
GASW_BH7	GASW_BH7	22/01/2020	Normal	698379	-	0.003	-	0.10	<0.0001	0.001	0.041	12	42	<1	<1	1	<2	<3	-	<10	50	90	220	220	<100	<100	220	<50	<100	<100
GASW_BH7	GASW_BH7	24/02/2020	Normal	704673	-	<0.001	-	0.14	<0.0001	<0.001	0.018	18	62	1	<1	<1	<2	<3	-	<10	30	90	300	300	<100	<100	300	<50	<100	<100
GASW_BH7	GASW_BH7	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	17/03/2020	Normal	708508	-	0.004	-	0.13	<0.0001	0.003	0.018	1.3	3	<1	<1	<1	<2	<3	-	<10	<20	<20	440	440	100	<100	540	<50	100	<100
GASW_BH10	GASW_BH10	05/06/2019	Normal	659250	-	<0.001	-	0.049	<0.0001	0.007	<0.005	<0.5	2	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	30/07/2019	Normal	669059	-	<0.001	-	0.25	<0.0001	0.042	<0.005	3.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	50	50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	28/08/2019	Normal	674722	-	<0.001	-	0.32	<0.0001	0.043	0.029	4.2	<4	<4	<4	<4	<8	<12	-	<40	<80	<80	310	310	100	<100	410	<50	<100	<100
GASW_BH10	GASW_BH10	26/09/2019	Normal	679636	-	<0.001	-	0.48	<0.0001	0.026	0.015	11	<1	2	<1	<1	<2	<3	-	<10	<20	<20	300	300	<100	<100	300	<50	<100	<100
GASW_BH10	GASW_BH10	17/10/2019	Normal	683453	-	<0.001	-	0.38	<0.0001	0.031	0.010	9.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	13/11/2019	Normal	688512	-	<0.001	-	0.49	0.0002	0.018	<0.005	11	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	16/12/2019	Normal	694466	-	<0.001	-	0.67	<0.0001	0.030	0.026	18	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	50	50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	21/01/2020	Normal	698379	-	<0.001	-	0.70	<0.0001	0.029	0.013	19	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	24/02/2020	Normal	704673	-	<0.001	-	0.46	<0.0001	0.021	0.015	15	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	18/03/2020	Normal	708508	-	<0.001	-	0.39	<0.0001	0.018	0.015	8.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	100	100	<100	<100	100	<50	200	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																								
GASW_BH10	GASW_BH10	14/04/2020	Normal	714027	-	<0.001	-	0.36	<0.0001	0.038	0.049	7.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	19/05/2020	Normal	720682	-	<0.01	-	0.50	<0.001	0.036	<0.05	12	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	18/06/2020	Normal	726825	-	<0.001	-	0.29	<0.0001	0.026	0.030	13	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	15/07/2020	Normal	732590	-	<0.001	-	0.22	<0.0001	0.010	0.006	8.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	100	<100	100	<50	<100	<100
GASW_BH10	GASW_BH10	17/08/2020	Normal	738860	-	<0.001	-	0.25	0.0004	0.031	0.020	7.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	14/09/2020	Normal	744463	-	<0.001	-	0.21	0.0002	0.018	0.008	3.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	27/10/2020	Normal	753369	-	<0.001	-	0.18	<0.0001	0.024	0.016	4.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	19/11/2020	Normal	758435	-	<0.001	-	0.17	<0.0001	0.036	0.035	6.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	50	50	200	<100	250	<50	<100	<100
GASW_BH10	GASW_BH10	23/12/2020	Normal	765715	-	<0.001	0.37	-	<0.0001	0.018	0.010	6.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	50	50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	27/01/2021	Normal	770782	-	<0.001	-	0.17	<0.0001	0.015	0.024	1.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	90	90	200	<100	290	<50	<100	<100
GASW_BH10	GASW_BH10	18/02/2021	Normal	775277	30	<0.001	0.58	-	<0.0001	0.034	0.057	4.9	<1	<1	<1	<1	<2	<3	-	<10	70	70	210	210	<100	<100	210	210	<100	<100
GASW_BH10	GASW_BH10	17/03/2021	Normal	781353	-	<0.001	-	0.15	<0.0001	0.007	0.023	0.63	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	27/04/2021	Normal	791517	-	<0.001	0.92	-	<0.0001	0.003	0.009	5.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	120	120	400	<100	520	<50	<100	<100
GASW_BH10	GASW_BH10	25/05/2021	Normal	799115	-	<0.001	-	0.11	<0.0001	0.002	0.014	0.59	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	160	160	600	<100	760	<50	200	<100
GASW_BH10	GASW_BH10	15/06/2021	Normal	803914	-	<0.001	-	0.11	<0.0001	0.002	0.061	5.0	<1	<1	<1	<1	<2	<3	-	<10	30	30	70	70	1,000	300	1,370	<50	200	<100
GASW-BH10	GASW_BH10	12/07/2021	Normal	810513	-	<0.001	-	0.097	<0.0001	0.001	0.009	5.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	100	100	200	<100	300	<50	100	<100
GASW_BH10	GASW_BH10	10/08/2021	Normal	816445	-	<0.001	-	0.096	<0.0001	<0.001	0.011	5.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	110	110	300	<100	410	<50	<100	<100
GASW_BH10	GASW_BH10	29/09/2021	Normal	829222	-	<0.001	-	0.097	<0.0001	<0.001	0.009	3.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	29/10/2021	Normal	836474	-	<0.001	-	0.10	<0.0001	<0.001	<0.005	5.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW BH10	GASW_BH10	24/11/2021	Normal	846135	-	<0.001	0.51	-	<0.0001	0.002	0.031	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	1,100	1,100	1,200	100	2,400	<50	1,100	<100
GASW_BH10	GASW_BH10	14/12/2021	Normal	851006	-	<0.001	-	0.12	<0.0001	0.001	0.006	3.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	18/01/2022	Normal	856960	-	<0.001	-	0.094	<0.0001	<0.001	<0.005	3.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	70	70	500	<100	570	<50	<100	<100
GASW_BH10	GASW_BH10	08/02/2022	Normal	862315	-	<0.001	-	0.12	<0.0001	<0.001	<0.005	4.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	140	140	500	<100	640	<50	300	<100
GASW_BH10	GASW_BH10	18/03/2022	Normal	872459	-	<0.001	-	0.11	<0.0001	<0.001	<0.005	4.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	1,700	1,700	300	<100	2,000	1,700	100	<100
GASW_BH11	GASW_BH11	05/06/2019	Normal	659250	-	<0.001	-	0.20	<0.0001	0.002	0.022	2.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	160	160	<100	<100	160	<50	<100	<100
QC02	GASW_BH11	05/06/2019	Field_D	659250	-	<0.001	-	-	<0.0001	0.002	0.022	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	220	220	<100	<100	220	-	-	-
GASW_BH11	GASW_BH11	30/07/2019	Normal	669059	-	<0.001	-	0.2	<0.0001	0.002	0.007	3.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	100	100	<100	<100	100	<50	<100	<100
GASW_BH11	GASW_BH11	28/08/2019	Normal	674722	-	<0.001	-	0.23	<0.0001	0.002	0.016	1.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	270	270	<100	<100	270	140	<100	<100
GASW_BH11	GASW_BH11	25/09/2019	Normal	679636	-	<0.001	-	0.25	<0.0001	0.002	0.016	1.1	<1	1	<1	<1	<2	<3	-	<10	<20	<20	640	640	200	<100	840	<50	<100	<100
GASW_BH11	GASW_BH11	16/10/2019	Normal	683453	-	<0.001	-	0.23	<0.0001	0.003	0.011	1.2	20	2	<1	<1	<2	<3	-	<10	<20	40	210	210	<100	<100	210	<50	<100	<100
GASW_BH11	GASW_BH11	14/11/2019	Normal	688512	-	<0.001	-	0.20	<0.0001	0.002	0.012	1.9	8	<1	<1	<1	<2	<3	-	<10	<20	<20	210	210	<100	<100	210	<50	<100	<100
GASW_BH11	GASW_BH11	16/12/2019	Normal	694466	-	<0.001	-	0.16	<0.0001	0.003	0.024	3.8	10	<1	<1	<1	<2	<3	-	<10	<20	<20	170	170	<100	<100	170	<50	<100	<100
GASW_BH11	GASW_BH11	22/01/2020	Normal	698379	-	<0.001	-	0.15	<0.0001	<0.001	0.021	1.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	220	220	<100	<100	220	<50	<100	<100
GASW_BH11	GASW_BH11	24/02/2020	Normal	704673	-	<0.001	-	0.32	<0.0001	<0.001	0.036	1.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	480	480	<100	<100	480	<50	<100	<100
GASW_BH11	GASW_BH11	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	17/03/2020	Normal	708508	-	<0.001	-	0.16	<0.0001	0.007	0.062	2.1	2	<1	<1	<1	<2	<3	-	<10	<20	<20	510	510	<100	<100	510	<50	200	<100
GASW_BH11	GASW_BH11	16/04/2020	Normal	714027	-	<0.001	-	0.31	<0.0001	0.006	0.086	1.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	360	360	100	<100	460	<50	<100	<100
GASW_BH11	GASW_BH11	20/05/2020	Normal	720682	-	<0.01	-	1.1	<0.001	0.017	0.12	2.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	580	580	300	<100	880	230	100	<100
GASW_BH11	GASW_BH11	19/06/2020	Normal	726825	-	0.001	-	0.20	<0.0001	0.007	0.11	0.59	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	340	340	<100	<100	340	70	<100	<100
GASW_BH11	GASW_BH11	16/07/2020	Normal	732590	-	0.001	-	0.18	<0.0001	0.011	0.090	1.9	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	340	340	200	<100	540	<50	<100	<100
GASW_BH11	GASW_BH11	17/08/2020	Normal	738860	-	<0.001	-	0.21	<0.0001	0.005	0.059	0.61	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH11	GASW_BH11	16/09/2020	Normal	744463	-	<0.001	-	0.23	<0.0001	0.004	0.064	0.47	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	350	350	100	<100	450	<50	<100	<100
GASW_BH11	GASW_BH11	27/10/2020	Normal	753369	-	<0.001	-	0.18	<0.0001	0.004	0.060	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	360	360	100	<100	460	<50	<100	<100
GASW_BH11	GASW_BH11	20/11/2020	Normal	758435	-	<0.001	-	0.19	<0.0001	0.004	0.053	1.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	220	220	300	<100	520	<50	<100	<100
GASW_BH11	GASW_BH11	21/12/2020	Normal	765715	-	<0.001	0.58	-	<0.0001	0.003	0.040	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	180	180	200	<100	380	<50	<100	<100
GASW_BH11	GASW_BH11	28/01/2021	Normal	770782	-	0.006	-	0.29	<0.0001	0.031	0.30	4.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	250	250	200	<100	450	<50	<100	<100
GASW_BH11	GASW_BH11	17/02/2021	Normal	775277	20	0.001	0.39	-	<0.0001	0.017	0.17	<0.5	<1	2	<1	<1	<2	<3	-	<10	<20	<20	110	110	300	200	610	<50	<100	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																								
GASW_BH11	GASW_BH11	18/03/2021	Normal	781353	-	<0.001	-	0.17	<0.0001	0.002	0.069	0.54	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH11	GASW_BH11	27/04/2021	Normal	791517	-	<0.001	0.27	-	<0.0001	0.002	0.051	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	170	170	100	<100	270	<50	<100	<100
GASW_BH11	GASW_BH11	26/05/2021	Normal	799115	-	<0.001	-	0.13	<0.0001	0.002	0.044	0.33	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	300	300	600	<100	900	90	100	<100
GASW_BH11	GASW_BH11	16/06/2021	Normal	803914	-	<0.001	-	0.13	<0.0001	0.002	0.034	0.22	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	210	210	200	<100	410	<50	<100	<100
GASW-BH11	GASW_BH11	12/07/2021	Normal	810513	-	<0.001	-	0.11	<0.0001	<0.001	0.019	0.19	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	290	290	300	<100	590	140	200	<100
GASW_BH11	GASW_BH11	10/08/2021	Normal	816445	-	<0.001	-	0.17	<0.0001	0.002	0.1	0.07	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	160	160	300	<100	460	<50	<100	<100
GASW_BH11	GASW_BH11	28/09/2021	Normal	829222	-	<0.001	-	0.16	<0.0001	0.002	0.088	1.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	<100	200	<50	<100	<100
GASW_BH11	GASW_BH11	28/10/2021	Normal	836474	-	<0.001	-	0.086	<0.0001	0.001	0.063	0.13	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
BH23	GASW_BH23	23/08/2019	Normal	ES1926979	-	<0.001	-	0.028	<0.0001	0.002	<0.005	<0.05	1,490	264	21	21	41	62	1,840	26	<200	1,970	330	360	190	<100	550	-	-	-
GW-BR1	GASW_BH23	23/08/2019	Field_D	ES1926979	-	0.001	-	0.060	<0.0001	0.001	<0.005	<0.05	1,900	319	25	24	48	72	2,320	15	<200	2,440	300	310	270	<100	580	-	-	-
GASW_BH23	GASW_BH23	25/09/2019	Normal	679636	-	<0.001	-	0.49	<0.0001	0.004	0.55	10	1,900	230	30	25	44	68	-	<10	2,800	5,000	400	400	300	<100	700	240	200	<100
GASW_BH23	GASW_BH23	16/10/2019	Normal	683453	-	<0.001	-	0.41	<0.0001	0.001	0.007	9.8	2,400	290	40	29	44	73	-	<200	4,000	6,800	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH23	GASW_BH23	14/11/2019	Normal	688512	-	<0.001	-	0.33	<0.0001	<0.001	<0.005	7.8	3,200	260	<50	<50	<100	<150	-	<500	3,200	6,700	<500	320	<100	<100	320	<50	<100	<100
GASW_BH23	GASW_BH23	16/12/2019	Normal	694466	-	<0.001	-	<0.005	<0.0001	<0.001	0.005	0.16	560	53	<8	<8	<16	<24	-	<80	260	870	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH23	GASW_BH23	22/01/2020	Normal	698379	-	0.001	-	0.28	<0.0001	<0.001	0.14	3.0	1,500	53	<50	<50	<100	<150	-	<500	-	1,500	<500	110	<100	<100	110	50	<100	<100
GASW_BH23	GASW_BH23	24/02/2020	Normal	704673	-	<0.001	-	0.12	<0.0001	<0.001	<0.005	4.6	**5,500**	340	<100	<100	<200	<300	-	<1,000	3,200	9,000	<1,000	880	200	<100	1,080	70	<100	<100
GASW_BH23	GASW_BH23	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	17/03/2020	Normal	708508	-	<0.001	-	0.20	<0.0001	0.001	0.037	1.3	640	45	<10	<10	<20	<30	-	<100	420	1,100	150	150	<100	<100	150	<50	<100	<100
GASW_BH23	GASW_BH23	16/04/2020	Normal	714027	-	<0.001	-	0.053	<0.0001	<0.001	<0.005	0.23	1,400	360	64	68	140	210	-	<500	670	2,700	<500	120	1,200	<100	1,320	<50	700	<100
GASW_BH23	GASW_BH23	20/05/2020	Normal	720682	-	<0.001	-	-	<0.0001	0.006	0.041	-	470	17	8	7	10	17	-	<40	240	750	370	370	300	<100	670	<50	<100	<100
GASW_BH23	GASW_BH23	17/06/2020	Normal	726825	-	<0.001	-	0.22	<0.0001	0.004	0.042	2.1	220	8	2	2	5	7	-	<20	260	500	70	70	100	<100	170	<50	<100	<100
GASW_BH23	GASW_BH23	16/07/2020	Normal	732590	-	<0.001	-	0.15	<0.0001	0.004	0.029	<0.5	84	2	1	1	<2	<3	-	<10	30	120	<50	<50	100	<100	100	<50	<100	<100
GASW_BH23	GASW_BH23	17/08/2020	Normal	738860	-	<0.001	-	0.24	<0.0001	0.007	0.009	4.6	130	7	4	2	4	7	-	<10	90	240	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH23	GASW_BH23	15/09/2020	Normal	744463	-	<0.001	-	0.20	<0.0001	0.011	0.064	2.3	440	7	6	<5	<10	<15	-	<50	220	670	240	240	300	<100	540	110	200	<100
GASW_BH23	GASW_BH23	26/10/2020	Normal	753369	-	0.001	-	0.14	<0.0001	0.002	0.19	0.8	9	<1	<1	<1	<2	<3	-	<10	<20	<20	120	120	<100	<100	120	<50	<100	<100
GASW_BH23	GASW_BH23	18/11/2020	Normal	758435	-	<0.001	-	0.32	<0.0001	0.002	<0.005	9.1	**5,500**	31	49	13	24	37	-	<10	3,300	8,900	170	170	300	<100	470	<50	<100	<100
GASW_BH23	GASW_BH23	21/12/2020	Normal	765715	-	0.003	0.48	-	<0.0001	0.001	0.010	4.5	850	<10	16	<10	<20	<30	-	<100	30	900	160	160	200	<100	360	<50	<100	<100
GASW_BH23	GASW_BH23	28/01/2021	Normal	770782	-	<0.001	-	0.20	<0.0001	0.002	0.22	0.57	65	<1	<1	<1	<2	<3	-	<10	40	100	110	110	200	<100	310	<50	<100	<100
GASW_BH23	GASW_BH23	17/02/2021	Normal	775277	3.5	<0.001	0.50	-	<0.0001	0.002	0.12	4.9	45	2	<1	<1	<2	<3	-	<10	<20	60	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH23	GASW_BH23	18/03/2021	Normal	781353	-	<0.001	-	0.26	<0.0001	<0.001	0.052	5.4	60	1	1	<1	<2	<3	-	<10	50	110	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH23	GASW_BH23	27/04/2021	Normal	791517	-	<0.001	0.31	-	<0.0001	<0.001	0.008	4.1	330	7	14	<5	<10	<15	-	<50	120	470	230	230	100	<100	330	130	<100	<100
GASW_BH23	GASW_BH23	26/05/2021	Normal	799115	-	<0.001	-	0.28	<0.0001	<0.001	0.016	6.1	120	2	6	<1	<2	<3	-	<10	50	180	260	260	800	<100	1,060	100	100	<100
GASW_BH23	GASW_BH23	16/06/2021	Normal	803914	-	<0.001	-	0.18	<0.0001	<0.001	<0.005	6.5	580	19	17	<10	<20	<30	-	<100	180	800	150	150	100	<100	250	<50	<100	<100
GASW-BH23	GASW_BH23	12/07/2021	Normal	810513	-	<0.001	-	0.23	0.0002	<0.001	0.032	5.9	31	<1	1	<1	<2	<3	-	<10	30	60	120	120	300	<100	420	<50	<100	<100
GASW_BH23	GASW_BH23	10/08/2021	Normal	816445	-	<0.001	-	0.38	<0.0001	<0.001	<0.005	6.3	850	<25	<25	<25	<50	<75	-	<250	350	1,200	<250	200	200	<100	400	<50	<100	<100
GASW_BH23	GASW_BH23	29/09/2021	Normal	829222	-	<0.001	-	0.39	0.0003	<0.001	0.031	14	21	<1	<1	<1	<2	<3	-	<10	<20	40	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH23	GASW_BH23	28/10/2021	Normal	836474	-	<0.001	-	0.38	<0.0001	<0.001	0.022	11	36	<1	3	<1	<2	<3	-	<10	20	60	<50	<50	<100	<100	<100	<50	<100	<100
GASW BH23	GASW_BH23	23/11/2021	Normal	846135	-	<0.001	0.21	-	<0.0001	<0.001	0.033	6.8	11	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	800	<100	800	<50	700	<100
GASW_BH23	GASW_BH23	14/12/2021	Normal	851006	-	<0.001	-	0.19	<0.0001	<0.001	0.011	6.4	20	<1	<1	<1	<2	<3	-	<10	30	50	<50	<50	<100	<100	<100	<50	<100	<100
BH25a	GASW_BH25A	23/08/2019	Normal	ES1926979	-	<0.001	-	0.348	0.0002	0.002	<0.005	0.46	**15,300**	5,660	280	283	612	895	22,100	89	2,360	24,500	430	520	490	<100	1,010	-	-	-
GW-SR1	GASW_BH25A	23/08/2019	Interlab_D	673339	-	<0.001	0.43	-	<0.0001	0.003	<0.005	0.47	**15,000**	7,100	460	<400	930	930	-	<4,000	500	24,000	<4,000	920	500	<100	1,420	-	-	-
GASW_BH25A	GASW_BH25A	25/09/2019	Normal	679636	-	<0.001	-	0.14	<0.0001	<0.001	<0.005	0.31	3,600	1,200	53	77	140	220	-	<40	4,900	10,000	260	260	200	<100	460	<50	<100	<100
GASW_BH25a	GASW_BH25A	16/10/2019	Normal	683453	-	<0.001	-	0.094	<0.0001	<0.001	<0.005	0.15	2,700	990	40	50	95	140	-	<200	5,000	8,900	<200	90	<100	<100	<100	<50	<100	<100
GASW_BH25A	GASW_BH25A	14/11/2019	Normal	688512	-	0.001	-	0.11	<0.0001	0.008	0.026	0.35	2,200	870	<50	<50	<100	<150	-	<500	3,000	6,100	<500	310	<100	<100	310	140	<100	<100
GASW_BH25A	GASW_BH25A	16/12/2019	Normal	694466	-	<0.001	-	0.086	<0.0001	<0.001	<0.005	0.26	**9,700**	3,500	110	120	250	370	-	<500	**6,300**	20,000	<500	280	300	<100	580	<50	<100	<100
GASW_BH25A	GASW_BH25A	22/01/2020	Normal	698379	-	<0.001	-	0.091	<0.0001	<0.001	<0.005	0.95	**30,000**	11,000	<400	<400	<800	<1,200	-	<4,000	**11,000**	52,000	<4,000	520	<100	<100	520	150	<100	<100
GASW_BH25A	GASW_BH25A	24/02/2020	Normal	704673	-	<0.001	-	0.096	<0.0001	<0.001	<0.005	8.3	**16,000**	7,200	460	420	1,100	1,600	-	<1,000	1,800	27,000	<1,000	430	<100	<100	430	140	<100	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																										
GASW_BH25A	GASW_BH25A	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25a	GASW_BH25A	17/03/2020	Normal	708508	-	<0.001	-	0.029	<0.0001	0.008	0.047	<0.5	**9,800**	4,900	300	340	700	1,000	-	<2,000	**7,000**	23,000	<2,000	240	<100	<100	240	70	<100	<100
GASW_BH25A	GASW_BH25A	16/04/2020	Normal	714027	-	<0.001	-	0.075	<0.0001	<0.001	<0.005	0.55	**29,000**	12,000	1,200	1,200	2,500	3,800	-	<4,000	100	46,000	<4,000	2,300	23,000	1,300	26,600	470	200	<100
GASW_BH25A	GASW_BH25A	20/05/2020	Normal	720682	-	<0.001	-	0.37	0.0003	<0.001	<0.005	0.72	**26,000**	12,000	560	720	1,300	2,000	-	<2,000	**20,000**	61,000	<2,000	1,100	800	<100	1,900	330	200	<100
GASW_BH25A	GASW_BH25A	19/06/2020	Normal	726825	-	<0.001	-	0.038	0.0001	<0.001	<0.005	0.36	**9,400**	6,500	270	400	790	1,200	-	<1,000	**18,000**	35,000	<1,000	800	600	<100	1,400	340	200	<100
GASW_BH25A	GASW_BH25A	16/07/2020	Normal	732590	-	<0.001	-	0.11	<0.0001	0.007	0.041	0.9	5,000	2,000	120	160	270	430	-	<1,000	350	7,900	<1,000	360	300	<100	660	110	<100	<100
GASW_BH25A	GASW_BH25A	17/08/2020	Normal	738860	-	0.002	-	0.078	0.0002	0.012	0.094	0.48	**7,100**	4,500	220	300	590	890	-	<1,000	4,300	17,000	<1,000	220	100	<100	320	<50	<100	<100
GASW_BH25A	GASW_BH25A	16/09/2020	Normal	744463	-	<0.001	-	0.052	0.0003	<0.001	<0.005	0.20	**23,000**	11,000	510	700	1,400	2,100	-	<4,000	**16,000**	53,000	<4,000	1,800	900	<100	2,700	500	<100	<100
GASW_BH25A	GASW_BH25A	27/10/2020	Normal	753369	-	0.001	-	0.30	<0.0001	0.010	0.097	2.0	1,200	360	21	29	80	110	-	<200	210	1,900	470	470	<100	<100	470	<50	<100	<100
GASW_BH25A	GASW_BH25A	20/11/2020	Normal	758435	-	<0.001	-	0.24	<0.0001	<0.001	<0.005	3.4	3,200	2,100	170	200	410	610	-	<500	1,000	7,100	960	960	600	<100	1,560	570	100	<100
GASW_BH25A	GASW_BH25A	21/12/2020	Normal	765715	-	<0.001	0.28	-	<0.0001	0.011	0.072	3.2	1,300	600	62	71	110	180	-	<200	460	2,600	330	330	300	<100	630	<50	<100	<100
GASW_BH25A	GASW_BH25A	28/01/2021	Normal	770782	-	<0.001	-	0.006	<0.0001	0.001	0.017	<0.05	10	7	1	1	<2	3	-	<10	20	40	110	110	200	<100	310	<50	<100	<100
GASW_BH25A	GASW_BH25A	17/02/2021	Normal	775277	0.51	0.001	0.013	-	<0.0001	0.053	0.067	<0.5	20	11	1	3	4	7	-	<10	30	70	80	80	200	200	480	<50	<100	<100
GASW_BH25A	GASW_BH25A	18/03/2021	Normal	781353	-	<0.001	-	0.012	<0.0001	<0.001	0.017	<0.05	3	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH25A	GASW_BH25A	27/04/2021	Normal	791517	-	<0.001	0.16	-	<0.0001	<0.001	<0.005	1.4	1,400	460	49	58	73	130	-	<100	1,400	3,400	340	340	200	<100	540	<50	<100	<100
GASW_BH25A	GASW_BH25A	26/05/2021	Normal	799115	-	<0.001	-	0.13	<0.0001	<0.001	<0.005	1.0	500	200	28	27	30	57	-	<100	220	1,000	370	370	900	<100	1,270	240	300	<100
GASW_BH25A	GASW_BH25A	15/06/2021	Normal	803914	-	<0.001	-	0.10	<0.0001	<0.001	<0.005	1.1	1,000	560	120	130	140	260	-	<250	450	2,400	250	250	300	<100	550	<50	<100	<100
GASW-BH25A	GASW_BH25A	12/07/2021	Normal	810513	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	2	<1	<1	<1	<2	<3	-	<10	<20	<20	60	60	100	<100	160	<50	<100	<100
GASW_BH25A	GASW_BH25A	10/08/2021	Normal	816445	-	<0.001	-	0.089	<0.0001	<0.001	<0.005	0.81	**8,900**	4,100	350	350	590	940	-	<1,000	**6,700**	21,000	<1,000	250	200	<100	450	<50	<100	<100
GASW_BH25A	GASW_BH25A	29/09/2021	Normal	829222	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	77	34	7	8	10	18	-	<10	100	240	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH25A	GASW_BH25A	28/10/2021	Normal	836474	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	70	33	10	11	16	28	-	<10	90	230	<50	<50	<100	<100	<100	<50	<100	<100
QA02	SRT_BH039	07/09/2018	Interlab_D	ES1826658	-	<0.001	-	-	<0.0001	0.002	0.013	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	230	<100	230	-	-	-
SRT-BH039	SRT_BH039	07/09/2018	Normal	616629	-	0.003	-	-	<0.0001	0.004	0.047	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	<100	200	<50	<100	<100
SRT-BH039	SRT_BH039	25/10/2018	Normal	624838	-	<0.001	-	<0.005	<0.0001	0.006	0.027	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QA02	SRT_BH039	26/10/2018	Interlab_D	ES1832040	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	220	<100	220	-	-	-
SRT-BH047	SRT_BH047	06/09/2018	Normal	616629	-	<0.001	-	-	<0.0001	0.003	0.021	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH047	SRT_BH047	25/10/2018	Normal	624838	-	<0.001	-	<0.005	<0.0001	<0.001	0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	26/11/2018	Normal	629922	-	0.002	-	-	<0.0001	0.005	0.039	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	18/12/2018	Normal	634274	-	0.002	-	0.009	<0.0001	0.004	0.031	0.06	<1	2	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	17/01/2019	Normal	636542	-	0.001	-	<0.005	<0.0001	0.005	0.053	0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	20/02/2019	Normal	641720	-	0.002	-	0.008	<0.0001	0.002	0.013	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	430	430	1,400	300	2,130	<50	<100	<100
SRT_BH047	SRT_BH047	16/04/2019	Normal	651825	-	<0.001	-	0.023	<0.0001	0.001	0.013	<0.5	<1	7	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH047	SRT_BH047	14/05/2019	Normal	656080	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	07/06/2019	Normal	660130	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT-BH047	SRT_BH047	31/07/2019	Normal	669059	-	<0.001	-	0.018	<0.0001	0.001	0.009	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	30/08/2019	Normal	674722	-	<0.001	-	<0.005	<0.0001	<0.001	0.008	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	27/09/2019	Normal	679636	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	18/10/2019	Normal	683453	-	<0.001	-	<0.005	<0.0001	0.002	<0.005	0.06	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	15/11/2019	Normal	688512	-	<0.001	-	<0.005	<0.0001	0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	18/12/2019	Normal	694466	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	20/01/2020	Normal	698379	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	26/02/2020	Normal	704673	-	<0.001	-	0.024	<0.0001	0.002	0.022	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/03/2020	Normal	708508	-	<0.001	-	0.009	<0.0001	0.002	0.011	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH047	SRT_BH047	15/04/2020	Normal	714027	-	<0.001	-	0.006	<0.0001	0.007	0.036	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	18/05/2020	Normal	720682	-	<0.01	-	<0.05	<0.001	<0.01	<0.05	0.16	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	17/06/2020	Normal	726825	-	<0.001	-	0.009	<0.0001	0.003	0.015	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
SRT_BH047	SRT_BH047	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/07/2020	Normal	732590	-	<0.001	-	<0.005	<0.0001	0.009	0.049	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH047	SRT_BH047	19/08/2020	Normal	738860	-	<0.001	-	<0.005	<0.0001	0.004	0.020	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	15/09/2020	Normal	744463	-	<0.001	-	<0.005	<0.0001	0.002	0.020	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	26/10/2020	Normal	753369	-	0.002	-	0.007	<0.0001	0.013	0.12	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	18/11/2020	Normal	758435	-	<0.001	-	0.53	<0.0001	0.002	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	22/12/2020	Normal	765715	-	<0.001	0.11	-	<0.0001	0.003	0.019	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	29/01/2021	Normal	770782	-	<0.001	-	0.013	<0.0001	0.005	0.11	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	17/02/2021	Normal	775277	0.06	0.002	0.028	-	<0.0001	0.014	0.10	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	18/03/2021	Normal	781353	-	<0.001	-	0.023	<0.0001	0.005	0.044	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	27/04/2021	Normal	791517	-	0.001	0.15	-	<0.0001	0.008	0.053	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	27/05/2021	Normal	799115	-	<0.001	-	0.009	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	500	<100	500	<50	100	<100
SRT_BH047	SRT_BH047	17/06/2021	Normal	803914	-	<0.001	-	0.021	<0.0001	0.004	0.024	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH047	SRT_BH047	12/07/2021	Normal	810513	-	<0.001	-	0.020	<0.0001	0.004	0.027	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	11/08/2021	Normal	816445	-	<0.001	-	0.029	<0.0001	0.004	0.013	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	SRT_BH047	30/09/2021	Field_D	829222	-	<0.001	-	-	<0.0001	0.004	0.033	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH047	SRT_BH047	30/09/2021	Normal	829222	-	<0.001	-	0.025	<0.0001	0.004	0.035	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	29/10/2021	Normal	836474	-	<0.001	-	0.015	<0.0001	0.003	0.022	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT BH047	SRT_BH047	24/11/2021	Normal	846135	-	<0.001	0.086	-	<0.0001	0.004	0.034	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	16/12/2021	Normal	851006	-	<0.001	-	0.022	<0.0001	0.004	0.034	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	19/01/2022	Normal	856960	-	<0.001	-	0.015	<0.0001	<0.001	0.026	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	SRT_BH047	08/02/2022	Field_D	862315	-	<0.001	-	-	<0.0001	0.004	0.027	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH047	SRT_BH047	08/02/2022	Normal	862315	-	<0.001	-	0.033	<0.0001	0.003	0.026	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	16/03/2022	Normal	872459	-	<0.001	-	0.018	<0.0001	0.004	0.032	0.11	<1	2	<1	<1	<2	<3	-	<10	<20	<20	140	140	<100	<100	140	100	<100	<100
SRT-BH048	SRT_BH048	06/09/2018	Normal	616629	-	0.004	-	-	<0.0001	0.011	0.066	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH048	SRT_BH048	25/10/2018	Normal	624838	-	0.006	-	0.55	<0.0001	0.017	0.18	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH048	SRT_BH048	26/11/2018	Normal	629922	-	0.005	-	-	<0.0001	0.011	0.086	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	16/03/2020	Normal	708508	-	<0.001	-	0.022	<0.0001	0.002	0.010	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH050	SRT_BH050	15/04/2020	Normal	714027	-	<0.001	-	0.024	<0.0001	0.001	0.012	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	17/06/2020	Normal	726825	-	<0.001	-	0.023	<0.0001	0.007	0.052	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	230	230	100	<100	330	200	100	<100
SRT_BH050	SRT_BH050	17/07/2020	Normal	732590	-	0.002	-	0.021	<0.0001	0.010	0.078	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH050	SRT_BH050	19/08/2020	Normal	738860	-	<0.001	-	0.025	<0.0001	0.002	0.013	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	18/11/2020	Normal	758435	-	0.018	-	0.026	<0.0001	0.010	0.15	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	22/12/2020	Normal	765715	-	0.003	-	0.022	<0.0001	0.012	0.13	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	100	300	<50	100	100
SRT_BH050	SRT_BH050	17/02/2021	Normal	775277	190	<0.001	0.067	-	<0.0001	0.003	0.008	<0.5	<1	3	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH050	SRT_BH050	18/03/2021	Normal	781353	-	<0.001	-	0.022	<0.0001	0.002	0.010	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT-BH050	SRT_BH050	12/07/2021	Normal	810513	-	<0.001	-	-	<0.0001	0.001	0.009	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT BH050	SRT_BH050	25/11/2021	Normal	846135	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	15/12/2021	Normal	851006	-	<0.001	-	0.024	<0.0001	0.002	0.015	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	19/01/2022	Normal	856960	-	<0.001	-	0.015	<0.0001	<0.001	0.006	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	08/02/2022	Normal	862315	-	<0.001	-	0.035	<0.0001	0.002	0.009	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	16/03/2022	Normal	872459	-	<0.001	-	0.013	<0.0001	<0.001	0.010	0.07	<1	3	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH052	SRT_BH052	25/10/2018	Normal	624838	-	0.005	-	0.036	<0.0001	0.008	0.086	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	26/11/2018	Normal	629922	-	0.003	-	-	<0.0001	0.006	0.085	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	18/12/2018	Normal	634274	-	0.001	-	0.020	<0.0001	0.004	0.023	<0.05	<1	2	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	17/01/2019	Normal	636542	-	0.019	-	0.029	<0.0001	0.013	0.44	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	20/02/2019	Normal	641720	-	<0.001	-	0.006	<0.0001	<0.001	0.006	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																								
SRT_BH052	SRT_BH052	16/04/2019	Normal	651825	-	<0.001	-	0.005	<0.0001	<0.001	<0.005	<0.5	<1	14	<1	<1	<2	<3	-	<10	<20	30	<50	<50	200	<100	200	<50	<100	<100
SRT_BH052	SRT_BH052	14/05/2019	Normal	656080	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	07/06/2019	Normal	660130	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT-BH052	SRT_BH052	31/07/2019	Normal	669059	-	<0.001	-	<0.005	<0.0001	0.001	0.015	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	30/08/2019	Normal	674722	-	<0.001	-	<0.005	<0.0001	<0.001	0.010	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	100	<100	100	<50	<100	<100
SRT_BH052	SRT_BH052	27/09/2019	Normal	679636	-	<0.001	-	<0.005	<0.0001	<0.001	0.007	<0.05	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	18/10/2019	Normal	683453	-	<0.001	-	<0.005	<0.0001	0.002	<0.005	0.07	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	15/11/2019	Normal	688512	-	0.002	-	<0.005	<0.0001	0.006	0.035	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	18/12/2019	Normal	694466	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	0.06	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	20/01/2020	Normal	698379	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	0.16	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	26/02/2020	Normal	704673	-	<0.001	-	0.014	<0.0001	<0.001	0.007	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	16/03/2020	Normal	708508	-	<0.001	-	0.012	<0.0001	0.002	0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH052	SRT_BH052	15/04/2020	Normal	714027	-	<0.001	-	0.008	<0.0001	0.003	0.037	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	18/05/2020	Normal	720682	-	<0.01	-	0.14	<0.001	<0.01	<0.05	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	17/06/2020	Normal	726825	-	0.001	-	0.008	<0.0001	0.015	0.084	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/07/2020	Normal	732590	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH052	SRT_BH052	19/08/2020	Normal	738860	-	0.002	-	0.012	<0.0001	0.011	0.10	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	15/09/2020	Normal	744463	-	<0.001	-	<0.005	<0.0001	<0.001	0.008	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	26/10/2020	Normal	753369	-	0.002	-	0.005	<0.0001	0.010	0.093	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	18/11/2020	Normal	758435	-	<0.001	-	<0.005	<0.0001	<0.001	0.018	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	22/12/2020	Normal	765715	-	<0.001	0.052	-	<0.0001	<0.001	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	29/01/2021	Normal	770782	-	<0.001	-	<0.005	<0.0001	<0.001	0.027	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	17/02/2021	Normal	775277	1.6	<0.001	0.051	-	<0.0001	0.002	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	70	70	200	200	470	<50	<100	<100
SRT_BH052	SRT_BH052	18/03/2021	Normal	781353	-	<0.001	-	<0.005	<0.0001	<0.001	0.006	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	27/04/2021	Normal	791517	-	<0.001	0.43	-	<0.0001	<0.001	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	27/05/2021	Normal	799115	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	110	110	500	<100	610	70	<100	<100
SRT_BH052	SRT_BH052	17/06/2021	Normal	803914	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH052	SRT_BH052	12/07/2021	Normal	810513	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	11/08/2021	Normal	816445	-	<0.001	-	<0.005	<0.0001	<0.001	0.006	<0.05	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	30/09/2021	Normal	829222	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	29/10/2021	Normal	836474	-	<0.001	-	0.006	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT BH052	SRT_BH052	24/11/2021	Normal	846135	-	<0.001	0.043	-	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	1,000	<100	1,000	<50	900	<100
SRT_BH052	SRT_BH052	16/12/2021	Normal	851006	-	<0.001	-	<0.005	<0.0001	0.02	0.006	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	19/01/2022	Normal	856960	-	<0.001	-	0.018	<0.0001	<0.001	0.007	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	08/02/2022	Normal	862315	-	<0.001	-	0.023	<0.0001	0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	SRT_BH052	16/03/2022	Interlab_D	ES2209602	-	<0.001	-	-	<0.0001	<0.001	<0.005	-	<1	2	<2	<2	<2	<2	2	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
SRT_BH052	SRT_BH052	16/03/2022	Normal	872459	-	<0.001	-	0.020	<0.0001	<0.001	<0.005	0.09	<1	3	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH053	SRT_BH053	06/09/2018	Normal	616629	-	0.014	-	-	<0.0001	0.029	0.32	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH053	SRT_BH053	25/10/2018	Normal	624838	-	<0.001	-	1.00	<0.0001	0.046	0.022	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH059	SRT_BH059	25/10/2018	Normal	624838	-	0.002	-	<0.005	<0.0001	0.004	0.027	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	26/11/2018	Normal	629922	-	0.003	-	-	<0.0001	0.008	0.077	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	3,100	3,100	2,900	800	6,800	<50	100	<100
SRT_BH059	SRT_BH059	17/12/2018	Normal	634274	-	0.003	-	<0.005	<0.0001	0.007	0.053	0.80	<1	2	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	18/01/2019	Normal	636542	-	0.002	-	<0.005	<0.0001	0.007	0.054	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	20/02/2019	Normal	641720	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	17/04/2019	Normal	651825	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
SRT_BH059	SRT_BH059	15/05/2019	Normal	656080	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	07/06/2019	Normal	660130	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT-BH059	SRT_BH059	31/07/2019	Normal	669059	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	30/08/2019	Normal	674722	-	0.001	-	<0.005	<0.0001	0.012	0.12	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	27/09/2019	Normal	679636	-	<0.001	-	<0.005	<0.0001	<0.001	0.008	<0.05	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	120	<100	<100
SRT_BH059	SRT_BH059	18/10/2019	Normal	683453	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	0.06	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	15/11/2019	Normal	688512	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	18/12/2019	Normal	694466	-	<0.001	-	<0.005	<0.0001	<0.001	0.005	0.08	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	20/01/2020	Normal	698379	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	26/02/2020	Normal	704673	-	<0.001	-	<0.005	<0.0001	0.005	0.054	0.09	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	16/03/2020	Normal	708508	-	<0.001	-	<0.005	<0.0001	0.006	0.042	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH059	SRT_BH059	15/04/2020	Normal	714027	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	18/05/2020	Normal	720682	-	<0.01	-	0.54	<0.001	<0.01	<0.05	0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	17/06/2020	Normal	726825	-	<0.001	-	<0.005	<0.0001	0.006	0.057	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/07/2020	Normal	732590	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH059	SRT_BH059	18/08/2020	Normal	738860	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	15/09/2020	Normal	744463	-	0.002	-	0.008	<0.0001	0.011	0.13	0.06	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH059	SRT_BH059	26/10/2020	Normal	753369	-	<0.001	-	<0.005	<0.0001	<0.001	0.006	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	100	<100	100	<50	<100	<100
SRT_BH059	SRT_BH059	18/11/2020	Normal	758435	-	<0.001	-	<0.005	<0.0001	0.006	0.011	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	<100	200	<50	<100	<100
SRT_BH060	SRT_BH060	16/03/2020	Normal	708508	-	<0.001	-	0.010	<0.0001	0.008	0.055	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH060	SRT_BH060	15/04/2020	Normal	714027	-	<0.001	-	0.009	<0.0001	0.006	0.025	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH063	SRT_BH063	06/09/2018	Normal	616629	-	<0.001	-	-	<0.0001	0.020	0.22	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH063	SRT_BH063	25/10/2018	Normal	624838	-	0.005	-	0.049	<0.0001	0.083	0.21	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH063	SRT_BH063	26/11/2018	Normal	629922	-	0.003	-	-	<0.0001	0.014	0.067	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	730	730	1,100	200	2,030	<50	<100	<100
QA02	SRT_BH063	27/11/2018	Interlab_D	ES1835581	-	<0.001	-	-	<0.0001	0.008	0.016	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
QA01	SRT_BH063	17/12/2018	Field_D	634274	-	0.003	-	-	<0.0001	0.004	0.015	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH063	SRT_BH063	17/12/2018	Normal	634274	-	0.005	-	<0.005	<0.0001	0.005	0.019	0.39	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QA01	SRT_BH063	17/01/2019	Field_D	636542	-	<0.001	-	-	<0.0001	0.004	0.023	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH063	SRT_BH063	17/01/2019	Normal	636542	-	0.003	-	0.011	<0.0001	0.013	0.11	0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QA02	SRT_BH063	21/02/2019	Interlab_D	ES1905610	-	<0.001	-	-	<0.0001	0.007	0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
SRT_BH063	SRT_BH063	21/02/2019	Normal	641720	-	0.002	-	0.009	<0.0001	0.010	0.034	0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH063	SRT_BH063	18/04/2019	Normal	651825	-	0.003	-	0.006	<0.0001	0.018	0.085	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	<100	200	<50	200	<100
SRT_BH063	SRT_BH063	15/05/2019	Normal	656080	-	<0.001	-	<0.005	<0.0001	0.005	0.014	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH063	SRT_BH063	07/06/2019	Normal	660130	-	<0.001	-	<0.005	<0.0001	0.006	0.036	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT-BH063	SRT_BH063	29/07/2019	Normal	669059	-	<0.001	-	<0.005	<0.0001	0.009	0.018	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH063	SRT_BH063	28/08/2019	Normal	674722	-	<0.001	-	0.017	<0.0001	0.007	0.032	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-BH064	SRT_BH064	06/09/2018	Normal	616629	-	0.002	-	-	<0.0001	0.006	0.032	-	3	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QA01	SRT_BH082	25/10/2018	Field_D	624838	-	<0.001	-	-	<0.0001	0.001	0.009	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT-BH082	SRT_BH082	25/10/2018	Normal	624838	-	<0.001	-	0.054	<0.0001	0.001	0.009	0.16	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QA01	SRT_BH082	26/11/2018	Field_D	629922	-	0.013	-	-	<0.0001	0.010	0.17	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH082	SRT_BH082	26/11/2018	Normal	629922	-	0.002	-	-	<0.0001	0.002	0.021	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QA01	SRT_CBH001	06/09/2018	Field_D	616629	-	0.003	-	-	<0.0001	0.012	0.058	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT-CBH001	SRT_CBH001	06/09/2018	Normal	616629	-	<0.001	-	-	<0.0001	0.004	0.012	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-CBH001	SRT_CBH001	25/10/2018	Normal	624838	-	0.004	-	0.62	<0.0001	0.014	0.22	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH001	SRT_CBH001	26/11/2018	Normal	629922	-	0.003	-	-	<0.0001	0.012	0.094	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	510	510	1,000	300	1,810	<50	<100	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
SRT-CBH007	SRT_CBH007	06/09/2018	Normal	616629	-	0.023	-	-	<0.0001	0.020	0.48	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-CBH015	SRT_CBH015	07/09/2018	Normal	616629	-	0.004	-	-	<0.0001	0.013	0.072	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-CBH015	SRT_CBH015	25/10/2018	Normal	624838	-	0.004	-	5.2	<0.0001	0.016	0.073	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH015	SRT_CBH015	26/11/2018	Normal	629922	-	<0.001	-	-	<0.0001	0.009	0.020	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QA02	SRT_CBH015	17/12/2018	Interlab_D	ES1838345	-	<0.001	-	-	<0.0001	0.010	0.024	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
SRT_CBH015	SRT_CBH015	17/12/2018	Normal	634274	-	0.002	-	5.4	<0.0001	0.011	0.040	<0.05	<1	2	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QA02	SRT_CBH015	18/01/2019	Interlab_D	ES1901871	-	0.004	-	-	<0.0001	0.012	0.077	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
SRT_CBH015	SRT_CBH015	18/01/2019	Normal	636542	-	<0.001	-	6.0	<0.0001	0.009	0.022	0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH015	SRT_CBH015	20/02/2019	Normal	641720	-	<0.001	-	6.6	<0.0001	0.010	0.023	0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH015	SRT_CBH015	17/04/2019	Normal	651825	-	<0.001	-	5.8	<0.0001	0.010	0.024	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_CBH015	SRT_CBH015	15/05/2019	Normal	656080	-	<0.001	-	5.1	<0.0001	0.009	0.024	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH015	SRT_CBH015	07/06/2019	Normal	660130	-	<0.001	-	7.5	<0.0001	0.010	0.027	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
QC02	SRT_CBH015	31/07/2019	Field_D	669059	-	<0.001	-	-	<0.0001	0.009	0.022	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT-CBH015	SRT_CBH015	31/07/2019	Normal	669059	-	<0.001	-	6.1	<0.0001	0.009	0.021	<0.05	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	SRT_CBH015	30/08/2019	Field_D	674722	-	<0.001	-	-	<0.0001	0.009	0.026	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_CBH015	SRT_CBH015	30/08/2019	Normal	674722	-	<0.001	-	6.5	<0.0001	0.009	0.025	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	300	<100	300	<50	200	<100
SRT_CBH015	SRT_CBH015	27/09/2019	Normal	679636	-	<0.001	-	6.8	<0.0001	0.010	0.034	<0.05	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH015	SRT_CBH015	18/10/2019	Normal	683453	-	<0.001	-	6.8	<0.0001	0.012	0.023	0.07	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH015	SRT_CBH015	15/11/2019	Normal	688512	-	<0.001	-	6.3	<0.0001	0.010	0.022	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	540	540	<100	<100	540	<50	<100	<100
SRT_CBH015	SRT_CBH015	18/12/2019	Normal	694466	-	<0.001	-	5.5	<0.0001	0.011	0.024	0.17	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-CBH017	SRT_CBH017	07/09/2018	Normal	616629	-	0.004	-	-	<0.0001	0.006	0.069	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT-CBH017	SRT_CBH017	25/10/2018	Normal	624838	-	0.004	-	0.85	<0.0001	0.010	0.12	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH017	SRT_CBH017	26/11/2018	Normal	629922	-	0.006	-	-	<0.0001	0.016	0.21	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH017	SRT_CBH017	17/12/2018	Normal	634274	-	<0.001	-	1.8	<0.0001	0.008	0.017	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH017	SRT_CBH017	18/01/2019	Normal	636542	-	<0.001	-	1.8	<0.0001	0.005	0.010	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QA01	SRT_CBH017	20/02/2019	Field_D	641720	-	<0.001	-	-	<0.0001	0.010	0.023	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_CBH017	SRT_CBH017	20/02/2019	Normal	641720	-	0.002	-	1.00	<0.0001	0.010	0.033	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH017	SRT_CBH017	17/04/2019	Normal	651825	-	<0.001	-	0.65	<0.0001	0.004	0.008	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_CBH017	SRT_CBH017	15/05/2019	Normal	656080	-	<0.001	-	0.70	<0.0001	0.004	0.008	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH017	SRT_CBH017	07/06/2019	Normal	660130	-	<0.001	-	5.1	<0.0001	0.006	0.017	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT-CBH017	SRT_CBH017	31/07/2019	Normal	669059	-	<0.001	-	2.1	<0.0001	0.005	0.015	<0.05	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH017	SRT_CBH017	30/08/2019	Normal	674722	-	<0.001	-	0.38	<0.0001	0.004	0.014	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	<100	200	<50	100	<100
QC02	SRT_CBH017	27/09/2019	Field_D	679636	-	<0.001	-	-	<0.0001	0.002	0.006	-	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_CBH017	SRT_CBH017	27/09/2019	Normal	679636	-	<0.001	-	0.45	<0.0001	0.002	0.006	0.05	<1	1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH017	SRT_CBH017	18/10/2019	Normal	683453	-	0.001	-	0.60	<0.0001	0.016	0.069	0.09	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH017	SRT_CBH017	15/11/2019	Normal	688512	-	<0.001	-	1.3	<0.0001	0.005	0.008	0.07	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH017	SRT_CBH017	18/12/2019	Normal	694466	-	<0.001	-	2.3	<0.0001	0.006	0.010	0.17	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_CBH017	SRT_CBH017	20/01/2020	Normal	698379	-	<0.001	-	3.6	<0.0001	0.011	0.074	0.64	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

		PAHs - standard 16																			PAHs - extended					Phenols - H				
	>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
CSM_BH02	CSM_BH02	16/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	14/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	06/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	30/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	29/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	26/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	17/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	13/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	17/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	21/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	25/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	14/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	19/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	18/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH02	18/06/2020	Field_D	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	15/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	18/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	14/09/2020	Normal	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH02	14/09/2020	Field_D	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	27/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	19/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	23/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	27/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH02	27/01/2021	Field_D	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	17/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	27/04/2021	Normal	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	-	0.02	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	25/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	15/06/2021	Normal	803914	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM-BH02	CSM_BH02	12/07/2021	Normal	810513	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	09/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
CSM_BH02	CSM_BH02	28/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	27/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH02	CSM_BH02	25/11/2021	Normal	846135	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH02	18/01/2022	Field_D	856960	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	10/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	18/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	16/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	13/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	11/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	30/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	29/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	26/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

		PAHs - standard 16																			PAHs - extended					Phenols - H				
	>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
CSM_BH04	CSM_BH04	17/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH04	17/10/2019	Field_D	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	13/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH04	13/11/2019	Interlab_D	ES1937682	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	17/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	21/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	-	0.06	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH04	21/01/2020	Field_D	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.0	0.17	0.08	-	1.25	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	25/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	25/02/2020	Field_D	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	14/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	20/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	18/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	15/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	17/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH04	17/08/2020	Interlab_D	ES2028968	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH04	CSM_BH04	14/09/2020	Normal	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	27/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	0.07	0.11	0.07	0.06	<0.01	0.08	<0.01	0.07	<0.01	<0.01	0.05	0.06	0.15	-	0.72	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	19/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH04	19/11/2020	Field_D	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	23/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	27/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH04	27/01/2021	Interlab_D	ES2102832	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH04	CSM_BH04	17/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH04	17/02/2021	Field_D	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	17/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH04	17/03/2021	Interlab_D	ES2109792	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH04	CSM_BH04	27/04/2021	Normal	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	-	0.03	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	25/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH04	25/05/2021	Interlab_D	ES2119803	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH04	CSM_BH04	15/06/2021	Normal	803914	100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH04	15/06/2021	Field_D	803914	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM-BH04	CSM_BH04	12/07/2021	Normal	810513	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH04	12/07/2021	Field_D	810513	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	09/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
QC01	CSM_BH04	09/08/2021	Field_D	816445	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	28/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	27/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH04	CSM_BH04	23/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH04	18/01/2022	Interlab_D	ES2201646	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH04	CSM_BH04	09/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	16/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH05	CSM_BH05	17/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	>C10-C40 (sum) SG Cleanup	PAHs - standard 16																			PAHs - extended					Phenols - H				
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
CSM_BH05	CSM_BH05	13/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH05	CSM_BH05	11/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH05	CSM_BH05	29/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	18/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	14/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH06	14/05/2019	Field_D	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	06/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC04	CSM_BH06	08/06/2019	Field_D	660130	-	<1	<1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	-	2	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	30/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	28/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	26/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	17/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	13/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	17/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH06	17/12/2019	Field_D	694466	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	25/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	16/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH06	16/03/2020	Interlab_D	ES2009232	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH06	CSM_BH06	14/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	0.10	-	0.17	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH06	14/04/2020	Interlab_D	ES2012716	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH06	CSM_BH06	19/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	18/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	15/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	18/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	14/09/2020	Normal	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	27/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	19/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	22/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	27/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	18/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.02	<0.01	-	0.05	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	17/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	27/04/2021	Normal	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	-	0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	25/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH06	25/05/2021	Field_D	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	16/06/2021	Normal	803914	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM-BH06	CSM_BH06	12/07/2021	Normal	810513	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	09/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
CSM_BH06	CSM_BH06	29/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH06	CSM_BH06	25/11/2021	Normal	846135	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	15/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	-	0.03	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	27/01/2022	Normal	858641	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	09/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	17/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	18/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

		PAHs - standard 16																			PAHs - extended					Phenols - H				
	>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
QC02	CSM_BH08	18/04/2019	Field_D	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	15/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	06/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC03	CSM_BH08	06/06/2019	Interlab_D	ES1917968	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	30/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	29/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	26/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	18/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	13/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	16/12/2019	Normal	694466	-	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	0.06	<0.01	0.03	-	0.14	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	21/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	25/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	14/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	0.03	-	0.06	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	18/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	-	0.05	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH08	18/05/2020	Interlab_D	ES2017182	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH08	CSM_BH08	17/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.09	<0.01	<0.01	-	0.09	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	17/06/2020	Interlab_D	ES2021404	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH08	CSM_BH08	15/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH08	15/07/2020	Interlab_D	ES2024606	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH08	CSM_BH08	19/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	14/09/2020	Normal	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH08	14/09/2020	Interlab_D	ES2032425	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH08	CSM_BH08	27/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	0.09	0.17	0.15	0.14	<0.01	0.15	<0.01	0.17	<0.01	<0.01	<0.01	0.04	0.17	-	1.08	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH08	27/10/2020	Field_D	753369	-	<0.01	<0.01	0.04	0.16	0.17	0.15	0.15	0.18	0.18	0.03	0.15	<0.01	0.11	0.03	0.08	0.16	-	1.59	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	27/10/2020	Interlab_D	ES2037870	-	<0.1	<0.1	<0.1	0.2	0.33	0.4	0.1	0.3	0.2	<0.1	0.3	<0.1	0.2	<0.1	<0.1	0.3	-	2.3	0.4	<0.1	<0.1	<0.1	0.2	<0.1	-	-	-	-	-
CSM_BH08	CSM_BH08	19/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
BD01	CSM_BH08	21/12/2020	Field_D	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	21/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SD01	CSM_BH08	21/12/2020	Interlab_D	ES2100056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	28/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	19/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	17/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH08	17/03/2021	Field_D	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/04/2021	Normal	791517	-	<0.01	0.03	0.03	0.14	0.15	0.15	0.14	0.11	0.19	<0.01	0.26	<0.01	0.06	0.02	0.04	0.28	-	1.6	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH08	27/04/2021	Interlab_D	ES2115835	-	<0.1	<0.1	<0.1	0.2	0.33	0.3	0.1	0.2	0.2	<0.1	0.3	<0.1	0.2	<0.1	<0.1	0.4	-	2.2	0.4	<0.1	<0.1	<0.1	0.3	<0.1	-	-	-	-	-
CSM_BH08	CSM_BH08	27/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	0.10	0.08	0.07	0.07	0.04	0.08	0.01	0.11	<0.01	0.01	<0.01	<0.01	0.14	-	0.71	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	15/06/2021	Normal	803914	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH08	15/06/2021	Interlab_D	ES2122606	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM-BH08	CSM_BH08	12/07/2021	Normal	810513	<100	<0.01	0.09	0.03	0.18	0.39	0.28	0.26	0.18	0.22	0.04	0.27	<0.01	0.22	0.03	0.04	0.37	-	6.25	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	10/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
QC02	CSM_BH08	10/08/2021	Interlab_D	ES2129447	-	<0.1	<0.1	<0.1	0.3	0.42	0.4	0.2	0.3	0.3	<0.1	0.3	<0.1	0.2	<0.1	<0.1	0.4	-	2.8	0.5	<0.1	<0.1	<0.1	0.3	0.1	-	-	-	-	-
CSM_BH08	CSM_BH08	28/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH08	28/09/2021	Interlab_D	EM2119579	-	<0.1	<0.1	<0.1	0.2	0.39	0.4	0.1	0.3	0.2	<0.1	0.2	<0.1	0.2	<0.1	<0.1	0.3	-	2.3	0.5	<0.1	<0.1	<0.1	0.3	<0.1	-	-	-	-	-
CSM_BH08	CSM_BH08	27/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH08	27/10/2021	Interlab_D	ES2139173	-	<0.1	<0.1	<0.1	<0.1	0.10	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	-	0.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	>C10-C40 (sum) SG Cleanup	PAHs - standard 16																			PAHs - extended					Phenols - H				
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
CSM BH08	CSM_BH08	24/11/2021	Normal	846135	<100	<0.01	<0.01	<0.01	0.20	0.20	0.40	0.30	0.40	0.20	<0.01	0.20	<0.01	0.20	<0.01	0.20	0.30	-	2.6	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH08	24/11/2021	Field_D	846135	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	16/12/2021	Normal	851006	<100	0.02	0.06	0.05	0.37	0.63	0.51	0.41	0.52	0.55	0.11	0.5	0.02	0.49	0.04	0.14	0.64	-	5.06	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	10/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	17/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	17/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH09S	17/04/2019	Interlab_D	ES1912362	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	13/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH09S	13/05/2019	Interlab_D	ES1914810	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	11/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	29/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH09S	29/07/2019	Interlab_D	ES1924197	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	28/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH09S	28/08/2019	Interlab_D	EM1914568	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	25/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH09S	25/09/2019	Interlab_D	ES1931406	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	14/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	16/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH09S	16/12/2019	Interlab_D	ES1941823	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH09S	CSM_BH09S	21/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	24/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	24/02/2020	Interlab_D	ES2006512	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH09S	CSM_BH09S	17/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	16/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	20/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09s	CSM_BH09S	19/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	19/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	16/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH09S	16/07/2020	Field_D	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	18/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH09S	18/08/2020	Field_D	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/09/2020	Normal	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	28/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	20/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH09S	CSM_BH09S	21/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	16/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	13/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	11/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	30/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	29/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	25/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	16/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH10S	16/10/2019	Interlab_D	ES1934142	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	14/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

		PAHs - standard 16																			PAHs - extended					Phenols - H				
	>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
QC02	CSM_BH10S	14/11/2019	Field_D	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	17/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	20/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH10S	20/01/2020	Interlab_D	ES2001825	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH10S	CSM_BH10S	25/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	17/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH10S	17/03/2020	Field_D	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	15/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH10S	15/04/2020	Field_D	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	18/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.10	<0.01	-	0.1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH10S	20/05/2020	Field_D	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	19/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	19/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	15/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	17/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	15/09/2020	Normal	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	27/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	18/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH10S	23/11/2020	Interlab_D	ES2041428	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH10S	CSM_BH10S	21/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	28/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	17/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	-	0.02	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH10S	17/02/2021	Interlab_D	ES2105795	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH10S	CSM_BH10S	17/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	27/04/2021	Normal	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	-	0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH10S	27/04/2021	Field_D	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	26/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	15/06/2021	Normal	803914	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM-BH10S	CSM_BH10S	12/07/2021	Normal	810513	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH10S	12/07/2021	Interlab_D	ES2125823	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH10S	CSM_BH10S	10/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
CSM_BH10S	CSM_BH10S	28/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	27/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH10S	CSM_BH10S	23/11/2021	Normal	846135	<100	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	-	0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH10S	14/12/2021	Field_D	851006	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	09/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH10S	09/02/2022	Interlab_D	ES2204819	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH10S	CSM_BH10S	16/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH10S	16/03/2022	Field_D	872459	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	27/04/2021	Normal	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	-	0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH12S	CSM_BH12S	26/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH12S	CSM_BH12S	17/06/2021	Normal	803914	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM-BH12S	CSM_BH12S	12/07/2021	Normal	810513	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH12S	CSM_BH12S	10/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	>C10-C40 (sum) SG Cleanup	PAHs - standard 16																			PAHs - extended					Phenols - H				
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
CSM_BH12S	CSM_BH12S	28/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH12S	CSM_BH12S	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH12S	CSM_BH12S	24/11/2021	Normal	846135	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH12S	24/11/2021	Interlab_D	ES2144215	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH12S	CSM_BH12S	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	-	0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH12S	CSM_BH12S	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH12S	CSM_BH12S	08/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH12S	CSM_BH12S	18/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH13	CSM_BH13	29/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH13	CSM_BH13	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH13	CSM_BH13	25/11/2021	Normal	846135	600	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH13	CSM_BH13	15/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH13	15/12/2021	Interlab_D	ES2146398	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH13	CSM_BH13	27/01/2022	Normal	858641	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH13	CSM_BH13	10/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH13	CSM_BH13	17/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	29/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH14S	28/10/2021	Field_D	836474	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM BH14S	CSM_BH14S	25/11/2021	Normal	846135	300	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	15/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	27/01/2022	Normal	858641	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	09/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	17/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH7	GASW_BH7	05/06/2019	Normal	659250	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	GASW_BH7	05/06/2019	Interlab_D	ES1917381	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	30/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH7	GASW_BH7	28/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH7	GASW_BH7	25/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH7	GASW_BH7	16/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH7	GASW_BH7	14/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH7	GASW_BH7	16/12/2019	Normal	694466	-	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.05	<0.01	0.30	0.01	0.02	-	0.46	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH7	GASW_BH7	22/01/2020	Normal	698379	-	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.17	<0.01	<0.01	-	0.23	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH7	GASW_BH7	24/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.17	<0.01	<0.01	-	0.17	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH7	GASW_BH7	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	17/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.10	<0.01	<0.01	-	0.1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	05/06/2019	Normal	659250	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	30/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	28/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	26/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	17/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	13/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	16/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	-	0.04	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	21/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	-	0.05	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	24/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.09	<0.01	<0.01	-	0.09	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	18/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

		PAHs - standard 16																			PAHs - extended					Phenols - H				
	>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																												
GASW_BH10	GASW_BH10	14/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	19/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	18/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	0.01	0.02	-	0.07	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	15/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	17/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	14/09/2020	Normal	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	27/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	19/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	23/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	27/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	18/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	-	0.02	-	-	-	-	-	-	<5	<5	<10	<10	<5
GASW_BH10	GASW_BH10	17/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	27/04/2021	Normal	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	25/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	15/06/2021	Normal	803914	200	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW-BH10	GASW_BH10	12/07/2021	Normal	810513	100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	-	0.03	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	10/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
GASW_BH10	GASW_BH10	29/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	-	0.02	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	29/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW BH10	GASW_BH10	24/11/2021	Normal	846135	1,100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	08/02/2022	Normal	862315	300	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	18/03/2022	Normal	872459	1,800	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	05/06/2019	Normal	659250	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	GASW_BH11	05/06/2019	Field_D	659250	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	30/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	28/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	25/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	16/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	14/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	16/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	-	0.02	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	22/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	-	0.04	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	24/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	17/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	16/04/2020	Normal	714027	-	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	<0.01	0.04	0.04	-	0.2	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	20/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	19/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	16/07/2020	Normal	732590	-	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	0.02	<0.01	0.08	0.07	0.04	-	0.28	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	17/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	16/09/2020	Normal	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	27/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	20/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	21/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	28/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	17/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	-	0.02	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

		PAHs - standard 16																			PAHs - extended					Phenols - H				
	>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
GASW_BH11	GASW_BH11	18/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	27/04/2021	Normal	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	26/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	16/06/2021	Normal	803914	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW-BH11	GASW_BH11	12/07/2021	Normal	810513	300	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	10/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
GASW_BH11	GASW_BH11	28/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
BH23	GASW_BH23	23/08/2019	Normal	ES1926979	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	4.0	1.7	<1.0	7.0	-	<0.5	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0
GW-BR1	GASW_BH23	23/08/2019	Field_D	ES1926979	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.9	1.6	<1.0	4.5	-	<0.5	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0
GASW_BH23	GASW_BH23	25/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	-	2	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	16/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	4	<1	<1	-	4	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	14/11/2019	Normal	688512	-	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	7	1	<1	-	11	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	16/12/2019	Normal	694466	-	0.25	0.03	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.29	0.30	<0.01	0.28	0.10	0.38	-	1.74	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	22/01/2020	Normal	698379	-	0.15	0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.08	0.18	<0.01	0.49	0.08	0.09	-	1.13	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	24/02/2020	Normal	704673	-	1.3	0.10	0.48	0.06	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	0.39	1.4	<0.01	9.1	1.6	0.40	-	14.88	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	17/03/2020	Normal	708508	-	0.26	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	0.16	<0.01	0.43	0.07	0.17	-	1.21	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	16/04/2020	Normal	714027	-	0.82	0.07	0.30	0.10	0.09	0.06	0.05	0.04	0.14	<0.01	0.54	1.0	0.04	1.7	0.78	0.67	-	6.4	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	20/05/2020	Normal	720682	-	0.21	0.04	0.30	0.15	0.17	0.16	0.13	<0.01	0.15	<0.01	0.60	0.42	<0.01	0.61	1.0	0.78	-	4.72	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	17/06/2020	Normal	726825	-	0.13	0.02	0.11	0.09	0.06	0.05	0.05	0.04	0.08	<0.01	0.25	0.19	0.03	0.25	0.21	0.31	-	1.87	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	16/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	0.10	-	0.15	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	17/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	15/09/2020	Normal	744463	-	0.28	0.15	0.50	0.47	0.72	0.49	0.53	0.47	0.42	0.14	1.2	0.87	0.36	1.7	0.81	1.9	-	11.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	26/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	18/11/2020	Normal	758435	-	1.2	0.10	0.30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.40	1.3	<0.01	3.5	0.70	0.41	-	7.91	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	21/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	28/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	17/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	0.09	<0.01	<0.01	-	0.13	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	18/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	27/04/2021	Normal	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	26/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	0.08	-	0.15	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	16/06/2021	Normal	803914	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW-BH23	GASW_BH23	12/07/2021	Normal	810513	<100	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	0.06	<0.01	0.03	-	0.16	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	10/08/2021	Normal	816445	<100	0.22	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.1	0.15	<0.01	0.12	0.06	0.11	-	0.76	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
GASW_BH23	GASW_BH23	29/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW BH23	GASW_BH23	23/11/2021	Normal	846135	700	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
BH25a	GASW_BH25A	23/08/2019	Normal	ES1926979	-	1.2	<1.0	1.5	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	2.4	2.1	<1.0	9.6	3.7	2.8	23.3	-	<0.5	-	-	-	-	-	<1.0	<1.0	<1.0	<1.0	<1.0
GW-SR1	GASW_BH25A	23/08/2019	Interlab_D	673339	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	7	1	<1	-	8	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	25/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	-	1	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25a	GASW_BH25A	16/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	<1	-	2	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	14/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	3	<1	<1	-	4	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	16/12/2019	Normal	694466	-	0.62	0.36	0.83	0.35	0.36	0.21	0.27	0.20	0.35	0.05	1.5	1.1	0.15	4.9	1.6	2.0	-	14.85	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	22/01/2020	Normal	698379	-	1.1	0.50	0.87	0.19	0.07	0.06	0.06	0.02	0.18	<0.01	0.79	1.9	0.02	20	2.6	0.98	-	29.34	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	24/02/2020	Normal	704673	-	0.70	0.28	0.94	0.24	0.32	0.15	0.14	0.12	0.32	0.02	1.2	1.6	0.09	13	1.8	1.5	-	22.42	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	>C10-C40 (sum) SG Cleanup	PAHs - standard 16																			PAHs - extended					Phenols - H				
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																												
GASW_BH25A	GASW_BH25A	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25a	GASW_BH25A	17/03/2020	Normal	708508	-	0.33	0.15	<0.01	0.09	0.08	0.07	0.06	0.03	0.10	<0.01	0.51	0.68	0.02	6.4	0.75	0.62	-	9.89	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	16/04/2020	Normal	714027	-	0.93	0.56	0.73	0.16	0.21	0.14	0.14	0.09	0.28	0.03	0.91	2.0	0.07	26	3.6	1.5	-	37.35	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	20/05/2020	Normal	720682	-	1.2	0.48	1.5	0.46	0.52	0.37	0.26	0.05	0.52	<0.01	1.7	2.0	0.05	28	4.6	2.4	-	44.11	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	19/06/2020	Normal	726825	-	0.60	0.38	0.56	0.22	0.21	0.14	0.15	0.11	0.22	0.05	0.86	1.4	0.11	17	2.1	1.1	-	25.21	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	16/07/2020	Normal	732590	-	0.08	0.02	0.10	0.09	<0.01	<0.01	<0.01	<0.01	0.08	<0.01	0.39	0.11	<0.01	0.17	0.28	0.45	-	1.77	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	17/08/2020	Normal	738860	-	0.30	0.31	0.44	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.41	0.95	<0.01	15	1.3	0.60	-	19.31	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	16/09/2020	Normal	744463	-	0.79	0.27	0.58	0.17	0.23	0.13	0.14	0.12	0.12	0.03	1.1	1.8	0.08	21	2.2	1.5	-	30.26	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	27/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	20/11/2020	Normal	758435	-	0.11	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	0.14	<0.01	0.30	<0.01	0.18	-	0.92	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	21/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	<0.01	<0.01	0.19	<0.01	0.13	-	0.44	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	28/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	17/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	18/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	27/04/2021	Normal	791517	-	0.08	0.03	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.11	0.07	<0.01	0.50	<0.01	0.09	-	0.9	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	26/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	<0.01	<0.01	<0.01	<0.01	0.14	-	0.26	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	15/06/2021	Normal	803914	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW-BH25A	GASW_BH25A	12/07/2021	Normal	810513	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	10/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
GASW_BH25A	GASW_BH25A	29/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA02	SRT_BH039	07/09/2018	Interlab_D	ES1826658	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
SRT-BH039	SRT_BH039	07/09/2018	Normal	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH039	SRT_BH039	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA02	SRT_BH039	26/10/2018	Interlab_D	ES1832040	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
SRT-BH047	SRT_BH047	06/09/2018	Normal	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH047	SRT_BH047	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	26/11/2018	Normal	629922	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	18/12/2018	Normal	634274	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	17/01/2019	Normal	636542	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	20/02/2019	Normal	641720	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	16/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	14/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	07/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH047	SRT_BH047	31/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	30/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	27/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	18/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	15/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	18/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	20/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	26/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	15/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	18/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	17/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

		PAHs - standard 16																			PAHs - extended					Phenols - H				
	>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
SRT_BH047	SRT_BH047	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	19/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	15/09/2020	Normal	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	26/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	18/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	22/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	29/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	17/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	18/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	27/04/2021	Normal	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	-	0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	27/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	17/06/2021	Normal	803914	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH047	SRT_BH047	12/07/2021	Normal	810513	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	11/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
QC01	SRT_BH047	30/09/2021	Field_D	829222	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	30/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	29/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT BH047	SRT_BH047	24/11/2021	Normal	846135	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	16/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	19/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	SRT_BH047	08/02/2022	Field_D	862315	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	08/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	16/03/2022	Normal	872459	100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH048	SRT_BH048	06/09/2018	Normal	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH048	SRT_BH048	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH048	SRT_BH048	26/11/2018	Normal	629922	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	16/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	15/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	17/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	17/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	19/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	18/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	22/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	17/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	18/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH050	SRT_BH050	12/07/2021	Normal	810513	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT BH050	SRT_BH050	25/11/2021	Normal	846135	<100	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	15/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	19/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	08/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	16/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH052	SRT_BH052	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	26/11/2018	Normal	629922	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	18/12/2018	Normal	634274	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	17/01/2019	Normal	636542	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	20/02/2019	Normal	641720	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

						PAHs - standard 16																PAHs - extended					Phenols - H				
					>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)										0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)										0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																		
>=2m, <4m																			**NL**															
>=4m, <8m																			**NL**															
>=8m																			**NL**															
Field ID	**Location Code**	**Sample Date**	**Sample Type**	**Lab Report Number**																														
SRT_BH052	SRT_BH052	16/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	14/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	07/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH052	SRT_BH052	31/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	30/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	27/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	18/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	15/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	18/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	-	0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	20/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	26/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	16/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	15/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	18/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	17/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	0.02	-	0.05	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	19/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	15/09/2020	Normal	744463	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	26/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	18/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	22/12/2020	Normal	765715	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	29/01/2021	Normal	770782	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	17/02/2021	Normal	775277	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	-	0.03	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	18/03/2021	Normal	781353	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	27/04/2021	Normal	791517	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	27/05/2021	Normal	799115	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	17/06/2021	Normal	803914	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH052	SRT_BH052	12/07/2021	Normal	810513	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	11/08/2021	Normal	816445	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.6	<0.6	<1.5	<1.5	<0.6
SRT_BH052	SRT_BH052	30/09/2021	Normal	829222	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	29/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT BH052	SRT_BH052	24/11/2021	Normal	846135	900	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	16/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	19/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	08/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	SRT_BH052	16/03/2022	Interlab_D	ES2209602	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
SRT_BH052	SRT_BH052	16/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH053	SRT_BH053	06/09/2018	Normal	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH053	SRT_BH053	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH059	SRT_BH059	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	26/11/2018	Normal	629922	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	17/12/2018	Normal	634274	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	18/01/2019	Normal	636542	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	20/02/2019	Normal	641720	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	17/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

		PAHs - standard 16																			PAHs - extended					Phenols - H				
	>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
SRT_BH059	SRT_BH059	15/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	07/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH059	SRT_BH059	31/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	30/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	27/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	18/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	15/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	18/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	-	0.03	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	20/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	26/02/2020	Normal	704673	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	16/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	15/04/2020	Normal	714027	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	18/05/2020	Normal	720682	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	17/06/2020	Normal	726825	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/07/2020	Normal	732590	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	18/08/2020	Normal	738860	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	15/09/2020	Normal	744463	-	<0.01	<0.01	0.03	0.04	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	0.09	<0.01	<0.01	<0.01	0.08	0.11	-	0.39	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	26/10/2020	Normal	753369	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH059	SRT_BH059	18/11/2020	Normal	758435	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH060	SRT_BH060	16/03/2020	Normal	708508	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH060	SRT_BH060	15/04/2020	Normal	714027	-	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	0.04	0.09	-	0.22	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH063	SRT_BH063	06/09/2018	Normal	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH063	SRT_BH063	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH063	SRT_BH063	26/11/2018	Normal	629922	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA02	SRT_BH063	27/11/2018	Interlab_D	ES1835581	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
QA01	SRT_BH063	17/12/2018	Field_D	634274	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	17/12/2018	Normal	634274	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA01	SRT_BH063	17/01/2019	Field_D	636542	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	17/01/2019	Normal	636542	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA02	SRT_BH063	21/02/2019	Interlab_D	ES1905610	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	21/02/2019	Normal	641720	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH063	SRT_BH063	18/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH063	SRT_BH063	15/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH063	SRT_BH063	07/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH063	SRT_BH063	29/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH063	SRT_BH063	28/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-BH064	SRT_BH064	06/09/2018	Normal	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA01	SRT_BH082	25/10/2018	Field_D	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
SRT-BH082	SRT_BH082	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA01	SRT_BH082	26/11/2018	Field_D	629922	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
SRT_BH082	SRT_BH082	26/11/2018	Normal	629922	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA01	SRT_CBH001	06/09/2018	Field_D	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-CBH001	SRT_CBH001	06/09/2018	Normal	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-CBH001	SRT_CBH001	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH001	SRT_CBH001	26/11/2018	Normal	629922	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	>C10-C40 (sum) SG Cleanup	PAHs - standard 16																			PAHs - extended					Phenols - H				
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
SRT-CBH007	SRT_CBH007	06/09/2018	Normal	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-CBH015	SRT_CBH015	07/09/2018	Normal	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-CBH015	SRT_CBH015	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH015	SRT_CBH015	26/11/2018	Normal	629922	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA02	SRT_CBH015	17/12/2018	Interlab_D	ES1838345	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	17/12/2018	Normal	634274	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA02	SRT_CBH015	18/01/2019	Interlab_D	ES1901871	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	18/01/2019	Normal	636542	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH015	SRT_CBH015	20/02/2019	Normal	641720	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH015	SRT_CBH015	17/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH015	SRT_CBH015	15/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH015	SRT_CBH015	07/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	SRT_CBH015	31/07/2019	Field_D	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH015	SRT_CBH015	31/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	SRT_CBH015	30/08/2019	Field_D	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	30/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH015	SRT_CBH015	27/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH015	SRT_CBH015	18/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH015	SRT_CBH015	15/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH015	SRT_CBH015	18/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-CBH017	SRT_CBH017	07/09/2018	Normal	616629	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-CBH017	SRT_CBH017	25/10/2018	Normal	624838	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	26/11/2018	Normal	629922	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	17/12/2018	Normal	634274	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	18/01/2019	Normal	636542	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QA01	SRT_CBH017	20/02/2019	Field_D	641720	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	20/02/2019	Normal	641720	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	17/04/2019	Normal	651825	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	15/05/2019	Normal	656080	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	07/06/2019	Normal	660130	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT-CBH017	SRT_CBH017	31/07/2019	Normal	669059	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	30/08/2019	Normal	674722	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	SRT_CBH017	27/09/2019	Field_D	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	27/09/2019	Normal	679636	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	18/10/2019	Normal	683453	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	15/11/2019	Normal	688512	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	18/12/2019	Normal	694466	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	-	0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_CBH017	SRT_CBH017	20/01/2020	Normal	698379	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
CSM_BH02	CSM_BH02	16/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	14/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	06/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	30/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	29/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	26/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	17/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	13/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	17/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	21/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	25/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	14/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	19/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH02	18/06/2020	Field_D	726825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	15/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	14/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH02	14/09/2020	Field_D	744463	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	27/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	19/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	23/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	27/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH02	27/01/2021	Field_D	770782	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	17/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
CSM_BH02	CSM_BH02	25/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	15/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM-BH02	CSM_BH02	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	09/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	28/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	27/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH02	CSM_BH02	25/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH02	18/01/2022	Field_D	856960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	10/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	16/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	13/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	11/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	30/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	29/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	26/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

							Halogenated					Phenols - Non-Halogenated												Chlorinated Hydrocarbons																							
							4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
							µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL							1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)								100																				300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)								22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																										
>=2m, <4m																																									
>=4m, <8m																																									
>=8m																																									
Field ID	**Location Code**	**Sample Date**	**Sample Type**	**Lab Report Number**																																							
CSM_BH04	CSM_BH04	17/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	17/10/2019	Field_D	683453	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	13/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	13/11/2019	Interlab_D	ES1937682	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	17/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	21/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	21/01/2020	Field_D	698379	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	25/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	25/02/2020	Field_D	704673	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	20/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	15/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	17/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	17/08/2020	Interlab_D	ES2028968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	27/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	19/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	19/11/2020	Field_D	758435	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	23/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	27/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	27/01/2021	Interlab_D	ES2102832	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	17/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	17/02/2021	Field_D	775277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	17/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	17/03/2021	Interlab_D	ES2109792	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
CSM_BH04	CSM_BH04	25/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	25/05/2021	Interlab_D	ES2119803	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	15/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	15/06/2021	Field_D	803914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM-BH04	CSM_BH04	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	12/07/2021	Field_D	810513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	09/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	09/08/2021	Field_D	816445	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	28/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	27/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH04	CSM_BH04	23/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	18/01/2022	Interlab_D	ES2201646	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	09/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	16/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH05	CSM_BH05	17/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
CSM_BH05	CSM_BH05	13/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH05	CSM_BH05	11/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH05	CSM_BH05	29/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	18/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	14/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH06	14/05/2019	Field_D	656080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	06/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04	CSM_BH06	08/06/2019	Field_D	660130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	30/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	28/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	26/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	17/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	13/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	17/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH06	17/12/2019	Field_D	694466	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	25/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	16/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH06	16/03/2020	Interlab_D	ES2009232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	14/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH06	14/04/2020	Interlab_D	ES2012716	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	19/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	18/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	15/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	18/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	14/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	27/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	19/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	22/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	27/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	18/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	17/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
CSM_BH06	CSM_BH06	25/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH06	25/05/2021	Field_D	799115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	16/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM-BH06	CSM_BH06	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	09/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	29/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH06	CSM_BH06	25/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	15/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	27/01/2022	Normal	858641	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	09/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	17/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

						Halogenated					Phenols - Non-Halogenated														Chlorinated Hydrocarbons																				
						4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL						1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)							100																				300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)							22				400													270	400	1,900	700		1,900	1,100							240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																										
>=2m, <4m																																										
>=4m, <8m																																										
>=8m																																										

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																									
QC02	CSM_BH08	18/04/2019	Field_D	651825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	15/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	06/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC03	CSM_BH08	06/06/2019	Interlab_D	ES1917968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	30/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	29/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	26/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	13/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	16/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	21/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	25/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	14/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	18/05/2020	Interlab_D	ES2017182	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	17/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	17/06/2020	Interlab_D	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	15/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	15/07/2020	Interlab_D	ES2024606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	19/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	14/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	14/09/2020	Interlab_D	ES2032425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	27/10/2020	Field_D	753369	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	27/10/2020	Interlab_D	ES2037870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	19/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD01	CSM_BH08	21/12/2020	Field_D	765715	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	21/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SD01	CSM_BH08	21/12/2020	Interlab_D	ES2100056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	28/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	19/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	17/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	17/03/2021	Field_D	781353	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
QC02	CSM_BH08	27/04/2021	Interlab_D	ES2115835	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	15/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	15/06/2021	Interlab_D	ES2122606	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM-BH08	CSM_BH08	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	10/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	10/08/2021	Interlab_D	ES2129447	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	28/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	28/09/2021	Interlab_D	EM2119579	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	27/10/2021	Interlab_D	ES2139173	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
CSM BH08	CSM_BH08	24/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	24/11/2021	Field_D	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	16/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	10/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	17/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	17/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	17/04/2019	Interlab_D	ES1912362	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	13/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	13/05/2019	Interlab_D	ES1914810	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	11/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	29/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	29/07/2019	Interlab_D	ES1924197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	28/08/2019	Normal	674722	<10	<10	<30	<10	-	140	<10	<3	<6	<3	<30	<30	<100	<30	-	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	28/08/2019	Interlab_D	EM1914568	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	25/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	25/09/2019	Interlab_D	ES1931406	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	14/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH09S	16/12/2019	Interlab_D	ES1941823	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	21/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	24/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	24/02/2020	Interlab_D	ES2006512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	17/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	20/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09s	CSM_BH09S	19/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	19/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH09S	16/07/2020	Field_D	732590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	18/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH09S	18/08/2020	Field_D	738860	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	28/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	20/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	21/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	16/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	13/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	11/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	30/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	29/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	25/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	16/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH10S	16/10/2019	Interlab_D	ES1934142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	14/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
QC02	CSM_BH10S	14/11/2019	Field_D	688512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	17/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	20/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH10S	20/01/2020	Interlab_D	ES2001825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	25/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	17/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH10S	17/03/2020	Field_D	708508	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	15/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH10S	15/04/2020	Field_D	714027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	18/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH10S	20/05/2020	Field_D	720682	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	19/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	19/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	15/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	17/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	15/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	27/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	18/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH10S	23/11/2020	Interlab_D	ES2041428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	21/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	28/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	17/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH10S	17/02/2021	Interlab_D	ES2105795	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	17/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
QC01	CSM_BH10S	27/04/2021	Field_D	791517	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
CSM_BH10S	CSM_BH10S	26/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	15/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM-BH10S	CSM_BH10S	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH10S	12/07/2021	Interlab_D	ES2125823	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	10/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	28/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	27/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH10S	CSM_BH10S	23/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH10S	14/12/2021	Field_D	851006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	09/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH10S	09/02/2022	Interlab_D	ES2204819	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	16/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH10S	16/03/2022	Field_D	872459	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
CSM_BH12S	CSM_BH12S	26/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	17/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM-BH12S	CSM_BH12S	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	10/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
CSM_BH12S	CSM_BH12S	28/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH12S	CSM_BH12S	24/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH12S	24/11/2021	Interlab_D	ES2144215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	08/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	18/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	29/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH13	CSM_BH13	25/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	15/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH13	15/12/2021	Interlab_D	ES2146398	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	27/01/2022	Normal	858641	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	10/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	17/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	29/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH14S	28/10/2021	Field_D	836474	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH14S	CSM_BH14S	25/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	15/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	27/01/2022	Normal	858641	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	09/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	17/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	05/06/2019	Normal	659250	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	GASW_BH7	05/06/2019	Interlab_D	ES1917381	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	30/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	28/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	25/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	16/10/2019	Normal	683453	<10	<10	<30	<10	-	5	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	14/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	16/12/2019	Normal	694466	<10	<10	<30	<10	-	4	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	22/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	24/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	17/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	05/06/2019	Normal	659250	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	30/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	28/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	26/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	17/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	13/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	16/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	21/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	11	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	24/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	15	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	18/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	33	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
GASW_BH10	GASW_BH10	14/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	60	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	19/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	45	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	18/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	33	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	15/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	68	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	17/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	14/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	26	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	27/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	53	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	19/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	23/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	120	<3	<30	<30	<100	<30	-	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	27/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	18/02/2021	Normal	775277	<10	<10	<30	<10	-	<5	<10	<5	<10	<5	<50	<50	<100	<50	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	17/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	29	<3	<30	<30	<100	<30	-	<100	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
GASW_BH10	GASW_BH10	25/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	15	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	15/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW-BH10	GASW_BH10	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	10/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	4	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	29/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	29/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW BH10	GASW_BH10	24/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	08/02/2022	Normal	862315	<10	<10	<30	-	<10	4	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	18/03/2022	Normal	872459	<10	<10	<30	-	<10	12	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	05/06/2019	Normal	659250	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	GASW_BH11	05/06/2019	Field_D	659250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	30/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	28/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	25/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	16/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	14/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	16/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	22/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	24/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	17/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	16/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	20/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	19/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	16/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	17/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	58	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	16/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	27/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	20/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	21/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	28/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	17/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
GASW_BH11	GASW_BH11	18/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
GASW_BH11	GASW_BH11	26/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	16/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW-BH11	GASW_BH11	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	10/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	28/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	GASW_BH23	23/08/2019	Normal	ES1926979	<1.0	<2.0	-	-	-	16.4	<1.0	8.0	4.7	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW-BR1	GASW_BH23	23/08/2019	Field_D	ES1926979	<1.0	<2.0	-	-	-	10.2	<1.0	6.2	4.3	1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	25/09/2019	Normal	679636	<10	<10	<30	<10	-	17	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	16/10/2019	Normal	683453	<10	<10	<30	<10	-	22	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	14/11/2019	Normal	688512	<10	<10	<30	<10	-	67	<10	6	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	16/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	22/01/2020	Normal	698379	<10	<10	<30	<10	-	37	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	24/02/2020	Normal	704673	<10	<10	<30	<10	-	21	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	17/03/2020	Normal	708508	<10	<10	<30	<10	-	6	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	16/04/2020	Normal	714027	<10	<10	<30	<10	-	15	<10	5	<6	7	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	20/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	17/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	16/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	17/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	15/09/2020	Normal	744463	<10	<10	<30	<10	-	20	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	26/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	18/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	21/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	28/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	17/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	18/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	<50	<50	<5	<5	<5	<5	<5	27	<5	<5	<5	<5	<5	<5	<5	<25	<5
GASW_BH23	GASW_BH23	26/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	16/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW-BH23	GASW_BH23	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	10/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	29/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW BH23	GASW_BH23	23/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25a	GASW_BH25A	23/08/2019	Normal	ES1926979	<1.0	<2.0	-	-	-	7.7	<1.0	4.2	12.0	2.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW-SR1	GASW_BH25A	23/08/2019	Interlab_D	673339	<10	<10	<30	<10	-	6	<10	5	7	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	25/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25a	GASW_BH25A	16/10/2019	Normal	683453	<10	<10	<30	<10	-	11	<10	5	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	14/11/2019	Normal	688512	<10	<10	<30	<10	-	53	<10	42	7	4	<30	<30	<100	<30	-	106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	16/12/2019	Normal	694466	<10	<10	<30	<10	-	88	<10	46	55	6	<30	<30	<100	<30	-	195	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	22/01/2020	Normal	698379	<10	<10	<30	<10	-	11	<10	7	11	8	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	24/02/2020	Normal	704673	<10	<10	<30	<10	-	31	<10	7	10	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
GASW_BH25A	GASW_BH25A	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25a	GASW_BH25A	17/03/2020	Normal	708508	<10	<10	<30	<10	-	89	<10	21	26	<3	<30	<30	<100	<30	-	136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	16/04/2020	Normal	714027	<10	<10	<30	<10	-	35	<10	10	7	5	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	20/05/2020	Normal	720682	<10	<10	<30	<10	-	37	<10	16	14	6	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	19/06/2020	Normal	726825	<10	<10	<30	<10	-	36	<10	27	19	16	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	16/07/2020	Normal	732590	<10	<10	<30	<10	-	11	<10	7	6	3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	17/08/2020	Normal	738860	<10	<10	<30	<10	-	35	<10	25	16	25	<30	<30	<100	<30	-	101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	16/09/2020	Normal	744463	<10	<10	<30	<10	-	38	<10	26	14	6	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	27/10/2020	Normal	753369	<10	<10	<30	<10	-	14	<10	3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	20/11/2020	Normal	758435	<10	<10	<30	<10	-	46	<10	45	36	34	<30	<30	<100	<30	-	161	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	21/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	9	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	28/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	17/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	18/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	27/04/2021	Normal	791517	<10	<10	<30	<10	-	20	<10	10	9	<3	<30	<30	<100	<30	-	<100	<100	<100	<10	<10	<10	<10	<10	<10	<10	56	<10	<10	<10	<10	<10	<10	<50	<10
GASW_BH25A	GASW_BH25A	26/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	15/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW-BH25A	GASW_BH25A	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	10/08/2021	Normal	816445	<1.5	<10	<30	<10	-	46	<1.5	4	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	29/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_BH039	07/09/2018	Interlab_D	ES1826658	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH039	SRT_BH039	07/09/2018	Normal	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH039	SRT_BH039	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_BH039	26/10/2018	Interlab_D	ES1832040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH047	SRT_BH047	06/09/2018	Normal	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH047	SRT_BH047	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	26/11/2018	Normal	629922	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/12/2018	Normal	634274	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/01/2019	Normal	636542	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	20/02/2019	Normal	641720	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	14/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	07/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH047	SRT_BH047	31/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	30/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	27/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	15/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	20/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	26/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	15/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
SRT_BH047	SRT_BH047	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	19/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	15/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	26/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	22/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	29/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
SRT_BH047	SRT_BH047	27/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH047	SRT_BH047	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	11/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	SRT_BH047	30/09/2021	Field_D	829222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	30/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	29/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH047	SRT_BH047	24/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	19/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	SRT_BH047	08/02/2022	Field_D	862315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	08/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH048	SRT_BH048	06/09/2018	Normal	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH048	SRT_BH048	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH048	SRT_BH048	26/11/2018	Normal	629922	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	16/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	15/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	17/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	17/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	19/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	18/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	22/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	17/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	18/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH050	SRT_BH050	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH050	SRT_BH050	25/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	15/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	19/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	08/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	16/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH052	SRT_BH052	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	26/11/2018	Normal	629922	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/12/2018	Normal	634274	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/01/2019	Normal	636542	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	20/02/2019	Normal	641720	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
SRT_BH052	SRT_BH052	16/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	14/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	07/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH052	SRT_BH052	31/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	30/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	27/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	15/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	20/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	26/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	16/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	15/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	19/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	15/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	26/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	22/12/2020	Normal	765715	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	29/01/2021	Normal	770782	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/02/2021	Normal	775277	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/03/2021	Normal	781353	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	27/04/2021	Normal	791517	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	<5	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1
SRT_BH052	SRT_BH052	27/05/2021	Normal	799115	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/06/2021	Normal	803914	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH052	SRT_BH052	12/07/2021	Normal	810513	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	<6	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	11/08/2021	Normal	816445	<1.5	<10	<30	<10	-	<0.6	<1.5	<0.6	<2	<2	<6	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	30/09/2021	Normal	829222	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	29/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH052	SRT_BH052	24/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	16/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	19/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	08/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	SRT_BH052	16/03/2022	Interlab_D	ES2209602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	16/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH053	SRT_BH053	06/09/2018	Normal	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH053	SRT_BH053	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH059	SRT_BH059	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	26/11/2018	Normal	629922	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/12/2018	Normal	634274	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/01/2019	Normal	636542	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	20/02/2019	Normal	641720	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
SRT_BH059	SRT_BH059	15/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	07/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH059	SRT_BH059	31/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	30/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	27/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	15/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	20/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	26/02/2020	Normal	704673	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	16/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	15/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/05/2020	Normal	720682	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/06/2020	Normal	726825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/07/2020	Normal	732590	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/08/2020	Normal	738860	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	15/09/2020	Normal	744463	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	26/10/2020	Normal	753369	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/11/2020	Normal	758435	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH060	SRT_BH060	16/03/2020	Normal	708508	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH060	SRT_BH060	15/04/2020	Normal	714027	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH063	SRT_BH063	06/09/2018	Normal	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH063	SRT_BH063	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	26/11/2018	Normal	629922	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_BH063	27/11/2018	Interlab_D	ES1835581	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_BH063	17/12/2018	Field_D	634274	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	17/12/2018	Normal	634274	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_BH063	17/01/2019	Field_D	636542	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	17/01/2019	Normal	636542	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_BH063	21/02/2019	Interlab_D	ES1905610	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	21/02/2019	Normal	641720	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	18/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	15/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	07/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH063	SRT_BH063	29/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	28/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH064	SRT_BH064	06/09/2018	Normal	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_BH082	25/10/2018	Field_D	624838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH082	SRT_BH082	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_BH082	26/11/2018	Field_D	629922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH082	SRT_BH082	26/11/2018	Normal	629922	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_CBH001	06/09/2018	Field_D	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH001	SRT_CBH001	06/09/2018	Normal	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH001	SRT_CBH001	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001	SRT_CBH001	26/11/2018	Normal	629922	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
SRT-CBH007	SRT_CBH007	06/09/2018	Normal	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH015	SRT_CBH015	07/09/2018	Normal	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH015	SRT_CBH015	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	26/11/2018	Normal	629922	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_CBH015	17/12/2018	Interlab_D	ES1838345	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	17/12/2018	Normal	634274	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_CBH015	18/01/2019	Interlab_D	ES1901871	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	18/01/2019	Normal	636542	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	20/02/2019	Normal	641720	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	17/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	15/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	07/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	SRT_CBH015	31/07/2019	Field_D	669059	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH015	SRT_CBH015	31/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	SRT_CBH015	30/08/2019	Field_D	674722	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	30/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	27/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	18/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	15/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	18/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH017	SRT_CBH017	07/09/2018	Normal	616629	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH017	SRT_CBH017	25/10/2018	Normal	624838	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	26/11/2018	Normal	629922	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	17/12/2018	Normal	634274	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	18/01/2019	Normal	636542	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_CBH017	20/02/2019	Field_D	641720	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	20/02/2019	Normal	641720	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	17/04/2019	Normal	651825	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	15/05/2019	Normal	656080	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	07/06/2019	Normal	660130	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH017	SRT_CBH017	31/07/2019	Normal	669059	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	30/08/2019	Normal	674722	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	SRT_CBH017	27/09/2019	Field_D	679636	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	27/09/2019	Normal	679636	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	18/10/2019	Normal	683453	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	15/11/2019	Normal	688512	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	18/12/2019	Normal	694466	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	20/01/2020	Normal	698379	<10	<10	<30	<10	-	<3	<10	<3	<6	<3	<30	<30	<100	<30	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																						
				cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)					40	3	10							300						10														500			
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)					4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																					
>=2m, <4m																																					
>=4m, <8m																																					
>=8m																																					
Field ID	**Location Code**	**Sample Date**	**Sample Type**	**Lab Report Number**																																	
CSM_BH02	CSM_BH02	16/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	14/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	06/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	30/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	29/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	26/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	17/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	13/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	17/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	21/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	25/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	14/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	19/05/2020	Normal	720682	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH02	18/06/2020	Field_D	726825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	15/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	14/09/2020	Normal	744463	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH02	14/09/2020	Field_D	744463	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	27/10/2020	Normal	753369	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	19/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	23/12/2020	Normal	765715	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	27/01/2021	Normal	770782	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH02	27/01/2021	Field_D	770782	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/02/2021	Normal	775277	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	17/03/2021	Normal	781353	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	27/04/2021	Normal	791517	<1	<1	<1	<1	<1	<100	<1	<1	<1	<1	<1	<3	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1
CSM_BH02	CSM_BH02	25/05/2021	Normal	799115	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	15/06/2021	Normal	803914	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM-BH02	CSM_BH02	12/07/2021	Normal	810513	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	09/08/2021	Normal	816445	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	28/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	27/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH02	CSM_BH02	25/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	14/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH02	18/01/2022	Field_D	856960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	10/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	16/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	13/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	11/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	30/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	29/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	26/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					
	cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)		40	3	10							300						10															500			
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																		
>=2m, <4m																																		
>=4m, <8m																																		
>=8m																																		

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																		
CSM_BH04	CSM_BH04	17/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	17/10/2019	Field_D	683453	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	13/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	13/11/2019	Interlab_D	ES1937682	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	17/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	21/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	21/01/2020	Field_D	698379	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	25/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	25/02/2020	Field_D	704673	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	20/05/2020	Normal	720682	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	15/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	17/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	17/08/2020	Interlab_D	ES2028968	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/09/2020	Normal	744463	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	27/10/2020	Normal	753369	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	19/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	19/11/2020	Field_D	758435	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	23/12/2020	Normal	765715	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	27/01/2021	Normal	770782	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	27/01/2021	Interlab_D	ES2102832	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	17/02/2021	Normal	775277	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	17/02/2021	Field_D	775277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	17/03/2021	Normal	781353	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	17/03/2021	Interlab_D	ES2109792	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	27/04/2021	Normal	791517	<1	<1	<1	<1	<1	<100	<1	<1	<1	<1	<1	<3	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1
CSM_BH04	CSM_BH04	25/05/2021	Normal	799115	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	25/05/2021	Interlab_D	ES2119803	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	15/06/2021	Normal	803914	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	15/06/2021	Field_D	803914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM-BH04	CSM_BH04	12/07/2021	Normal	810513	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	12/07/2021	Field_D	810513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	09/08/2021	Normal	816445	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH04	09/08/2021	Field_D	816445	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	28/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	27/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH04	CSM_BH04	23/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	18/01/2022	Interlab_D	ES2201646	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	09/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	16/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH05	CSM_BH05	17/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																				
				cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)					40	3	10							300						10														500			
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)					4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																				
>=2m, <4m																																				
>=4m, <8m																																				
>=8m																																				
Field ID	**Location Code**	**Sample Date**	**Sample Type**	**Lab Report Number**																																
CSM_BH05	CSM_BH05	13/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH05	CSM_BH05	11/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH05	CSM_BH05	29/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	18/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	14/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH06	14/05/2019	Field_D	656080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	06/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC04	CSM_BH06	08/06/2019	Field_D	660130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	30/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	28/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	26/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	17/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	13/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	17/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH06	17/12/2019	Field_D	694466	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	25/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	16/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH06	16/03/2020	Interlab_D	ES2009232	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	14/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH06	14/04/2020	Interlab_D	ES2012716	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	19/05/2020	Normal	720682	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	18/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	18/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	15/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	18/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	14/09/2020	Normal	744463	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	27/10/2020	Normal	753369	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	19/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	22/12/2020	Normal	765715	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	27/01/2021	Normal	770782	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	18/02/2021	Normal	775277	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	17/03/2021	Normal	781353	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	27/04/2021	Normal	791517	<1	<1	<1	<1	<1	<100	<1	<1	<1	<1	<1	<3	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1
CSM_BH06	CSM_BH06	25/05/2021	Normal	799115	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH06	25/05/2021	Field_D	799115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	16/06/2021	Normal	803914	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM-BH06	CSM_BH06	12/07/2021	Normal	810513	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	09/08/2021	Normal	816445	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	29/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	28/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH06	CSM_BH06	25/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	15/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	27/01/2022	Normal	858641	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	09/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	17/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					
				cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)					40	3	10							300						10														500			
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)					4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																					
>=2m, <4m																																					
>=4m, <8m																																					
>=8m																																					
Field ID	**Location Code**	**Sample Date**	**Sample Type**	**Lab Report Number**																																	
QC02	CSM_BH08	18/04/2019	Field_D	651825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	15/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	06/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC03	CSM_BH08	06/06/2019	Interlab_D	ES1917968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	30/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	29/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	26/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	13/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	16/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	21/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	25/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	25/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	14/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/05/2020	Normal	720682	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	18/05/2020	Interlab_D	ES2017182	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	17/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	17/06/2020	Interlab_D	ES2021404	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	15/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	15/07/2020	Interlab_D	ES2024606	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	19/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	14/09/2020	Normal	744463	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	14/09/2020	Interlab_D	ES2032425	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/10/2020	Normal	753369	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	27/10/2020	Field_D	753369	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	27/10/2020	Interlab_D	ES2037870	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	19/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BD01	CSM_BH08	21/12/2020	Field_D	765715	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	21/12/2020	Normal	765715	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SD01	CSM_BH08	21/12/2020	Interlab_D	ES2100056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	28/01/2021	Normal	770782	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	19/02/2021	Normal	775277	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	17/03/2021	Normal	781353	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	17/03/2021	Field_D	781353	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/04/2021	Normal	791517	<1	<1	<1	<1	<1	<100	<1	<1	<1	<1	<1	<3	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1
QC02	CSM_BH08	27/04/2021	Interlab_D	ES2115835	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/05/2021	Normal	799115	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	15/06/2021	Normal	803914	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	15/06/2021	Interlab_D	ES2122606	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM-BH08	CSM_BH08	12/07/2021	Normal	810513	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	10/08/2021	Normal	816445	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	10/08/2021	Interlab_D	ES2129447	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	28/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	28/09/2021	Interlab_D	EM2119579	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	27/10/2021	Interlab_D	ES2139173	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					
	cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)		40	3	10							300						10															500				
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																	
CSM BH08	CSM_BH08	24/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	24/11/2021	Field_D	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	16/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	10/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	17/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	17/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	17/04/2019	Interlab_D	ES1912362	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	13/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	13/05/2019	Interlab_D	ES1914810	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	11/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	29/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	29/07/2019	Interlab_D	ES1924197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	28/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	28/08/2019	Interlab_D	EM1914568	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	25/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	25/09/2019	Interlab_D	ES1931406	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	14/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH09S	16/12/2019	Interlab_D	ES1941823	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	21/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	24/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH09S	24/02/2020	Interlab_D	ES2006512	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	17/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	20/05/2020	Normal	720682	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09s	CSM_BH09S	19/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	19/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH09S	16/07/2020	Field_D	732590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	18/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH09S	18/08/2020	Field_D	738860	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	16/09/2020	Normal	744463	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	28/10/2020	Normal	753369	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	20/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH09S	CSM_BH09S	21/12/2020	Normal	765715	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	16/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	13/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	11/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	30/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	29/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	25/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	16/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH10S	16/10/2019	Interlab_D	ES1934142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	14/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					

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				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					
	cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)		40	3	10							300						10															500			
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																		
>=2m, <4m																																		
>=4m, <8m																																		
>=8m																																		

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
CSM_BH12S	CSM_BH12S	28/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	28/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH12S	CSM_BH12S	24/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH12S	24/11/2021	Interlab_D	ES2144215	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	14/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	18/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	08/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	18/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	29/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	28/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH13	CSM_BH13	25/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	15/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH13	15/12/2021	Interlab_D	ES2146398	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	27/01/2022	Normal	858641	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	10/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	17/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	29/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	28/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH14S	28/10/2021	Field_D	836474	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH14S	CSM_BH14S	25/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	15/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	27/01/2022	Normal	858641	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	09/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	17/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	05/06/2019	Normal	659250	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	GASW_BH7	05/06/2019	Interlab_D	ES1917381	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	30/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	28/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	25/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	16/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	14/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	16/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	22/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	24/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH7	GASW_BH7	17/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	05/06/2019	Normal	659250	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	30/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	28/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	26/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	17/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	13/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	16/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	21/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	24/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	18/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
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				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					

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				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					
				cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)					40	3	10							300						10														500			
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)					4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																					
>=2m, <4m																																					
>=4m, <8m																																					
>=8m																																					
Field ID	**Location Code**	**Sample Date**	**Sample Type**	**Lab Report Number**																																	
GASW_BH11	GASW_BH11	18/03/2021	Normal	781353	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	27/04/2021	Normal	791517	<1	<1	<1	<1	<1	<100	<1	<1	<1	<1	<1	<3	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1
GASW_BH11	GASW_BH11	26/05/2021	Normal	799115	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	16/06/2021	Normal	803914	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW-BH11	GASW_BH11	12/07/2021	Normal	810513	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	10/08/2021	Normal	816445	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	28/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	28/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	GASW_BH23	23/08/2019	Normal	ES1926979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW-BR1	GASW_BH23	23/08/2019	Field_D	ES1926979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	25/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	16/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	14/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	16/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	22/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	24/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	17/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	16/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	20/05/2020	Normal	720682	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	17/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	16/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	17/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	15/09/2020	Normal	744463	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	26/10/2020	Normal	753369	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	18/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	21/12/2020	Normal	765715	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	28/01/2021	Normal	770782	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	17/02/2021	Normal	775277	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	18/03/2021	Normal	781353	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	27/04/2021	Normal	791517	<5	<50	<5	<5	<5	<100	<5	<5	<5	<5	<5	351	-	<5	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	-	<5	<5	<5	<5	<5	<5	<5
GASW_BH23	GASW_BH23	26/05/2021	Normal	799115	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	16/06/2021	Normal	803914	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW-BH23	GASW_BH23	12/07/2021	Normal	810513	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	10/08/2021	Normal	816445	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	29/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	28/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW BH23	GASW_BH23	23/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	14/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25a	GASW_BH25A	23/08/2019	Normal	ES1926979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW-SR1	GASW_BH25A	23/08/2019	Interlab_D	673339	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	25/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25a	GASW_BH25A	16/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	14/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	16/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	22/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	24/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					
				Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)				10							300						10														500				
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)										30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																	
GASW_BH25A	GASW_BH25A	24/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25a	GASW_BH25A	17/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	16/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	20/05/2020	Normal	720682	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	19/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	16/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	17/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	16/09/2020	Normal	744463	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	27/10/2020	Normal	753369	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	20/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	21/12/2020	Normal	765715	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	28/01/2021	Normal	770782	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	17/02/2021	Normal	775277	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	18/03/2021	Normal	781353	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	27/04/2021	Normal	791517	<10	<100	<10	<10	<10	<100	<10	<10	<10	<10	<10	2,040	-	<10	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-	<10	<10	<10	<10	<10	<10	<10
GASW_BH25A	GASW_BH25A	26/05/2021	Normal	799115	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	15/06/2021	Normal	803914	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW-BH25A	GASW_BH25A	12/07/2021	Normal	810513	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	10/08/2021	Normal	816445	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	29/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	28/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_BH039	07/09/2018	Interlab_D	ES1826658	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH039	SRT_BH039	07/09/2018	Normal	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH039	SRT_BH039	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_BH039	26/10/2018	Interlab_D	ES1832040	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH047	SRT_BH047	06/09/2018	Normal	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH047	SRT_BH047	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	26/11/2018	Normal	629922	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/12/2018	Normal	634274	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/01/2019	Normal	636542	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	20/02/2019	Normal	641720	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	14/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	07/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH047	SRT_BH047	31/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	30/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	27/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	15/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	20/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	26/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	15/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/05/2020	Normal	720682	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					
	cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)		40	3	10							300						10															500				
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		4,000	100							30																				330	70				
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																	
SRT_BH047	SRT_BH047	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	19/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	15/09/2020	Normal	744463	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	26/10/2020	Normal	753369	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	22/12/2020	Normal	765715	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	29/01/2021	Normal	770782	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/02/2021	Normal	775277	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	18/03/2021	Normal	781353	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	27/04/2021	Normal	791517	<1	<1	<1	<1	<1	<100	<1	<1	<1	<1	<1	<3	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1
SRT_BH047	SRT_BH047	27/05/2021	Normal	799115	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	17/06/2021	Normal	803914	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH047	SRT_BH047	12/07/2021	Normal	810513	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	11/08/2021	Normal	816445	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	SRT_BH047	30/09/2021	Field_D	829222	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	30/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	29/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH047	SRT_BH047	24/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	19/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	SRT_BH047	08/02/2022	Field_D	862315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	08/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH048	SRT_BH048	06/09/2018	Normal	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH048	SRT_BH048	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH048	SRT_BH048	26/11/2018	Normal	629922	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	16/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	15/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	17/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	17/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	19/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	18/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	22/12/2020	Normal	765715	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	17/02/2021	Normal	775277	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	18/03/2021	Normal	781353	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH050	SRT_BH050	12/07/2021	Normal	810513	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH050	SRT_BH050	25/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	15/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	19/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	08/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	16/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH052	SRT_BH052	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	26/11/2018	Normal	629922	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/12/2018	Normal	634274	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/01/2019	Normal	636542	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	20/02/2019	Normal	641720	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					
	cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)		40	3	10							300						10															500				
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																		
SRT_BH052	SRT_BH052	16/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	14/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	07/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH052	SRT_BH052	31/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	30/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	27/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	15/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	20/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	26/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	16/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	15/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/05/2020	Normal	720682	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	19/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	15/09/2020	Normal	744463	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	26/10/2020	Normal	753369	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	22/12/2020	Normal	765715	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	29/01/2021	Normal	770782	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/02/2021	Normal	775277	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	18/03/2021	Normal	781353	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	27/04/2021	Normal	791517	<1	<1	<1	<1	<1	<100	<1	<1	<1	<1	<1	<3	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<1
SRT_BH052	SRT_BH052	27/05/2021	Normal	799115	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	17/06/2021	Normal	803914	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH052	SRT_BH052	12/07/2021	Normal	810513	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	11/08/2021	Normal	816445	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	30/09/2021	Normal	829222	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	29/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH052	SRT_BH052	24/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	16/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	19/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	08/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	SRT_BH052	16/03/2022	Interlab_D	ES2209602	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	16/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH053	SRT_BH053	06/09/2018	Normal	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH053	SRT_BH053	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH059	SRT_BH059	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	26/11/2018	Normal	629922	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/12/2018	Normal	634274	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/01/2019	Normal	636542	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	20/02/2019	Normal	641720	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																					
	cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)		40	3	10							300						10															500			
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																	
SRT_BH059	SRT_BH059	15/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	07/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH059	SRT_BH059	31/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	30/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	27/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	15/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	20/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	26/02/2020	Normal	704673	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	26/02/2020	Normal	706746	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	16/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	15/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/05/2020	Normal	720682	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/06/2020	Normal	726825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/06/2020	Normal	ES2021404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	17/07/2020	Normal	732590	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/08/2020	Normal	738860	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	15/09/2020	Normal	744463	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	26/10/2020	Normal	753369	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH059	SRT_BH059	18/11/2020	Normal	758435	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH060	SRT_BH060	16/03/2020	Normal	708508	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH060	SRT_BH060	15/04/2020	Normal	714027	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH063	SRT_BH063	06/09/2018	Normal	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH063	SRT_BH063	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	26/11/2018	Normal	629922	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_BH063	27/11/2018	Interlab_D	ES1835581	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_BH063	17/12/2018	Field_D	634274	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	17/12/2018	Normal	634274	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_BH063	17/01/2019	Field_D	636542	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	17/01/2019	Normal	636542	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_BH063	21/02/2019	Interlab_D	ES1905610	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	21/02/2019	Normal	641720	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	18/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	15/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	07/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH063	SRT_BH063	29/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH063	SRT_BH063	28/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH064	SRT_BH064	06/09/2018	Normal	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_BH082	25/10/2018	Field_D	624838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-BH082	SRT_BH082	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_BH082	26/11/2018	Field_D	629922	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH082	SRT_BH082	26/11/2018	Normal	629922	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_CBH001	06/09/2018	Field_D	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH001	SRT_CBH001	06/09/2018	Normal	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH001	SRT_CBH001	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH001	SRT_CBH001	26/11/2018	Normal	629922	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B2
Groundwater Analytical Results September 2018 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																						
				cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)					40	3	10							300						10														500			
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)					4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																					
>=2m, <4m																																					
>=4m, <8m																																					
>=8m																																					
Field ID	**Location Code**	**Sample Date**	**Sample Type**	**Lab Report Number**																																	
SRT-CBH007	SRT_CBH007	06/09/2018	Normal	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH015	SRT_CBH015	07/09/2018	Normal	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH015	SRT_CBH015	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	26/11/2018	Normal	629922	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_CBH015	17/12/2018	Interlab_D	ES1838345	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	17/12/2018	Normal	634274	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA02	SRT_CBH015	18/01/2019	Interlab_D	ES1901871	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	18/01/2019	Normal	636542	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	20/02/2019	Normal	641720	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	17/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	15/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	07/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	SRT_CBH015	31/07/2019	Field_D	669059	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH015	SRT_CBH015	31/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	SRT_CBH015	30/08/2019	Field_D	674722	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	30/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	27/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	18/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	15/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH015	SRT_CBH015	18/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH017	SRT_CBH017	07/09/2018	Normal	616629	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH017	SRT_CBH017	25/10/2018	Normal	624838	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	26/11/2018	Normal	629922	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	17/12/2018	Normal	634274	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	18/01/2019	Normal	636542	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QA01	SRT_CBH017	20/02/2019	Field_D	641720	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	20/02/2019	Normal	641720	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	17/04/2019	Normal	651825	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	15/05/2019	Normal	656080	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	07/06/2019	Normal	660130	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT-CBH017	SRT_CBH017	31/07/2019	Normal	669059	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	30/08/2019	Normal	674722	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	SRT_CBH017	27/09/2019	Field_D	679636	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	27/09/2019	Normal	679636	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	18/10/2019	Normal	683453	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	15/11/2019	Normal	688512	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	18/12/2019	Normal	694466	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_CBH017	SRT_CBH017	20/01/2020	Normal	698379	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B3 - Groundwater Analytical Results for October 2021 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
CSM_BH02	CSM_BH02	27/10/2021	Normal	836474	7.8	<10	18,000	<0.004	<10	190	<20	190	340	47	-	55	-	4.1	-	85	-	100	33	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.003
CSM BH02	CSM_BH02	25/11/2021	Normal	846135	7.2	340	2,400	0.15	<10	250	<20	250	210	35	-	30	-	4.8	-	92	-	130	26	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	14/12/2021	Normal	851006	8.5	520	630	<0.004	21	290	<20	310	250	41	-	36	-	5.1	-	99	-	160	28	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	0.003
CSM_BH02	CSM_BH02	18/01/2022	Normal	856960	7.5	240	2,400	<0.004	<10	330	<20	330	290	46	-	42	-	7.2	-	120	-	150	20	-	-	-	-	<0.01	-	<0.001	<0.0002	0.001	0.003
QC01	CSM_BH02	18/01/2022	Field_D	856960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.002
CSM_BH02	CSM_BH02	10/02/2022	Normal	862315	7.9	260	1,300	<0.004	<10	100	<20	100	81	11	-	13	-	3.0	-	59	-	43	35	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH02	CSM_BH02	18/03/2022	Normal	872459	7.4	470	630	<0.004	<10	340	<20	340	230	35	-	34	-	5.5	-	100	-	140	24	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	27/10/2021	Normal	836474	7.2	80	6,400	0.004	<10	87	<20	87	100	10	-	19	-	2.5	-	73	-	90	34	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	<0.001
CSM BH04	CSM_BH04	23/11/2021	Normal	846135	7.0	280	510	<0.004	<10	110	<20	110	62	6.1	-	11	-	2.9	-	68	-	63	50	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	0.001
CSM_BH04	CSM_BH04	14/12/2021	Normal	851006	7.6	140	1,300	0.005	<10	92	<20	92	95	10	-	17	-	2.8	-	55	-	87	22	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH04	CSM_BH04	18/01/2022	Normal	856960	6.5	260	1,200	<0.004	<10	120	<20	120	120	13	-	21	-	6.0	-	69	-	72	28	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	0.002
QC02	CSM_BH04	18/01/2022	Interlab_D	ES2201646	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH04	CSM_BH04	09/02/2022	Normal	862315	6.8	260	1,100	<0.004	<10	100	<20	100	92	9.1	-	17	-	3.3	-	72	-	93	32	-	-	-	-	0.01	-	0.003	0.0003	0.003	0.003
CSM_BH04	CSM_BH04	16/03/2022	Normal	872459	6.7	260	330	<0.004	<10	120	<20	120	76	8.2	-	13	-	2.9	-	69	-	71	36	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH06	CSM_BH06	28/10/2021	Normal	836474	7.9	500	120	0.004	<10	140	<20	140	220	33	-	34	-	4.4	-	110	-	220	27	-	-	-	-	0.07	-	<0.001	<0.0002	<0.001	0.009
CSM BH06	CSM_BH06	25/11/2021	Normal	846135	7.1	500	190	0.011	<10	150	<20	150	200	32	-	30	-	4.9	-	97	-	230	21	-	-	-	-	0.07	-	<0.001	<0.0002	<0.001	0.002
CSM_BH06	CSM_BH06	15/12/2021	Normal	851006	7.6	510	920	<0.004	<10	130	<20	130	200	31	-	30	-	5.1	-	94	-	240	23	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.002
CSM_BH06	CSM_BH06	27/01/2022	Normal	858641	7.8	570	160	0.004	<10	150	<20	150	480	34	-	38	-	6.2	-	110	-	190	24	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.013
CSM_BH06	CSM_BH06	09/02/2022	Normal	862315	7.1	600	340	<0.004	<10	170	<20	170	230	34	-	34	-	5.2	-	120	-	200	30	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.065
CSM_BH06	CSM_BH06	17/03/2022	Normal	872459	7.4	520	65	<0.004	<10	160	<20	160	190	26	-	29	-	5.4	-	110	-	200	21	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.022
CSM_BH08	CSM_BH08	27/10/2021	Normal	836474	8.1	280	20	0.004	<10	110	<20	110	110	13	-	18	-	4.1	-	83	-	110	89	-	-	-	-	0.24	-	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH08	27/10/2021	Interlab_D	ES2139173	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM BH08	CSM_BH08	24/11/2021	Normal	846135	5.8	150	110	<0.004	<10	99	<20	99	72	8.5	-	12	-	3.9	-	68	-	93	35	-	-	-	-	0.04	-	<0.001	<0.0002	<0.001	0.010
QC01	CSM_BH08	24/11/2021	Field_D	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.015
CSM_BH08	CSM_BH08	16/12/2021	Normal	851006	8.1	350	550	<0.004	<10	120	<20	120	110	12	-	18	-	4.2	-	75	-	110	47	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	18/01/2022	Normal	856960	7.1	420	96	0.27	<10	140	<20	140	120	13	-	21	-	4.4	-	97	-	110	38	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	0.002
CSM_BH08	CSM_BH08	10/02/2022	Normal	862315	8.0	350	320	<0.004	<10	120	<20	120	120	13	-	20	-	4.6	-	92	-	110	44	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH08	CSM_BH08	17/03/2022	Normal	872459	6.8	350	6.7	<0.004	<10	160	<20	160	100	9.8	-	19	-	4.4	-	85	-	100	44	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	27/10/2021	Normal	836474	6.9	140	78	<0.004	<10	<20	<20	<20	35	3.9	-	6.2	-	2.5	-	33	-	24	89	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM BH10S	CSM_BH10S	23/11/2021	Normal	846135	6.4	150	42	0.005	<10	25	<20	25	45	7.7	-	6.4	-	2.8	-	26	-	27	50	-	-	-	-	0.06	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	14/12/2021	Normal	851006	6.8	150	29	<0.004	<10	<20	<20	<20	40	4.9	-	6.8	-	2.8	-	26	-	25	60	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH10S	14/12/2021	Field_D	851006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH10S	CSM_BH10S	18/01/2022	Normal	856960	6.1	170	47	<0.004	<10	26	<20	26	41	4.6	-	7.1	-	2.9	-	36	-	21	45	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	0.002
CSM_BH10S	CSM_BH10S	09/02/2022	Normal	862315	6.6	170	42	<0.004	<10	25	<20	25	41	4.9	-	7.0	-	3.2	-	37	-	24	50	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH10S	09/02/2022	Interlab_D	ES2204819	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH10S	CSM_BH10S	16/03/2022	Normal	872459	5.8	150	32	0.006	<10	35	<20	35	41	5.3	-	6.6	-	2.9	-	30	-	24	51	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH10S	16/03/2022	Field_D	872459	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH12S	CSM_BH12S	28/10/2021	Normal	836474	7.5	300	74	<0.004	<10	60	<20	60	32	2.3	-	6.5	-	2.1	-	120	-	74	160	-	-	-	-	0.12	-	0.002	<0.0002	<0.001	<0.001
CSM BH12S	CSM_BH12S	24/11/2021	Normal	846135	6.6	370	66	0.005	<10	60	<20	60	31	2.1	-	6.3	-	2.1	-	100	-	80	140	-	-	-	-	0.03	-	0.001	<0.0002	<0.001	<0.001
QC02	CSM_BH12S	24/11/2021	Interlab_D	ES2144215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
CSM_BH12S	CSM_BH12S	14/12/2021	Normal	851006	7.7	350	120	<0.004	<10	59	<20	59	29	2	-	5.9	-	2.1	-	99	-	73	130	-	-	-	-	0.02	-	0.002	<0.0002	<0.001	<0.001
CSM_BH12S	CSM_BH12S	18/01/2022	Normal	856960	6.7	380	84	<0.004	<10	64	<20	64	32	1.9	-	6.7	-	2.4	-	130	-	69	120	-	-	-	-	0.03	-	0.002	<0.0002	<0.001	0.002
CSM_BH12S	CSM_BH12S	08/02/2022	Normal	862315	7.6	370	87	<0.004	<10	78	<20	78	28	1.7	-	5.6	-	2.2	-	120	-	67	120	-	-	-	-	0.03	-	0.002	<0.0002	<0.001	<0.001
CSM_BH12S	CSM_BH12S	18/03/2022	Normal	872459	6.3	360	70	<0.004	<10	92	<20	92	27	2.1	-	5.3	-	2.0	-	110	-	66	130	-	-	-	-	<0.01	-	0.003	<0.0002	<0.001	<0.001
CSM_BH13	CSM_BH13	28/10/2021	Normal	836474	7.1	780	78	<0.004	<10	180	<20	180	260	60	-	26	-	5.3	-	140	-	210	51	-	-	-	-	0.12	-	0.001	<0.0002	<0.001	<0.001
CSM BH13	CSM_BH13	25/11/2021	Normal	846135	7.5	630	43	<0.004	<10	170	<20	170	220	50	-	22	-	5.7	-	110	-	230	40	-	-	-	-	0.03	-	0.001	<0.0002	<0.001	0.003
CSM_BH13	CSM_BH13	15/12/2021	Normal	851006	7.5	590	99	<0.004	<10	200	<20	200	250	57	-	27	-	6	-	120	-	210	40	-	-	-	-	<0.01	-	0.001	<0.0002	<0.001	0.002

Appendix B
Table B3 - Groundwater Analytical Results for October 2021 to March 2022

	Inorganics			Cyanide	Acidity & Alkalinity					Major Ions														Nutrients					
	pH (Lab)	Total Dissolved Solids	Total Suspended Solids	Cyanide (Total)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Alkalinity (Hydroxide as CaCO3)	Alkalinity (total as CaCO3)	Hardness as CaCO3	Calcium	Calcium (filtered)	Magnesium	Magnesium (filtered)	Potassium	Potassium (filtered)	Sodium	Sodium (filtered)	Chloride	Sulfate	Sulfate (filtered)	Cations Total	Anions Total	Ionic Balance	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)
	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	meq/L	meq/L	%	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL	0.01	5	1	0.004	1	1	1	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	0.01	0.01	0.01	0.01	0.02	0.001	0.0001	0.001	0.001
ADWG 2011 Recreational (v3.7 updated 2022)				0.8															5,000	5,000					112.9	0.1	0.02		20
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)				0.004																				0.91			0.0055	0.0044	0.0013
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																													
>=2m, <4m																													
>=4m, <8m																													
>=8m																													

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																									
QC02	CSM_BH13	15/12/2021	Interlab_D	ES2146398	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001	<0.0001	<0.001	<0.001
CSM_BH13	CSM_BH13	27/01/2022	Normal	858641	7.5	660	630	0.004	<10	270	<20	270	520	59	-	29	-	6.2	-	120	-	190	40	-	-	-	-	<0.01	-	0.001	<0.0002	<0.001	0.007
CSM_BH13	CSM_BH13	10/02/2022	Normal	862315	8.1	640	68	<0.004	<10	180	<20	180	230	50	-	27	-	5.4	-	130	-	220	38	-	-	-	-	0.01	-	0.004	0.0003	0.002	0.005
CSM_BH13	CSM_BH13	17/03/2022	Normal	872459	7.0	520	39	<0.004	<10	130	<20	130	180	35	-	23	-	4.9	-	140	-	190	33	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.002
CSM_BH14S	CSM_BH14S	28/10/2021	Normal	836474	6.9	150	8.6	<0.004	<10	45	<20	45	58	17	-	3.6	-	1.8	-	13	-	26	13	-	-	-	-	0.09	-	<0.001	<0.0002	<0.001	<0.001
QC01	CSM_BH14S	28/10/2021	Field_D	836474	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	<0.001
CSM BH14S	CSM_BH14S	25/11/2021	Normal	846135	6.9	82	9.6	<0.004	<10	46	<20	46	55	17	-	3.0	-	1.8	-	11	-	25	7.4	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.004
CSM_BH14S	CSM_BH14S	15/12/2021	Normal	851006	7.5	110	<5	<0.004	<10	43	<20	43	56	17	-	3.1	-	1.7	-	9.8	-	25	5.4	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH14S	CSM_BH14S	27/01/2022	Normal	858641	7.7	150	14	<0.004	<10	54	<20	54	83	21	-	4.7	-	3.0	-	18	-	24	<5	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
CSM_BH14S	CSM_BH14S	09/02/2022	Normal	862315	7.7	160	<5	<0.004	<10	64	<20	64	74	22	-	4.6	-	2.5	-	17	-	26	8.9	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.001
CSM_BH14S	CSM_BH14S	17/03/2022	Normal	872459	7.2	110	6.9	<0.004	<10	90	<20	90	73	22	-	4.5	-	2.6	-	12	-	16	6.4	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	29/10/2021	Normal	836474	7.8	660	1,100	<0.004	<10	400	<20	400	410	90	-	44	-	12	-	120	-	170	8.7	-	-	-	-	0.06	-	0.001	<0.0002	<0.001	<0.001
GASW BH10	GASW_BH10	24/11/2021	Normal	846135	7.2	660	6,500	<0.004	<10	450	<20	450	340	81	-	34	-	11	-	100	-	180	<5	-	-	-	-	0.03	-	0.002	<0.0002	<0.001	0.019
GASW_BH10	GASW_BH10	14/12/2021	Normal	851006	-	-	-	<0.004	-	-	-	-	390	83	-	43	-	10	-	110	-	-	-	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	18/01/2022	Normal	856960	7.7	590	290	<0.004	<10	440	<20	440	370	77	-	44	-	9.8	-	120	-	240	<2	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	0.002
GASW_BH10	GASW_BH10	08/02/2022	Normal	862315	8.1	800	4,200	<0.004	<10	390	<20	390	370	76	-	43	-	10	-	130	-	180	<5	-	-	-	-	<0.01	-	0.001	<0.0002	<0.001	<0.001
GASW_BH10	GASW_BH10	18/03/2022	Normal	872459	7.0	640	1,400	<0.004	<10	480	<20	480	300	64	-	34	-	11	-	110	-	190	<5	-	-	-	-	<0.01	-	0.002	<0.0002	<0.001	<0.001
GASW_BH11	GASW_BH11	28/10/2021	Normal	836474	7.7	240	280	<0.004	<10	95	<20	95	240	76	-	11	-	1.9	-	34	-	74	56	-	-	-	-	0.19	-	<0.001	<0.0002	<0.001	0.001
GASW_BH23	GASW_BH23	28/10/2021	Normal	836474	7.5	480	16	<0.004	<10	250	<20	250	390	140	-	10	-	10	-	20	-	54	160	-	-	-	-	0.52	-	0.003	<0.0002	<0.001	<0.001
GASW BH23	GASW_BH23	23/11/2021	Normal	846135	7.6	360	16	0.005	<10	190	<20	190	270	91	-	9.7	-	6.7	-	20	-	11	110	-	-	-	-	0.19	-	0.002	<0.0002	<0.001	<0.001
GASW_BH23	GASW_BH23	14/12/2021	Normal	851006	7.7	330	13	<0.004	<10	160	<20	160	230	81	-	6.1	-	5.9	-	15	-	12	79	-	-	-	-	0.26	-	0.002	<0.0002	<0.001	<0.001
GASW_BH25A	GASW_BH25A	28/10/2021	Normal	836474	7.4	130	5.4	<0.004	<10	72	<20	72	84	29	-	2.7	-	2.8	-	13	-	38	19	-	-	-	-	0.24	-	0.004	<0.0002	<0.001	0.003
SRT_BH047	SRT_BH047	29/10/2021	Normal	836474	6.4	220	26	0.004	<10	<20	<20	<20	81	18	-	8.6	-	0.7	-	23	-	20	21	-	-	-	-	0.11	-	<0.001	<0.0002	<0.001	0.001
SRT BH047	SRT_BH047	24/11/2021	Normal	846135	6.1	180	34	0.004	<10	<20	<20	<20	43	5.0	-	7.4	-	0.6	-	18	-	20	14	-	-	-	-	0.02	-	<0.001	<0.0002	<0.001	0.003
SRT_BH047	SRT_BH047	16/12/2021	Normal	851006	6.6	140	68	0.005	<10	<20	<20	<20	43	5.4	-	7.1	-	0.6	-	17	-	18	14	-	-	-	-	<0.01	-	<0.001	<0.0002	0.005	0.005
SRT_BH047	SRT_BH047	19/01/2022	Normal	856960	6.1	130	19	<0.004	<10	<20	<20	<20	43	4.8	-	7.6	-	0.7	-	22	-	16	12	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.004
QC01	SRT_BH047	08/02/2022	Field_D	862315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0002	<0.001	0.003
SRT_BH047	SRT_BH047	08/02/2022	Normal	862315	6.4	130	5.0	<0.004	<10	<20	<20	<20	43	5.0	-	7.5	-	1.2	-	24	-	17	26	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.003
SRT_BH047	SRT_BH047	16/03/2022	Normal	872459	5.7	120	19	<0.004	<10	<20	<20	<20	42	5.4	-	7.0	-	0.7	-	19	-	17	12	-	-	-	-	2.4	-	<0.001	<0.0002	<0.001	<0.001
SRT BH050	SRT_BH050	25/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	15/12/2021	Normal	851006	4.7	100	1,400	<0.004	<10	<20	<20	<20	54	17	-	3.1	-	5.6	-	11	-	11	44	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.005
SRT_BH050	SRT_BH050	19/01/2022	Normal	856960	4.9	170	95	<0.005	<10	<20	<20	<20	58	17	-	3.5	-	5.5	-	14	-	12	35	-	-	-	-	0.05	-	<0.001	<0.0002	<0.001	0.003
SRT_BH050	SRT_BH050	08/02/2022	Normal	862315	4.9	160	73	<0.004	<10	<20	<20	<20	54	16	-	3.2	-	5.6	-	16	-	9.9	44	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.002
SRT_BH050	SRT_BH050	16/03/2022	Normal	872459	5.0	150	30	<0.004	<10	<20	<20	<20	74	25	-	3.0	-	5.9	-	11	-	11	40	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001
SRT_BH052	SRT_BH052	29/10/2021	Normal	836474	6.7	240	190	<0.004	<10	40	<20	40	48	13	-	3.6	-	1.8	-	49	-	48	40	-	-	-	-	0.08	-	<0.001	<0.0002	<0.001	<0.001
SRT BH052	SRT_BH052	24/11/2021	Normal	846135	6.9	240	44	<0.004	<10	39	<20	39	46	13	-	3.5	-	1.8	-	43	-	48	36	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	<0.001
SRT_BH052	SRT_BH052	16/12/2021	Normal	851006	7.2	130	41	<0.004	<10	24	<20	24	60	17	-	4	-	1.8	-	43	-	42	23	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	0.006
SRT_BH052	SRT_BH052	19/01/2022	Normal	856960	6.3	180	81	<0.004	<10	<20	<20	<20	29	5.4	-	3.8	-	1.4	-	40	-	32	12	-	-	-	-	0.03	-	<0.001	<0.0002	<0.001	0.002
SRT_BH052	SRT_BH052	08/02/2022	Normal	862315	6.8	200	18	<0.004	<10	<20	<20	<20	32	6.7	-	3.8	-	1.3	-	43	-	40	28	-	-	-	-	0.01	-	<0.001	<0.0002	<0.001	<0.001
QC02	SRT_BH052	16/03/2022	Interlab_D	ES2209602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.0001	<0.001	<0.001
SRT_BH052	SRT_BH052	16/03/2022	Normal	872459	5.6	150	5.4	0.004	<10	<20	<20	<20	30	5.8	-	3.8	-	0.8	-	38	-	40	15	-	-	-	-	<0.01	-	<0.001	<0.0002	<0.001	<0.001

Appendix B
Table B3 - Groundwater Analytical Results for October 2021 to March 2022

	Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
	Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)		0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																										
>=2m, <4m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m									**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																								
CSM_BH02	CSM_BH02	27/10/2021	Normal	836474	-	<0.001	-	0.25	<0.0001	0.004	0.011	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH02	CSM_BH02	25/11/2021	Normal	846135	-	<0.001	0.63	-	<0.0001	0.005	<0.005	0.09	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	14/12/2021	Normal	851006	-	<0.001	-	0.005	<0.0001	0.012	0.13	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	18/01/2022	Normal	856960	-	<0.001	-	0.013	<0.0001	0.007	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH02	18/01/2022	Field_D	856960	-	<0.001	-	-	<0.0001	0.006	<0.005	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH02	CSM_BH02	10/02/2022	Normal	862315	-	0.002	-	0.10	<0.0001	0.008	<0.005	0.23	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH02	CSM_BH02	18/03/2022	Normal	872459	-	<0.001	-	0.018	<0.0001	0.010	0.026	0.13	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	27/10/2021	Normal	836474	-	<0.001	-	0.47	<0.0001	0.011	0.015	3.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH04	CSM_BH04	23/11/2021	Normal	846135	-	<0.001	0.70	-	<0.0001	0.014	0.046	1.6	<1	<1	<1	<1	<2	<3	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/12/2021	Normal	851006	-	<0.001	-	0.39	<0.0001	0.01	0.23	6.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	18/01/2022	Normal	856960	-	<0.001	-	0.35	<0.0001	0.051	0.008	3.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	200	<100	200	<50	<100	<100
QC02	CSM_BH04	18/01/2022	Interlab_D	ES2201646	-	<0.001	-	-	<0.0001	0.052	0.010	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH04	CSM_BH04	09/02/2022	Normal	862315	-	0.003	-	0.40	<0.0001	0.10	0.081	4.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH04	CSM_BH04	16/03/2022	Normal	872459	-	<0.001	-	0.41	<0.0001	0.027	0.13	3.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	28/10/2021	Normal	836474	-	<0.001	-	0.41	<0.0001	0.005	0.040	0.75	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH06	CSM_BH06	25/11/2021	Normal	846135	-	<0.001	0.21	-	<0.0001	0.003	0.005	0.35	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	15/12/2021	Normal	851006	-	<0.001	-	0.51	<0.0001	0.016	0.26	1.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	27/01/2022	Normal	858641	-	<0.001	-	0.27	<0.0001	0.003	<0.005	0.97	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	09/02/2022	Normal	862315	-	<0.001	-	0.23	<0.0001	0.061	0.22	1.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH06	CSM_BH06	17/03/2022	Normal	872459	-	<0.001	-	0.38	<0.0001	0.009	0.094	0.73	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	27/10/2021	Normal	836474	-	<0.001	-	0.39	<0.0001	0.002	<0.005	6.0	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH08	27/10/2021	Interlab_D	ES2139173	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM BH08	CSM_BH08	24/11/2021	Normal	846135	-	<0.001	0.46	-	<0.0001	0.057	0.090	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH08	24/11/2021	Field_D	846135	-	0.001	-	-	<0.0001	0.046	0.17	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH08	CSM_BH08	16/12/2021	Normal	851006	-	<0.001	-	0.43	<0.0001	0.003	0.3	4.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	18/01/2022	Normal	856960	-	<0.001	-	0.32	<0.0001	0.032	<0.005	5.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	10/02/2022	Normal	862315	-	<0.001	-	0.38	<0.0001	0.037	0.034	5.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH08	CSM_BH08	17/03/2022	Normal	872459	-	<0.001	-	0.42	<0.0001	0.007	0.043	6.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	27/10/2021	Normal	836474	-	<0.001	-	0.59	<0.0001	0.002	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH10S	CSM_BH10S	23/11/2021	Normal	846135	-	<0.001	0.58	-	<0.0001	0.002	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	14/12/2021	Normal	851006	-	<0.001	-	0.64	<0.0001	0.002	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH10S	14/12/2021	Field_D	851006	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	18/01/2022	Normal	856960	-	<0.001	-	0.47	<0.0001	<0.001	<0.005	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH10S	CSM_BH10S	09/02/2022	Normal	862315	-	<0.001	-	0.57	<0.0001	0.002	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH10S	09/02/2022	Interlab_D	ES2204819	-	<0.001	-	-	<0.0001	0.002	<0.005	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH10S	CSM_BH10S	16/03/2022	Normal	872459	-	<0.001	-	0.61	<0.0001	0.002	0.007	0.14	<1	2	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH10S	16/03/2022	Field_D	872459	-	<0.001	-	-	<0.0001	0.002	0.006	-	<1	2	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM_BH12S	CSM_BH12S	28/10/2021	Normal	836474	-	<0.001	-	0.84	<0.0001	0.027	0.11	8.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH12S	CSM_BH12S	24/11/2021	Normal	846135	-	<0.001	0.81	-	<0.0001	0.022	0.094	5.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	CSM_BH12S	24/11/2021	Interlab_D	ES2144215	-	<0.001	-	-	<0.0001	0.019	0.076	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH12S	CSM_BH12S	14/12/2021	Normal	851006	-	<0.001	-	0.67	<0.0001	0.016	0.065	7.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH12S	CSM_BH12S	18/01/2022	Normal	856960	-	<0.001	-	0.53	<0.0001	0.011	0.051	4.6	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH12S	CSM_BH12S	08/02/2022	Normal	862315	-	<0.001	-	0.58	<0.0001	0.009	0.031	9.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH12S	CSM_BH12S	18/03/2022	Normal	872459	-	<0.001	-	0.63	<0.0001	0.012	0.047	7.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH13	CSM_BH13	28/10/2021	Normal	836474	-	<0.001	-	0.52	<0.0001	0.011	0.017	2.7	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM BH13	CSM_BH13	25/11/2021	Normal	846135	-	<0.001	0.60	-	<0.0001	0.012	0.007	0.50	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	700	<100	700	<50	600	<100
CSM_BH13	CSM_BH13	15/12/2021	Normal	851006	-	<0.001	-	0.67	<0.0001	0.038	0.66	3.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100

Appendix B
Table B3 - Groundwater Analytical Results for October 2021 to March 2022

					Metals							Iron speciation	BTEXN								TRH - NEPM 2013							TRH - NEPM 2013 - S Cleanup		
					Iron	Lead (filtered)	Manganese	Manganese (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Ferrous Iron	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	BTEX (Sum of Total) - Lab Calc	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	>C10-C16 SG Cleanup	>C16-C34 SG Cleanup	>C34-C40 SG Cleanup
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.05	0.001	0.001	0.001	0.0001	0.001	0.005	0.05	1	1	1	1	2	2	1	5	20	20	50	50	100	100	100	50	100	100
ADWG 2011 Recreational (v3.7 updated 2022)						0.1	5	5	0.01	0.2			10	8,000	3,000			6,000												
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.0044			0.0004	0.07	0.008		700	180	80					70										
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m													**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=4m, <8m													**5,000**	**NL**	**NL**			**NL**		**NL**	**6,000**		**NL**							
>=8m													**5,000**	**NL**	**NL**			**NL**		**NL**	**7,000**		**NL**							
Field ID	**Location Code**	**Sample Date**	**Sample Type**	**Lab Report Number**																										
QC02	CSM_BH13	15/12/2021	Interlab_D	ES2146398	-	<0.001	-	-	<0.0001	0.033	0.572	-	<1	<2	<2	<2	<2	<2	<1	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
CSM_BH13	CSM_BH13	27/01/2022	Normal	858641	-	<0.001	-	0.45	<0.0001	0.010	0.009	4.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH13	CSM_BH13	10/02/2022	Normal	862315	-	0.002	-	0.54	<0.0001	0.011	0.008	3.1	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH13	CSM_BH13	17/03/2022	Normal	872459	-	<0.001	-	0.52	<0.0001	0.023	0.059	7.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH14S	CSM_BH14S	28/10/2021	Normal	836474	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	0.08	<1	<1	<1	<1	<2	<3	-	<10	40	40	<50	<50	<100	<100	<100	<50	<100	<100
QC01	CSM_BH14S	28/10/2021	Field_D	836474	-	<0.001	-	-	<0.0001	<0.001	<0.005	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
CSM BH14S	CSM_BH14S	25/11/2021	Normal	846135	-	<0.001	0.012	-	<0.0001	<0.001	<0.005	0.07	<1	<1	<1	<1	<2	<3	-	<10	30	30	<50	<50	300	<100	300	<50	300	<100
CSM_BH14S	CSM_BH14S	15/12/2021	Normal	851006	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	20	20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH14S	CSM_BH14S	27/01/2022	Normal	858641	-	<0.001	-	0.006	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH14S	CSM_BH14S	09/02/2022	Normal	862315	-	<0.001	-	0.014	<0.0001	0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	20	20	<50	<50	<100	<100	<100	<50	<100	<100
CSM_BH14S	CSM_BH14S	17/03/2022	Normal	872459	-	<0.001	-	0.028	<0.0001	<0.001	<0.005	0.17	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	29/10/2021	Normal	836474	-	<0.001	-	0.10	<0.0001	<0.001	<0.005	5.4	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW BH10	GASW_BH10	24/11/2021	Normal	846135	-	<0.001	0.51	-	<0.0001	0.002	0.031	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	1,100	1,100	1,200	100	2,400	<50	1,100	<100
GASW_BH10	GASW_BH10	14/12/2021	Normal	851006	-	<0.001	-	0.12	<0.0001	0.001	0.006	3.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH10	GASW_BH10	18/01/2022	Normal	856960	-	<0.001	-	0.094	<0.0001	<0.001	<0.005	3.2	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	70	70	500	<100	570	<50	<100	<100
GASW_BH10	GASW_BH10	08/02/2022	Normal	862315	-	<0.001	-	0.12	<0.0001	<0.001	<0.005	4.3	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	140	140	500	<100	640	<50	300	<100
GASW_BH10	GASW_BH10	18/03/2022	Normal	872459	-	<0.001	-	0.11	<0.0001	<0.001	<0.005	4.8	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	1,700	1,700	300	<100	2,000	1,700	100	<100
GASW_BH11	GASW_BH11	28/10/2021	Normal	836474	-	<0.001	-	0.086	<0.0001	0.001	0.063	0.13	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH23	GASW_BH23	28/10/2021	Normal	836474	-	<0.001	-	0.38	<0.0001	<0.001	0.022	11	36	<1	3	<1	<2	<3	-	<10	20	60	<50	<50	<100	<100	<100	<50	<100	<100
GASW BH23	GASW_BH23	23/11/2021	Normal	846135	-	<0.001	0.21	-	<0.0001	<0.001	0.033	6.8	11	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	800	<100	800	<50	700	<100
GASW_BH23	GASW_BH23	14/12/2021	Normal	851006	-	<0.001	-	0.19	<0.0001	<0.001	0.011	6.4	20	<1	<1	<1	<2	<3	-	<10	30	50	<50	<50	<100	<100	<100	<50	<100	<100
GASW_BH25A	GASW_BH25A	28/10/2021	Normal	836474	-	<0.001	-	<0.005	<0.0001	<0.001	<0.005	<0.05	70	33	10	11	16	28	-	<10	90	230	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	29/10/2021	Normal	836474	-	<0.001	-	0.015	<0.0001	0.003	0.022	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT BH047	SRT_BH047	24/11/2021	Normal	846135	-	<0.001	0.086	-	<0.0001	0.004	0.034	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	16/12/2021	Normal	851006	-	<0.001	-	0.022	<0.0001	0.004	0.034	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	19/01/2022	Normal	856960	-	<0.001	-	0.015	<0.0001	<0.001	0.026	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC01	SRT_BH047	08/02/2022	Field_D	862315	-	<0.001	-	-	<0.0001	0.004	0.027	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	-	-	-
SRT_BH047	SRT_BH047	08/02/2022	Normal	862315	-	<0.001	-	0.033	<0.0001	0.003	0.026	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH047	SRT_BH047	16/03/2022	Normal	872459	-	<0.001	-	0.018	<0.0001	0.004	0.032	0.11	<1	2	<1	<1	<2	<3	-	<10	<20	<20	140	140	<100	<100	140	100	<100	<100
SRT BH050	SRT_BH050	25/11/2021	Normal	846135	-	-	-	-	-	-	-	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	15/12/2021	Normal	851006	-	<0.001	-	0.024	<0.0001	0.002	0.015	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	19/01/2022	Normal	856960	-	<0.001	-	0.015	<0.0001	<0.001	0.006	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	08/02/2022	Normal	862315	-	<0.001	-	0.035	<0.0001	0.002	0.009	-	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH050	SRT_BH050	16/03/2022	Normal	872459	-	<0.001	-	0.013	<0.0001	<0.001	0.010	0.07	<1	3	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	29/10/2021	Normal	836474	-	<0.001	-	0.006	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT BH052	SRT_BH052	24/11/2021	Normal	846135	-	<0.001	0.043	-	<0.0001	<0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	1,000	<100	1,000	<50	900	<100
SRT_BH052	SRT_BH052	16/12/2021	Normal	851006	-	<0.001	-	<0.005	<0.0001	0.02	0.006	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	19/01/2022	Normal	856960	-	<0.001	-	0.018	<0.0001	<0.001	0.007	<0.5	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
SRT_BH052	SRT_BH052	08/02/2022	Normal	862315	-	<0.001	-	0.023	<0.0001	0.001	<0.005	<0.05	<1	<1	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100
QC02	SRT_BH052	16/03/2022	Interlab_D	ES2209602	-	<0.001	-	-	<0.0001	<0.001	<0.005	-	<1	2	<2	<2	<2	<2	2	<5	<20	<20	<100	<100	<100	<100	<100	-	-	-
SRT_BH052	SRT_BH052	16/03/2022	Normal	872459	-	<0.001	-	0.020	<0.0001	<0.001	<0.005	0.09	<1	3	<1	<1	<2	<3	-	<10	<20	<20	<50	<50	<100	<100	<100	<50	<100	<100

Appendix B
Table B3 - Groundwater Analytical Results for October 2021 to March 2022

		PAHs - standard 16																			PAHs - extended					Phenols - H				
	>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
CSM_BH02	CSM_BH02	27/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH02	CSM_BH02	25/11/2021	Normal	846135	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH02	18/01/2022	Field_D	856960	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	10/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH02	CSM_BH02	18/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	27/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH04	CSM_BH04	23/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH04	18/01/2022	Interlab_D	ES2201646	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH04	CSM_BH04	09/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH04	CSM_BH04	16/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH06	CSM_BH06	25/11/2021	Normal	846135	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	15/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	0.03	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	27/01/2022	Normal	858641	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	09/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH06	CSM_BH06	17/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	27/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH08	27/10/2021	Interlab_D	ES2139173	-	<0.1	<0.1	<0.1	<0.1	0.10	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	-	0.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM BH08	CSM_BH08	24/11/2021	Normal	846135	<100	<0.01	<0.01	<0.01	0.20	0.20	0.40	0.30	0.40	0.20	<0.01	0.20	<0.01	0.20	0.30	-	2.6	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH08	24/11/2021	Field_D	846135	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	16/12/2021	Normal	851006	<100	0.02	0.06	0.05	0.37	0.63	0.51	0.41	0.52	0.55	0.11	0.5	0.02	0.49	0.04	0.14	0.64	-	5.06	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	10/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH08	CSM_BH08	17/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	27/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH10S	CSM_BH10S	23/11/2021	Normal	846135	<100	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH10S	14/12/2021	Field_D	851006	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH10S	CSM_BH10S	09/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH10S	09/02/2022	Interlab_D	ES2204819	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH10S	CSM_BH10S	16/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH10S	16/03/2022	Field_D	872459	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH12S	CSM_BH12S	24/11/2021	Normal	846135	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	CSM_BH12S	24/11/2021	Interlab_D	ES2144215	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH12S	CSM_BH12S	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	-	0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH12S	CSM_BH12S	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH12S	CSM_BH12S	08/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH12S	CSM_BH12S	18/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH13	CSM_BH13	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM BH13	CSM_BH13	25/11/2021	Normal	846135	600	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH13	CSM_BH13	15/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B3 - Groundwater Analytical Results for October 2021 to March 2022

		PAHs - standard 16																			PAHs - extended					Phenols - H				
	>C10-C40 (sum) SG Cleanup	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo[b+j]fluoranthene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene-PAH	Phenanthrene	Pyrene	Sum of standard 16 PAHs	PAHs (Sum of total) - Lab calc	Total 8 PAHs (as BaP TEQ)(zero LOR) - Lab Calc	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Perylene	2-Chlorophenol	2,4-Dichlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,6-Dichlorophenol
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.5	0.01	0.05	0.1	0.1	0.1	0.1	0.1	0.6	0.6	1	1	0.6
ADWG 2011 Recreational (v3.7 updated 2022)						0.1																				3,000	2,000		200	
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)						0.2						1.4			70	2														
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																														
>=2m, <4m															**NL**															
>=4m, <8m															**NL**															
>=8m															**NL**															

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																											
QC02	CSM_BH13	15/12/2021	Interlab_D	ES2146398	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
CSM_BH13	CSM_BH13	27/01/2022	Normal	858641	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH13	CSM_BH13	10/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH13	CSM_BH13	17/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	CSM_BH14S	28/10/2021	Field_D	836474	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
CSM BH14S	CSM_BH14S	25/11/2021	Normal	846135	300	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	15/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	27/01/2022	Normal	858641	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	09/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
CSM_BH14S	CSM_BH14S	17/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	29/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW BH10	GASW_BH10	24/11/2021	Normal	846135	1,100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	18/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	08/02/2022	Normal	862315	300	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH10	GASW_BH10	18/03/2022	Normal	872459	1,800	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH11	GASW_BH11	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW BH23	GASW_BH23	23/11/2021	Normal	846135	700	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH23	GASW_BH23	14/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
GASW_BH25A	GASW_BH25A	28/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	29/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT BH047	SRT_BH047	24/11/2021	Normal	846135	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	16/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	19/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC01	SRT_BH047	08/02/2022	Field_D	862315	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	08/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH047	SRT_BH047	16/03/2022	Normal	872459	100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT BH050	SRT_BH050	25/11/2021	Normal	846135	<100	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	15/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	19/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	08/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH050	SRT_BH050	16/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	29/10/2021	Normal	836474	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT BH052	SRT_BH052	24/11/2021	Normal	846135	900	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	16/12/2021	Normal	851006	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	19/01/2022	Normal	856960	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
SRT_BH052	SRT_BH052	08/02/2022	Normal	862315	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3
QC02	SRT_BH052	16/03/2022	Interlab_D	ES2209602	-	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
SRT_BH052	SRT_BH052	16/03/2022	Normal	872459	<100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<3	<3	<10	<10	<3

Appendix B
Table B3 - Groundwater Analytical Results for October 2021 to March 2022

	Halogenated					Phenols - Non-Halogenated										Chlorinated Hydrocarbons																			
	4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)		100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		22				400														270	400	1,900	700		1,900	1,100						240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																
CSM_BH02	CSM_BH02	27/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH02	CSM_BH02	25/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH02	18/01/2022	Field_D	856960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	10/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	27/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH04	CSM_BH04	23/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	18/01/2022	Interlab_D	ES2201646	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	09/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	16/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH06	CSM_BH06	25/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	15/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	27/01/2022	Normal	858641	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	09/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	17/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	27/10/2021	Interlab_D	ES2139173	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH08	CSM_BH08	24/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	24/11/2021	Field_D	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	16/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	10/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	17/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	27/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH10S	CSM_BH10S	23/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH10S	14/12/2021	Field_D	851006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	09/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH10S	09/02/2022	Interlab_D	ES2204819	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	16/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH10S	16/03/2022	Field_D	872459	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH12S	CSM_BH12S	24/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH12S	24/11/2021	Interlab_D	ES2144215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	08/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	18/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH13	CSM_BH13	25/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	15/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B3 - Groundwater Analytical Results for October 2021 to March 2022

						Halogenated					Phenols - Non-Halogenated													Chlorinated Hydrocarbons																			
						4-Chloro-3-methylphenol	Pentachlorophenol	Tetrachlorophenols	Phenols (halogenated)	Phenols(halogenated) - Lab Calc	Phenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	3,4-Methylphenol (m,p-cresol)	2,4-Dimethylphenol	2,4-Dinitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-Nitrophenol	Cresol Total	Phenols (Total Non Halogenated)	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons (Total)	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Carbon tetrachloride	Chlorobenzene	Chloroform	Chloromethane
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL						1	2	30	10	10	0.6	1	0.6	2	1	6	30	100	30	2	100	5	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1
ADWG 2011 Recreational (v3.7 updated 2022)							100																					300	15,000	30			400				30	3,000		
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)							22				400													270	400	1,900	700		1,900	1,100							240	55	770	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																									
>=2m, <4m																																									
>=4m, <8m																																									
>=8m																																									
Field ID	**Location Code**	**Sample Date**	**Sample Type**	**Lab Report Number**																																						
QC02	CSM_BH13	15/12/2021	Interlab_D	ES2146398	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	27/01/2022	Normal	858641	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	10/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	17/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH14S	28/10/2021	Field_D	836474	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH14S	CSM_BH14S	25/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	15/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	27/01/2022	Normal	858641	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	09/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH14S	CSM_BH14S	17/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	29/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW BH10	GASW_BH10	24/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	18/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	08/02/2022	Normal	862315	<10	<10	<30	-	<10	4	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH10	GASW_BH10	18/03/2022	Normal	872459	<10	<10	<30	-	<10	12	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH11	GASW_BH11	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW BH23	GASW_BH23	23/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH23	GASW_BH23	14/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GASW_BH25A	GASW_BH25A	28/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	29/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH047	SRT_BH047	24/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	19/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	SRT_BH047	08/02/2022	Field_D	862315	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	08/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH047	SRT_BH047	16/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH050	SRT_BH050	25/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	15/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	19/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	08/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH050	SRT_BH050	16/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	29/10/2021	Normal	836474	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT BH052	SRT_BH052	24/11/2021	Normal	846135	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	16/12/2021	Normal	851006	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	19/01/2022	Normal	856960	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	08/02/2022	Normal	862315	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	SRT_BH052	16/03/2022	Interlab_D	ES2209602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRT_BH052	SRT_BH052	16/03/2022	Normal	872459	<10	<10	<30	-	<10	<3	<10	<3	<6	<3	<30	<30	<100	<30	<10	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B3 - Groundwater Analytical Results for October 2021 to March 2022

				Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																						
	cis-1,2-dichloroethene	Methylene chloride	Vinyl chloride	Bromomethane	Dichlorodifluoromethane	Dinoseb	Carbon disulfide	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Total MAH	Coronene	1,1-dichloroethane	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2-dibromoethane	1,3-dichlorobenzene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	Acetone	Allyl chloride	Bromodichloromethane	Bromoform	Chlorodibromomethane	Chloroethane	cis-1,3-dichloropropene	cis-1,4-Dichloro-2-butene	Dibromomethane	Iodomethane	Trichloroethene	Tetrachloroethene	trans-1,3-dichloropropene	trans-1,2-dichloroethene	Trichlorofluoromethane
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	1	1	1	1	1	100	1	1	1	1	1	3	0.1	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	1	1	1
ADWG 2011 Recreational (v3.7 updated 2022)		40	3	10							300						10															500				
ANZG (2018) - MW - 95% species protection (updated 1/10/2021)		4,000	100							30																				330	70			
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			

Field ID	Location Code	Sample Date	Sample Type	Lab Report Number																																		
CSM_BH02	CSM_BH02	27/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH02	CSM_BH02	25/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	14/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH02	18/01/2022	Field_D	856960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	10/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH02	CSM_BH02	18/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	27/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH04	CSM_BH04	23/11/2021	Normal	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	14/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	18/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH04	18/01/2022	Interlab_D	ES2201646	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	09/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH04	CSM_BH04	16/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	28/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH06	CSM_BH06	25/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	15/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	27/01/2022	Normal	858641	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	09/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH06	CSM_BH06	17/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	27/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH08	27/10/2021	Interlab_D	ES2139173	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH08	CSM_BH08	24/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH08	24/11/2021	Field_D	846135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	16/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	18/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	10/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH08	CSM_BH08	17/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	27/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH10S	CSM_BH10S	23/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	14/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH10S	14/12/2021	Field_D	851006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	18/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	09/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH10S	09/02/2022	Interlab_D	ES2204819	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH10S	CSM_BH10S	16/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC01	CSM_BH10S	16/03/2022	Field_D	872459	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	28/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH12S	CSM_BH12S	24/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC02	CSM_BH12S	24/11/2021	Interlab_D	ES2144215	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	14/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	18/01/2022	Normal	856960	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	08/02/2022	Normal	862315	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH12S	CSM_BH12S	18/03/2022	Normal	872459	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	28/10/2021	Normal	836474	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM BH13	CSM_BH13	25/11/2021	Normal	846135	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSM_BH13	CSM_BH13	15/12/2021	Normal	851006	-	-	-	-	-	<100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix B
Table B3 - Groundwater Analytical Results for October 2021 to March 2022

					Halogenated Hydrocarbons		Herbicides	Solvents	MAH					SVOCs	VOCs																						

Appendix B
Table B4 - Groundwater Gauging for
October 2021 to March 2022 monitoring period

Well ID	Sampling Event	SWL (mbTOC)	BOC (mbTOC)	Elevation of well (m)	SWL (m AHD)	Shallow or Deep?	Date Measured	Lithology (mAHD)	Well screen (mAHD)	Lithology (mbgl)	Well screen (mbgl)
CSM_BH02	Event 37 - Oct 2021	26.243	32.810	21.424	-4.819	Deep	27/10/2021	14.28-14.88 concrete / fill 13.98-14.28 residual soil (20.12)-13.98 sandstone	(20.12)-0.88	-	-
CSM_BH02	Event 38 - Nov 2021	25.985	32.940	21.424	-4.561	Deep	25/11/2021				
CSM_BH02	Event 39 - Dec 2021	25.785	32.810	21.424	-4.361	Deep	14/12/2021				
CSM_BH02	Event 40 - Jan 2022	25.590	32.600	21.424	-4.166	Deep	18/01/2022				
CSM_BH02	Event 41 - Feb 2022	25.350	32.545	21.424	-3.926	Deep	10/02/2022				
CSM_BH02	Event 42 - Mar 2022	25.325	32.960	21.424	-3.901	Deep	18/03/2022				
CSM_BH04	Event 37 - Oct 2021	21.885	33.230	15.814	-6.071	Deep	27/10/2021	13.91-15.91 fill 5.91-13.91 residual (sand, clayey sand, sandy clay) (20.91)-5.91 sandstone	(20.91)-(5.91)	-	-
CSM_BH04	Event 38 - Nov 2021	21.910	33.260	15.814	-6.096	Deep	25/11/2021				
CSM_BH04	Event 39 - Dec 2021	21.525	33.230	15.814	-5.711	Deep	14/12/2021				
CSM_BH04	Event 40 - Jan 2022	21.340	33.060	15.814	-5.526	Deep	18/01/2022				
CSM_BH04	Event 41 - Feb 2022	21.415	32.780	15.814	-5.601	Deep	10/02/2022				
CSM_BH04	Event 42 - Mar 2022	21.350	32.770	15.814	-5.536	Deep	18/03/2022				
CSM_BH06	Event 37 - Oct 2021	26.335	35.430	21.930	-4.405	Deep	27/10/2021	19.52-20.02 fill 14.02-19.52 residual (clayey sand, sandy clay, clay) 10.02-14.02 residual / weathered shale / weathered claystone (13.02)-10.02 sandstone	(13.02)-2.02	-	-
CSM_BH06	Event 38 - Nov 2021	26.100	35.840	21.930	-4.170	Deep	25/11/2021				
CSM_BH06	Event 39 - Dec 2021	25.875	35.430	21.930	-3.945	Deep	14/12/2021				
CSM_BH06	Event 40 - Jan 2022	25.680	35.800	21.930	-3.750	Deep	18/01/2022				
CSM_BH06	Event 41 - Feb 2022	25.685	36.410	21.930	-3.755	Deep	10/02/2022				
CSM_BH06	Event 42 - Mar 2022	25.350	35.880	21.930	-3.420	Deep	18/03/2022				
CSM_BH08	Event 37 - Oct 2021	18.460	35.160	14.694	-3.766	Deep	27/10/2021	14.28-14.88 concrete / fill 13.98-14.28 residual (sandy clay) (21.88)-13.98 sandstone	(21.88)-(6.88)	-	-
CSM_BH08	Event 38 - Nov 2021	18.285	35.320	14.694	-3.591	Deep	25/11/2021				
CSM_BH08	Event 39 - Dec 2021	18.025	35.160	14.694	-3.331	Deep	14/12/2021				
CSM_BH08	Event 40 - Jan 2022	17.780	35.220	14.694	-3.086	Deep	18/01/2022				
CSM_BH08	Event 41 - Feb 2022	17.800	34.890	14.694	-3.106	Deep	10/02/2022				
CSM_BH08	Event 42 - Mar 2022	17.465	35.360	14.694	-2.771	Deep	18/03/2022				
CSM_BH10S	Event 37 - Oct 2021	4.440	9.690	15.583	11.143	Shallow	27/10/2021	13.68-15.68 fill 9.68-13.68 residual soil (sand) 5.68-9.68 residual soil (clayey sand and sandy clay)	5.98-9.68	-	-
CSM_BH10S	Event 38 - Nov 2021	4.230	9.700	15.583	11.353	Shallow	25/11/2021				
CSM_BH10S	Event 39 - Dec 2021	4.110	9.825	15.583	11.473	Shallow	14/12/2021				
CSM_BH10S	Event 40 - Jan 2022	3.970	9.670	15.583	11.613	Shallow	18/01/2022				
CSM_BH10S	Event 41 - Feb 2022	3.995	9.695	15.583	11.588	Shallow	10/02/2022				
CSM_BH10S	Event 42 - Mar 2022	3.480	9.700	15.583	12.103	Shallow	18/03/2022				
CSM_BH12S	Event 37 - Oct 2021	4.795	6.505	20.726	15.931	Shallow	27/10/2021				
CSM_BH12S	Event 38 - Nov 2021	4.700	6.490	20.726	16.026	Shallow	25/11/2021				
CSM_BH12S	Event 39 - Dec 2021	4.635	6.600	20.726	16.091	Shallow	14/12/2021				
CSM_BH12S	Event 40 - Jan 2022	4.595	6.495	20.726	16.131	Shallow	18/01/2022				
CSM_BH12S	Event 41 - Feb 2022	4.615	6.670	20.726	16.111	Shallow	10/02/2022				
CSM_BH12S	Event 42 - Mar 2022	4.440	6.510	20.726	16.286	Shallow	18/03/2022				
CSM_BH13	Event 37 - Oct 2021	20.245	33.670	25.452	5.207	Deep	27/10/2021			Sandstone	
CSM_BH13	Event 38 - Nov 2021	22.155	33.700	25.452	3.297	Deep	25/11/2021				
CSM_BH13	Event 39 - Dec 2021	22.090	33.670	25.452	3.362	Deep	14/12/2021				
CSM_BH13	Event 40 - Jan 2022	22.090	34.250	25.452	3.362	Deep	18/01/2022				
CSM_BH13	Event 41 - Feb 2022	21.925	33.650	25.452	3.527	Deep	10/02/2022				
CSM_BH13	Event 42 - Mar 2022	21.870	34.070	25.452	3.582	Deep	18/03/2022				
CSM_BH14S	Event 37 - Oct 2021	2.470	5.645	22.794	20.324	Shallow	27/10/2021	-	-	0.0 - 2.0 fill 2.0 - 3.5 silty sand 3.5 - 7.0 sandy clay	
CSM_BH14S	Event 38 - Nov 2021	2.460	5.635	22.794	20.334	Shallow	25/11/2021				
CSM_BH14S	Event 39 - Dec 2021	2.490	5.720	22.794	20.304	Shallow	14/12/2021				
CSM_BH14S	Event 40 - Jan 2022	2.550	5.640	22.794	20.244	Shallow	18/01/2022				
CSM_BH14S	Event 41 - Feb 2022	2.525	5.740	22.794	20.269	Shallow	10/02/2022				
CSM_BH14S	Event 42 - Mar 2022	2.485	5.650	22.794	20.309	Shallow	18/03/2022				

Appendix B
Table B4 - Groundwater Gauging for
October 2021 to March 2022 monitoring period

Well ID	Sampling Event	SWL (mbTOC)	BOC (mbTOC)	Elevation of well (m)	SWL (m AHD)	Shallow or Deep?	Date Measured	Lithology (mAHD)	Well screen (mAHD)	Lithology (mbgl)	Well screen (mbgl)
GASW_BH10	Event 37 - Oct 2021	23.720	24.730	20.493	-3.227	Deep	27/10/2021	-	-	0-3.5 fill 3.5-6 silty clay 6-8.5 shale 8.5-25 sandstone	22-25
GASW_BH10	Event 38 - Nov 2021	23.745	24.750	20.493	-3.252	Deep	25/11/2021				
GASW_BH10	Event 39 - Dec 2021	23.680	25.250	20.493	-3.187	Deep	14/12/2021				
GASW_BH10	Event 40 - Jan 2022	23.655	24.730	20.493	-3.162	Deep	18/01/2022				
GASW_BH10	Event 41 - Feb 2022	23.655	24.730	20.493	-3.162	Deep	10/02/2022				
GASW_BH10	Event 42 - Mar 2022	23.632	24.730	20.493	-3.139	Deep	18/03/2022				
GASW_BH11	Event 37 - Oct 2021	7.160	8.050	20.548	13.388	Shallow	27/10/2021	-	-	5.0 - 7.0 shale	
GASW_BH23	Event 37 - Oct 2021	2.905	3.915	19.605	16.700	Shallow	27/10/2021	17.01 - 19.61 fill	17.01 - 18.61	-	-
GASW_BH23	Event 38 - Nov 2021	2.150	3.910	19.605	17.455	Shallow	25/11/2021				
GASW_BH23	Event 39 - Dec 2021	2.350	3.980	19.605	17.255	Shallow	14/12/2021				
GASW_BH25A	Event 37 - Oct 2021	1.465	2.950	19.631	18.166	Shallow	27/10/2021	16.73 - 19.63 fill/concrete	16.73 - 18.63	-	-
GASW_BH7	Event 37 - Oct 2021	6.220	6.220	21.170	14.950	Shallow	27/10/2021	20.59 - 20.89 fill 14.39-20.59 residual (weathered shale)	-	0-2.7 fill 2.7-5 silty clay 5-7 shale	-
GASW_BH7	Event 38 - Nov 2021	6.190	6.190	21.170	14.980	Shallow	25/11/2021				
GASW_BH7	Event 39 - Dec 2021	6.335	6.335	21.170	14.835	Shallow	14/12/2021				
SRT_BH047	Event 37 - Oct 2021	4.555	7.035	21.310	16.755	Shallow	27/10/2021	19.71-21.11 fill 14.18-19.71 laminite / residual soil 6.31-14.18 bedrock sandstone	11.91-15.41	2.5 - 3.0 Silty clay with sand, trace of gravel 4.0 - 4.5 Silty clay, trace of sand and gravel 6.0 - 6.9 Sandy silty clay 7.35-13.48 Sandstone	-
SRT_BH047	Event 38 - Nov 2021	3.680	7.040	21.310	17.630	Shallow	25/11/2021				
SRT_BH047	Event 39 - Dec 2021	3.660	7.015	21.310	17.650	Shallow	14/12/2021				
SRT_BH047	Event 40 - Jan 2022	3.560	7.040	21.310	17.750	Shallow	18/01/2022				
SRT_BH047	Event 41 - Feb 2022	3.320	7.045	21.310	17.990	Shallow	10/02/2022				
SRT_BH047	Event 42 - Mar 2022	3.225	7.030	21.310	18.085	Shallow	18/03/2022				
SRT_BH050	Event 37 - Oct 2021	2.770	2.770	21.390	18.620	Shallow	27/10/2021	-	-	1.5 - 2.0 Clayey sand 2.2 - 3.0 Silty clay with sand, trace of gravel 5.0 - 6.0 Silty clay, trace of sand and gravel 9.70 - 9.94 Sandstone	-
SRT_BH050	Event 38 - Nov 2021	2.525	2.760	21.390	18.865	Shallow	25/11/2021				
SRT_BH050	Event 39 - Dec 2021	2.435	2.780	21.390	18.955	Shallow	14/12/2021				
SRT_BH050	Event 40 - Jan 2022	2.290	2.760	21.390	19.100	Shallow	18/01/2022				
SRT_BH050	Event 41 - Feb 2022	2.430	2.780	21.390	18.960	Shallow	10/02/2022				
SRT_BH050	Event 42 - Mar 2022	2.075	2.790	21.390	19.315	Shallow	18/03/2022				
SRT_BH052	Event 37 - Oct 2021	6.210	7.895	21.400	15.190	Shallow	27/10/2021	19.55-21.40 fill 16.40-19.55 residual soil 6.08-16.40 sandstone	14.2-16.9		-
SRT_BH052	Event 38 - Nov 2021	6.160	7.920	21.400	15.240	Shallow	25/11/2021				
SRT_BH052	Event 39 - Dec 2021	6.010	8.050	21.400	15.390	Shallow	14/12/2021				
SRT_BH052	Event 40 - Jan 2022	5.790	7.900	21.400	15.610	Shallow	18/01/2022				
SRT_BH052	Event 41 - Feb 2022	5.730	10.120	21.400	15.670	Shallow	10/02/2022				
SRT_BH052	Event 42 - Mar 2022	4.836	7.920	21.400	16.564	Shallow	18/03/2022				

Note:
mTOC: metres to top of casing
mbgl: metres below ground level
mAHD: metres Australian Height Datum

Well ID	Sampling Event	Date Measured	SWL (mbTOC)	BOC (mbTOC)	Dissolved Oxygen (ppm)	Electrical Conductivity (us/cm)	pH	Ox-Red Potential (mV)	Temperature (°C)	Comments
CSM_BH02	Event 37 - Oct 2021	27/10/2021	26.243	32.81	2.43	692	6.11	114.7	22.5	Orange brown, cloudy, some sediments, no odour/sheen
CSM_BH02	Event 38 - Nov 2021	25/11/2021	25.985	32.94	2.54	835	6.78	159.7	20.2	Brown, cloudy, no odour/sheen
CSM_BH02	Event 39 - Dec 2021	14/12/2021	25.785	32.81	2.37	937	6.76	93.3	20.4	Orange, cloudy, some sediment, no odour/sheen
CSM_BH02	Event 40 - Jan 2022	18/01/2022	25.59	32.6	3.82	951	6.63	162.1	21	Light orange, slightly cloudy, no odour/sheen
CSM_BH02	Event 41 - Feb 2022	10/02/2022	25.35	32.545	3.8	391.4	5.98	132.1	22.4	Light brown, cloudy, no odour/sheen
CSM_BH02	Event 42 - Mar 2022	18/03/2022	25.325	32.96	1.95	851	6.72	-85.7	21.1	Cloudy, no odour/sheen
CSM_BH04	Event 37 - Oct 2021	27/10/2021	21.885	33.23	0.41	539	6.05	48.2	25.4	Red brown, cloudy, some sediments, no odour/sheen
CSM_BH04	Event 38 - Nov 2021	23/11/2021	21.91	33.26	0.52	475.4	5.95	50.2	20.8	Clear, no odour/sheen
CSM_BH04	Event 39 - Dec 2021	14/12/2021	21.525	33.23	3.93	508	5.8	21.2	21.1	DRY
CSM_BH04	Event 40 - Jan 2022	18/01/2022	21.34	33.06	0.71	455.5	5.77	16.2	21.5	Grey, cloudy, some sediment, organic odour, no sheen (grab sample taken)
CSM_BH04	Event 41 - Feb 2022	09/02/2022	21.415	32.78	1.67	501	5.39	61	21.9	Brown, cloudy, no odour/sheen
CSM_BH04	Event 42 - Mar 2022	16/03/2022	21.35	32.77	0.8	449.1	6.05	-75.4	22.1	Grey, cloudy, some black sediment, hydrocarbon odour, no sheen
CSM_BH06	Event 37 - Oct 2021	28/10/2021	26.335	35.43	4.87	1002	6.24	59	23.5	Clear to slightly cloudy, some black sediment, hydrocarbon odour, no sheen
CSM_BH06	Event 38 - Nov 2021	25/11/2021	26.1	35.84	1.09	974	6.3	134.4	22.6	Clear, no odour/sheen
CSM_BH06	Event 39 - Dec 2021	15/12/2021	25.875	35.43	1.5	1080	6.07	32.2	29.1	DRY
CSM_BH06	Event 40 - Jan 2022	27/01/2022	25.68	35.8	1.38	955	5.81	80.7	25.3	Clear, no odour/sheen
CSM_BH06	Event 41 - Feb 2022	09/02/2022	25.685	36.41	1.86	1169	5.71	94.6	30.7	Brown, some sediment, no odour/sheen
CSM_BH06	Event 42 - Mar 2022	17/03/2022	25.35	35.88	0.8	945	6.27	-84.5	22.9	Brown, cloudy, high sediments, no odour/sheen
CSM_BH08	Event 37 - Oct 2021	27/10/2021	18.46	35.16	0.43	613	6.16	-8.1	20.9	Orange, slightly cloudy, no odour/sheen
CSM_BH08	Event 38 - Nov 2021	24/11/2021	18.285	35.32	0.39	626	5.5	54.9	20.8	Light brown, some sediment, no odour/sheen
CSM_BH08	Event 39 - Dec 2021	16/12/2021	18.025	35.16	2.52	604	6.2	8.4	21	Light brown, slightly cloudy, no odour/sheen
CSM_BH08	Event 40 - Jan 2022	18/01/2022	17.78	35.22	0.35	620	6.06	15	21.2	Slightly cloudy, no odour/sheen
CSM_BH08	Event 41 - Feb 2022	10/02/2022	17.8	34.89	1.2	637	6.13	17	21.2	Dark orange, some suspended sediments, no odour/sheen
CSM_BH08	Event 42 - Mar 2022	17/03/2022	17.465	35.36	0.28	607	6.1	-123.2	21	Clear, no odour/sheen
CSM_BH10S	Event 37 - Oct 2021	27/10/2021	4.44	9.69	0.24	237.2	5.38	173.2	21.5	DRY
CSM_BH10S	Event 38 - Nov 2021	23/11/2021	4.23	9.7	0.58	251.2	5.4	188.9	20.8	Grey, cloudy, slight organic odour, no sheen (grab sample taken)
CSM_BH10S	Event 39 - Dec 2021	14/12/2021	4.11	9.825	2.09	231.8	5.13	235.8	21.3	Clear, hydrocarbon odour, slight sheen
CSM_BH10S	Event 40 - Jan 2022	18/01/2022	3.97	9.67	0.27	236.2	4.66	217.9	22	Slightly cloudy, no odour/sheen
CSM_BH10S	Event 41 - Feb 2022	09/02/2022	3.995	9.695	0.88	249.9	5.19	125.9	21.5	Orange, no odour/sheen (grab sample taken)
CSM_BH10S	Event 42 - Mar 2022	16/03/2022	3.48	9.7	0.28	234	5.15	-78.5	21.9	Brown, cloudy, no odour/sheen
CSM_BH12S	Event 37 - Oct 2021	28/10/2021	4.795	6.505	0.19	662	6.13	40.9	20.2	Brown-red, cloudy, no odour/sheen
CSM_BH12S	Event 38 - Nov 2021	24/11/2021	4.7	6.49	0.33	643	6.47	58.7	21.2	Light brown, turbid, high sediments, no odour/sheen
CSM_BH12S	Event 39 - Dec 2021	14/12/2021	4.635	6.6	0.33	589	5.7	34.1	20.2	Orange, slightly cloudy, no odour/sheen
CSM_BH12S	Event 40 - Jan 2022	18/01/2022	4.595	6.495	0.26	609	5.32	58.3	20.6	Orange, cloudy, high sediment, no odour/sheen
CSM_BH12S	Event 41 - Feb 2022	08/02/2022	4.615	6.67	0.81	622	5.93	19.7	21	Clear, no odour/sheen
CSM_BH12S	Event 42 - Mar 2022	18/03/2022	4.44	6.51	0.28	596	5.96	-98.6	20.9	Brown, slightly cloudy, no odour/sheen
CSM_BH13	Event 37 - Oct 2021	28/10/2021	20.245	33.67	0.28	1052	6.68	-37.8	22.3	Red orange, cloudy, no odour/sheen
CSM_BH13	Event 38 - Nov 2021	25/11/2021	22.155	33.7	0.4	1042	6.72	-10.7	22.1	Clear, no odour/sheen
CSM_BH13	Event 39 - Dec 2021	15/12/2021	22.09	33.67	0.69	1037	5.8	67.8	23.6	DRY
CSM_BH13	Event 40 - Jan 2022	27/01/2022	22.09	34.25	1.04	1007	6.13	9.9	22.6	Light grey, cloudy, slight organic odour, no sheen (grab sample taken)
CSM_BH13	Event 41 - Feb 2022	10/02/2022	21.925	33.65	0.94	1087	6.15	9.5	24	Grey, cloudy, hydrocarbon odour, slight sheen
CSM_BH13	Event 42 - Mar 2022	17/03/2022	21.87	34.07	0.7	913	6.37	-100.4	22.2	Light grey and brown, slightly cloudy, no odour/sheen
CSM_BH14S	Event 37 - Oct 2021	28/10/2021	2.47	5.645	2.58	176.1	6.75	69.6	21.4	Clear to orange, no odour/sheen (grab sample taken)
CSM_BH14S	Event 38 - Nov 2021	25/11/2021	2.46	5.635	2.19	162.7	6.61	122.7	20.8	Clear, no odour/sheen
CSM_BH14S	Event 39 - Dec 2021	15/12/2021	2.49	5.72	2.17	151.2	6.38	118.2	20.4	Brown cloudy, no odour/sheen
CSM_BH14S	Event 40 - Jan 2022	27/01/2022	2.55	5.64	1.25	191	6.2	142.1	22.6	Brown cloudy, no odour/sheen
CSM_BH14S	Event 41 - Feb 2022	09/02/2022	2.525	5.74	1.07	218.2	6.37	76.2	22.7	Brown cloudy, sediments, no odour/sheen
CSM_BH14S	Event 42 - Mar 2022	17/03/2022	2.485	5.65	0.74	192.5	6.57	-111.2	23.7	Orange cloudy, some suspended sediments, no odour/sheen
GASW_BH10	Event 37 - Oct 2021	29/10/2021	23.72	24.73	1.4	1211	6.7	-62.5	21.6	Brown cloudy, no odour/sheen
GASW_BH10	Event 38 - Nov 2021	24/11/2021	23.745	24.75	-	-	-	-	-	Brown, slightly cloudy, no odour/sheen
GASW_BH10	Event 39 - Dec 2021	14/12/2021	23.68	25.25	-	-	-	-	-	Orange, some sediment, no odour/sheen

Well ID	Sampling Event	Date Measured	SWL (mbTOC)	BOC (mbTOC)	Dissolved Oxygen (ppm)	Electrical Conductivity (us/cm)	pH	Ox-Red Potential (mV)	Temperature (°C)	Comments
GASW_BH10	Event 40 - Jan 2022	18/01/2022	23.655	24.73	-	-	-	-	-	Clear, no odour/sheen
GASW_BH10	Event 41 - Feb 2022	08/02/2022	23.655	24.73	-	-	-	-	-	Light grey, cloudy, slight organic odour, no sheen (grab sample taken)
GASW_BH10	Event 42 - Mar 2022	18/03/2022	23.632	24.73	1.03	1109	6.87	-161.4	21.7	Cloudy, no odour/sheen
GASW_BH11	Event 37 - Oct 2021	28/10/2021	7.16	8.05	5.02	238.9	5.74	126.8	19.6	Clear, no odour/sheen (grab sample taken)
GASW_BH23	Event 37 - Oct 2021	28/10/2021	2.905	3.915	0.25	689	7.29	-156.5	19.9	Clear to slightly cloudy, no odour/sheen
GASW_BH23	Event 38 - Nov 2021	23/11/2021	2.15	3.91	0.3	555	6.96	-169	20.7	Orange brown, cloudy, some sediments, no odour/sheen
GASW_BH23	Event 39 - Dec 2021	14/12/2021	2.35	3.98	0.09	465	6.79	-131.2	21.1	Brown, very cloudy, no odour/sheen
GASW_BH25A	Event 37 - Oct 2021	28/10/2021	1.465	2.95	3.46	210.8	8.11	-50.6	19.5	Orange brown, cloudy, no odour/sheen
GASW_BH7	Event 37 - Oct 2021	29/10/2021	DRY	6.22	-	-	-	-	-	Orange, cloudy, no odour/sheen
GASW_BH7	Event 38 - Nov 2021	23/11/2021	DRY	6.19	-	-	-	-	-	Clear, no odour/sheen
GASW_BH7	Event 39 - Dec 2021	14/12/2021	DRY	6.335	-	-	-	-	-	Brown, slightly cloudy, no odour/sheen
SRT_BH047	Event 37 - Oct 2021	29/10/2021	4.555	7.035	2.59	200.6	5.58	155.5	20	Orange, slightly cloudy, no odour/sheen
SRT_BH047	Event 38 - Nov 2021	24/11/2021	3.68	7.04	2.45	190.5	5.39	198.9	20.4	Slightly brown, no odour/sheen
SRT_BH047	Event 39 - Dec 2021	16/12/2021	3.66	7.015	2.56	181.5	5.37	246.8	19.6	Cloudy, sulfur/organic odour, no sheen (grab sample taken)
SRT_BH047	Event 40 - Jan 2022	19/01/2022	3.56	7.04	3.03	178.4	4.72	221.7	19.9	Clear, no odour/sheen
SRT_BH047	Event 41 - Feb 2022	08/02/2022	3.32	7.045	2.56	190.9	5.09	188.8	20.2	Clear, no odour/sheen (grab sample taken)
SRT_BH047	Event 42 - Mar 2022	16/03/2022	3.225	7.03	2.82	177	4.93	-35.8	20.5	Clear, no odour/sheen
SRT_BH050	Event 37 - Oct 2021	29/10/2021	DRY	2.77	-	-	-	-	-	Brown, cloudy, no odour/sheen
SRT_BH050	Event 38 - Nov 2021	25/11/2021	2.525	2.76	-	-	-	-	-	Orange brown, cloudy, no odour, very slight sheen
SRT_BH050	Event 39 - Dec 2021	15/12/2021	2.435	2.78	-	-	-	-	-	Brown, cloudy, no odour/sheen
SRT_BH050	Event 40 - Jan 2022	19/01/2022	2.29	2.76	6.48	203.2	4.54	220.5	21.4	Brown and orange, no odour, very slight sheen
SRT_BH050	Event 41 - Feb 2022	08/02/2022	2.43	2.78	-	-	-	-	-	Clear to slightly cloudy, no odour, slight sheen
SRT_BH050	Event 42 - Mar 2022	16/03/2022	2.075	2.79	5.72	223	4.78	5.2	22.7	Brown, cloudy, no odour/sheen
SRT_BH052	Event 37 - Oct 2021	29/10/2021	6.21	7.895	4.04	316.2	5.91	129.3	20.2	Orange brown, some sediments, no odour/sheen
SRT_BH052	Event 38 - Nov 2021	24/11/2021	6.16	7.92	2.51	320.5	5.92	144.9	20.7	Orange brown, cloudy, no odour/sheen
SRT_BH052	Event 39 - Dec 2021	16/12/2021	6.01	8.05	3.88	254.1	5.57	220	19.8	Grey, cloudy, some sediment, sulfur odour, no sheen (grab sample taken)
SRT_BH052	Event 40 - Jan 2022	19/01/2022	5.79	7.9	6.53	233.3	5.23	183.2	20	Clear, no odour/sheen
SRT_BH052	Event 41 - Feb 2022	08/02/2022	5.73	10.12	5.56	247.1	5.48	143.3	20.1	Clear, no odour/sheen (grab sample taken)
SRT_BH052	Event 42 - Mar 2022	16/03/2022	4.836	7.92	4.15	241	4.92	-10.2	20.5	Clear, no odour/sheen

Well ID	Date Measured	pH (field)	pH (lab)	Sulfate (mg/L)	chloride (mg/L)	soil condition A	soil condition B	aquifer
						high permerability soil (sand, gravel) that are in groundwater	low permeability soils (silt and clay) or all soils above groundwater	Table 6.5.2 C in AS2159
CSM_BH02	27/10/2021	6.11	7.8	100	33	non-aggressive	non-aggressive	deep
CSM_BH02	25/11/2021	6.78	7.2	130	26	non-aggressive	non-aggressive	deep
CSM_BH02	14/12/2021	6.76	8.5	160	28	non-aggressive	non-aggressive	deep
CSM_BH02	18/01/2022	6.63	7.5	150	20	non-aggressive	non-aggressive	deep
CSM_BH02	10/02/2022	5.98	7.9	43	35	non-aggressive	non-aggressive	deep
CSM_BH02	18/03/2022	6.72	7.4	140	24	non-aggressive	non-aggressive	deep
CSM_BH04	27/10/2021	6.05	7.2	90	34	non-aggressive	non-aggressive	off-site deep
CSM_BH04	23/11/2021	5.95	7	63	50	non-aggressive	non-aggressive	off-site deep
CSM_BH04	14/12/2021	5.8	7.6	87	22	non-aggressive	non-aggressive	off-site deep
CSM_BH04	18/01/2022	5.77	6.5	72	28	non-aggressive	non-aggressive	off-site deep
CSM_BH04	09/02/2022	5.39	6.8	93	32	non-aggressive	non-aggressive	off-site deep
CSM_BH04	16/03/2022	6.05	6.7	71	36	non-aggressive	non-aggressive	off-site deep
CSM_BH06	28/10/2021	6.24	7.9	220	27	non-aggressive	non-aggressive	off-site deep
CSM_BH06	25/11/2021	6.3	7.1	230	21	non-aggressive	non-aggressive	off-site deep
CSM_BH06	15/12/2021	6.07	7.6	240	23	non-aggressive	non-aggressive	off-site deep
CSM_BH06	27/01/2022	5.81	7.8	190	24	non-aggressive	non-aggressive	off-site deep
CSM_BH06	09/02/2022	5.71	7.1	200	30	non-aggressive	non-aggressive	off-site deep
CSM_BH06	17/03/2022	6.27	7.4	200	21	non-aggressive	non-aggressive	off-site deep
CSM_BH08	27/10/2021	6.16	8.1	110	89	non-aggressive	non-aggressive	off-site deep
CSM_BH08	24/11/2021	5.5	5.8	93	35	non-aggressive	non-aggressive	off-site deep
CSM_BH08	16/12/2021	6.2	8.1	110	47	non-aggressive	non-aggressive	off-site deep
CSM_BH08	18/01/2022	6.06	7.1	110	38	non-aggressive	non-aggressive	off-site deep
CSM_BH08	10/02/2022	6.13	8	110	44	non-aggressive	non-aggressive	off-site deep
CSM_BH08	17/03/2022	6.1	6.8	100	44	non-aggressive	non-aggressive	off-site deep
CSM_BH10S	27/10/2021	5.38	6.9	24	89	non-aggressive	non-aggressive	off-site shallow
CSM_BH10S	23/11/2021	5.4	6.4	27	50	non-aggressive	non-aggressive	off-site shallow
CSM_BH10S	14/12/2021	5.13	6.8	25	60	non-aggressive	non-aggressive	off-site shallow
CSM_BH10S	18/01/2022	4.66	6.1	21	45	mild	non-aggressive	off-site shallow
CSM_BH10S	09/02/2022	5.19	6.6	24	50	non-aggressive	non-aggressive	off-site shallow
CSM_BH10S	16/03/2022	5.15	5.8	24	51	non-aggressive	non-aggressive	off-site shallow
CSM_BH12S	28/10/2021	6.13	7.5	74	160	non-aggressive	non-aggressive	shallow
CSM_BH12S	24/11/2021	6.47	6.6	80	140	non-aggressive	non-aggressive	shallow
CSM_BH12S	14/12/2021	5.7	7.7	73	130	non-aggressive	non-aggressive	shallow
CSM_BH12S	18/01/2022	5.32	6.7	69	120	non-aggressive	non-aggressive	shallow
CSM_BH12S	08/02/2022	5.93	7.6	67	120	non-aggressive	non-aggressive	shallow
CSM_BH12S	18/03/2022	5.96	6.3	66	130	non-aggressive	non-aggressive	shallow
CSM_BH13	28/10/2021	6.68	7.1	210	51	non-aggressive	non-aggressive	off-site deep
CSM_BH13	25/11/2021	6.72	7.5	230	40	non-aggressive	non-aggressive	off-site deep
CSM_BH13	15/12/2021	5.8	7.5	210	40	non-aggressive	non-aggressive	off-site deep
CSM_BH13	27/01/2022	6.13	7.5	190	40	non-aggressive	non-aggressive	off-site deep
CSM_BH13	10/02/2022	6.15	8.1	220	38	non-aggressive	non-aggressive	off-site deep
CSM_BH13	17/03/2022	6.37	7	190	33	non-aggressive	non-aggressive	off-site deep
CSM_BH14S	28/10/2021	6.75	6.9	26	13	non-aggressive	non-aggressive	off-site shallow
CSM_BH14S	25/11/2021	6.61	6.9	25	7.4	non-aggressive	non-aggressive	off-site shallow
CSM_BH14S	15/12/2021	6.38	7.5	25	5.4	non-aggressive	non-aggressive	off-site shallow
CSM_BH14S	27/01/2022	6.2	7.7	24	<5	non-aggressive	non-aggressive	off-site shallow
CSM_BH14S	09/02/2022	6.37	7.7	26	8.9	non-aggressive	non-aggressive	off-site shallow
CSM_BH14S	17/03/2022	6.57	7.2	16	6.4	non-aggressive	non-aggressive	off-site shallow
GASW_BH10	29/10/2021	6.7	7.8	170	8.7	non-aggressive	non-aggressive	deep
GASW_BH10	24/11/2021	-	7.2	180	<5	non-aggressive	non-aggressive	deep
GASW_BH10	14/12/2021	-	-	-	-	-	-	deep
GASW_BH10	18/01/2022	-	7.7	240	<2	non-aggressive	non-aggressive	deep
GASW_BH10	08/02/2022	-	8.1	180	<5	non-aggressive	non-aggressive	deep
GASW_BH10	18/03/2022	6.87	7	190	<5	non-aggressive	non-aggressive	deep
GASW_BH11	28/10/2021	5.74	7.7	74	56	non-aggressive	non-aggressive	shallow
GASW_BH23	28/10/2021	7.29	7.5	54	160	non-aggressive	non-aggressive	shallow
GASW_BH23	23/11/2021	6.96	7.6	11	110	non-aggressive	non-aggressive	shallow
GASW_BH23	14/12/2021	6.79	7.7	12	79	non-aggressive	non-aggressive	shallow
GASW_BH25A	28/10/2021	8.11	7.4	38	19	non-aggressive	non-aggressive	shallow
SRT_BH047	29/10/2021	5.58	6.4	20	21	non-aggressive	non-aggressive	shallow
SRT_BH047	24/11/2021	5.39	6.1	20	14	non-aggressive	non-aggressive	shallow
SRT_BH047	16/12/2021	5.37	6.6	18	14	non-aggressive	non-aggressive	shallow
SRT_BH047	19/01/2022	4.72	6.1	16	12	mild	non-aggressive	shallow
SRT_BH047	08/02/2022	5.09	6.4	17	26	non-aggressive	non-aggressive	shallow
SRT_BH047	16/03/2022	4.93	5.7	17	12	mild	non-aggressive	shallow

SRT_BH050	29/10/2021	-	-	-	-	-	-	shallow
SRT_BH050	25/11/2021	-	-	-	-	-	-	shallow
SRT_BH050	15/12/2021	-	4.7	11	44	mild	non-aggressive	shallow
SRT_BH050	19/01/2022	4.54	4.9	12	35	mild	non-aggressive	shallow
SRT_BH050	08/02/2022	-	4.9	9.9	44	mild	non-aggressive	shallow
SRT_BH050	16/03/2022	4.78	5	11	40	mild	non-aggressive	shallow
SRT_BH052	29/10/2021	5.91	6.7	48	40	non-aggressive	non-aggressive	shallow
SRT_BH052	24/11/2021	5.92	6.9	48	36	non-aggressive	non-aggressive	shallow
SRT_BH052	16/12/2021	5.57	7.2	42	23	non-aggressive	non-aggressive	shallow
SRT_BH052	19/01/2022	5.23	6.3	32	12	non-aggressive	non-aggressive	shallow
SRT_BH052	08/02/2022	5.48	6.8	40	28	non-aggressive	non-aggressive	shallow
SRT_BH052	16/03/2022	4.92	5.6	40	15	mild	non-aggressive	shallow

Appendix B
Table B7
Groundwater Aggressivity Comparsion Table - Concrete Piles

Well ID	Date Measured	pH (field)	pH (lab)	Sulfate (mg/L)	chloride (mg/L)	soil condition A	soil condition B	aquifer
						high permerability soil (sand, gravel) that are in groundwater	low permeability soils (silt and clay) or all soils above groundwater	Table 6.4.2 C in AS2159
CSM_BH02	27/10/2021	6.11	7.8	100	33	mild	non-aggressive	deep
CSM_BH02	25/11/2021	6.78	7.2	130	26	mild	non-aggressive	deep
CSM_BH02	14/12/2021	6.76	8.5	160	28	mild	non-aggressive	deep
CSM_BH02	18/01/2022	6.63	7.5	150	20	mild	non-aggressive	deep
CSM_BH02	10/02/2022	5.98	7.9	43	35	mild	non-aggressive	deep
CSM_BH02	18/03/2022	6.72	7.4	140	24	mild	non-aggressive	deep
CSM_BH04	27/10/2021	6.05	7.2	90	34	mild	non-aggressive	off-site deep
CSM_BH04	23/11/2021	5.95	7	63	50	mild	non-aggressive	off-site deep
CSM_BH04	14/12/2021	5.8	7.6	87	22	mild	non-aggressive	off-site deep
CSM_BH04	18/01/2022	5.77	6.5	72	28	mild	non-aggressive	off-site deep
CSM_BH04	09/02/2022	5.39	6.8	93	32	moderate	mild	off-site deep
CSM_BH04	16/03/2022	6.05	6.7	71	36	mild	non-aggressive	off-site deep
CSM_BH06	28/10/2021	6.24	7.9	220	27	mild	non-aggressive	off-site deep
CSM_BH06	25/11/2021	6.3	7.1	230	21	mild	non-aggressive	off-site deep
CSM_BH06	15/12/2021	6.07	7.6	240	23	mild	non-aggressive	off-site deep
CSM_BH06	27/01/2022	5.81	7.8	190	24	mild	non-aggressive	off-site deep
CSM_BH06	09/02/2022	5.71	7.1	200	30	mild	non-aggressive	off-site deep
CSM_BH06	17/03/2022	6.27	7.4	200	21	mild	non-aggressive	off-site deep
CSM_BH08	27/10/2021	6.16	8.1	110	89	mild	non-aggressive	off-site deep
CSM_BH08	24/11/2021	5.5	5.8	93	35	moderate	mild	off-site deep
CSM_BH08	16/12/2021	6.2	8.1	110	47	mild	non-aggressive	off-site deep
CSM_BH08	18/01/2022	6.06	7.1	110	38	mild	non-aggressive	off-site deep
CSM_BH08	10/02/2022	6.13	8	110	44	mild	non-aggressive	off-site deep
CSM_BH08	17/03/2022	6.1	6.8	100	44	mild	non-aggressive	off-site deep
CSM_BH10S	27/10/2021	5.38	6.9	24	89	moderate	mild	off-site shallow
CSM_BH10S	23/11/2021	5.4	6.4	27	50	moderate	mild	off-site shallow
CSM_BH10S	14/12/2021	5.13	6.8	25	60	moderate	mild	off-site shallow
CSM_BH10S	18/01/2022	4.66	6.1	21	45	moderate	mild	off-site shallow
CSM_BH10S	09/02/2022	5.19	6.6	24	50	moderate	mild	off-site shallow
CSM_BH10S	16/03/2022	5.15	5.8	24	51	moderate	mild	off-site shallow
CSM_BH12S	28/10/2021	6.13	7.5	74	160	mild	non-aggressive	shallow
CSM_BH12S	24/11/2021	6.47	6.6	80	140	mild	non-aggressive	shallow
CSM_BH12S	14/12/2021	5.7	7.7	73	130	mild	non-aggressive	shallow
CSM_BH12S	18/01/2022	5.32	6.7	69	120	moderate	mild	shallow
CSM_BH12S	08/02/2022	5.93	7.6	67	120	mild	non-aggressive	shallow
CSM_BH12S	18/03/2022	5.96	6.3	66	130	mild	non-aggressive	shallow
CSM_BH13	28/10/2021	6.68	7.1	210	51	mild	non-aggressive	off-site deep
CSM_BH13	25/11/2021	6.72	7.5	230	40	mild	non-aggressive	off-site deep
CSM_BH13	15/12/2021	5.8	7.5	210	40	mild	non-aggressive	off-site deep
CSM_BH13	27/01/2022	6.13	7.5	190	40	mild	non-aggressive	off-site deep
CSM_BH13	10/02/2022	6.15	8.1	220	38	mild	non-aggressive	off-site deep
CSM_BH13	17/03/2022	6.37	7	190	33	mild	non-aggressive	off-site deep
CSM_BH14S	28/10/2021	6.75	6.9	26	13	mild	non-aggressive	off-site shallow
CSM_BH14S	25/11/2021	6.61	6.9	25	7.4	mild	non-aggressive	off-site shallow
CSM_BH14S	15/12/2021	6.38	7.5	25	5.4	mild	non-aggressive	off-site shallow
CSM_BH14S	27/01/2022	6.2	7.7	24	<5	mild	non-aggressive	off-site shallow
CSM_BH14S	09/02/2022	6.37	7.7	26	8.9	mild	non-aggressive	off-site shallow
CSM_BH14S	17/03/2022	6.57	7.2	16	6.4	mild	non-aggressive	off-site shallow
GASW_BH10	29/10/2021	6.7	7.8	170	8.7	mild	non-aggressive	deep
GASW_BH10	24/11/2021	-	7.2	180	<5	mild	non-aggressive	deep
GASW_BH10	14/12/2021	-	-	-	-	-	-	deep
GASW_BH10	18/01/2022	-	7.7	240	<2	mild	non-aggressive	deep
GASW_BH10	08/02/2022	-	8.1	180	<5	mild	non-aggressive	deep
GASW_BH10	18/03/2022	6.87	7	190	<5	mild	non-aggressive	deep
GASW_BH11	28/10/2021	5.74	7.7	74	56	mild	non-aggressive	shallow
GASW_BH23	28/10/2021	7.29	7.5	54	160	mild	non-aggressive	shallow
GASW_BH23	23/11/2021	6.96	7.6	11	110	mild	non-aggressive	shallow
GASW_BH23	14/12/2021	6.79	7.7	12	79	mild	non-aggressive	shallow
GASW_BH25A	28/10/2021	8.11	7.4	38	19	mild	non-aggressive	shallow
SRT_BH047	29/10/2021	5.58	6.4	20	21	mild	non-aggressive	shallow
SRT_BH047	24/11/2021	5.39	6.1	20	14	moderate	mild	shallow
SRT_BH047	16/12/2021	5.37	6.6	18	14	moderate	mild	shallow
SRT_BH047	19/01/2022	4.72	6.1	16	12	moderate	mild	shallow
SRT_BH047	08/02/2022	5.09	6.4	17	26	moderate	mild	shallow
SRT_BH047	16/03/2022	4.93	5.7	17	12	moderate	mild	shallow

SRT_BH050	29/10/2021	-	-	-	-	-	-	shallow
SRT_BH050	25/11/2021	-	-	-	-	-	-	shallow
SRT_BH050	15/12/2021	-	4.7	11	44	moderate	mild	shallow
SRT_BH050	19/01/2022	4.54	4.9	12	35	moderate	mild	shallow
SRT_BH050	08/02/2022	-	4.9	9.9	44	moderate	mild	shallow
SRT_BH050	16/03/2022	4.78	5	11	40	moderate	mild	shallow
SRT_BH052	29/10/2021	5.91	6.7	48	40	mild	non-aggressive	shallow
SRT_BH052	24/11/2021	5.92	6.9	48	36	mild	non-aggressive	shallow
SRT_BH052	16/12/2021	5.57	7.2	42	23	mild	non-aggressive	shallow
SRT_BH052	19/01/2022	5.23	6.3	32	12	moderate	mild	shallow
SRT_BH052	08/02/2022	5.48	6.8	40	28	moderate	mild	shallow
SRT_BH052	16/03/2022	4.92	5.6	40	15	moderate	mild	shallow

Appendix B
Table B8 - Calculated RPD of groundwater field duplicate samples

Field or Interlab Duplicates

Lab Report Number	836474	ES2139173		836474	836474		846135	846135		846135	ES2144215		851006	851006		851006	ES2146398	
Field ID	CSM_BH08	QC02	RPD	CSM_BH14S	QC01	RPD	CSM BH08	QC01	RPD	CSM BH12S	QC02	RPD	CSM_BH10S	QC01	RPD	CSM_BH13	QC02	RPD
Sample Date	27-10-21	27-10-21		28-10-21	28-10-21		24-11-21	24-11-21		24-11-21	24-11-21		14-12-21	14-12-21		15-12-21	15-12-21	

Chem_Group	ChemName	Unit	EQL																	
Metals	Arsenic (filtered)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	0.001	<0.001	0	<0.001	<0.001	0	0.001	0.001	0
	Cadmium (filtered)	mg/L	0.0001	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
	Chromium (III+VI) (filtered)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
	Copper (filtered)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	0.010	0.015	**40**	<0.001	<0.001	0	<0.001	<0.001	0	0.002	<0.001	**67**
	Lead (filtered)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
	Mercury (filtered)	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	<0.0001	0	<0.0001	<0.0001	0	<0.0001	<0.0001	0	<0.0001	<0.0001	0	<0.0001	<0.0001	0
	Nickel (filtered)	mg/L	0.001	0.002	0.002	0	<0.001	<0.001	0	0.057	0.046	21	0.022	0.019	15	0.002	0.002	0	0.038	0.033	14
	Zinc (filtered)	mg/L	0.005	<0.005	<0.005	0	<0.005	<0.005	0	0.090	0.17	**62**	0.094	0.076	21	<0.005	<0.005	0	0.66	0.572	14
BTEXN	Benzene	µg/L	1	<1	<1	0	<1	<1	0	<1	<1	0	<1	<1	0	<1	<1	0	<1	<1	0
	Toluene	µg/L	1	<1	<2	0	<1	<1	0	<1	<1	0	<1	<2	0	<1	<1	0	<1	<2	0
	Ethylbenzene	µg/L	1	<1	<2	0	<1	<1	0	<1	<1	0	<1	<2	0	<1	<1	0	<1	<2	0
	Xylene (o)	µg/L	1	<1	<2	0	<1	<1	0	<1	<1	0	<1	<2	0	<1	<1	0	<1	<2	0
	Xylene (m & p)	µg/L	2	<2	<2	0	<2	<2	0	<2	<2	0	<2	<2	0	<2	<2	0	<2	<2	0
	Naphthalene (BTEXN suite)	µg/L	5	<10	<5	0	<10	<10	0	<10	<10	0	<10	<5	0	<10	<10	0	<10	<5	0
TRH - NEPM 2013	F1 (C6-C10 minus BTEX)	µg/L	20	<20	<20	0	40	<20	**67**	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0
	C6-C10 Fraction	µg/L	20	<20	<20	0	40	<20	**67**	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0
	F2 (>C10-C16 minus Naphthalene)	µg/L	50	<50	<100	0	<50	<50	0	<50	<50	0	<50	<100	0	<50	<50	0	<50	<100	0
	>C10-C16 Fraction	µg/L	50	<50	<100	0	<50	<50	0	<50	<50	0	<50	<100	0	<50	<50	0	<50	<100	0
	F3 (>C16-C34 Fraction)	µg/L	100	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0
	F4 (>C34-C40 Fraction)	µg/L	100	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0
TRH - NEPM 1999	C6-C9 Fraction	µg/L	20	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0
	C10-C14 Fraction	µg/L	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0
	C15-C28 Fraction	µg/L	100	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0
	C29-C36 Fraction	µg/L	50	<100	<50	0	<100	<100	0	<100	<100	0	<100	<50	0	<100	<100	0	<100	<50	0
PAHs - standard 16	Acenaphthene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Acenaphthylene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Anthracene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Benz(a)anthracene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	0.20	<0.01	**181**	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Benzo(a)pyrene	µg/L	0.01	<0.01	0.10	**164**	<0.01	<0.01	0	0.20	<0.01	**181**	<0.01	<0.05	0	<0.01	<0.01	0	<0.01	<0.05	0
	Benzo[b+j]fluoranthene	µg/L	0.01	<0.01	0.1	164	<0.01	<0.01	0	0.40	<0.01	**190**	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Benzo(k)fluoranthene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	0.30	<0.01	**187**	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Benzo(g,h,i)perylene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	0.40	<0.01	**190**	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Chrysene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	0.20	<0.01	**181**	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Dibenz(a,h)anthracene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Fluoranthene	µg/L	0.01	<0.01	0.1	164	<0.01	<0.01	0	0.20	<0.01	**181**	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Fluorene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	0.20	<0.01	**181**	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Naphthalene-PAH	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.1	0	0.01	<0.01	0	<0.01	<0.1	0
	Phenanthrene	µg/L	0.01	<0.01	<0.1	0	<0.01	<0.01	0	0.20	<0.01	**181**	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Pyrene	µg/L	0.01	<0.01	0.1	164	<0.01	<0.01	0	0.30	<0.01	**187**	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0

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

Appendix B
Table B8 - Calculated RPD of groundwater field duplicate samples

Field or Interlab Duplicates

Lab Report Number	856960	856960		856960	ES2201646		862315	862315		862315	ES2204819		872459	872459		872459	ES2209602	
Field ID	CSM_BH02	QC01	RPD	CSM_BH04	QC02	RPD	SRT_BH047	QC01	RPD	CSM_BH10S	QC02	RPD	CSM_BH10S	QC01	RPD	SRT_BH052	QC02	RPD
Sample Date	18-01-22	18-01-22		18-01-22	18-01-22		08-02-22	08-02-22		09-02-22	09-02-22		16-03-22	16-03-22		16-03-22	16-03-22	

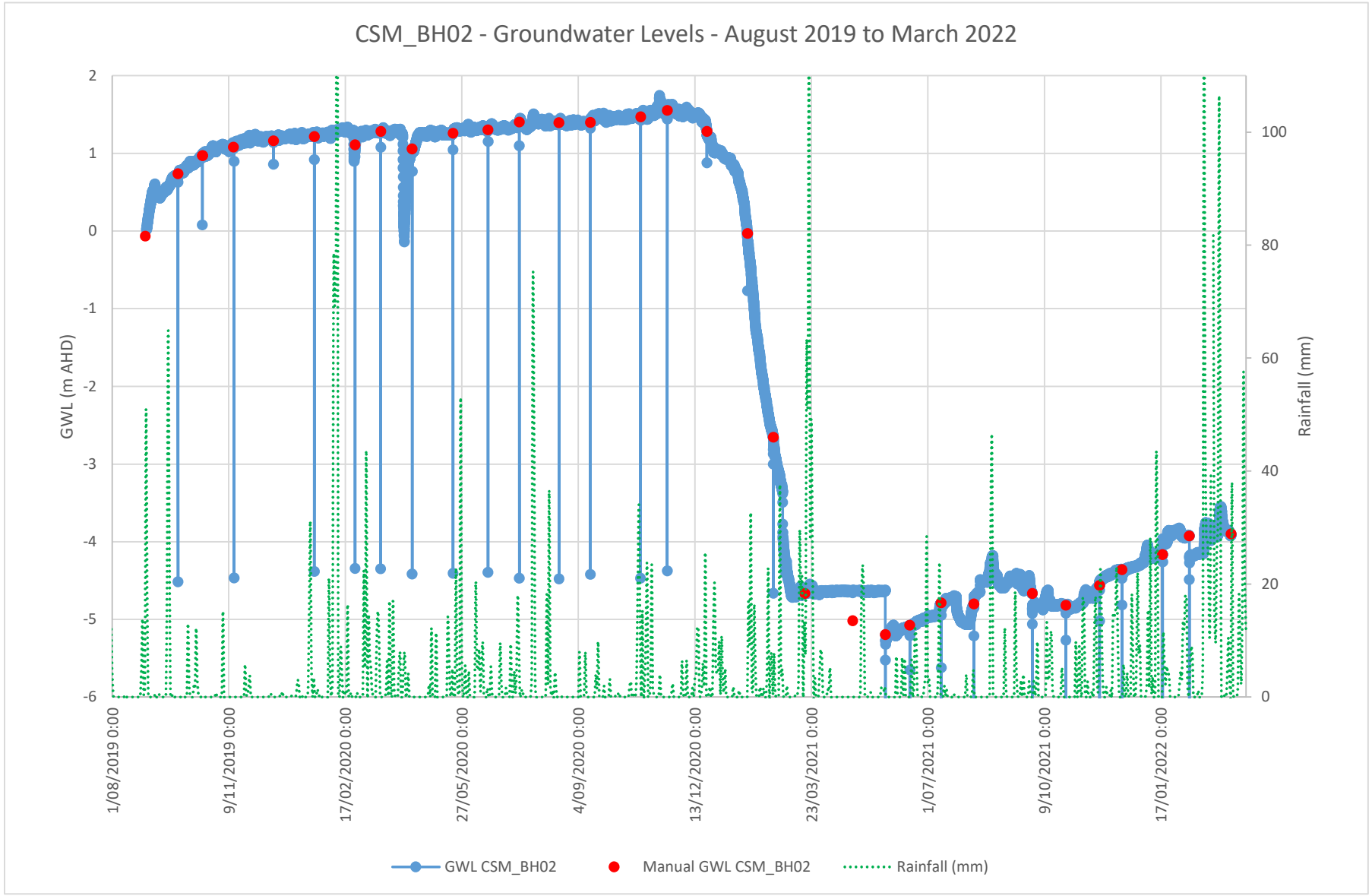
Chem_Group	ChemName	Unit	EQL																	
Metals	Arsenic (filtered)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
	Cadmium (filtered)	mg/L	0.0001	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0	<0.0002	<0.0002	0	<0.0002	<0.0001	0
	Chromium (III+VI) (filtered)	mg/L	0.001	0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
	Copper (filtered)	mg/L	0.001	0.003	0.002	**40**	0.002	<0.001	**67**	0.003	0.003	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
	Lead (filtered)	mg/L	0.001	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0
	Mercury (filtered)	mg/L	0.0001	<0.0001	<0.0001	0	<0.0001	<0.0001	0	<0.0001	<0.0001	0	<0.0001	<0.0001	0	<0.0001	<0.0001	0	<0.0001	<0.0001	0
	Nickel (filtered)	mg/L	0.001	0.007	0.006	15	0.051	0.052	2	0.003	0.004	29	0.002	0.002	0	0.002	0.002	0	<0.001	<0.001	0
	Zinc (filtered)	mg/L	0.005	<0.005	<0.005	0	0.008	0.010	22	0.026	0.027	4	<0.005	<0.005	0	0.007	0.006	15	<0.005	<0.005	0
BTEXN	Benzene	µg/L	1	<1	<1	0	<1	<1	0	<1	<1	0	<1	<1	0	<1	<1	0	<1	<1	0
	Toluene	µg/L	1	<1	<1	0	<1	<2	0	<1	<1	0	<1	<2	0	2	2	0	3	2	**40**
	Ethylbenzene	µg/L	1	<1	<1	0	<1	<2	0	<1	<1	0	<1	<2	0	<1	<1	0	<1	<2	0
	Xylene (o)	µg/L	1	<1	<1	0	<1	<2	0	<1	<1	0	<1	<2	0	<1	<1	0	<1	<2	0
	Xylene (m & p)	µg/L	2	<2	<2	0	<2	<2	0	<2	<2	0	<2	<2	0	<2	<2	0	<2	<2	0
	Naphthalene (BTEXN suite)	µg/L	5	<10	<10	0	<10	<5	0	<10	<10	0	<10	<5	0	<10	<10	0	<10	<5	0
TRH - NEPM 2013	F1 (C6-C10 minus BTEX)	µg/L	20	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0
	C6-C10 Fraction	µg/L	20	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0
	F2 (>C10-C16 minus Naphthalene)	µg/L	50	<50	<50	0	<50	<100	0	<50	<50	0	<50	<100	0	<50	<50	0	<50	<100	0
	>C10-C16 Fraction	µg/L	50	<50	<50	0	<50	<100	0	<50	<50	0	<50	<100	0	<50	<50	0	<50	<100	0
	F3 (>C16-C34 Fraction)	µg/L	100	<100	<100	0	200	<100	**67**	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0
	F4 (>C34-C40 Fraction)	µg/L	100	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0
TRH - NEPM 1999	C6-C9 Fraction	µg/L	20	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0
	C10-C14 Fraction	µg/L	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0
	C15-C28 Fraction	µg/L	100	<100	<100	0	200	<100	**67**	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0
	C29-C36 Fraction	µg/L	50	<100	<100	0	<100	<50	0	<100	<100	0	<100	<50	0	<100	<100	0	<100	<50	0
PAHs - standard 16	Acenaphthene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Acenaphthylene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Anthracene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Benz(a)anthracene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Benzo(a)pyrene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.05	0	<0.01	<0.01	0	<0.01	<0.05	0	<0.01	<0.01	0	<0.01	<0.05	0
	Benzo[b+j]fluoranthene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Benzo(k)fluoranthene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Benzo(g,h,i)perylene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Chrysene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Dibenz(a,h)anthracene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Fluoranthene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Fluorene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Indeno(1,2,3-c,d)pyrene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Naphthalene-PAH	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Phenanthrene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0
	Pyrene	µg/L	0.01	<0.01	<0.02	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0	<0.01	<0.01	0	<0.01	<0.1	0

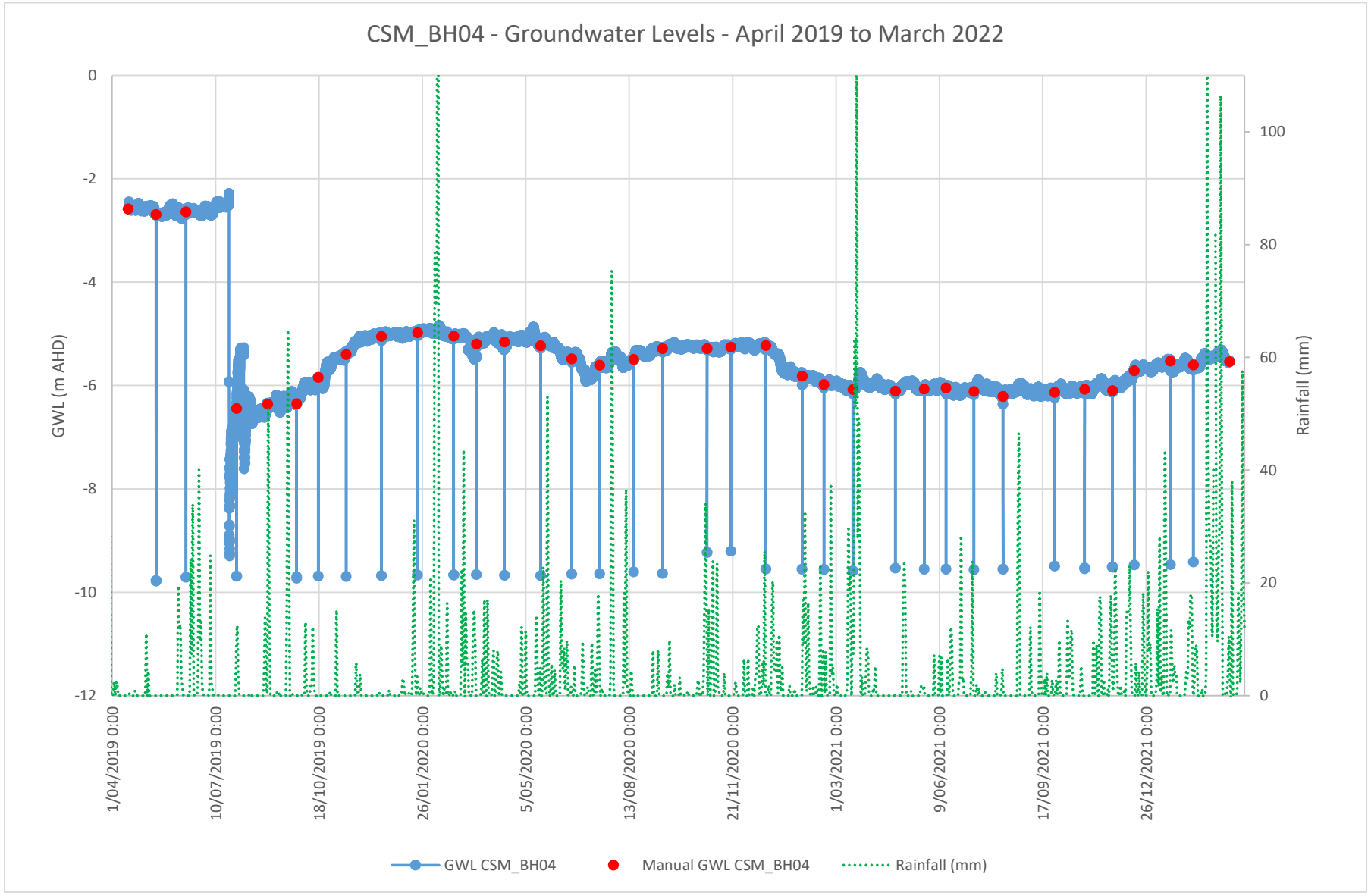
***RPDs have only been considered where a concentration is greater than 1 times the EQL.**
****Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 30 x EQL))**
*****Interlab Duplicates are matched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

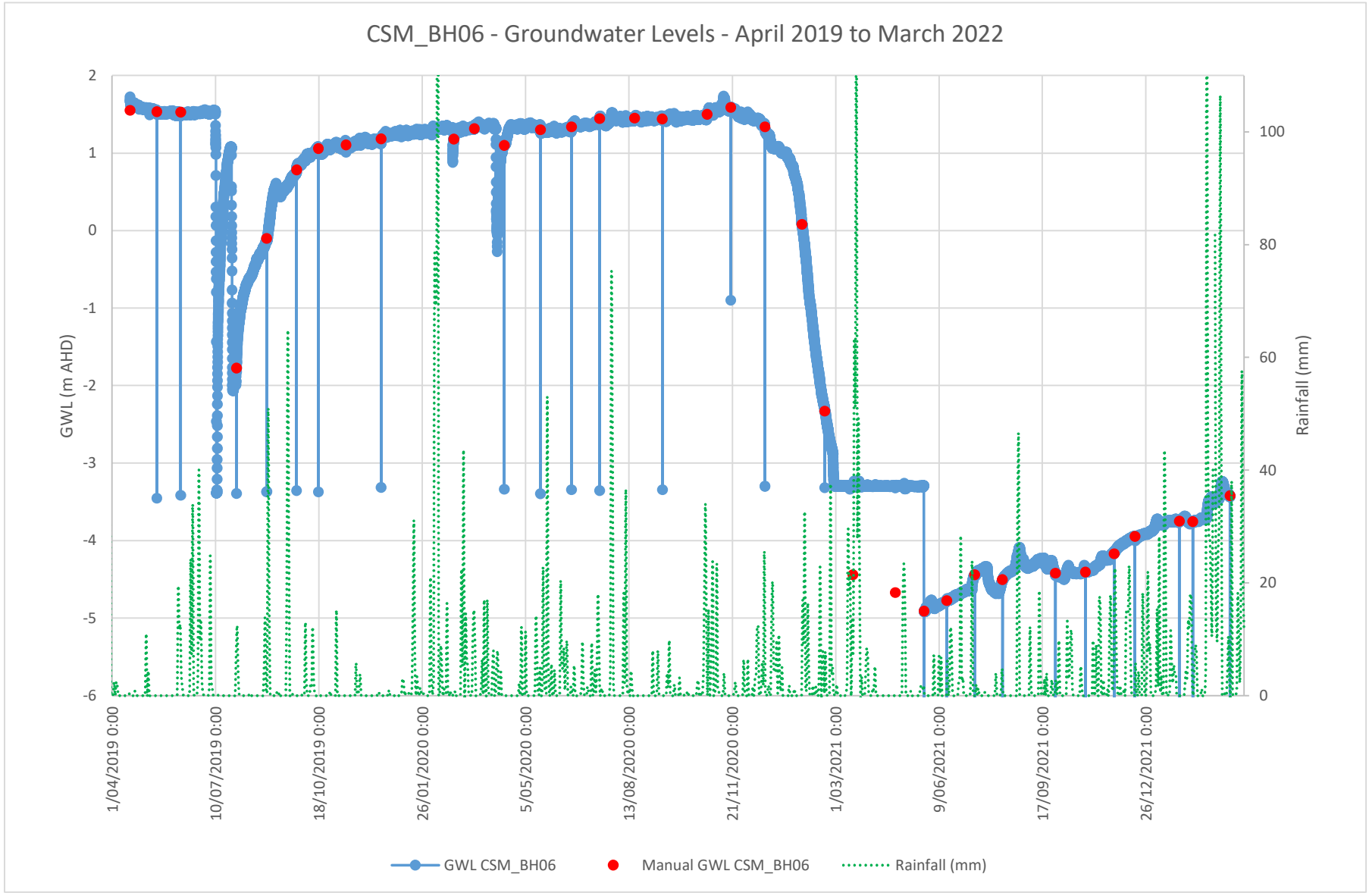
Appendix B
Table B9 - Results of Rinsates, Trip Spikes, Trip Blanks

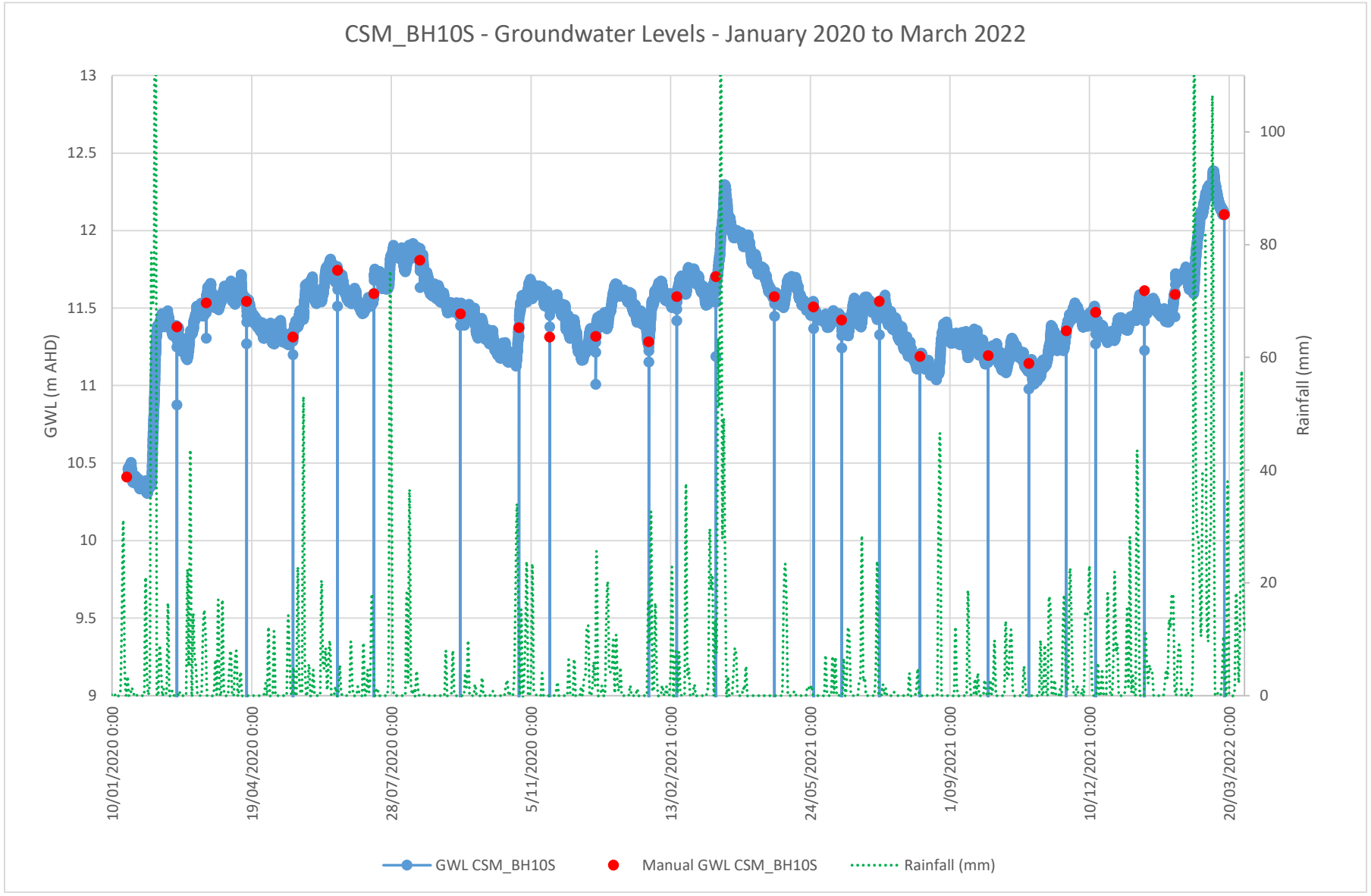
				Metals								BTEXN							TRH - NEPM	
				Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (BTEXN suite)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				0.001	0.0001	0.001	0.001	0.001	0.0001	0.001	0.005	1	1	1	1	2	2	5	20	20
Field ID	**Sample Date**	**Sample Type**	**Lab Report Number**																	
RB01	28-10-2021	Rinsate	836474	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005									
RB01	25-11-2021	Rinsate	846135	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005									
RB01	16-12-2021	Rinsate	851006	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005									
RB01	18-01-2022	Rinsate	856960	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005									
RB01	10-02-2022	Rinsate	862315	<0.001	<0.0002	<0.001	0.001	<0.001	<0.0001	<0.001	<0.005									
RB01	17-03-2022	Rinsate	872459	<0.001	<0.0002	<0.001	<0.001	<0.001	<0.0001	<0.001	<0.005									
TRIP BLANK	27-10-2021	Trip_B	836474									<1	<1	<1	<1	<2	<3	<10	<20	<20
TRIP BLANK	25-11-2021	Trip_B	846135									<1	<1	<1	<1	<2	<3	<10	<20	<20
TRIP BLANK	14-12-2021	Trip_B	851006									<1	<1	<1	<1	<2	<3	<10	<20	<20
TRIP BLANK	18-01-2022	Trip_B	856960									<1	<1	<1	<1	<2	<3	<10	<20	<20
TRIP BLANK	27-01-2022	Trip_B	858641									<1	<1	<1	<1	<2	<3	<10	<20	<20
TRIP BLANK	2-02-2022	Trip_B	862315									<1	<1	<1	<1	<2	<3	<10	<20	<20
TRIP BLANK	17-03-2022	Trip_B	872459									<1	<1	<1	<1	<2	<3	<10	<20	<20
TRIP SPIKE	27-10-2021	Trip_S	836474									120%	110%	110%	100%	110%	100%	110%	76%	76%
TRIP SPIKE	25-11-2021	Trip_S	846135									77%	87%	87%	86%	92%	87%	86%	74%	74%
TRIP SPIKE	14-12-2021	Trip_S	851006									100%	100%	99%	89%	110%	94%	100%	74%	71%
TRIP SPIKE	18-01-2022	Trip_S	856960									110%	110%	110%	100%	110%	110%	120%	79%	77%
TRIP SPIKE	27-01-2022	Trip_S	858641									95%	91%	84%	90%	91%	90%	-	-	-
TRIP SPIKE	2-02-2022	Trip_S	862315									120%	110%	110%	110%	110%	110%	120%	90%	88%
TRIP SPIKE	17-03-2022	Trip_S	872459									96%	94%	95%	90%	94%	91%	80%	82%	81%

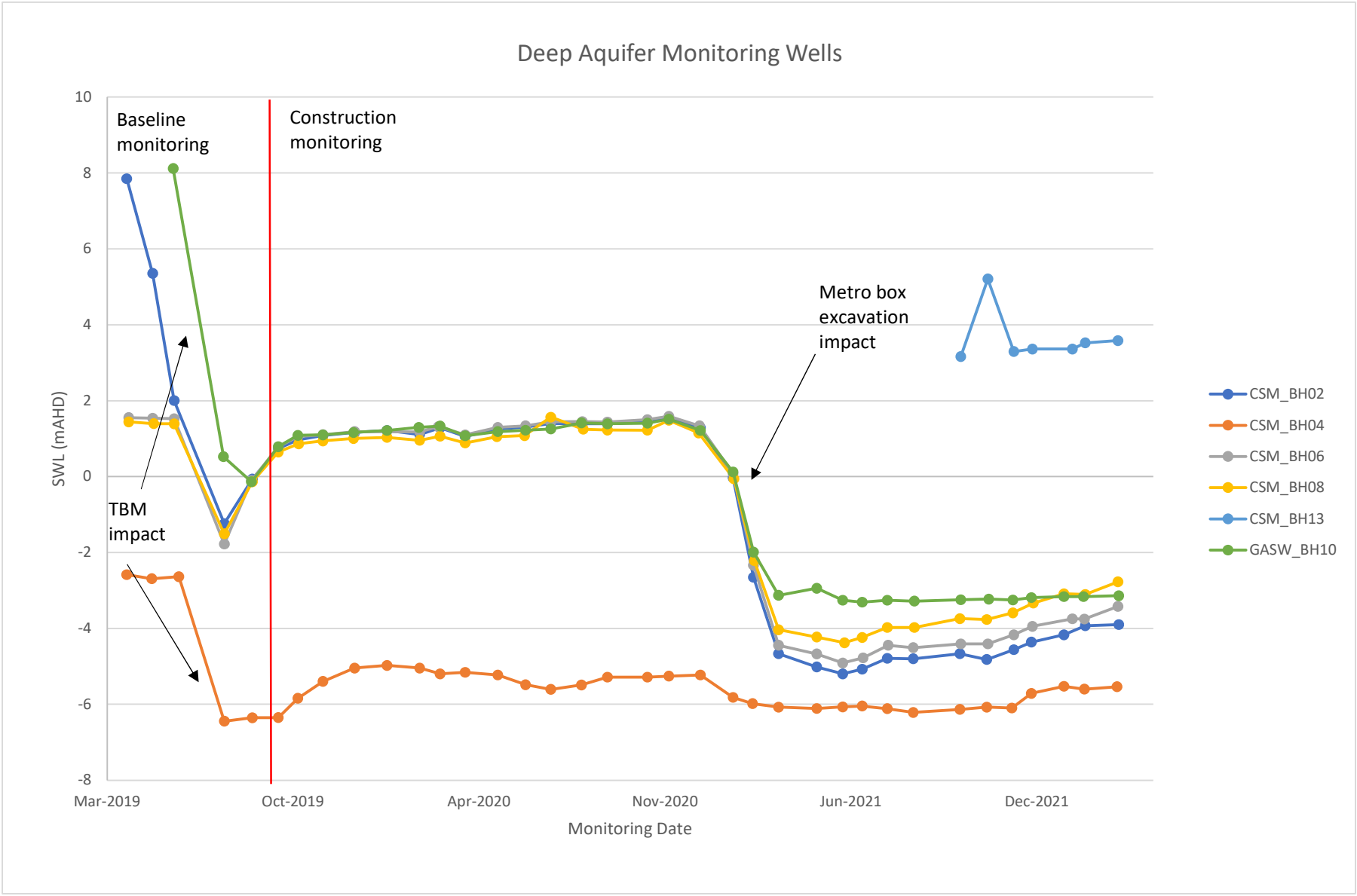
Appendix C
Graphs for groundwater levels and selected analytes / water quality parameters

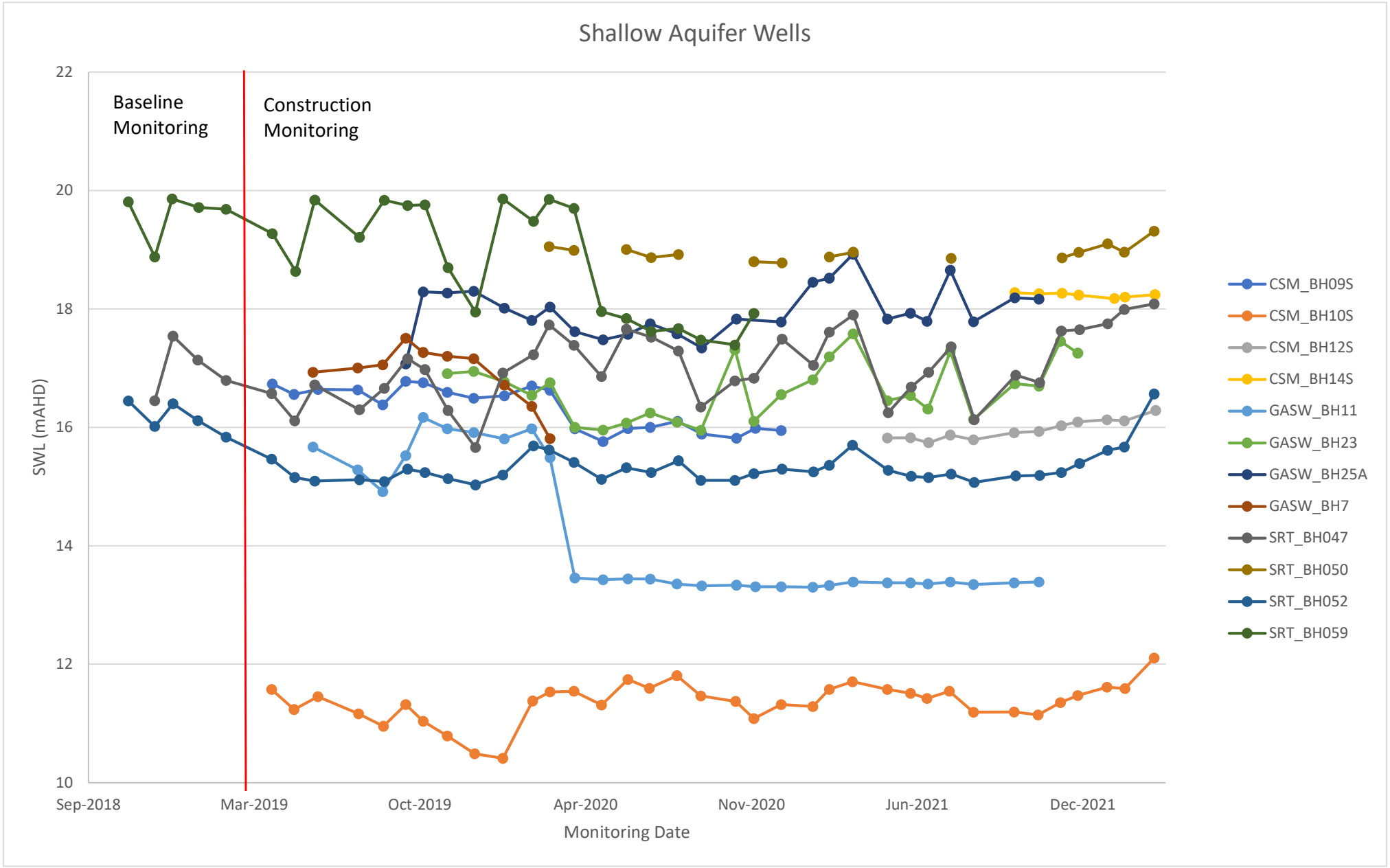

CSM_BH02 - Groundwater Levels - August 2019 to March 2022
GWL (m AHD)
Rainfall (mm)
2
1
0
-1
-2
-3
-4
-5
-6
100
80
60
40
20
0
1/08/2019 0:00
9/11/2019 0:00
17/02/2020 0:00
27/05/2020 0:00
4/09/2020 0:00
13/12/2020 0:00
23/03/2021 0:00
1/07/2021 0:00
9/10/2021 0:00
17/01/2022 0:00
GWL CSM_BH02
Manual GWL CSM_BH02
Rainfall (mm)

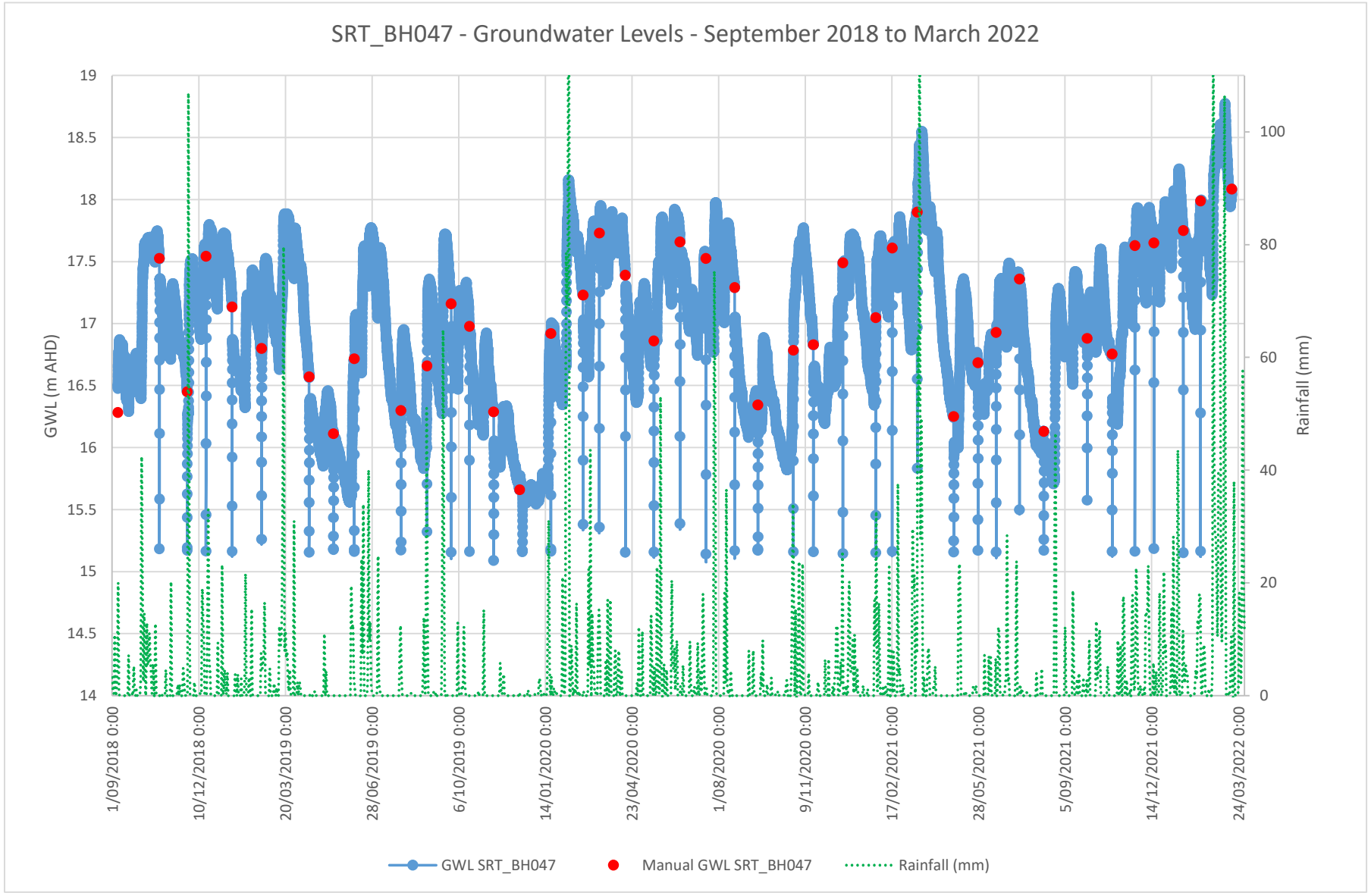

CSM_BH04 - Groundwater Levels - April 2019 to March 2022
GWL (m AHD)
Rainfall (mm)
0
-2
-4
-6
-8
-10
-12
100
80
60
40
20
0
1/04/2019 0:00
10/07/2019 0:00
18/10/2019 0:00
26/01/2020 0:00
5/05/2020 0:00
13/08/2020 0:00
21/11/2020 0:00
1/03/2021 0:00
9/06/2021 0:00
17/09/2021 0:00
26/12/2021 0:00
GWL CSM_BH04
Manual GWL CSM_BH04
Rainfall (mm)


CSM_BH06 - Groundwater Levels - April 2019 to March 2022
GWL (m AHD)
Rainfall (mm)
2
1
0
-1
-2
-3
-4
-5
-6
100
80
60
40
20
0
1/04/2019 0:00
10/07/2019 0:00
18/10/2019 0:00
26/01/2020 0:00
5/05/2020 0:00
13/08/2020 0:00
21/11/2020 0:00
1/03/2021 0:00
9/06/2021 0:00
17/09/2021 0:00
26/12/2021 0:00
GWL CSM_BH06
Manual GWL CSM_BH06
Rainfall (mm)


CSM_BH10S - Groundwater Levels - January 2020 to March 2022
GWL (m AHD)
Rainfall (mm)
13
12.5
12
11.5
11
10.5
10
9.5
9
100
80
60
40
20
0
10/01/2020 0:00
19/04/2020 0:00
28/07/2020 0:00
5/11/2020 0:00
13/02/2021 0:00
24/05/2021 0:00
1/09/2021 0:00
10/12/2021 0:00
20/03/2022 0:00
GWL CSM_BH10S
Manual GWL CSM_BH10S
Rainfall (mm)


Deep Aquifer Monitoring Wells
Baseline monitoring
Construction monitoring
Metro box excavation impact
TBM impact
SWL (mAHD)
10
8
6
4
2
0
-2
-4
-6
-8
Mar-2019
Oct-2019
Apr-2020
Nov-2020
Jun-2021
Dec-2021
Monitoring Date
CSM_BH02
CSM_BH04
CSM_BH06
CSM_BH08
CSM_BH13
GASW_BH10


Shallow Aquifer Wells
Baseline Monitoring
Construction Monitoring
SWL (mAHD)
22
20
18
16
14
12
10
Sep-2018
Mar-2019
Oct-2019
Apr-2020
Nov-2020
Jun-2021
Dec-2021
Monitoring Date
CSM_BH09S
CSM_BH10S
CSM_BH12S
CSM_BH14S
GASW_BH11
GASW_BH23
GASW_BH25A
GASW_BH7
SRT_BH047
SRT_BH050
SRT_BH052
SRT_BH059


SRT_BH047 - Groundwater Levels - September 2018 to March 2022
GWL (m AHD)
Rainfall (mm)
19
18.5
18
17.5
17
16.5
16
15.5
15
14.5
14
100
80
60
40
20
0
1/09/2018 0:00
10/12/2018 0:00
20/03/2019 0:00
28/06/2019 0:00
6/10/2019 0:00
14/01/2020 0:00
23/04/2020 0:00
1/08/2020 0:00
9/11/2020 0:00
17/02/2021 0:00
28/05/2021 0:00
5/09/2021 0:00
14/12/2021 0:00
24/03/2022 0:00
GWL SRT_BH047
Manual GWL SRT_BH047
Rainfall (mm)

Appendix D
Calibration certificates

Multi Parameter Water Meter

Instrument **YSI Quatro Pro Plus**
Serial No. **10E101052**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 10.00		pH 10.00		370064	pH 9.95
2. pH 7.00		pH 7.00		368081	pH 6.98
3. pH 4.00		pH 4.00		367234	pH 4.03
4. mV		234.0mV		365451/370891	233.8mV
5. EC		2.76mS		377099	2.76mS
6. D.O		0.00ppm		371864	0.02ppm
7. Temp		19.4°C		MultiTherm	19.7°C

Calibrated by: **Kylie Rawlings**

Calibration date: **25/10/2021**

Next calibration due: **24/11/2021**

Oil / Water Interface Meter

Instrument **Geotech Interface Meter (30M)**
Serial No. **4441**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: **Gary Needs**

Calibration date: **25/10/2021**

Next calibration due: **24/12/2021**

22/11/21

Oil / Water Interface Meter

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument **Geotech Interface Meter (60m)**
Serial No. **3954**

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: **Kylie Rawlings**

Calibration date: **22-Nov-21**

Next calibration due: **21-Jan-22**

Multi Parameter Water Meter

Instrument YSI Quatro Pro Plus
Serial No. 20M101175

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 10.00		pH 10.00		364961	pH 10.4
2. pH 7.00		pH 7.00		368081	pH 7.04
3. pH 4.00		pH 4.00		367234	pH 3.94
4. mV		234.0mV		365451/370891	234.5mV
5. EC		2.76mS		377099	2.74mS
6. D.O		0.00ppm		371864	0.00ppm
7. Temp		20.0°C		MultiTherm	20.5°C

Calibrated by: Michelle Wagner

Calibration date: 22/11/2021

Next calibration due: 22/12/2021

13/12/2021

Multi Parameter Water Meter

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument **YSI Quatro Pro Plus**
Serial No. **20M101178**

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 10.00		pH 10.00		370064	pH 9.79
2. pH 7.00		pH 7.00		368081	pH 7.01
3. pH 4.00		pH 4.00		367234	pH 4.08
4. mV		231.8mV		365451/370891	231.9mV
5. EC		2.76mS		377099	2.75mS
6. D.O		0.00ppm		371864	minus001
7. Temp		21°C		MultiTherm	20.2°C

Calibrated by: **Gary Needs**

Calibration date: **13/12/2021**

Next calibration due: **12/01/2022**

Oil / Water Interface Meter

Instrument Geotech Interface Meter (60m)
Serial No. 3954

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: **Kylie Rawlings**

Calibration date: **22-Nov-21**

Next calibration due: **21-Jan-22**

Multi Parameter Water Meter

Instrument **YSI Quatro Pro Plus**
Serial No. **16G104247**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00		pH 7.00		372012	pH 7.18
2. pH 4.00		pH 4.00		367234	pH 3.94
3. pH 10.00		pH 10.00		370064	pH 9.91
3. mV		231.8mV		365451/370891	232.4mV
4. EC		2.76mS		362912	2.74mS
5. D.O		0.00ppm		371864	0.00ppm
6. Temp		21.4°C		MultiTherm	21.6°C

Calibrated by: **Evan Weller**

Calibration date: **17/01/2022**

Next calibration due: **16/02/2022**

Oil / Water Interface Meter

Instrument **Geotech Interface Meter (60M)**
Serial No. **4439**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Compartment	✓	On/Off light not working
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: **Evan Weller**

Calibration date: **17/01/2022**

Next calibration due: **18/03/2022**

Oil / Water Interface Meter

Instrument Geotech Interface Meter (60M)
Serial No. 3953

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Compartment	✓	Beeper noise is soft
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: **Darcy Keogh**

Calibration date: **2/02/2022**

Next calibration due: **3/04/2022**

Multi Parameter Water Meter

Instrument YSI Quatro Pro Plus
Serial No. 16G104247

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00		pH 7.00		368081	pH 7.13
2. pH 4.00		pH 4.00		380227	pH 3.99
3. pH 10.00		pH 10.00		370064	pH 9.93
3. mV		229.6mV		3760891/365491	229.3mV
4. EC		2.76mS		377099	2.74mS
5. D.O		0.00ppm		371864	0.02ppm
6. Temp		22°C		MultiTherm	22.0°C

Calibrated by: **Evan Weller**

Calibration date: **3/02/2022**

Next calibration due: **5/03/2022**

Multi Parameter Water Meter

Instrument **YSI Quatro Pro Plus**
Serial No. **21B104020**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. PH 10.00		PH1 10.00		380833	pH 9.71
2. pH 7.00		pH 7.00		377339	pH 7.05
3. pH 4.00		pH 4.00		380327	pH 4.09
4. mV		227.4 mV		365451/374424	227.6mV
5. EC		2.76mS		377099	2.76mS
6. D.O		0.00 ppm		371864	0.01ppm
7. Temp		23°C		MultiTherm	23.1°C

Calibrated by: **Gary Needs**

Calibration date: **15/03/2022**

Next calibration due: **14/09/2022**

Oil / Water Interface Meter

Instrument **Geotech Interface Meter (100m)**
Serial No. **4078**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	9v
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
Connectors	Checked for cuts	✓	
Instrument Test	At surface level	✓	

Certificate of Calibration

This is to certify that the above instrument has been cleaned and tested.

Calibrated by: **Gary Needs**

Calibration date: **15/03/2022**

Next calibration due: **16/05/2022**

Appendix E
Groundwater purging sheets

Purging and Sampling Record

Bore ID: CSM-BH02

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: CG / TN
- Date: 27/10/21
- Round: October 2021

Sampling Information
- Purge Method: QED mp10
- Sample Method: h
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 30 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 26.25 m — Logic Check: ✓
- Screen: From: ..... to ..... m — Stick Up: / m
- NAPL Check: / — Bore Diam.: 50 mm
- Ref.datum: ..... — Well Cap Secure? Y
- Bore Depth: 32.81 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
10:57	1	26.48	5.61	742	6.27	110.4	25.5		Orange-brown, cloudy, lots of sediment,
11:00	2	26.50	4.28	719	6.14	114.5	24.2		no sheen, no odour.
11:03	3	26.57	3.33	704	6.14	113.0	23.3		
11:06	4	26.64	2.81	694	6.16	112.2	22.7		
11:09	5	26.72	2.55	693	6.13	113.3	22.5		
11:12	6	26.79	2.43	692	6.11	114.7	22.5		

Field QA Checks:
- Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
- Decontamination as per GHD procedure? (Y) / N
- Was sampling equipment pre-cleaned? (Y) / N
- COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metal)
filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH024

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN/CG
- Date: 27/10/2021
- Round: October 2021

Sampling Information
- Purge Method: QED mP10
- Sample Method: u
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 28 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 21.885 m — Logic Check: ✓
- Screen: From: ..... to: ..... m — Stick Up: ..... m
- NAPL Check: / — Bore Diam.: 50 mm
- Ref.datum: ..... — Well Cap Secure? Yes
- Bore Depth: 33.23 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		Brown
12:20	1	22.01	1.18	585	6.37	0.7	26.0		cloudy / no odour/sheen
12:25	2	22.03	0.56	577	6.45	5.0	25.0		"
12:29	3	22.03	1.51	568	6.44	12.4	25.1		"
12:33	4	22.03	1.55	562	6.46	20.0	25.3		"
12:36	5	22.03	0.70	562	6.43	28.8	25.3		"
12:39	6	22.06	0.46	559	6.34	33.6	25.3		"
12:42	7	22.06	0.41	556	6.20	38.3	25.5		"
12:45	8	22.06	0.40	550	6.12	43.1	25.5		"
12:48	9	22.06	0.41	543	6.06	47.1	25.4		"
12:51	10	22.06	0.41	539	6.05	48.2	25.4		sampled.
~~12:54~~									

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_DH06

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN / CG
- Date: 28/10/2021
- Round: October 2021

Sampling Information
- Purge Method: QED MP10
- Sample Method: "
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 32 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 26.335 m — Logic Check: ✓
- Screen: From: ..... to ..... m — Stick Up: ..... m
- NAPL Check: ..... — Bore Diam.: 50 mm
- Ref.datum: ..... — Well Cap Secure? Yes
- Bore Depth: 35.47 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
2:52	1	26.40	6.02	1026	6.26	104.5	24.4		orange cloudy, some sediments, no odour/clear
2:55	2	26.40	5.66	1011	6.30	104.1	24.0		"
2:58	3	26.40	5.41	1011	6.26	89.4	24.1		"
3:01	4	26.40	5.37	1006	6.22	77.6	23.7		"
3:04	5	26.40	5.05	1005	6.22	69.1	23.7		"
3:09	6	26.40	4.89	1004	6.23	63.3	23.5		
3:12	7	26.40	4.84	1002	6.24	59.0	23.5		

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters / Preservatives	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Metals + TRH filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH08

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN/CG
- Date: 27/10/21
- Round October 2021

Sampling Information
- Purge Method: QED MP10
- Sample Method: 4
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 28 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 18.46 m — Logic Check: /
- Screen: From: ..... to ..... m — Stick Up: ..... m
- NAPL Check: / — Bore Diam.: 50 mm
- Ref.datum: ..... — Well Cap Secure? Yes
- Bore Depth: 35.16 m

Time (AM)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
9:17	1	18.47	0.76	615	5.96	28.0	20.9		Light orange, slightly cloudy, no sheen, no odour.
9:20	2	18.47	0.73	613	5.98	23.0	20.9		"
9:26	~~3~~ 3	18.48	0.61	612	6.06	8.8	20.9		"
9:31	4	18.47	0.50	615	6.11	0.2	20.9		"
9:35	5	18.47	0.46	615	6.13	-4.6	20.9		"
9:38	6	18.47	0.43	613	6.16	-8.1	20.9		sampled.

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered) + QC02 (ALS)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH105

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T.N / CG
- Date: 27/10/21
- Round: October 2021

Sampling Information
- Purge Method: Peri pump
- Sample Method: Peri pump
- WQ Meter Type: YSI
- Flow Cell: Y / N Pump Depth: 7 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 4.44 m Logic Check: ✓
- Screen: From: ..... to ..... m Stick Up: - m
- NAPL Check: / Bore Diam.: 50 mm
- Ref.datum: Well Cap Secure? YES
- Bore Depth: 9.69 m

Time (PM)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
13:14	1	4.63	0.26	241.8	5.36	162.0	21.7		Light brown, cloudy, no sheen,
13:17	2	4.67	0.27	239.6	5.32	170.9	21.5		no odour.
13:20	3	4.70	0.26	239.2	5.40	172.1	21.6		"
13:23	4	4.73	0.25	237.6	5.38	172.7	21.5		"
13:26	5	4.76	0.24	237.2	5.38	173.2	21.5		sampled.

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH125

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN / CG
- Date: 28/10/2021
- Round: October 2021

Sampling Information
- Purge Method: Peri Pump
- Sample Method: "
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 6.2 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge

Bore Information
- SWL: 4.795 m — Logic Check: /
- Screen: From: ..... to ..... m — Stick Up: ..... m
- NAPL Check: ..... — Bore Diam.: 50 mm
- Ref.datum: / — Well Cap Secure? Yes
- Bore Depth: 6.505 m

Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
10:54	1	4.86	0.32	672	5.98	51.7	20.3		Cloudy, no odour/sheen
10:57	2	4.86	0.22	675	6.00	48.8	20.3		"
11:00	3	4.86	0.18	675	6.05	46.6	20.3		"
11:03	4	4.87	0.15	672	6.08	42.2	20.2		"
11:07	5	4.87	0.15	662	6.13	40.9	20.2		"

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Metals + Fe++ filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH13

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN / CG
- Date: 28/10/2021
- Round October 2021

Sampling Information
- Purge Method: ~~QED~~ MP10
- Sample Method: "
- WQ Meter Type: YSI
- Flow Cell: Y / N Pump Depth: 30 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 20.245 m Logic Check: /
- Screen: From: ..... to ..... m Stick Up: ..... m
- NAPL Check: ..... Bore Diam.: 50 mm
- Ref.datum: ..... Well Cap Secure? Yes
- Bore Depth: 33.67 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
1:10	1	20.39	2.64	1054	6.76	-20.7	23.5		Red brown cloudy, some sediment, no odour/sheen purged
1:13	2	20.63	0.51	1071	6.74	-35.9	22.9		"
1:16	3	20.96	0.29	1061	6.72	-37.1	22.6		"
1:19	4	21.23	0.25	1060	6.71	-38.7	22.5		"
1:22	5	21.40	0.30	1057	6.70	-39.0	22.5		"
1:25	6	21.48	0.28	1052	6.68	-37.8	22.3		"

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

6 Lable, Metals + Ferrous Filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH145

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN / CG
- Date: 28/10/2021
- Round: October 2021

Sampling Information
- Purge Method: Pen
- Sample Method: Pen
- WQ Meter Type: YSI
- Flow Cell: Y / N
- Pump Depth: 5 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 2.470 m
- Screen: From: / to: m
- NAPL Check:
- Ref.datum:
- Bore Depth: 5.645 m
- Logic Check:
- Stick Up: m
- Bore Diam.: 50 mm
- Well Cap Secure? Yes

Time (PM)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (mS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
1:56	1	2.48	3.35	183.9	6.85	62.5	21.5		Clear, no sheen, no odour.
1:59	2	2.48	3.16	179.0	6.78	69.7	21.3		"
2:02	3	2.48	3.14	178.0	6.75	68.9	21.5		"
2:05	4	2.48	2.96	178.4	6.82	66.4	21.5		"
2:08	5	248	2.75	176.6	6.78	68.2	21.4		"
2:11	6	2.48	2.56	176.1	6.75	69.6	21.4		sampled.

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered), QC01 (Eurofins)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASC_BH7

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: CG/KN
Date: 29/10/2021
Round October 2021

Sampling Information

Purge Method: DRY
Sample Method:
WQ Meter Type: YSI
Flow Cell: Y / N Pump Depth:.....m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information

SWL: DRY m
Screen: From:..... to..... m
NAPL Check:.....
Ref.datum: .....
Bore Depth: 6.22 m
Logic Check: .....
Stick Up: ..... m
Bore Diam.: 50 mm
Well Cap Secure?.....

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (.....)	Elec.Cond (.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
	DRY								

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASV_BH10

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: CG / TN
- Date: 25/10/2021
- Round: October 2021

Sampling Information
- Purge Method: —
- Sample Method: Bailer
- WQ Meter Type: YSI
- Flow Cell: Y / N Pump Depth: —
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 23.72 m
- Screen: From: ..... to ..... m
- NAPL Check: .....
- Ref.datum: .....
- Bore Depth: 24.73 m
- Logic Check: .....
- Stick Up: ..... m
- Bore Diam.: 50 mm
- Well Cap Secure? Yes

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (.....)	Elec.Cond (.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
—	grab sampled first.								
10:51	—	—	1.40	1211	6.70	-62.5	21.6		Grey, slightly cloudy, ~~sulfidic~~ organic odour, no sheen.
—	—	dry	—						

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe²⁺ + metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASW_BH11

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T.N. / C.G.
- Date: 28/10/21
- Round: October 2021

Sampling Information
- Purge Method: Peri pump / Grab sample
- Sample Method: Peri pump
- WQ Meter Type: YSI
- Flow Cell: Y / N
- Pump Depth: 7.8 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 7.160 m
- Logic Check: ✓
- Screen: From: ..... to ..... m
- Stick Up: — m
- NAPL Check: .....
- Bore Diam.: 50 mm
- Ref.datum: .....
- Well Cap Secure? YES
- Bore Depth: 8.05 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
			5.02	238.9	5.74	126.8	19.6		Brown cloudy, no odours/sheen
	Very little water, grab sample taken								

Field QA Checks:
- Air bubbles in vials? Y / N
- Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, metals + PAH filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASV_DH23

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN / CG
- Date: 28/10/2021
- Round: October 2021

Sampling Information
- Purge Method: Peri Pump
- Sample Method: "
- WQ Meter Type: YSI
- Flow Cell: Y / N
- Pump Depth: 3.5 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 2.905 m
- Screen: From: / to: m
- NAPL Check:
- Ref.datum:
- Bore Depth: 3.915 m
- Logic Check:
- Stick Up: m
- Bore Diam.: 50 mm
- Well Cap Secure? Y

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (uS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
10:05	1	2.91	0.57	748	7.15	-134.0	19.7		Gray cloudy, some black sediment, HC odour
10:08	2	2.91	0.48	739	7.16	-140.5	19.8		" no sheen
10:11	3	2.91	0.24	728	7.24	-152.6	19.8		"
10:14	4	2.91	0.25	719	7.25	-155.2	19.8		"
10:17	5	2.91	0.23	705	7.31	-155.1	19.9		"
10:20	6	2.91	0.30	695	7.30	-156.1	19.9		"
10:23	7	2.91	0.25	689	7.25	-156.5	19.9		"

Field QA Checks:
- Air bubbles in vials? Y / N
- Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Metals + Fe2 filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASW-BH25A

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN/CG
- Date: 28/10/21
- Round October 2021

Sampling Information
- Purge Method: Peri pump
- Sample Method: Peri pump
- WQ Meter Type: YSI
- Flow Cell: Y / N Pump Depth:.....m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 1.465 m Logic Check: ✓
- Screen: From:.....to..... m Stick Up: — m
- NAPL Check:..... Bore Diam.: 50 mm
- Ref.datum: ..... Well Cap Secure? YES
- Bore Depth: 2.95 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (%/ppm)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
9:25	1	1.48	0.27	282.8	7.84	-223.0	19.3		Clear, slightly cloudy, NC odour / no sheen some black sediments.
9:28	2	1.49	2.07	267.3	8.01	-210.3	19.4		"
9:31	3	1.49	2.61	248.2	8.07	-132.7	19.4		"
9:34	4	1.49	2.81	237.4	8.13	-116.4	19.5		"
9:37	5	1.49	3.20	223.3	8.16	-95.7	19.5		"
9:40	6	1.49	3.37	217.1	8.12	-85.3	19.5		"
9:43	7	1.49	3.42	213.3	8.12	-79.0	19.6		"
9:46	8	1.49	3.52	211.5	8.13	-62.8	19.6		"
9:49	9	1.49	3.46	210.8	8.11	-50.6	19.5		"

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Metals + Fe++ filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_DH047

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TW / CG
- Date: 29/10/2021
- Round: October 2021

Sampling Information
- Purge Method: Peri Pump
- Sample Method: Peri Pump
- WQ Meter Type: YSI
- Flow Cell: Y / N
- Pump Depth: 6.5 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 4.555 m
- Screen: From: ..... to ..... m
- NAPL Check: .....
- Ref.datum: .....
- Bore Depth: 7.035 m
- Logic Check: .....
- Stick Up: ..... m
- Bore Diam.: 50 mm
- Well Cap Secure? Yes

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
9:36	4.96	1	2.62	214.7	5.76	130.7	20.1		Cloudy, no odour/Sheen
9:40	5.24	2	2.26	206.3	5.64	142.2	20.0		"
9:43	5.52	3	2.24	202.8	5.58	149.2	20.0		"
9:47	5.78	4	2.58	201.8	5.55	154.2	20.1		"
9:51	6.05	5	2.59	200.6	5.58	155.5	20.0		"

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Methyl + EDTA filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_BH050

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: CGTN
Date: 29/10/2021
Round October 2021

Sampling Information

Purge Method: DRY
Sample Method:
WQ Meter Type: YSI
Flow Cell: Y / N Pump Depth:.....m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information

SWL: DRY m
Screen: From:.....to..... m
NAPL Check:.....
Ref.datum: .....
Bore Depth: 2.77 m
Logic Check: .....
Stick Up: ..... m
Bore Diam.: 50 mm
Well Cap Secure? Yes

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (.....)	Elec.Cond (.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
		DRY							

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_BH052

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: CG/TN
- Date: 29/10/2021
- Round October 2021

Sampling Information
- Purge Method: Peri Pump
- Sample Method: Peri Pump
- WQ Meter Type: YSI
- Flow Cell: Y / N
- Pump Depth: 7.5 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 6.210 m
- Logic Check: .....
- Screen: From:..... to..... m
- Stick Up: ..... m
- NAPL Check: .....
- Bore Diam.: 50 mm
- Ref.datum: .....
- Well Cap Secure? Yes
- Bore Depth: 7.895 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (uS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
8:56	1	6.57	2.88	319.0	5.96	115.8	20.2		clear, no odour/clear
8:59	2	6.74	3.94	315.9	5.92	126.1	20.2		"
9:03	3	6.80	4.17	316.1	5.98	128.3	20.2		"
9:06	4	7.15	4.04	316.2	5.91	129.3	20.2		"

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

GHD MANAGEMENT ENGINEERING ENVIRONMENT

Purging and Sampling Record

Bore ID: CSM-BH02

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: C.Allen / C. Gray
Date: 25/11/21
Round Nov-21

Sampling Information

Purge Method: Micropurge
Sample Method: low flow
WQ Meter Type: YSI
Flow Cell: Y / N Pump Depth: ~30 m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information

SWL: 25.985 m Logic Check: ✓
Screen: From: – to: – m Stick Up: – m
NAPL Check: – Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES
Bore Depth: 32.94 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
10:00	1.0	26.22	3.01	834	6.71	168.6	20.4		Brown, ~~tyb~~ sediment, no odour
10:03	2.0	26.38	2.68	836	6.76	162.5	20.4		no sheen
10:06	3.0	26.52	2.61	835	6.79	160.6	20.4		
10:09	4.0	26.60	2.59	835	6.77	160.4	20.2		
10:12	5.0	26.65	2.54	835	6.78	159.7	20.2		Stable - sampled

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc
9 bottles (metals + Fe+ filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH04

Job Information	Sampling Information	Bore Information
Client: Laing O'Rourke / Sydney Metro	Purge Method: Micro-purge	SWL: 21.91 m — Logic Check: Y
Project: Central Station Main Works	Sample Method: Bailer	Screen: From:..... to..... m — Stick Up: ..... m
Proj. No.: 2127234	WQ Meter Type: YSI	NAPL Check:..... — Bore Diam.: 50 mm
Sampler: CG	Flow Cell: Y / N — Pump Depth: 29 m	Ref.datum: TOC — Well Cap Secure? Y
Date: 23/11/21	WLevel Meter Type: Dip / Fox / ~~Int Fee / Gge~~	Bore Depth: 33.26 m
Round ~~September 2021~~ Nov 2021	Field Filtered? Y / N (filter vessel, disposable filter/syringe)	

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (.....)	Elec.Cond (.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
11:21	1	22.15	0.44	439.0	6.03	61.4	21.0		Brown, cloudy, high sediment
11:24	2	22.14	0.50	491.6	5.96	55.5	21.1		load, no sheen, no odour.
11:27	3	22.16	0.50	488.7	5.95	52.3	21.0		"
11:30	4	22.17	0.52	475.4	5.95	50.2	20.8		Stable - well sampled
									Bailed to collect samples -
									Micropurge malfunctioning
									*Haven't sampled semvolatiles >2 3
									inorganics - limited water - insufficient
									water

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters / Preservatives	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

~~Bottles (Fe24 ... Shady, Filtered)~~

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

GHD MANAGEMENT ENGINEERING ENVIRONMENT

Purging and Sampling Record

Bore ID: CSM-BH06

Job Information	Sampling Information	Bore Information
Client: Laing O'Rourke / Sydney Metro	**Purge Method:** Micropurge	**SWL:** 26.10 m **Logic Check:** Y
Project: Central Station Main Works	**Sample Method:** low flow	**Screen:** From: — to: — m **Stick Up:** — m
Proj. No.: 2127234	**WQ Meter Type:** YSI	**NAPL Check:** — **Bore Diam.:** 50 mm
Sampler: C.Allen / C. Gray	**Flow Cell:** Y / N **Pump Depth:** 28.50 m	**Ref.datum:** TOC **Well Cap Secure?** Y
Date: 25/11/21	**WLevel Meter Type:** Dip / Fox / Int.Fce / Gge	**Bore Depth:** 35.84 m
Round Nov-21	**Field Filtered?** Y / N (filter vessel, disposable filter/syringe)	

Time (1.06)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (C.F)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
1:16	0.5	26.11	4.75	997	6.33	144.4	23.5		Orange, slightly cloudy, no sheen, no odour.
1:19	1	26.12	1.28	987	6.28	138.9	23.2		
1:22	1.5	26.12	1.19	982	6.31	134.5	23.0		
1:25	2.0	26.12	1.10	979	6.30	134.1	22.9		
1:28	2.5	26.12	1.15	982	6.34	134.2	22.9		
1:31	3.0	26.13	1.09	974	6.30	134.4	22.6		Stable - sampled

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

GHD MANAGEMENT ENGINEERING ENVIRONMENT

Purging and Sampling Record

Bore ID: CSM_BH08

Job Information	Sampling Information	Bore Information
Client: Laing O'Rourke / Sydney Metro	**Purge Method:** Micropurge	**SWL:** 18.285 m — **Logic Check:** Y
Project: Central Station Main Works	**Sample Method:** ~~Low flow~~ Bailer	**Screen:** From:.....to..... m — **Stick Up:** ..... m
Proj. No.: 2127234	**WQ Meter Type:** YSI	**NAPL Check:**..... — **Bore Diam.:** 50 mm
Sampler: C.Allen / C. Gray	**Flow Cell:** Y / N — **Pump Depth:** 33.0 m	**Ref.datum:** TOC — **Well Cap Secure?** Y
Date: 24/11/21	**WLevel Meter Type:** Dip / Fox / Int.Fce / Gge	**Bore Depth:** 35.32 m
Round Nov-21	**Field Filtered?** Y / N (filter vessel, disposable filter/syringe)	

Time (8:15.)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (Cond)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
8:44	1.0	18.29	0.63	621	6.33	-9.7	20.9		Light brown, sediment, no sheen or odour
8:47	2.5	18.29	0.41	624	6.31	-8.9	20.8		
8:50	4.0	18.29	0.36	625	5.62	35.7	20.8		
8:53	5.5	18.29	0.39	626	5.50	54.9	20.8		Micropurge malfunctioned - Baled to collect samples

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

QC01 (intralab) collected - metals, TRH, BTEXN — 9 bottles (primary)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

CSM-BH105

Purging and Sampling Record

Bore ID: ~~CSM-BH105~~

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: CG
Date: 23/11/21
Round ~~September 2021~~ Nov 2021

Sampling Information

Purge Method: Pen pump
Sample Method: Pen pump
WQ Meter Type: YSI
Flow Cell: Y / N Pump Depth: 8.5 m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information

SWL: 4.23 m Logic Check: ✓
Screen: From: —— to …… m Stick Up: — m
NAPL Check: — Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? ……
Bore Depth: 9.70 m

Time (……)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(……)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
9:40	1	4.35	1.07	260.0	5.26	157.9	20.8	~~435~~	Light brown, slightly cloudy, no
9:43	2	4.40	0.75	255.1	5.30	166.9	20.8		sheen, no odour.
9:46	3	4.45	0.66	254.8	5.37	169.6	20.9		"
9:54	5	4.52	0.60	252.5	5.38	180.8	20.7		"
9:59	6	4.52	0.56	251.8	5.40	185.4	20.8		"
10:02	7	4.53	0.58	251.2	5.40	188.9	20.8		sampled
10									

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} f metals filtered).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

GHD MANAGEMENT ENGINEERING ENVIRONMENT

Purging and Sampling Record

Bore ID: CSM-BH125

Job Information	Sampling Information	Bore Information
Client: Laing O'Rourke / Sydney Metro	**Purge Method:** Peri pump	**SWL:** 4.70 m **Logic Check:** Y
Project: Central Station Main Works	**Sample Method:** Low flow	**Screen:** From:—to— m **Stick Up:** — m
Proj. No.: 2127234	**WQ Meter Type:** YSI	**NAPL Check:** — **Bore Diam.:** 50 mm
Sampler: C.Allen / C. Gray	**Flow Cell:** Y / N **Pump Depth:** 6.0 m	**Ref.datum:** TOC **Well Cap Secure?** Y
Date: 24/11/21	**WLevel Meter Type:** Dip / Fox / Int.Fce / Gge	**Bore Depth:** 6.49 m
Round Nov-21	**Field Filtered?** Y / N (filter vessel, disposable filter/syringe)	

Time (12:39)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (Cos)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
12:39	0.5	4.725	0.44	639	6.23	76.7	20.9		slightly cloudy, no odour or sheen
12:42	1.0	4.735	0.29	639	6.25	74.3	20.8		
12:45	1.5	4.74	0.36	641	6.34	70.4	21.0		
12:48	2.0	4.74	0.31	642	6.42	66.2	21.0		
12:51	2.5	4.75	0.30	647	6.45	61.6	21.2		
12:54	3.0	4.75	0.33	643	6.47	58.7	21.2		Stable - sampled

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

Interlab QC02 collected (metals, volatiles, semi-volatiles) Primary: 9 bottles

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

GHD MANAGEMENT ENGINEERING ENVIRONMENT

Purging and Sampling Record

Bore ID: CSM-BH13

Job Information
- **Client:** Laing O'Rourke / Sydney Metro
- **Project:** Central Station Main Works
- **Proj. No.:** 2127234
- **Sampler:** C.Allen / C. Gray
- **Date:** 25/11/21
- **Round** Nov-21

Sampling Information
- **Purge Method:** Micropurge
- **Sample Method:** Low flow
- **WQ Meter Type:** YSI
- **Flow Cell:** Y / N — **Pump Depth:** 31.0 m
- **WLevel Meter Type:** Dip / Fox / Int.Fce / Gge
- **Field Filtered?** Y / N (filter vessel, disposable filter/syringe)

Bore Information
- **SWL:** 22.155 m — **Logic Check:** Y
- **Screen:** From: – to: – m — **Stick Up:** – m
- **NAPL Check:** — **Bore Diam.:** 50 mm
- **Ref.datum:** TOC — **Well Cap Secure?** Y
- **Bore Depth:** 33.70 m

Time (hr:mm)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (mS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
11:20	1.0	22.33	1.80	1110	7.20	34.8	24.4		Dark orange, no odour no sheen,
11:23	2.0	22.40	0.65	1094	6.89	-2.9	24.2		Orange iron precipitate
11:26	3.0	22.46	0.54	1068	6.82	-9.3	23.0		
11:29	4.0	22.51	0.42	1069	6.81	-14.3	23.3		
11:32	5.0	22.64	0.48	1040	6.70	-10.9	22.3		
11:35	6.0	22.76	0.42	1039	6.73	-8.2	22.0		
11:38	7.0	22.85	0.40	1042	6.72	-10.7	22.1		Stable - sampled

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc
9 bottles (Fe⁺ and metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

GHD | MANAGEMENT ENGINEERING ENVIRONMENT

Purging and Sampling Record

Bore ID: CSM_BH145

Job Information	Sampling Information	Bore Information
Client: Laing O'Rourke / Sydney Metro	**Purge Method:** Peri pump	**SWL:** 2.46 m **Logic Check:** Y
Project: Central Station Main Works	**Sample Method:** Low flow	**Screen:** From:.....to..... m **Stick Up:** ..... m
Proj. No.: 2127234	**WQ Meter Type:** YSI	**NAPL Check:** - **Bore Diam.:** 50 mm
Sampler: C.Allen / C. Gray	**Flow Cell:** Y / N **Pump Depth:** 5.0 m	**Ref.datum:** TOC **Well Cap Secure?** Y
Date: 25/11/21	**WLevel Meter Type:** Dip / Fox / Int.Fce / Gge	**Bore Depth:** 5.635 m
Round Nov-21	**Field Filtered?** Y / N (filter vessel, disposable filter/syringe)	

Time (PM)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (Cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
14:11	0.5	2.47	2.68	170.8	6.59	119.6	21.0		Clear, no sheen, no odour
14:14	1	2.47	2.41	166.6	6.59	120.7	20.9		"
14:17	1.5	2.47	2.30	165.8	6.62	119.6	21.0		"
14:20	2	2.47	2.14	165.0	6.61	121.1	20.8		"
14:23	2.5	2.47	2.05	164.5	6.58	122.7	20.8		"
14:26	3	2.47	2.19	162.7	6.61	122.7	20.8		sampled

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y (N)
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metal filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASW-BH7

Job Information	Sampling Information	Bore Information
Client: Laing O'Rourke / Sydney Metro	**Purge Method:**	**SWL:** ..... m **Logic Check:** .....
Project: Central Station Main Works	**Sample Method:**	**Screen:** From:.....to..... m **Stick Up:** ..... m
Proj. No.: 2127234	**WQ Meter Type:** YSI	**NAPL Check:**..... **Bore Diam.:** 50 mm
Sampler: CA	**Flow Cell:** Y / N **Pump Depth:**.....m	**Ref.datum:** ..... **Well Cap Secure?**.....
Date: 23/11/21	**WLevel Meter Type:** Dip / Fox / Int.Fce / Gge	**Bore Depth:** 6.19 m
Round ~~September 2021~~ Nov 2021	**Field Filtered?** Y / N (filter vessel, disposable filter/syringe)	

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (.....)	Elec.Cond (.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
									DRY

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

GHD MANAGEMENT ENGINEERING ENVIRONMENT

Purging and Sampling Record

Bore ID: CASW-BH10

Job Information	*Sampling Information*	*Bore Information*
Client: Laing O'Rourke / Sydney Metro	**Purge Method:** Bailer	**SWL:** 23.745 m — **Logic Check:** Y
Project: Central Station Main Works	**Sample Method:**	**Screen:** From:.....to..... m — **Stick Up:** ..... m
Proj. No.: 2127234	**WQ Meter Type:** YSI	**NAPL Check:**..... — **Bore Diam.:** 50 mm
Sampler: C.Allen / C. Gray	**Flow Cell:** Y / N — **Pump Depth:**.....m	**Ref.datum:** TOC — **Well Cap Secure?** Y
Date: 24/11/21	**WLevel Meter Type:** Dip / Fox / Int.Fce / Gge	**Bore Depth:** 24.75 m
Round Nov-21	**Field Filtered?** Y / N (filter vessel, disposable filter/syringe)	

Time (.hr:MS.)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
									Not enough water for water quality parameters
									Collected all bottles except Ferrous Iron - insufficient water
									- Grey, cloudy, HC odour, no sheen

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

All bottles except ferrous iron

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASW-BH23

Job Information	Sampling Information	Bore Information
Client: Laing O'Rourke / Sydney Metro	Purge Method: Peri pump	SWL: 2.15 m — Logic Check: Y
Project: Central Station Main Works	Sample Method: Low flow	Screen: From: - to: - m — Stick Up: - m
Proj. No.: 2127234	WQ Meter Type: YSI	NAPL Check: - — Bore Diam.: 50 mm
Sampler: CG	Flow Cell: Y / N — Pump Depth: 3.70 m	Ref.datum: TOC — Well Cap Secure? Y
Date: 23/11/21	WLevel Meter Type: Dip / Fox / Int.Fce / Gge	Bore Depth: 3.91 m
Round ~~September 2021~~ Nov 2021	Field Filtered? Y / N (filter vessel, disposable filter/syringe)	

Time (2:23)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (ms/cm)	pH (pH units)	Ox-Red Pt (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
2:26	0.5	2.16	0.44	675	6.90	-73.7	20.7		Clear, HC odour, slight HC sheen
2:29	1.0	2.16	0.36	646	6.93	-94.6	20.7		
2:32	1.5	2.16	0.32	609	6.95	-104.8	20.7		
2:35	2.0	2.16	0.31	578	6.95	-108.6	20.7		
2:38	2.5	2.16	0.30	552	6.96	-109.4	20.7		
2:41	3.0	2.16	0.30	555	6.96	-109.0	20.7		Stable - well sampled

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

GHD | MANAGEMENT ENGINEERING ENVIRONMENT

Purging and Sampling Record

Bore ID: SRT_BH047

Job Information	*Sampling Information*	*Bore Information*
Client: Laing O'Rourke / Sydney Metro	**Purge Method:** Peripump	**SWL:** 3.68 m **Logic Check:** Y
Project: Central Station Main Works	**Sample Method:** low flow	**Screen:** From: – to: – m **Stick Up:** – m
Proj. No.: 2127234	**WQ Meter Type:** YSI	**NAPL Check:** – **Bore Diam.:** 50 mm
Sampler: C.Allen / C. Gray	**Flow Cell:** Y / N **Pump Depth:** ~6.5 m	**Ref.datum:** TOC **Well Cap Secure?** Y
Date: 24/11/21	**WLevel Meter Type:** Dip / Fox / Int.Fce / Gge	**Bore Depth:** 7.04 m
Round Nov-21	**Field Filtered?** Y / N (filter vessel, disposable filter/syringe)	

Time (2:30)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (Cus/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
2:36	0.5	3.89	3.42	198.6	5.37	187.5	21.7		slightly cloudy, no odour, no sheen
2:39	1.0	4.04	2.45	195.1	5.37	191.4	20.8		
2:42	1.5	4.24	2.51	193.2	5.41	193.8	20.7		
2:45	2.0	4.40	2.63	191.8	5.38	194.8	20.6		
2:48	2.5	4.55	2.48	191.1	5.40	198.0	20.5		
2:51	3.0	4.69	2.45	190.5	5.39	1989	20.4		Stable - sampled

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

GHD MANAGEMENT ENGINEERING ENVIRONMENT

Purging and Sampling Record

Bore ID: SRT_BH050

Job Information	Sampling Information	Bore Information
Client: Laing O'Rourke / Sydney Metro	**Purge Method:** Bailer	**SWL:** 2.525 m **Logic Check:** Y
Project: Central Station Main Works	**Sample Method:** Grab	**Screen:** From:.....to..... m **Stick Up:** ..... m
Proj. No.: 2127234	**WQ Meter Type:** YSI	**NAPL Check:**..... **Bore Diam.:** 50 mm
Sampler: C.Allen / C. Gray	**Flow Cell:** Y / N **Pump Depth:**.....m	**Ref.datum:** TOC **Well Cap Secure?** Y
Date: 25/11/21	**WLevel Meter Type:** Dip / Fox / Int.Fce / Gge	**Bore Depth:** 2.76 m
Round Nov-21	**Field Filtered?** Y / N (filter vessel, disposable filter/syringe)	

Time (3.00.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (.....)	Elec.Cond (.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
									Orange, no odour or sheen
									Not enough water for field parameters or to fill all bottles

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

2x vials
1x metals (filtered)
1x Amber (semi-volatiles)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

GHD | MANAGEMENT ENGINEERING ENVIRONMENT

Purging and Sampling Record

Bore ID: SRT_BH052

Job Information	Sampling Information	Bore Information
Client: Laing O'Rourke / Sydney Metro	**Purge Method:** Peripump	**SWL:** 6.16 m — **Logic Check:** Y
Project: Central Station Main Works	**Sample Method:** Low Flow	**Screen:** From:—to— m — **Stick Up:** — m
Proj. No.: 2127234	**WQ Meter Type:** YSI	**NAPL Check:** — — **Bore Diam.:** 50 mm
Sampler: C.Allen / C. Gray	**Flow Cell:** Y / N — **Pump Depth:** 7.50 m	**Ref.datum:** TOC — **Well Cap Secure?** Y
Date: 24/11/21	**WLevel Meter Type:** Dip / Fox / Int.Fce / Gge	**Bore Depth:** 7.92 m
Round Nov-21	**Field Filtered?** Y / N (filter vessel, disposable filter/syringe)	

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
1:45	0.5	6.33	3.02	346.3	6.01	124.9	20.8		Brown, cloudy, no sheen,
1:50	1	6.46	2.63	339.1	6.00	134.1	20.8		no odour.
1:53	1.5	6.55	2.75	3322	6.09	139.0	20.8		"
1:56	2	6.62	2.68	331.0	6.00	141.7	20.8		"
1:59	2.5	6.77	2.51	330.5	5.92	144.9	20.7		Sampled.

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (metal + Fe^{2+} filtered).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH02

Job Information		Sampling Information		Bore Information	
Client:	LOR	**Purge Method:**	Micro-purge	**SWL(mbTOC):**	25.785 m
Project:	CSM	**Sample Method:**	Low-flow	**Logic Check:**	✓
Proj. No.:	2127234	**WQ Meter Type:**	YSI	**Screen: From:**	— to — m
Sampler:	CG / ES	**Flow Cell:**	(Y) / N	**Stick Up:**	— m
Date:	14/12/21	**Pump Depth:**	~30 m	**NAPL Check:**	—
Round	Dec	**WLevel Meter Type:**	Dip / Fox / Int.Fce / Gge	**Bore Diam.:**	50 mm
		Field Filtered?	(Y) / N (filter vessel, disposable filter, filter/syringe)	**Ref.datum:**	TOC
				Well Cap Secure?	YES
				Bore Depth:	32.81 m

Time (PM)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (.....)	Dis.Oxygen (.....)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		-	*+/- 0.05 pH*	*+/- 3%*	*+/- 10%*	*+/- 10 mV*	*stable*		
14:43	2	20.4	6.67	924	2.98	~~688~~ ⇒ 100.0	26.59		Brown-red, cloudy, no sheen, no odour.
14:46	3	20.4	6.69	929	2.88	97.2	26.64		"
14:49	4	20.4	6.72	928	2.78	95.4	26.71		"
14:52	5	20.3	6.73	933	2.47	95.0	26.79		"
14:55	6	20.4	6.74	937	2.63	94.2	26.85		"
14:58	7	20	6.76	937	2.37	93.3	26.93		sampled.

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)

Decontamination as per GHD procedure? (Y) / N

Was sampling equipment pre-cleaned? (Y) / N

COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH04

Job Information

Client: GHD
Project: 2127234
Proj. No.: CSM
Sampler: CG / ES
Date: 14/12/21
Round: DEC

Sampling Information

Purge Method: Micro Purge
Sample Method: Low-flow
WQ Meter Type: YSI
Flow Cell: Y / N
Pump Depth: ~30 m
WLevel Meter Type: Dip / ~~Fox / Int.Fce / Gge~~
Field Filtered? Y / N (filter vessel, disposable filter, filter/syringe)

Bore Information

SWL(mbTOC): 21.525 m
Logic Check: ✓
Screen: From: — to — m
Stick Up: — m
NAPL Check: —
Bore Diam.: 50 mm
Ref.datum: TOC
Well Cap Secure? YES
Bore Depth: 33.23 m

Time (AM)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		-	+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable		
10:40	1 ~~2170~~	21.4	5.95	519	4.75	7.7	21.70		Light brown, ~~clo~~ turbid,
10:45	2	21.3	5.88	520	3.72	11.7	21.75		high sediment load,
10:48	3	21.3	5.82	520	3.65	20.5	21.78		no sheen, no odour.
10:51	4	21.2	5.76	518	3.47	25.7	21.79		"
10:55	5	21.2	~~3~~ ~~3~~ 580 ~~3~~ 515		3.37	19.8	21.82		"
10:58	6	21.2	5.81	513	2.96	18.6	21.82		"
11:01	7	21.1	5.80	508	3.93	21.2	21.83		sampled

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH06

Job Information

Client: COR
Project: CSM
Proj. No.: 2127234
Sampler: CG + ES
Date: 15/12/21
Round: DEC

Sampling Information

Purge Method: Micro-purge
Sample Method: ~~grab~~ ~~low-flow~~ YSI
WQ Meter Type:
Flow Cell: (Y) / N Pump Depth: ~30 m
WLevel Meter Type: Dip / Fox / (Int.Fce) / Gge
Field Filtered? (Y) / N (filter vessel, ~~disposable filter~~, filter/syringe)

Bore Information

SWL(mbTOC): 25.875 m Logic Check: ✓
Screen: From: — to — m Stick Up: — m
NAPL Check: — Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES
Bore Depth: 35.43 m

Time (AM)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):	-	*+/- 0.05 pH*	*+/- 3%*	*+/- 10%*	*+/- 10 mV*	*stable*			
1:04	0.5	30.8	6.19	1120	2.63	46.5	25.87		Orange, slightly cloudy
1:07	1	29.1	6.07	1080	1.50	32.2	25.87		
	Gas bottle empty → sampled.								

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
Decontamination as per GHD procedure? (Y) / N
Was sampling equipment pre-cleaned? (Y) / N
COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles / metals + Fe^{2+} filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH08

Job Information

Client: LOR
Project: CSM
Proj. No.: 2127234
Sampler: CG + ES
Date: 16/12/24
Round: DEC

Sampling Information

Purge Method: Geo-Central
Sample Method: low-flow
WQ Meter Type: YSI
Flow Cell: (Y) / N Pump Depth: ~32 m
WLevel Meter Type: Dip / Fox / ~~Int.Fce~~ / ~~Oge~~
Field Filtered? (Y) / N (filter vessel, (disposable filter), filter/syringe)

Bore Information

SWL(mbTOC): 18.025 m Logic Check: ✓
Screen: From: — to — m Stick Up: — m
NAPL Check: — Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES
Bore Depth: 35.16 m

Time (10:25)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):	-		+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable		
10:30	0-5	21.7	6.29	567	6.26	16.1	18.02		Orange, cloudy, high sediment,
10:41	2.0	20.8	6.21	609	1.56	-5.2	18.02		no sheen, no odour.
10:46	2.5	20.8	6.20	604	1.59	-3.6	18.02		
10:51	4.0	20.9	6.20	604	1.75	-1.6	18.02		
10:56	4.5	21.0	6.20	604	2.07	1.6	18.02		
11:01	5.0	21.0	6.20	604	2.17	3.4	18.02		
11:06	5.5	21.0	6.20	604	2.31	6.2	18.02		
11:11	6.0	21.0	6.20	604	2.52	8.4	18.02		Stable - sampled.

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
Decontamination as per GHD procedure? (Y) / N
Was sampling equipment pre-cleaned? (Y) / N
COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals & filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH105

Job Information
- **Client:** E LOR
- **Project:** CSM
- **Proj. No.:** 2127234
- **Sampler:** CG / ES
- **Date:** 14/12/21
- **Round** DES

Sampling Information
- **Purge Method:** peri pump
- **Sample Method:** low flow
- **WQ Meter Type:** YSI
- **Flow Cell:** (Y) / N **Pump Depth:** 9 m
- **WLevel Meter Type:** Dip / Fox / Int.Fce / Gge
- **Field Filtered?** (Y) / N (filter vessel, disposable filter, filter/syringe)

Bore Information
- **SWL(mbTOC):** 4.100 m **Logic Check:** ✓
- **Screen:** From: — to — m **Stick Up:** — m
- **NAPL Check:** — **Bore Diam.:** 50 mm
- **Ref.datum:** TOC **Well Cap Secure?** YES
- **Bore Depth:** 9.825 m

Time (09:21)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		-	*+/- 0.05 pH*	*+/- 3%*	*+/- 10%*	*+/- 10 mV*	*stable*		
09:33	1.0	20.8	5.29	276.0	0.43	221.1	4.32		clear, no odour, no sheen
09:36	2.0	20.8	5.22	239.3	0.59	225.5	4.37		
09:40	3.0	20.8	5.17	231.3	0.73	229.8	4.43		
09:43	4.0	20.8	5.15	230.8	0.78	230.9	4.46		
09:46	5.0	20.8	5.14	230.7	1.02	233.2	4.48		
09:49	6.0	21.0	5.14	231.7	1.33	233.7	4.48		
09:52	7.0	21.3	5.15	232.6	1.73	233.6	4.48		
09:58	8.0	21.3	5.13	231.8	2.09	235.8	4.48		Sampled. - stable.

Field QA Checks:
- Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
- Decontamination as per GHD procedure? (Y) / N
- Was sampling equipment pre-cleaned? (Y) / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles + metals Fe^{2+} filtered + QC01

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH125

Job Information

Client: LOR
Project: CSM
Proj. No.: 2127234
Sampler: CG / ES
Date: 14/12/21
Round: DEC

Sampling Information

Purge Method: Peri pump
Sample Method: Low-flow
WQ Meter Type: YSI
Flow Cell Y / N
Pump Depth: 6 m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter, filter/syringe)

Bore Information

SWL(mbTOC): 4.635 m
Logic Check: ✓
Screen: From: – to – m
Stick Up: – m
NAPL Check: –
Bore Diam.: 50 mm
Ref.datum: TOC
Well Cap Secure? YES
Bore Depth: 6.60 m

Time (24hr)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		-	+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable		
16:03	0.5	20.4	5.91	598	0.21	28.2	4.67		brown, slightly cloudy, no sheen,
16:06	1.0	20.4	5.76	594	0.17	35.2	4.68		no odour.
16:09	1.5	20.4	5.69	595	0.30	39.5	4.70		"
16:12	2.0	20.3	5.69	592	0.32	38.4	4.70		"
16:15	2.5	20.2	5.70	589	0.33	34.1	4.71		sampled

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (metals + Fe^{2+} filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH13

Job Information		Sampling Information		Bore Information	
Client:	COR	Purge Method:	Micro-purge	SWL(mbTOC):	22.090 m
Project:	CSM	Sample Method:	low-flow	Logic Check:	✓
Proj. No.:	2127234	WQ Meter Type:	YSI	Screen: From: – to: – m	
Sampler:	CG & ES	Flow Cell: (Y) / N	Pump Depth: ~30 m	Stick Up: – m	
Date:	15/12/21	WLevel Meter Type:	Dip / Fox / (Int.Fce) / Gge	NAPL Check: –	
Round	DES	Field Filtered: (Y) / N (filter vessel, disposable filter, filter/syringe)		Bore Diam.: 50 mm	
				Ref.datum: TOC	
				Well Cap Secure? YES	
				Bore Depth: 33.67 m	

Time (AM)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		-	+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable		
11:44	1	23.4	6.34	1033	0.69	-11.3	22.30		Red-orange, cloudy, no sheen,
11:47	2	23.5	6.15	1033	0.69	15.9	22.51		no odour.
11:50	3	22.3	6.08	1020	0.61	27.7	22.68		"
11:53	4 5	22.3	5.98	1013	0.52	42.9	22.88		"
12:00	6	22.5	5.90	1017	0.55	52.0	22.25		"
12:03	7	23.1	5.85	1028	0.60	59.3	23.39		"
12:06	8	23.7	5.82	1043	0.66	63.8	23.47		"
12:12	9	23.6	5.80	1037	0.69	67.8	23.57		sampled

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)

Decontamination as per GHD procedure? (Y) / N

Was sampling equipment pre-cleaned? (Y) / N

COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metal filtered) + QCO2.

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH145

Job Information

Client: COR
Project: CSM
Proj. No.: 127234
Sampler: CG + ES
Date: 15/12/24
Round: DEC.

Sampling Information

Purge Method: Peri pump
Sample Method: low-flow
WQ Meter Type: YSI
Flow Cell (Y) / N
Pump Depth: 5 m
WLevel Meter Type: Dip / Fox / (Int.Fce) / Gge
Field Filtered? (Y) / N (filter vessel, disposable filter, filter/syringe)

Bore Information

SWL(mbTOC): 2.490 m
Logic Check: ✓
Screen: From: – to: – m
Stick Up: ✓ m
NAPL Check: –
Bore Diam.: 50 mm
Ref.datum: TOC
Well Cap Secure? YES
Bore Depth: 5.720 m

Time (PM)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):	-	*+/- 0.05 pH*	*+/- 3%*	*+/- 10%*	*+/- 10 mV*	*stable*			
13:48	1	20.6	6.71	167.2	2.55	93.4	2.50		Clear, no sheen, no odour.
13:52	2	20.5	6.50	164.5	2.32	105.8	2.50		"
14:00 ~~13:56~~	3	20.4	6.38	161.8	1.88	113.6	2.50		"
14:05	4	20.4	6.34	161.5	1.87	115.3	2.50		"
14:10	5	20.5	6.36	161.5	2.13	116.0	2.50		"
14:14	6	20.4	6.38	151.2	2.17	118.2	2.50		sampled - stable.

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
Decontamination as per GHD procedure? (Y) / N
Was sampling equipment pre-cleaned? (Y) / N
COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe2+ + metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASW_BH7

Job Information

Client: LOR
Project: CSM
Proj. No.: 2127234
Sampler: CG + ES
Date: 14/12/21
Round: DEC

Sampling Information

Purge Method: .....
Sample Method: .....
WQ Meter Type: .....
Flow Cell: Y / N Pump Depth: .....m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge

Bore Information

SWL(mbTOC): DRY m Logic Check: ✓
Screen: From: — to ..... m Stick Up: — m
NAPL Check: — Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES
Bore Depth: 6.335 m

Field Filtered? Y / N (filter vessel, disposable filter, filter/syringe)

Time (.....)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (.....)	Dis.Oxygen (.....)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		-	*+/- 0.05 pH*	*+/- 3%*	*+/- 10%*	*+/- 10 mV*	*stable*		
				DRY					

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASW-BH10

Job Information

Client: LOR
Project: CSM
Proj. No.: 2127234
Sampler: CG/ES
Date: 14/12/21
Round: DEC

Sampling Information

Purge Method: Bailer
Sample Method: ~~Bailer~~ Grab
WQ Meter Type: —
Flow Cell: Y / N
Pump Depth: ..... m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter, filter/syringe)

Bore Information

SWL(mbTOC): 2.368 m
Logic Check: ✓
Screen: From: ..... to ..... m
Stick Up: — m
NAPL Check: —
Bore Diam.: 50 mm
Ref.datum: TOC
Well Cap Secure? YES
Bore Depth: 25.25 m

Time (.....)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (.....)	Dis.Oxygen (.....)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		-	*+/- 0.05 pH*	*+/- 3%*	*+/- 10%*	*+/- 10 mV*	*stable*		
		Sampled – 8 bottles							
		Not enough water for water quality parameters							
		Water looked light grey, cloudy							

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

8 bottles (~~BTE~~ Amber x2, metals, Fe^{2+}, CN^-, vials x2, perserved inorganics)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASW_BH23

Job Information

Client: LOR
Project: CSM
Proj. No.: 2127284
Sampler: CG/ES
Date: 14/12/24
Round: DEC

Sampling Information

Purge Method: Peri pump
Sample Method: ~~Peri~~ Low-flow
WQ Meter Type: YSI
Flow Cell: Y / N
Pump Depth: 3 m
WLevel Meter Type: Dip / Fox / Int.Tape / Gge
Field Filtered? Y / N (filter vessel, disposable filter, filter/syringe)

Bore Information

SWL(mbTOC): 2.35 m
Logic Check: ✓
Screen: From: ~~—~~ to ~~—~~ m
Stick Up: — m
NAPL Check: —
Bore Diam.: 50 mm
Ref.datum: TOC
Well Cap Secure? YES
Bore Depth: 3.98 m

Time (.....)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):	-	+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable			
13:07	0-5	21.3	6.75	627	0.32	-125.7	2.35		Grey, cloudy, sulfuric odour,
13:10	1.0	21.4	6.77	603	0.25	-130.6	2.35		slight organic? sheen.
13:13	1.5	21.3	6.80	558	0.18	-135.1	2.35		"
13:16	2.0	21.3	6.82	527	0.16	-135.5	2.35		"
13:20	2.5	21.2	6.80	491	0.11	-134.1	2.35		"
13:22	3.0	21.2	6.80	480	0.10	-133.6	2.35		"
13:25	3.5	21.1	6.79	465	0.09	-131.2	2.35		sampled - stable

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_BH047

Job Information

Client: LOR
Project: CSM
Proj. No.: 2127234
Sampler: CG + ES
Date: 16/12/21
Round: DEC

Sampling Information

Purge Method: Peri pump
Sample Method: low-flow
WQ Meter Type: YSI
Flow Cell: (Y) / N Pump Depth: 6 m
WLevel Meter Type: Dip / Fox / Int.Fee / Gge
Field Filtered? (Y) / N (filter vessel, disposable filter, filter/syringe)

Bore Information

SWL(mbTOC): 3.660 m Logic Check: ✓
Screen: From: – to: – m Stick Up: – m
NAPL Check: – Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES
Bore Depth: 7.015 m

Time (PM)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):	-	+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable			
1:19	0.5	19.7	5.96	205.3	3.23	195.5	3.95		Light grey/brown, slightly cloudy
1:22	1	19.6	5.68	194.0	2.93	212.4	4.25		no sheen, no odour.
1:25	1.5	19.7	5.47	~~228.5~~ 185.5	2.63	229.7	4.41		"
1:28	2	19.7	5.43	183.1	2.55	234.0	4.50		"
1:31	2.5	19.7	5.48	185.0	2.58	234.5	4.61		"
1:34	3	19.7	5.41	182.2	2.74	241.1	4.77		"
1:37	3.5	19.7	5.39	182.0	2.48	244.2	4.86		"
1:40	4	19.6	5.37	181.5	2.56	246.8	4.95		sampled.

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
Decontamination as per GHD procedure? (Y) / N
Was sampling equipment pre-cleaned? (Y) / N
COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_BH050

Job Information

Client: LOR
Project: CSM
Proj. No.: 2127234
Sampler: CG / ES
Date: 5/12/21
Round: DEC

Sampling Information

Purge Method: Peri pump
Sample Method: Grab
WQ Meter Type: —
Flow Cell: Y / N Pump Depth: 2.5 m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter, filter/syringe)

Bore Information

SWL(mbTOC): 2.435 m Logic Check: ✓
Screen: From: ..... to ..... m Stick Up: — m
NAPL Check: — Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES
Bore Depth: 2.78 m

Time (.....)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (.....)	Dis.Oxygen (.....)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		-	*+/- 0.05 pH*	*+/- 3%*	*+/- 10%*	*+/- 10 mV*	*stable*		
		Sampled - low water level.							Clear to orange.
		No water quality parameters taken.							

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (metals + Fe^{2+} filtered) Unpreserved inorganics ½ full.

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_BH052

Job Information

Client: LOR
Project: CSM
Proj. No.: 2127234
Sampler: CG + ES
Date: 16/12/21
Round: DEC

Sampling Information

Purge Method: Peri pump
Sample Method: low-flow
WQ Meter Type: YSI
Flow Cell (Y) / N Pump Depth: 7.5 m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? (Y) / N (filter vessel, disposable filter, filter/syringe)

Bore Information

SWL(mbTOC): 6.01 m Logic Check: ✓
Screen: From: – to: – m Stick Up: – m
NAPL Check: – Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES
Bore Depth: 8.05 m

Time (12:10)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (CNF µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):	-	+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable			
12:15	0.5	19.8	5.71	246.9	4.28	196.2	6.26		clear, no odour, no sheen.
12:19	1.0	19.8	5.45	235.4	4.81	220.3	6.41		
12:23	1.5	19.9	5.43	244.4	3.983	223.4	6.52		
12:27	2.0	19.9	5.47	248.3	4.14	223.6	6.60		
12:30	2.5	19.8	5.57	254.1	3.88	220.0	6.70		sampled.

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
Decontamination as per GHD procedure? (Y) / N
Was sampling equipment pre-cleaned? (Y) / N
COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (metals + Fe^{2+} filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_DH02

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN / CG
- Date: 18/1/22
- Round: January 2022

Sampling Information
- Purge Method: QED MP10
- Sample Method: 1
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 28 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 25.59 m — Logic Check: /
- Screen: From: / to: m — Stick Up: m
- NAPL Check: / — Bore Diam.: 50 mm
- Ref.datum: / — Well Cap Secure? Y
- Bore Depth: 32.60 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (mS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
11:28	1	25.90	3.87	955	6.55	172.9	21.2		Brown cloudy / no odour / clear
11:31	2	26.10	3.83	957	6.63	167.0	21.1		"
11:34	3	26.27	3.93	957	6.67	165.5	21.0		"
11:37	4	26.35	3.90	951	6.66	163.1	21.0		"
11:40	5	26.44	3.87	950	6.65	162.5	21.0		"
11:43	6	26.53	3.82	951	6.63	162.1	21.0		"

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles Metals + Hg Filtered

+5

Dup = QC01

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH04

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN / CG
- Date: 18/1/2022
- Round: January 2022

Sampling Information
- Purge Method: QED nPlo
- Sample Method: "
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 28 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 21.34 m
- Screen: From: ..... to ..... m
- NAPL Check: /
- Ref.datum: /
- Bore Depth: 33.06 m
- Logic Check: /
- Stick Up: / m
- Bore Diam.: 50 mm
- Well Cap Secure? Yes

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
9:21	1	21.54	1.25	517	6.82	-14.1	21.9		Brown cloudy, no odour/sheen
9:24	2	21.60	0.45	505	6.23	-16.4	21.6		"
9:27	3	21.61	0.66	491.2	6.04	-8.0	21.6		"
9:30	4	21.67	0.75	478.5	5.52	0.0	21.5		"
9:33	5	21.72	0.72	467.1	5.84	7.7	21.5		"
9:36	6	21.75	0.71	455.5	5.77	16.2	21.5		"

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 + 5 bottles, Metals + Fe as filtered DUP = QCO2 (ALS)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH08

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TW / CG
- Date: 18/1/2022
- Round: January 2022

Sampling Information
- Purge Method: QED mP10
- Sample Method: 4
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 28 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 17.780 m — Logic Check: ....
- Screen: From: .... to .... m — Stick Up: .... m
- NAPL Check: .... — Bore Diam.: 50 mm
- Ref.datum: .... — Well Cap Secure? Yes
- Bore Depth: 35.22 m

Time (..PM)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
4:00	1	17.80	0.51	617	6.05	26.7	21.3		Orange, cloudy, some particles,
4:03	2	17.79	0.47	618	6.06	20.5	21.3		no sheen, no odour.
4:06	3	17.79	0.41	618	6.06	~~21.2~~ 17.2	21.2		"
4:09	4	17.79	0.39	619	6.06	15.7	21.2		"
4:12	5	17.79	0.35	620	6.06	15.0	21.2		sampled.

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (metals + Fe21 filtered).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH105

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN / CG
- Date: 18/1/22
- Round January 2022

Sampling Information
- Purge Method: Peri pump
- Sample Method: Peri pump
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 8.5 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 3.97 m — Logic Check: ✓
- Screen: From: — to: — m — Stick Up: — m
- NAPL Check: — — Bore Diam.: 50 mm
- Ref.datum: TOC — Well Cap Secure? ✓
- Bore Depth: 9.67 m

Time (AM)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (mS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
10:00	1	4.14	7.07	240.4	4.91	164.1	22.5		Brown, cloudy, no sheen, no odour.
10:05	2	4.17	6.80	240.0	4.81	183.3	22.3		"
10:08	3	4.23	6.50	238.4	4.76	192.6	22.2		"
10:14	4	4.25	6.31	238.3	4.65	202.3	22.2		Less cloudy
10:17	5	4.27	6.12	238.4	4.74	201.4	22.2		"
10:20	6	4.29	5.83	238.9	4.73	205.4	22.1		"
10:23	7	4.31	0.48	238.0	4.69	210.8	22.1		"
10:27	8	4.33	0.31	237.9	4.69	213.1	22.1		"
10:30	9	4.33	0.31	237.8	4.65	217.6	22.0		"
10:33	10	4.36	0.27	236.2	4.66	217.9	22.0		sampled.

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters / Preservatives	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

4.595

Bore ID: CSM_BH125

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: TN / CG
Date: 18/01/22
Round January 2022

Sampling Information

Purge Method: Peri pump
Sample Method: Peri pump
WQ Meter Type: YSI
Flow Cell: Y / N Pump Depth: 5.5 m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information

SWL: ~~4.895~~ m Logic Check: ✓
Screen: From: —— to —— m Stick Up: ~ m
NAPL Check: — Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES
Bore Depth: 6.495 m

Time (PM)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (mS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
2:55	1	4.64	0.37	~~5.95~~ 622	5.94	16.2	20.8		Brown, slightly cloudy, no sheen, no odour.
2:58	2	4.64	0.43	617	5.73	24.8	20.6		"
3:01	3	4.64	0.35	613	5.52	40.7	20.6		"
3:04	4	4.65	0.32	609	5.42	47.8	20.5		"
3:06	5	4.65	0.29	608	5.37	54.8	20.5		"
3:09	6	4.66	0.26	609	5.32	58.3	20.6		

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: ~~GSM_P~~ GASW_BH10

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: AR/CG
Date: 18/1/2022
Round January 2022

Sampling Information

Purge Method: —
Sample Method: Bailer
WQ Meter Type: YSI
Flow Cell: Y / N Pump Depth: —m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information

SWL: 23.655 m Logic Check: ✓
Screen: From: ..... to: ..... m Stick Up: ..... m
NAPL Check: ✓ Bore Diam.: 50 mm
Ref.datum: ..... Well Cap Secure? Yes
Bore Depth: 24.73 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (.....)	Elec.Cond (.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
	Very little water, grab sample taken								
	Not enough water for parameters								

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Metals + Fe2+ filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_DH047

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN/CG
- Date: 19/1/22
- Round: January 2022

Sampling Information
- Purge Method: Pe
- Sample Method: Pe
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 6.8 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 3.560 m — Logic Check: /
- Screen: From: / to: m — Stick Up: / m
- NAPL Check: / — Bore Diam.: 50 mm
- Ref.datum: / — Well Cap Secure?: Yes
- Bore Depth: 7.04 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
9:27	1	3.99	3.09	197.2	5.46	175.4	19.8		Cloudy, no odour/sheen
9:28	2	4.18	3.02	190.1	5.15	188.8	19.5		"
9:29	3	4.44	2.98	186.5	4.89	207.8	19.5		"
9:32	4	4.67	3.04	184.1	4.71	218.7	19.9		"
9:35	5	5.06	3.05	178.6	4.71	221.1	19.8		"
9:38	6	5.30	3.07	178.4	4.72	221.7	19.8		"

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Metals filtered in field

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRZ_DH050

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: TN/CG
Date: 19/1/22
Round January 2022

Sampling Information

Purge Method: —
Sample Method: Peri
WQ Meter Type: YSI
Flow Cell: Y / N
Pump Depth: 2.6 m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information

SWL: 2.296 m
Logic Check: ✓
Screen: From: ..... to ..... m
Stick Up: ..... m
NAPL Check: ✓
Bore Diam.: 50 mm
Ref.datum: .....
Well Cap Secure? Yes
Bore Depth: 2.76 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (uS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
	Very little water gets			Sample	taken				
	—		6.48	208.2	4.54	220.5	21.4		Clear, no odour/sheen

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Metals + Fors filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT-BH052

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: TN / CG
- Date: 19/1/22
- Round: January 2022

Sampling Information
- Purge Method: Peri
- Sample Method: Bail
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 7.5 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 5.790 m — Logic Check: /
- Screen: From: ..... to ..... m — Stick Up: ..... m
- NAPL Check: / — Bore Diam.: 50 mm
- Ref.datum: ..... — Well Cap Secure? Yes
- Bore Depth: 7.90 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
8:34	1	5.95	4.72	320.7	6.53	104.6	20.1		clear/slightly cloudy, no odour/sheen
8:38	2	6.09	4.84	312.0	6.26	116.4	20.1		"
8:41	3	6.23	5.24	295.1	5.93	136.5	20.0		"
8:44	4	6.43	6.25	266.1	5.59	158.1	20.1		"
8:47	5	6.58	6.67	250.2	5.18	181.0	20.0		"
8:50	6	6.77	6.53	233.3	5.23	183.2	20.0		"

Field QA Checks:
- Air bubbles in vials? Y / N
- Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters / Preservatives	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Metals + Lead filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_BH052

Job Information
- **Client:** Laing O'Rourke / Sydney Metro
- **Project:** Central Station Main Works
- **Proj. No.:** 2127234
- **Sampler:** CG / ES
- **Date:** 8/02/22
- **Round** January 2022

Sampling Information
- **Purge Method:** Peri pump
- **Sample Method:** Peri pump
- **WQ Meter Type:** YSI
- **Flow Cell:** Y / N — **Pump Depth:** 9 m
- **WLevel Meter Type:** Dip / Fox / Int.Fce / Gge
- **Field Filtered?** Y / N (filter vessel, disposable filter/syringe)

Bore Information
- **SWL:** 5.73 m — **Logic Check:** ✓
- **Screen:** From: – to: – m — **Stick Up:** – m
- **NAPL Check:** – — **Bore Diam.:** 50 mm
- **Ref.datum:** TOC — **Well Cap Secure?** YES
- **Bore Depth:** 10.12 m

Time (AM)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
9:27	0.5	6.05	6.18	249.1	5.99	117.5	20.1		Clear, no sheen, no odour.
9:30	1	6.12	5.76	245.3	5.75	125.9	20.1		"
9:33	1.5	~~6.18~~	~~6.00~~	244.2	5.61	132.2	20.1		"
9:36	2	6.26	6.16	240.7	5.47	139.0	20.2		"
9:39	2.5	6.35	5.63	238.2	5.37	146.0	20.0		"
9.42	3.0	6.42	5.56	247.1	5.48	143.3	20.1		sampled.

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_BH047

Job Information
- **Client:** Laing O'Rourke / Sydney Metro
- **Project:** Central Station Main Works
- **Proj. No.:** 2127234
- **Sampler:** CA/ES
- **Date:** 8/2/22
- **Round** January 2022

Sampling Information
- **Purge Method:** Peri pump
- **Sample Method:** Peri pump
- **WQ Meter Type:** YSI
- **Flow Cell:** Y / N — **Pump Depth:** 6.5 m
- **WLevel Meter Type:** Dip / Fox / Int.Fce / Gge
- **Field Filtered?** Y / N (filter vessel, disposable filter/syringe)

Bore Information
- **SWL:** 3.320 m — **Logic Check:** ✓
- **Screen:** From: — to: — m — **Stick Up:** — m
- **NAPL Check:** — — **Bore Diam.:** 50 mm
- **Ref.datum:** TOC — **Well Cap Secure?** yes
- **Bore Depth:** 7.045 m

Time (1.0.25)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
10:28	0.5	3.89	2.35	192.0	5.13	171.2	20.1		clear, no sheen, no odour.
10:34	1.0	4.11	2.63	191.7	5.11	176.7	20.2		"
10:39	1.5	4.23	2.64	191.8	5.13	179.5	20.1		"
10:44	2.0	4.46	2.54	189.9	5.12	182.2	20.1		"
10:50	2.5	4.74	2.50	189.5	5.04	187.3	20.1		"
10:55	3.0	4.92	2.69	190.0	5.07	188.4	20.2		"
11:00	3.5	5.08	2.56	190.9	5.09	188.8	20.2		sampled

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

QC01 (metals filtered) + 9 bottles (Fe2+ + metals filter).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_BH050

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: CG / ES
Date: 8/2/22
Round January 2022

Sampling Information

Purge Method: ~~Peri pump~~ –
Sample Method: Peri pump
WQ Meter Type: YSI
Flow Cell: Y / N Pump Depth: 2.7 m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information

SWL: 2.43 m Logic Check: ✓
Screen: From: – to: – m Stick Up: – m
NAPL Check: – Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES
Bore Depth: 2.78 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (.....)	Elec.Cond (.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
		Sampled – no parameters taken – low SWL							
			purged dry.						Clear, no odour.

Field QA Checks:
Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc
8 bottles (6 metals filtered) excl. Fe21.

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASW_BH10

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: CG / TS
Date: 8/2/22
Round ~~January~~ 2022 Feb.

Sampling Information

Purge Method: P —
Sample Method: Bailer
WQ Meter Type: YSI
Flow Cell: Y / N Pump Depth: —m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information

SWL: 23.655 m Logic Check: ~~Y~~
Screen: From: — to — m Stick Up: — m
NAPL Check: — Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? ~~Y~~ES
Bore Depth: 24.730 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (.....)	Elec.Cond (.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	*-*		
		LOW SWL -			Sampled	with	bailer		Cloudy, sulfuric odour.
		—DRY—							

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
Decontamination as per GHD procedure? (Y) / N
Was sampling equipment pre-cleaned? (Y) / N
COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (metals + Fe2+ filtered) + Unpreserved inorganics ½ full.

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH125

Job Information
- **Client:** Laing O'Rourke / Sydney Metro
- **Project:** Central Station Main Works
- **Proj. No.:** 2127234
- **Sampler:** CG / ES
- **Date:** 8/2/22
- **Round** January 2022

Sampling Information
- **Purge Method:** Peri pump
- **Sample Method:** Peri pump
- **WQ Meter Type:** YSI
- **Flow Cell:** Y / N — **Pump Depth:** 6 m
- **WLevel Meter Type:** Dip / Fox / Int.Fce / Gge
- **Field Filtered?** Y / N (filter vessel, ~~disposable filter~~ syringe)

Bore Information
- **SWL:** 4.615 m — **Logic Check:** ✓
- **Screen:** From: — to: — m — **Stick Up:** — m
- **NAPL Check:** — — **Bore Diam.:** 50 mm
- **Ref.datum:** TOC — **Well Cap Secure?** YES
- **Bore Depth:** 6.670 m

Time (AM)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
2:09	0.5	4.66	0.29	645	5.95	39.1	21.0		Brown, slightly cloudy, no sheen
2:12	1	4.67	0.48	641	5.95	33.3	21.2		no odour.
2:15	1.5	4.67	0.33	638	5.94	30.6	21.2		"
2:18	2	4.68	0.33	631	5.94	26.6	21.0		"
2:21	2.5	4.69	0.51	629	5.94	24.5	21.0		"
2:24	3	4.69	0.75	624	5.94	21.5	21.0		"
2:27	3.5	4.69	0.81	622	5.93	19.7	21.0		*sampled.

Field QA Checks:
- Air bubbles in vials? Y / (N) — Any violent reactions? Y / (N)
- Decontamination as per GHD procedure? (Y) / N
- Was sampling equipment pre-cleaned? (Y) / N
- COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles. (Fe2+ + metals filtered).

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH105

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: CG / ES
- Date: 8 9/02/22
- Round ~~January~~ 2022 Feb

Sampling Information
- Purge Method: Peri pump
- Sample Method: Peri pump
- WQ Meter Type: YSI
- Flow Cell: Y / N Pump Depth: 8.5 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 3.995 m Logic Check: ✓
- Screen: From: – to: – m Stick Up: – m
- NAPL Check: – Bore Diam.: 50 mm
- Ref.datum: TOC Well Cap Secure? YES
- Bore Depth: 9.695 m

Time (9.08.)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
9.11	0.5	4.06	0.48	257.1	5.29	103.6	21.6		clear, no sheen, no odour
9.14	1.0	4.10	0.39	250.0	5.22	111.4	21.6		"
9.17	1.5	4.13	0.44	249.9	5.21	114.6	21.6		"
9.20	2.0	4.16	0.72	251.3	5.20	118.0	21.5		"
9.23	2.5	4.19	0.94	250.5	5.20	121.7	21.5		"
9.26	3.0	4.22	0.91	250.9	5.20	124.0	21.5		"
9.29	3.5	4.25	0.88	249.9	5.19	125.9	21.5		"
									sample

Field QA Checks:
- Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
- Decontamination as per GHD procedure? (Y) / N
- Was sampling equipment pre-cleaned? (Y) / N
- COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, QC02 (amberst vials + metals)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH145

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: CG / ES
Date: 9/02/22
Round January 2022

Sampling Information

Purge Method: peri pump
Sample Method: peri pump
WQ Meter Type: YSI
Flow Cell: (Y) / N Pump Depth: 5 m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, ~~disposable filter~~/syringe)

Bore Information

SWL: 2.525 m Logic Check: ✓
Screen: From: – to: – m Stick Up: ..... m
NAPL Check: – Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES.
Bore Depth: 5.740 m

Time (24:..)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
10:32	0.5	–	0.93	227.1	6.27	100.2	22.1		very slight brown tinge, no sheen,
10:36	1.0	2.54	1.99	227.6	6.32	94.8	22.4		" no odour
10:42	2.0	2.53	0.86	226.7	6.34	87.2	22.2		"
10:47	3.0	2.48	1.00	221.5	6.36	81.4	22.3		"
10:53	4.0	2.51	0.96	219.8	6.36	73.1	22.7		"
10:59	5.0	2.51	1.07	218.2	6.37	76.2	22.7		Sampled.

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH3 06

Job Information	Sampling Information	Bore Information
Client: Laing O'Rourke / Sydney Metro	**Purge Method:** Micropurge	**SWL:** 25.685 m **Logic Check:** ✓
Project: Central Station Main Works	**Sample Method:** Micro-purge	**Screen:** From: – to: – m **Stick Up:** – m
Proj. No.: 2127234	**WQ Meter Type:** YSI	**NAPL Check:** – **Bore Diam.:** 50 mm
Sampler: CG / ES	**Flow Cell:** Y / N **Pump Depth:** ~34 m	**Ref.datum:** TOC **Well Cap Secure?** YES
Date: 9/02/22	**WLevel Meter Type:** Dip / Fox / Int ~~Fce / Gge~~	**Bore Depth:** 36.41 m
Round ~~January~~ 2022 Feb.	**Field Filtered?** Y / N (filter vessel, disposable filter/syringe)	

Time (~~Actual~~)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (mS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
12:57	1	25.72	1.33	1184	6.12	26.7	31.4		Orange-brown, cloudy. no sheen,
13:03	2	25.72	1.71	1163	6.02	39.0	30.5		no odour.
13:09	2.5	25.70	1.76	1180	5.91	54.0	31.9		"
13:13	3	25.70	1.78	1192	5.88	59.2	31.7		"
13:16	3.5	25.70	1.88	1167	5.86	64.3	30.4		" Tubing pulled across road to
13:20	4	25.64	1.88	1142	5.81	75.4	29.9		" pump due to cars.
13:25	4.5	25.70	1.89	1169	5.77	84.1	30.6		∴ Temp higher
13:30	5	25.70	1.96	1161	5.72	92.6	30.6		"
13:33	5.5	25.70	1.86	1169	5.71	94.6	30.7		sampled.

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
Decontamination as per GHD procedure? (Y) / N
Was sampling equipment pre-cleaned? (Y) / N
COC updated? (Y) N

Parameters / Preservatives	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH04

Job Information
Client: ~~GSH~~ LOR
Project: 2127234
Proj. No.: CSM
Sampler: CG / ES
Date: 9/02/22
Round: Feb '22

Sampling Information
Purge Method: Micropurge
Sample Method: Micro purge
WQ Meter Type: YSI
Flow Cell: Y / N Pump Depth: .....m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter, filter/syringe)

Bore Information
SWL(mbTOC): 21.415 m Logic Check: ✓
Screen: From: — to: — m Stick Up: — m
NAPL Check: — Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? YES
Bore Depth: 32.78 m

Time (24:hh)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		-	+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable		
14:49	0.5	22.4	5.78	560	0.94	43.8	21.60		cloudy (very), brown, no odour
14:52	1.0 5	22.1	5.80	556	0.73	36.6	21.63		no sheer
14:55	2.5	22.1	5.79	553	0.77	35.0	21.65		
14:58	3.5	21.9	5.63	533	1.38	43.0	21.73		
15:01	4.5	22.0	5.51	521	1.56	52.4	21.72		
15:04	5.5	21.8	5.45	510	1.70	55.4	21.77		
15:07	6.5	21.9	5.39	501	1.67	61.0	21.77		sample

Field QA Checks:
Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles

Purge Volumes
Casing Int. Dia (mm) 50 100 150
Vol (L/m of casing) 2.0 7.9 17.7
*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH08

Job Information

Client: LOR / Sydney metro
Project: Central station main works
Proj. No.: 2127234
Sampler: CG / ES
Date: 10/12/22
Round: Feb

Sampling Information

Purge Method: micro purge
Sample Method: micro purge
WQ Meter Type: YSI
Flow Cell: (Y) / N Pump Depth: ~31 m
WLevel Meter Type: Dip / Fox / (Int.Fce) / Gge
Field Filtered? Y / N (filter vessel / (disposable filter), filter/syringe)

Bore Information

SWL(mbTOC): 17.80 m Logic Check: ✓
Screen: From: — to: — m Stick Up: — m
NAPL Check: — Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? Y
Bore Depth: 34.89 m

Time (AM)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		-	+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable		
10:01	1	21.3	5.96	636	1.42	38.3	17.805		orange, cloudy, no sheen, no
10:04	2	21.2	6.06	~~633~~ 636	1.80	~~34~~ 31.0	17.82		odour
10:07	3	21.1	6.10	635	1.25	24.1	17.80		"
10:10	4	21.2	6.12	637	1.21	20.3	17.81		"
10:13	5	21.2	6.13	637	1.20	17.0	17.81		sampled.

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
Decontamination as per GHD procedure? (Y) / N
Was sampling equipment pre-cleaned? (Y) / N
COC updated? (Y) / N

Parameters / Preservatives	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles. (Fe^{2+} + metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

25.350

Bore ID: CSM-BH02

Job Information

Client: LOR
Project: CSM
Proj. No.: 127234
Sampler: CG / ES
Date: 10/02/22
Round ..... Feb ..... 2022 .....

Sampling Information Geo-control

Purge Method: ~~Micro purge~~ pump
Sample Method: ~~Micro purge~~ low-flow
WQ Meter Type: YSI
Flow Cell: (Y) N
Pump Depth: ..... m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel / disposable filter / filter/syringe)

Bore Information

SWL(mbTOC): ~~11.12~~ ..... m
Logic Check: ✓
Screen: From: – to: – m
Stick Up: – m
NAPL Check: –
Bore Diam.: 50 mm
Ref.datum: TOC
Well Cap Secure? YES
Bore Depth: 32.545 m

Time (AM.)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):	-	+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable			
11:20	0.5	23.0	6.46	4088	4.60	107.0	25.56		Orange-brown, cloudy, ~~light~~ some
11:28	1	23.1	6.24	398.0	3.20	116.7	25.70		sediment, no sheen, no
11:32	2	23.6	6.03	398.1	3.61	127.2	25.82		odour.
11:35	2.5	22.7	6.02	393.1	3.87	128.6	25.89		"
11:38	3	22.3	6.01	390.9	3.60	129.9	25.96		"
11:42	3.5	22.4	5.98	391.4	3.80	132.1	26.04		sampled.

Field QA Checks:

Air bubbles in vials? Y / (N) Any violent reactions? Y (N)
Decontamination as per GHD procedure? (Y) / N
Was sampling equipment pre-cleaned? (Y) / N
COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2r} + metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH13

Job Information
- **Client:** LOR
- **Project:** CSM
- **Proj. No.:** 2127234
- **Sampler:** CG / ES
- **Date:** 10/2/22
- **Round** Feb 2022

Sampling Information
- **Purge Method:** Geocontrol
- **Sample Method:** low-flow
- **WQ Meter Type:** YSI
- **Flow Cell:** (Y) / N **Pump Depth:** .....m
- **WLevel Meter Type:** Dip / Fox / Int.Fce / Gge
- **Field Filtered? Y / N** (filter vessel, disposable filter, filter/syringe)

Bore Information
- **SWL(mbTOC):** 21.925 m **Logic Check:** ✓
- **Screen:** From: – to: – m **Stick Up:** – m
- **NAPL Check:** – **Bore Diam.:** 50 mm
- **Ref.datum:** TOC **Well Cap Secure?** YES
- **Bore Depth:** 23.650 m

Time (PM)	Volume (L)	Temp (°C)	pH (pH units)	Elec.Cond (µS/cm)	Dis.Oxygen (mg/L)	Ox-Red Pt. (± mV)	SWL (m TOC)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):	-	+/- 0.05 pH	+/- 3%	+/- 10%	+/- 10 mV	stable			
13:39	1	25.9	6.42	1149	4.17	14.6	22.13		Orange, v. slightly cloudy,
13:42	2	25.3	6.26	1132	1.43	5.1	22.29		no sheen, no odour.
13:45	2.5	25.5	6.24	1131	1.31	4.6	22.35		〃
13:48	3	24.6	6.21	600	1.07	-0.7	22.42		〃
13:51	3.5	24.9	6.19	1119	0.99	6.1	22.51		〃
13:54	4	24.1	6.18	1096	1.05	7.5	22.65		〃
13:57	4.5	24.0	6.15	1087	0.94	9.5	22.79		sampled

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles (Fe^{2+} + metals filtered)

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH02

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 18/3/22
- Round: March 2022

Sampling Information
- Purge Method: Geocentrell low flow
- Sample Method: "
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 30 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 25.325 m — Logic Check: /
- Screen: From: ..... to ..... m — Stick Up: ..... m
- NAPL Check: / — Bore Diam.: 50 mm
- Ref.datum: / — Well Cap Secure? Yes
- Bore Depth: 32.96. m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
9:46	0.5	25.66	3.38	867	6.68	-89.2	21.5		brown, non-transparent solution,
9:50	1.0	25.79	2.59	863	6.69	-94.3	21.3		no sheen, no odour.
9:54	1.5	25.91	2.52	859	6.70	-95.1	21.3		
9:58	2.0	26.00	2.35	853	6.70	-95.4	21.2		
10:02	2.5	26.07	2.39	851	6.71	-95.4	21.2		
10:06	3.0	26.13	2.23	850	6.71	-95.5	21.1		
10:14	4.0	26.29	2.05	850	6.71	-85.3	21.1		stable,
10:20	5.0	26.37	1.95	851	6.72	-85.7	21.1		sample now.

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles collected. Metals + Fe2 filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH04

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 16/3/2022
- Round March 2022

Sampling Information
- Purge Method: (Geocentre) low-flow
- Sample Method: "
- WQ Meter Type: YSI
- Flow Cell: Y / N Pump Depth: 28 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 21.350 m Logic Check: /
- Screen: From: ..... to ..... m Stick Up: ..... m
- NAPL Check: ..... Bore Diam.: 50 mm
- Ref.datum: ..... Well Cap Secure? Yes
- Bore Depth: 32.77 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L .....)	Elec.Cond (uS/cm .....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
2:51	1	21.50	1.76	430.0	6.05	-56.6	22.8		Orange brown cloudy, no odour then,
2:56	1.5	21.47	1.12	432.7	6.02	-61.5	22.5		" slight sheen.
3:01	2.0	21.45	1.07	432.6	6.02	-64.1	22.5		
3:06	2.5	21.49	0.95	435.8	6.03	-65.5	22.4		
3:11	3.0	21.50	0.89	439.2	6.07	-68.6	22.3		
3:16	3.5	21.50	0.87	439.9	6.09	-69.9	22.3		
3:21	4.0	21.50	0.86	439.9	6.06	-72.0	22.3		
3:26	4.5	21.50	0.85	442.0	6.06	-73.2	22.1		
3:31	5.0	21.5	0.80	449.1	6.05	-75.4	22.1		sample now.

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles collected. Metals + Fe2+ filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH06

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 17/3/2022
- Round March 2022

Sampling Information
- Purge Method: QED MP10
- Sample Method: "
- WQ Meter Type: YSI
- Flow Cell: Y / N Pump Depth: 32 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 25.35 m
- Screen: From: ..... to: ..... m
- NAPL Check: .....
- Ref.datum: .....
- Bore Depth: 35.88 m
- Logic Check: ✓
- Stick Up: ..... m
- Bore Diam.: 50 mm
- Well Cap Secure? Yes

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L.....)	Elec.Cond (uS/cm.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
11:50	0.5	25.42	1.01	~~951~~ 944	6.36	-76.6	23.1		brown coloured, turbid solution,
11:53	1.80	25.42	0.94	948	6.34	-83.7	23.2		no odour, no sheen.
11:57	2.0	25.42	0.85	944	6.34	-83.5	22.9		
12:00	3.0	25.42	0.80	942	6.31	-84.3	22.8		
12:03	4.0	25.42	1.06	944	6.30	-84.2	22.8		
12:06	5.0	25.42	0.85	946	6.28	-82.7	22.9		
12:09	6.0	25.42	0.80	946	6.28	-84.2	22.8		
12:12	7.0	25.42	0.80	945	6.27	-84.5	22.9		stable, sample now.

Field QA Checks:
- Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
- Decontamination as per GHD procedure? (Y) / N
- Was sampling equipment pre-cleaned? (Y) / N
- COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Metals + Fe2 filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH08

Job Information

Client: Laing O'Rourke / Sydney Metro
Project: Central Station Main Works
Proj. No.: 2127234
Sampler: T. Nham / E. Smith
Date: 17/03/22
Round March 2022

Sampling Information

Purge Method: Micro purge MP10
Sample Method: Micro purge
WQ Meter Type: YSI
Flow Cell: Y / N Pump Depth: 22 m
WLevel Meter Type: Dip / Fox / Int.Fce / Gge
Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information

SWL: 17.465 m Logic Check: —
Screen: From: — to: — m Stick Up: — m
NAPL Check: — Bore Diam.: 50 mm
Ref.datum: TOC Well Cap Secure? Y
Bore Depth: 35.360 m

Time (9:00.)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L...)	Elec.Cond (µS/cm.)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
9:03	0.5	17.50	1.06	558	6.03	-80.6	21.0		brown/~~orange~~ orange tinge colour,
9:06	1.0	17.49	0.84	588	6.00	-89.1	21.0		no sediment, slight sheen.
9:08	1.5	17.49	0.71	598	6.02	-94.9	21.0		
9:10	2.0	17.48	0.58	602	6.07	-100.4	21.0		
9:12	2.5	17.49	0.47	606	6.11	-105.7	21.0		
9:14	3.0	17.49	0.41	607	6.13	-109.0	21.0		
9:16	3.5	17.49	0.36	608	6.15	-112.4	21.0		
9:18	4.0	17.49	0.32	607	6.14	-114.3	21.0		
9:22	5.0	17.49	0.30	607	6.13	-116.4	21.0		
9:25	6.0	17.49	0.30	607	6.09	-117.2	21.0		
9:28	7.0	17.49	0.28	607	6.08	-120.2	21.0		
9:31	8.0	17.49	0.28	607	6.10	-123.2	21.0		stable, sample now

Field QA Checks:

Air bubbles in vials? Y / N Any violent reactions? Y / N
Decontamination as per GHD procedure? Y / N
Was sampling equipment pre-cleaned? Y / N
COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles collected. Metals + Fe ✓ filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM-BH105

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 16/3/2022
- Round March 2022

Sampling Information
- Purge Method: Peri Pump
- Sample Method: Peri Pump
- WQ Meter Type: YSI
- Flow Cell: Y / N Pump Depth: 8 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 3.480 m
- Screen: From: / to: m
- NAPL Check:
- Ref.datum:
- Bore Depth: 9.70 m
- Logic Check:
- Stick Up: m
- Bore Diam.: 50 mm
- Well Cap Secure? Yes

Time (13:35.)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (mS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
13:38	0.5	3.62	0.35	0.236	5.13	-58.2	21.8		clear, slightly turbid, oily sheen, no odour
13:41	1.0	3.77	0.30	0.236	5.10	-60.7	21.8		
13:44	1.5	3.92	0.23	0.236	5.17	-69.4	21.9		
13:47	2.0	3.97	0.22	0.236	5.14	-70.5	21.9		
13:50	2.5	3.91	0.24	0.236	5.13	-72.1	21.9		
13:52	3.0	3.93	0.27	0.234	5.15	-75.0	21.9		
13:55	3.5	3.91	0.28	0.234	5.17	-77.0	21.9		
13:58	4.0	3.91	0.28	0.234	5.15	-78.5	21.9		stable, sample.

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

QC01 + 9 bottles collected. Metals + Fe2+ filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

DNP

Purging and Sampling Record

Bore ID: SM_DH1285

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 18/3/22
- Round March 2022

Sampling Information
- Purge Method: Peri Pump
- Sample Method: Peri Pump
- WQ Meter Type: YSI
- Flow Cell: Y / N Pump Depth: 6 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 4.44 m
- Screen: From: ..... to ..... m
- NAPL Check: .....
- Ref.datum: .....
- Bore Depth: 6.51 m
- Logic Check: .....
- Stick Up: ..... m
- Bore Diam.: 50 mm
- Well Cap Secure? Yes

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
11:08	0.5	4.53	0.31	615	5.91	-83.8	20.8		brown, non-transparent, no odour,
11:11	1.0	4.56	0.29	609	5.89	-84.9	20.8		no sheen
11:14	1.5	4.57	0.29	610	5.85	-85.4	20.9		
11:17	2.0	4.57	0.28	610	5.85	-87.0	20.8		
11:20	3.0	4.57	0.31	610	5.85	-88.0	20.8		
11:23	4.0	4.57	0.33	609	5.83	-90.3	20.8		
11:26	5.0	4.57	0.31	605	5.88	-93.6	20.8		
11:29	6.0	4.59	0.31	601	5.91	-95.3	20.9		
11:32	7.0	4.62	0.28	596	5.96	-98.6	20.9		stable, sample now

Field QA Checks:
- Air bubbles in vials? Y / N (2) Any violent reactions? Y / N (6)
- Decontamination as per GHD procedure? Y / N (3)
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N (4)

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles, Metals + Fe2+ filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_DH13

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 17/3/22
- Round: March 2022

Sampling Information
- Purge Method: MPID GSP
- Sample Method: LI
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 26.0 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 21.870 m — Logic Check: /
- Screen: From: ..... to ..... m — Stick Up: ..... m
- NAPL Check: ..... — Bore Diam.: 50 mm
- Ref.datum: ..... — Well Cap Secure? Yes
- Bore Depth: 34.07 m

Time (10:24)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
10:24	0.5	22.28	0.67	950	6.15	-86.8	22.3		bright orange-brown colour, ~~[illegible]~~ sediment, no odour, ~~[illegible]~~ sheen, is slight, some reddish sediment.
10:32	1.0	22.45	0.51	944	6.20	-94.7	21.9		
10:36	1.5	22.65	0.44	944	6.21	-98.7	22.1		
10:40	2.0	22.84	0.42	939	6.23	-100.9	22.1		
10:43	2.5	22.98	0.43	937	6.25	-101.9	22.2		
10:46	3.0	23.13	0.47	931	6.28	-102.5	22.2		
10:49	3.5	23.35	0.49	925	6.30	-103.2	22.2		
10:54	4.5	23.57	0.67	909	6.36	-101.9	22.3		
11:00	5.5	23.94	0.80	903	6.41	-99.8	22.2		
11:06	6.5	24.18	0.70	913	6.37	-100.4	22.2		

Field QA Checks:
- Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
- Decontamination as per GHD procedure? (Y) / N
- Was sampling equipment pre-cleaned? (Y) / N
- COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles left. Metals + Fe+ filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: CSM_BH145

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 17/3/22
- Round: March 2022

Sampling Information
- Purge Method: Peri Pump
- Sample Method: Peri "
- WQ Meter Type: YSI
- Flow Cell: Y / N
- Pump Depth: 5.5 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 2.485 m
- Screen: From: / to: m
- NAPL Check:
- Ref.datum:
- Bore Depth: 5.65 m
- Logic Check:
- Stick Up: m
- Bore Diam.: 50 mm
- Well Cap Secure? Yes

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
12:48	1	2.50	0.69	212.2	6.71	-96.5	23.7		Orange brown cloudy no odour/sheen
12:54	2	2.50	0.48	206.0	6.60	-106.3	23.6		"
12:58	3	2.50	0.56	202.3	6.58	-107.5	23.6		"
1:03	4	2.50	0.69	200.6	6.58	-108.2	23.8		"
1:07	5	2.50	0.73	193.9	6.57	-109.6	23.7		"
1:10	6	2.50	0.74	192.5	6.57	-111.2	23.7		"

Field QA Checks:
- Air bubbles in vials? Y / N
- Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

6 bottles, Metals + Ford filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: GASW_BH10

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 18/3/22
- Round March 2022

Sampling Information
- Purge Method: —
- Sample Method: Bailer
- WQ Meter Type: YSI
- Flow Cell: Y / N Pump Depth: —m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 23.632 m Logic Check: —
- Screen: From: —to— m Stick Up: — m
- NAPL Check: — Bore Diam.: 50 mm
- Ref.datum: TOC Well Cap Secure? Y
- Bore Depth: 24.730 m

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (µS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
—		—	1.03	1109	6.87	-161.4	21.7		Bailed, one parameter
									Grey, cloudy, some sediment, sulfur odour, no sheen

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles collected. , Metals + Fe2+ filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_DH047

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 16/3/2022
- Round March 2022

Sampling Information
- Purge Method: Peri Pump
- Sample Method: Peri Pump
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 6 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 3.225 m — Logic Check: /
- Screen: From: / to: m — Stick Up: m
- NAPL Check: — Bore Diam.: 50 mm
- Ref.datum: — Well Cap Secure? Yes
- Bore Depth: 7.030 m

Time (10:14)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (mS/cm)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		stable	+/- 10%	+/- 3%	+/- 0.05 pH	+/- 10 mV	-		
10:17	0.5	3.75	~~3.66~~ 2.54	~~0.178~~ 0.176	4.69	-22.3	20.4		clear water, no odour, no sheen, no sediment.
10:20	1.0	4.02	2.68	0.178	4.71	-24.9	20.4		
10:23	1.5	4.07	2.69	0.177	4.77	-29.7	20.4		
10:26	2.0	4.32	2.75	0.176	4.78	-31.2	20.4		
10:29	2.5	4.65	2.81	0.176	4.85	-34.0	20.4		
10:32	3.0	4.87	2.85	0.176	4.90	-35.9	20.4		
10:35	3.5	5.02	2.82	0.177	4.93	-35.8	20.5		stable sample.

Field QA Checks:
- Air bubbles in vials? Y / (N) Any violent reactions? Y / (N)
- Decontamination as per GHD procedure? (Y) / N
- Was sampling equipment pre-cleaned? (Y) / N
- COC updated? (Y) / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles collected Metals + Filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_BH050

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 16/7/22
- Round March 2022

Sampling Information
- Purge Method: Peri Pump
- Sample Method: Peri Pump
- WQ Meter Type: YSI
- Flow Cell: Y / N
- Pump Depth: 2.7 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 2.075 m
- Screen: From:.....to..... m
- NAPL Check:.....
- Ref.datum:.....
- Bore Depth: 2.79 m
- Logic Check:.....
- Stick Up:..... m
- Bore Diam.: 50 mm
- Well Cap Secure? Y

Time (.....)	Volume (L)	SWL mbtoc	Dis.Oxygen (.....)	Elec.Cond (.....)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
12:30	—	—	5.72	0.223	4.78	5.2	22.7		one parameter taken after sampling as <1 metre of water in well.

Field QA Checks:
- Air bubbles in vials? Y / N Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

9 bottles collected. Metals + Fe2+ filtered.

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Purging and Sampling Record

Bore ID: SRT_BH052

Job Information
- Client: Laing O'Rourke / Sydney Metro
- Project: Central Station Main Works
- Proj. No.: 2127234
- Sampler: T. Nham / E. Smith
- Date: 16/3/22
- Round March 2022

Sampling Information
- Purge Method: Peri pump
- Sample Method: Peri pump
- WQ Meter Type: YSI
- Flow Cell: Y / N — Pump Depth: 7.6 m
- WLevel Meter Type: Dip / Fox / Int.Fce / Gge
- Field Filtered? Y / N (filter vessel, disposable filter/syringe)

Bore Information
- SWL: 4.836 m — Logic Check: Y
- Screen: From: — to — m — Stick Up: — m
- NAPL Check: — — Bore Diam.: 50 mm
- Ref.datum: TOC — Well Cap Secure? Y
- Bore Depth: 7.920 m

Time (11:15)	Volume (L)	SWL mbtoc	Dis.Oxygen (mg/L)	Elec.Cond (mS)	pH (pH units)	Ox-Red Pt. (± mV)	Temp (°C)	(.....)	Comment: Colour, turbidity, sediment load, sheen, odour, flow rate, purged dry?
Stable when (3 consecutive readings):		*stable*	*+/- 10%*	*+/- 3%*	*+/- 0.05 pH*	*+/- 10 mV*	-		
11:18	0.5	5.29	5.76	0.224	4.81	-8.5	20.3		clear, no sediment load, no odour, no sheen
11:21	1.0	5.39	5.82	0.223	4.79	-6.9	20.4		
11:24	1.5	5.47	5.72	0.223	4.77	-5.8	20.5		
11:27	2.0	5.55	5.35	0.223	4.79	-4.0	20.5		
11:30	2.5	5.60	5.22	0.224	5.31	-4.1	20.5		
11:33	3.0	5.67	4.95	0.225	5.06	-3.4	20.5		
11:36	3.5	5.76	4.55	0.229	4.84	-5.2	20.5		
11:39	4.0	5.82	4.20	0.233	4.86	-5.8	20.5		
11:42	4.5	5.86	4.06	0.241	4.89	-9.1	20.5		
11:45	5.0	5.90	4.15	0.241	4.92	-10.2	20.5		

Field QA Checks:
- Air bubbles in vials? Y / N — Any violent reactions? Y / N
- Decontamination as per GHD procedure? Y / N
- Was sampling equipment pre-cleaned? Y / N
- COC updated? Y / N

Parameters	BTEX	TPH	PAH	CHC	PCB	OCP	OPP	Tot. Metal	Biol.				
Preservatives													

Comment: Duplicate samples collected, bottles used, access, condition of headworks etc

QC02 duplicate, 9 bottles collected. # Metals + Fe2+ filtered

Purge Volumes

Casing Int. Dia (mm)	50	100	150
Vol (L/m of casing)	2.0	7.9	17.7

*Double for gravel pack

Appendix F
Laboratory analytical reports

eurofins | mgt

☑ **Sydney**
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☐ **Brisbane**
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☐ **Melbourne**
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
Email: enquiries.melb@mgtlabmark.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham / Charlotte Gray	**Purchase Order :** 2127234	**COC Number :**
Office Address :	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2020/2021
Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Email for results :** terry.nham@ghd.com henry.luo@ghd.com charlotte.gray@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number: S0356

Analytes

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols		TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (<0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)		Ferrous Iron	Manganese	pH	TDS	TSS		TRH C6-C10 / BTEX	8 Metals (Total)				
1	CSM_BH02	27/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
2	CSM_BH04	27/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
3	CSM_BH06	28/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
4	CSM_BH08	27/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
5	CSM_BH10S	27/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
6	CSM_BH12S	28/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
7	SRT_BH047	29/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
8	SRT_BH052	29/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
9	GASW_BH10	29/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
10	GASW_BH11	28/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
11	GASW_BH23	28/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
12	GASW_BH25A	28/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
13	QC01	29/10/21	Water	X	X																			
14	RB01	28/10/21	Water																X					
15	Trip Blank	27/10/21	Water															X						
16	Trip Spike	27/10/21	Water															X						

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

	500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag	Sample comments:
1	1		4		2	2			
2	1		4		2	2			
3	1		4		2	2			
4	1		4		2	2			
5	1		4		2	2			
6	1		4		2	2			
7	1		4		2	2			
8	1		4		2	2			
9	1		4		2	2			
10	1		4		2	2			
11	1		4		2	2			
12	1		4		2	2			
13			1		2	2			
14			1						
15					2				
16					2				

Laboratory Staff

Relinquished By: Terry Nham - GHD
Date & Time : 29/10/2021
Signature:

Received By: MR
Date & Time : 29/10/21 12:57PM
Signature:

Turn around time

1 DAY ☐ 2 DAY ☐ 3 DAY ☐
5 DAY ☒ 10 DAY ☐ Other:

Method Of Shipment

☐ Courier
☒ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arrival: 5.3°c

Report number: 836474

eurofins | mgt

☑ **Sydney**
Unit F3 - 6 Building F, 16 Mars Road, Lane Cove
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CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham / Charlotte Gray	**Purchase Order :** 2127234	**COC Number :**
Office Address :	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2020/2021
Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Email for results :** terry.nham@ghd.com henry.luo@ghd.com charlotte.gray@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number: S0756

Analytes

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols		TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (<0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)		Ferrous Iron	Manganese	pH	TDS	TSS	TRH C6-C10 / BTEX	8 Metals (Total)				
1	~~SRT_BH06~~		~~Water~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~						
2	~~QC02~~		~~Water~~	~~PLEASE SEND TO ALS WITH ATTACHED COC~~																			
3	CSM_BH13	28/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X						
4	CSM_BH14S	28/10/21	Water	X	X	X		X	X	X	X		X	X	X	X	X						
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							
13																							
14																							
15																							
16																							

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

	500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag	Sample comments:
1	~~1~~		~~4~~		~~2~~	~~2~~			
2			~~1~~		~~2~~	~~2~~			
3	1		4		2	2			
4	1		4		2	2			

Laboratory Staff

Relinquished By: Terry Nham - GHD
Date & Time : 29/10/2021
Signature:

Received By: MR
Date & Time : 29/10/21 12:57PM
Signature:

Turn around time

1 DAY ☐ 2 DAY ☐ 3 DAY ☐
5 DAY ☒ 10 DAY ☐ Other:

Method Of Shipment

☐ Courier
☒ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arrival: 5.3°C

Report number: 836474

eurofins | Environment Testing

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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	GHD Pty Ltd NSW
Contact name:	Henry Luo
Project name:	CENTRAL
Project ID:	2127234
Turnaround time:	5 Day
Date/Time received	Oct 29, 2021 12:57 PM
Eurofins reference	836474

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 5.3 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Henry Luo - henry.luo@ghd.com.

Note: A copy of these results will also be delivered to the general GHD Pty Ltd NSW email address.

GHD Pty Ltd NSW
Level 15, 133 Castlereagh Street
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Henry Luo**

Report **836474-W-V2**
Project name CENTRAL
Project ID 2127234
Received Date Oct 29, 2021

Client Sample ID			**CSM_BH02**	**CSM_BH04**	**CSM_BH06**	**CSM_BH08**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S21-Oc64681**	**S21-Oc64682**	**S21-Oc64683**	**S21-Oc64684**
Date Sampled			**Oct 27, 2021**	**Oct 27, 2021**	**Oct 28, 2021**	**Oct 27, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	88	109	104	110
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			CSM_BH02	CSM_BH04	CSM_BH06	CSM_BH08
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Oc64681	S21-Oc64682	S21-Oc64683	S21-Oc64684
Date Sampled			Oct 27, 2021	Oct 27, 2021	Oct 28, 2021	Oct 27, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	56	85	45	114
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	119	119	98	64
p-Terphenyl-d14 (surr.)	1	%	116	139	66	64
Ammonia (as N)	0.01	mg/L	0.02	0.04	0.07	0.24
Chloride	1	mg/L	100	90	220	110
Cyanide (total)	0.004	mg/L	< 0.004	0.004	0.004	0.004
Ferrous Iron - Fe2+	0.05	mg/L	< 0.05	3.7	0.75	6.0
pH (at 25 °C)	0.1	pH Units	7.8	7.2	7.9	8.1

Client Sample ID			CSM_BH02	CSM_BH04	CSM_BH06	CSM_BH08
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Oc64681	S21-Oc64682	S21-Oc64683	S21-Oc64684
Date Sampled			Oct 27, 2021	Oct 27, 2021	Oct 28, 2021	Oct 27, 2021
Test/Reference	LOR	Unit				
Sulphate (as SO4)	5	mg/L	33	34	27	89
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	< 10	80	500	280
Total Suspended Solids Dried at 103–105°C	5	mg/L	18000	6400	120	20
Hardness mg equivalent CaCO3/L	5	mg/L	340	100	220	110
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	190	87	140	110
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	190	87	140	110
Alkali Metals						
Calcium	0.5	mg/L	47	10	33	13
Magnesium	0.5	mg/L	55	19	34	18
Potassium	0.5	mg/L	4.1	2.5	4.4	4.1
Sodium	0.5	mg/L	85	73	110	83
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	0.003	< 0.001	0.009	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.25	0.47	0.41	0.39
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.004	0.011	0.005	0.002
Zinc (filtered)	0.005	mg/L	0.011	0.015	0.040	< 0.005

Client Sample ID			CSM_BH10S	CSM_BH12S	SRT_BH047	SRT_BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Oc64685	S21-Oc64686	S21-Oc64687	S21-Oc64688
Date Sampled			Oct 27, 2021	Oct 28, 2021	Oct 29, 2021	Oct 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			CSM_BH10S	CSM_BH12S	SRT_BH047	SRT_BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Oc64685	S21-Oc64686	S21-Oc64687	S21-Oc64688
Date Sampled			Oct 27, 2021	Oct 28, 2021	Oct 29, 2021	Oct 29, 2021
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	118	103	86	85
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	131	113	77	113
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Client Sample ID			CSM_BH10S	CSM_BH12S	SRT_BH047	SRT_BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Oc64685	S21-Oc64686	S21-Oc64687	S21-Oc64688
Date Sampled			Oct 27, 2021	Oct 28, 2021	Oct 29, 2021	Oct 29, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons (Trace level)						
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	73	64	131	64
p-Terphenyl-d14 (surr.)	1	%	131	86	67	64
Ammonia (as N)	0.01	mg/L	0.01	0.12	0.11	0.08
Chloride	1	mg/L	24	74	20	48
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	< 0.05	8.8	< 0.05	< 0.05
pH (at 25 °C)	0.1	pH Units	6.9	7.5	6.4	6.7
Sulphate (as SO4)	5	mg/L	89	160	21	40
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	140	300	220	240
Total Suspended Solids Dried at 103–105°C	5	mg/L	78	74	26	190
Hardness mg equivalent CaCO3/L	5	mg/L	35	32	81	48
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	60	< 20	40
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	< 20	60	< 20	40
Alkali Metals						
Calcium	0.5	mg/L	3.9	2.3	18	13
Magnesium	0.5	mg/L	6.2	6.5	8.6	3.6
Potassium	0.5	mg/L	2.5	2.1	0.7	1.8
Sodium	0.5	mg/L	33	120	23	49
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	0.002	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.59	0.84	0.015	0.006
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.002	0.027	0.003	< 0.001
Zinc (filtered)	0.005	mg/L	< 0.005	0.11	0.022	< 0.005

Client Sample ID			GASW_BH10	GASW_BH11	GASW_BH23	GASW_BH25A
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Oc64689	S21-Oc64690	S21-Oc64691	S21-Oc64692
Date Sampled			Oct 29, 2021	Oct 28, 2021	Oct 28, 2021	Oct 28, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	0.06	0.19
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	0.06	0.23
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	0.02	0.09
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	0.036	0.070
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.033
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	0.003	0.010
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	0.016
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.011
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	0.028
4-Bromofluorobenzene (surr.)	1	%	75	104	80	110
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	113	113	108	102
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			GASW_BH10	GASW_BH11	GASW_BH23	GASW_BH25A
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Oc64689	S21-Oc64690	S21-Oc64691	S21-Oc64692
Date Sampled			Oct 29, 2021	Oct 28, 2021	Oct 28, 2021	Oct 28, 2021
Test/Reference	LOR	Unit				
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	66	54	130	109
p-Terphenyl-d14 (surr.)	1	%	131	131	131	113
Ammonia (as N)	0.01	mg/L	0.06	0.19	0.52	0.24
Chloride	1	mg/L	170	74	54	38
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	< 0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	5.4	0.13	11	< 0.05
pH (at 25 °C)	0.1	pH Units	7.8	7.7	7.5	7.4
Sulphate (as SO4)	5	mg/L	8.7	56	160	19
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	660	240	480	130
Total Suspended Solids Dried at 103–105°C	5	mg/L	1100	280	16	5.4
Hardness mg equivalent CaCO3/L	5	mg/L	410	240	390	84
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	400	95	250	72
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	400	95	250	72
Alkali Metals						
Calcium	0.5	mg/L	90	76	140	29
Magnesium	0.5	mg/L	44	11	10	2.7
Potassium	0.5	mg/L	12	1.9	10	2.8
Sodium	0.5	mg/L	120	34	20	13
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.001	< 0.001	0.003	0.004
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	0.001	< 0.001	0.003

Client Sample ID			GASW_BH10	GASW_BH11	GASW_BH23	GASW_BH25A
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Oc64689	S21-Oc64690	S21-Oc64691	S21-Oc64692
Date Sampled			Oct 29, 2021	Oct 28, 2021	Oct 28, 2021	Oct 28, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.10	0.086	0.38	< 0.005
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	0.001	< 0.001	< 0.001
Zinc (filtered)	0.005	mg/L	< 0.005	0.063	0.022	< 0.005

Client Sample ID			QC01	RB01	TRIP BLANK	TRIP SPIKE
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Oc64693	S21-Oc64694	S21-Oc64695	S21-Oc64696
Date Sampled			Oct 28, 2021	Oct 28, 2021	Oct 27, 2021	Oct 27, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	-	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	-	-
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	-	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-	-
BTEX						
Benzene	0.001	mg/L	< 0.001	-	< 0.001	-
Toluene	0.001	mg/L	< 0.001	-	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	-	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	120	-	85	-
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	-	-	-
Acenaphthylene	0.00001	mg/L	< 0.00001	-	-	-
Anthracene	0.00001	mg/L	< 0.00001	-	-	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	-	-	-
Chrysene	0.00001	mg/L	< 0.00001	-	-	-
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	-	-	-
Fluoranthene	0.00001	mg/L	< 0.00001	-	-	-
Fluorene	0.00001	mg/L	< 0.00001	-	-	-
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	-	-	-
Naphthalene	0.00001	mg/L	< 0.00001	-	-	-

Client Sample ID			QC01	RB01	TRIP BLANK	TRIP SPIKE
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Oc64693	S21-Oc64694	S21-Oc64695	S21-Oc64696
Date Sampled			Oct 28, 2021	Oct 28, 2021	Oct 27, 2021	Oct 27, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons (Trace level)						
Phenanthrene	0.00001	mg/L	< 0.00001	-	-	-
Pyrene	0.00001	mg/L	< 0.00001	-	-	-
Total PAH*	0.00001	mg/L	< 0.00001	-	-	-
2-Fluorobiphenyl (surr.)	1	%	58	-	-	-
p-Terphenyl-d14 (surr.)	1	%	65	-	-	-
TRH C6-C10	1	%	-	-	-	76
Heavy Metals						
Arsenic	0.001	mg/L	-	< 0.001	-	-
Arsenic (filtered)	0.001	mg/L	< 0.001	-	-	-
Cadmium	0.0002	mg/L	-	< 0.0002	-	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	-	-	-
Chromium	0.001	mg/L	-	< 0.001	-	-
Chromium (filtered)	0.001	mg/L	< 0.001	-	-	-
Copper	0.001	mg/L	-	< 0.001	-	-
Copper (filtered)	0.001	mg/L	< 0.001	-	-	-
Lead	0.001	mg/L	-	< 0.001	-	-
Lead (filtered)	0.001	mg/L	< 0.001	-	-	-
Mercury	0.0001	mg/L	-	< 0.0001	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	-	-	-
Nickel	0.001	mg/L	-	< 0.001	-	-
Nickel (filtered)	0.001	mg/L	< 0.001	-	-	-
Zinc	0.005	mg/L	-	< 0.005	-	-
Zinc (filtered)	0.005	mg/L	< 0.005	-	-	-
Total Recoverable Hydrocarbons						
Naphthalene	1	%	-	-	-	110
TRH C6-C9	1	%	-	-	-	76
BTEX						
Benzene	1	%	-	-	-	120
Ethylbenzene	1	%	-	-	-	110
m&p-Xylenes	1	%	-	-	-	110
o-Xylene	1	%	-	-	-	100
Toluene	1	%	-	-	-	110
Xylenes - Total	1	%	-	-	-	100
4-Bromofluorobenzene (surr.)	1	%	-	-	-	121

Client Sample ID			CSM_BH13	CSM_BH14S
Sample Matrix			Water	Water
Eurofins Sample No.			S21-Oc64697	S21-Oc64698
Date Sampled			Oct 28, 2021	Oct 28, 2021
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01

Client Sample ID			CSM_BH13	CSM_BH14S
Sample Matrix			Water	Water
Eurofins Sample No.			S21-Oc64697	S21-Oc64698
Date Sampled			Oct 28, 2021	Oct 28, 2021
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C10	0.02	mg/L	< 0.02	0.04
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	0.04
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1
BTEX				
Benzene	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	101	121
Phenols (Halogenated)				
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01
Phenols (non-Halogenated)				
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	71	113
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)				
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)				
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1

Client Sample ID			CSM_BH13	CSM_BH14S
Sample Matrix			Water	Water
Eurofins Sample No.			S21-Oc64697	S21-Oc64698
Date Sampled			Oct 28, 2021	Oct 28, 2021
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons (Trace level)				
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	67	65
p-Terphenyl-d14 (surr.)	1	%	71	53
Ammonia (as N)	0.01	mg/L	0.12	0.09
Chloride	1	mg/L	210	26
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	2.7	0.08
pH (at 25 °C)	0.1	pH Units	7.1	6.9
Sulphate (as SO4)	5	mg/L	51	13
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	780	150
Total Suspended Solids Dried at 103–105°C	5	mg/L	78	8.6
Hardness mg equivalent CaCO3/L	5	mg/L	260	58
Alkalinity (speciated)				
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	180	45
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	180	45
Alkali Metals				
Calcium	0.5	mg/L	60	17
Magnesium	0.5	mg/L	26	3.6
Potassium	0.5	mg/L	5.3	1.8
Sodium	0.5	mg/L	140	13
Heavy Metals				
Arsenic (filtered)	0.001	mg/L	0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.52	< 0.005
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.011	< 0.001
Zinc (filtered)	0.005	mg/L	0.017	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B7 (filtered metals/PAH trace level)			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Nov 04, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Nov 04, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Nov 04, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Nov 04, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	Nov 04, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Metals M8 filtered	Melbourne	Nov 04, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Recoverable Hydrocarbons	Melbourne	Nov 04, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Phenols (Speciated)			
Phenols (Halogenated)	Melbourne	Nov 04, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Nov 04, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Melbourne	Nov 04, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Melbourne	Nov 04, 2021	7 Days
- Method: TRH C6-C36 (Silica Gel Cleanup) - MGT 100A			
Ammonia (as N)	Melbourne	Nov 04, 2021	28 Days
- Method: APHA 4500-NH3 Ammonia Nitrogen by FIA			
Cyanide (total)	Melbourne	Nov 11, 2021	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
Ferrous Iron - Fe2+	Melbourne	Nov 04, 2021	7 Days
- Method: LTM-INO-4190 Ferrous Iron in Water by Discrete Analyser			
pH (at 25 °C)	Melbourne	Nov 04, 2021	0 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Total Suspended Solids Dried at 103–105°C	Melbourne	Nov 04, 2021	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Metals M8	Melbourne	Nov 04, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Heavy Metals (filtered)	Melbourne	Nov 04, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Melbourne	Nov 04, 2021	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Sulphate (as SO4)	Melbourne	Nov 04, 2021	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Nov 04, 2021	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Dissolved Solids Dried at 180°C ± 2°C	Melbourne	Nov 04, 2021	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Eurofins Suite B11D: Na/K/Ca/Mg and Hardness			
Hardness mg equivalent CaCO3/L	Melbourne	Nov 04, 2021	28 Days
- Method: APHA 2340B Hardness by Calculation			
Alkali Metals	Melbourne	Nov 04, 2021	180 Days
- Method: LTM-MET-3010 Alkali Metals Sulfur Silicon Phosphorus by ICP-AES			

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Company Name: GHD Pty Ltd NSW
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Project Name: CENTRAL
Project ID: 2127234

Order No.: 2127234
Report #: 836474
Phone: 02 9239 7100
Fax: 02 9239 7199

Received: Oct 29, 2021 12:57 PM
Due: Nov 5, 2021
Priority: 5 Day
Contact Name: Henry Luo

Eurofins Analytical Services Manager : John Nguyen

Sample Detail	Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103–105°C	Metals M8	Phenols (Speciated)	TRH (after Silica Gel cleanup)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B7 (filtered metals/PAH trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254	X	X	X	X	X	X	X	X	X	X	X	X		X	X
Sydney Laboratory - NATA # 1261 Site # 18217													X		
Brisbane Laboratory - NATA # 1261 Site # 20794															
Mayfield Laboratory - NATA # 1261 Site # 25079															
Perth Laboratory - NATA # 2377 Site # 2370															
External Laboratory															

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID														
1	CSM_BH02	Oct 27, 2021		Water	S21-Oc64681	X	X	X	X	X	X		X	X		X	X		X	X
2	CSM_BH04	Oct 27, 2021		Water	S21-Oc64682	X	X	X	X	X	X		X	X		X	X		X	X
3	CSM_BH06	Oct 28, 2021		Water	S21-Oc64683	X	X	X	X	X	X		X	X		X	X		X	X
4	CSM_BH08	Oct 27, 2021		Water	S21-Oc64684	X	X	X	X	X	X		X	X		X	X		X	X
5	CSM_BH10S	Oct 27, 2021		Water	S21-Oc64685	X	X	X	X	X	X		X	X		X	X		X	X
6	CSM_BH12S	Oct 28, 2021		Water	S21-Oc64686	X	X	X	X	X	X		X	X		X	X		X	X
7	SRT_BH047	Oct 29, 2021		Water	S21-Oc64687	X	X	X	X	X	X		X	X		X	X		X	X
8	SRT_BH052	Oct 29, 2021		Water	S21-Oc64688	X	X	X	X	X	X		X	X		X	X		X	X
9	GASW_BH10	Oct 29, 2021		Water	S21-Oc64689	X	X	X	X	X	X		X	X		X	X		X	X

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Project Name: CENTRAL
Project ID: 2127234

Order No.: 2127234
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Phone: 02 9239 7100
Fax: 02 9239 7199

Received: Oct 29, 2021 12:57 PM
Due: Nov 5, 2021
Priority: 5 Day
Contact Name: Henry Luo

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103–105°C	Metals M8	Phenols (Speciated)	TRH (after Silica Gel cleanup)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B7 (filtered metals/PAH trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X		X	X
Sydney Laboratory - NATA # 1261 Site # 18217																		X		
Brisbane Laboratory - NATA # 1261 Site # 20794																				
Mayfield Laboratory - NATA # 1261 Site # 25079																				
Perth Laboratory - NATA # 2377 Site # 2370																				
External Laboratory																				
10	GASW_BH11	Oct 28, 2021		Water	S21-Oc64690	X	X	X	X	X	X		X	X		X	X		X	X
11	GASW_BH23	Oct 28, 2021		Water	S21-Oc64691	X	X	X	X	X	X		X	X		X	X		X	X
12	GASW_BH25A	Oct 28, 2021		Water	S21-Oc64692	X	X	X	X	X	X		X	X		X	X		X	X
13	QC01	Oct 28, 2021		Water	S21-Oc64693														X	
14	RB01	Oct 28, 2021		Water	S21-Oc64694							X								
15	TRIP BLANK	Oct 27, 2021		Water	S21-Oc64695										X					
16	TRIP SPIKE	Oct 27, 2021		Water	S21-Oc64696													X		
17	CSM_BH13	Oct 28, 2021		Water	S21-Oc64697	X	X	X	X	X	X		X	X		X	X		X	X
18	CSM_BH14S	Oct 28, 2021		Water	S21-Oc64698	X	X	X	X	X	X		X	X		X	X		X	X
Test Counts						14	14	14	14	14	14	1	14	14	1	14	14	1	15	14

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs..

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM where no positive PFAS results have been reported have been reviewed and no data was affected.

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QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	mg/L	< 0.00001			0.00001	Pass	
Acenaphthylene	mg/L	< 0.00001			0.00001	Pass	
Anthracene	mg/L	< 0.00001			0.00001	Pass	
Benz(a)anthracene	mg/L	< 0.00001			0.00001	Pass	
Benzo(a)pyrene	mg/L	< 0.00001			0.00001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.00001			0.00001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Chrysene	mg/L	< 0.00001			0.00001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.00001			0.00001	Pass	
Fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Fluorene	mg/L	< 0.00001			0.00001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.00001			0.00001	Pass	
Naphthalene	mg/L	< 0.00001			0.00001	Pass	
Phenanthrene	mg/L	< 0.00001			0.00001	Pass	
Pyrene	mg/L	< 0.00001			0.00001	Pass	
Total PAH*	mg/L	-			0.00001	N/A	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Chloride	mg/L	< 1			1	Pass	
Cyanide (total)	mg/L	< 0.004			0.004	Pass	
Ferrous Iron - Fe2+	mg/L	< 0.05			0.05	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	< 10			10	Pass	
Total Suspended Solids Dried at 103–105°C	mg/L	< 5			5	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	103			70-130	Pass	
TRH C10-C14	%	87			70-130	Pass	
Naphthalene	%	84			70-130	Pass	
TRH C6-C10	%	103			70-130	Pass	
TRH >C10-C16	%	89			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	104			70-130	Pass	
Toluene	%	88			70-130	Pass	
Ethylbenzene	%	103			70-130	Pass	
m&p-Xylenes	%	98			70-130	Pass	
Xylenes - Total*	%	99			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	97			25-140	Pass	
4-Chloro-3-methylphenol	%	95			25-140	Pass	
Pentachlorophenol	%	80			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
4-Nitrophenol	%	80			25-140	Pass	
Phenol	%	99			25-140	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	89			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	87			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	%	123			70-130	Pass	
Acenaphthylene	%	81			70-130	Pass	
Anthracene	%	116			70-130	Pass	
Benz(a)anthracene	%	119			70-130	Pass	
Benzo(a)pyrene	%	118			70-130	Pass	
Benzo(b&j)fluoranthene	%	96			70-130	Pass	
Benzo(g.h.i)perylene	%	103			70-130	Pass	
Benzo(k)fluoranthene	%	93			70-130	Pass	
Chrysene	%	100			70-130	Pass	
Dibenz(a.h)anthracene	%	113			70-130	Pass	
Fluoranthene	%	106			70-130	Pass	
Fluorene	%	111			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	113			70-130	Pass	
Naphthalene	%	115			70-130	Pass	
Phenanthrene	%	101			70-130	Pass	
Pyrene	%	103			70-130	Pass	
LCS - % Recovery							
Ammonia (as N)	%	99			70-130	Pass	
Chloride	%	109			70-130	Pass	
Cyanide (total)	%	111			70-130	Pass	
Ferrous Iron - Fe2+	%	109			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Sulphate (as SO4)	%	130			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	97			70-130	Pass	
Total Suspended Solids Dried at 103–105°C	%	82			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	90			70-130	Pass	
Total Alkalinity (as CaCO3)	%	96			70-130	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	94			80-120	Pass	
Magnesium	%	93			80-120	Pass	
Potassium	%	90			80-120	Pass	
Sodium	%	96			80-120	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	102			80-120	Pass	
Cadmium	%	92			80-120	Pass	
Chromium	%	104			80-120	Pass	
Copper	%	98			80-120	Pass	
Lead	%	87			80-120	Pass	
Mercury	%	83			80-120	Pass	
Nickel	%	100			80-120	Pass	
Zinc	%	102			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
				Result 1					
Cyanide (total)	B21-No03615	NCP	%	109			70-130	Pass	
Ferrous Iron - Fe2+	S21-Oc64681	CP	%	99			70-130	Pass	
Total Suspended Solids Dried at 103–105°C	M21-No13135	NCP	%	79			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	B21-No03619	NCP	%	119			75-125	Pass	
Magnesium	B21-No03619	NCP	%	92			75-125	Pass	
Potassium	B21-No03619	NCP	%	86			75-125	Pass	
Sodium	B21-No03619	NCP	%	90			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S21-Oc64681	CP	%	102			75-125	Pass	
Cadmium (filtered)	S21-Oc64681	CP	%	99			75-125	Pass	
Chromium (filtered)	S21-Oc64681	CP	%	101			75-125	Pass	
Copper (filtered)	S21-Oc64681	CP	%	97			75-125	Pass	
Lead (filtered)	S21-Oc64681	CP	%	96			75-125	Pass	
Manganese (filtered)	S21-Oc64681	CP	%	79			75-125	Pass	
Mercury (filtered)	S21-Oc64681	CP	%	96			75-125	Pass	
Nickel (filtered)	S21-Oc64681	CP	%	98			75-125	Pass	
Zinc (filtered)	S21-Oc64681	CP	%	101			75-125	Pass	
Spike - % Recovery									
				Result 1					
Ammonia (as N)	S21-Oc64683	CP	%	88			70-130	Pass	
Spike - % Recovery									
				Result 1					
Chloride	S21-Oc64685	CP	%	100			70-130	Pass	
Sulphate (as SO4)	S21-Oc64685	CP	%	87			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M21-No08012	NCP	%	113			70-130	Pass	
Naphthalene	M21-No08012	NCP	%	115			70-130	Pass	
TRH C6-C10	M21-No08012	NCP	%	113			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M21-No08012	NCP	%	99			70-130	Pass	
Toluene	M21-No08012	NCP	%	110			70-130	Pass	
Ethylbenzene	M21-No08012	NCP	%	116			70-130	Pass	
m&p-Xylenes	M21-No08012	NCP	%	105			70-130	Pass	
o-Xylene	M21-No08012	NCP	%	119			70-130	Pass	
Xylenes - Total*	M21-No08012	NCP	%	110			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S21-Oc64691	CP	%	96			75-125	Pass	
Cadmium (filtered)	S21-Oc64691	CP	%	96			75-125	Pass	
Chromium (filtered)	S21-Oc64691	CP	%	93			75-125	Pass	
Copper (filtered)	S21-Oc64691	CP	%	93			75-125	Pass	
Lead (filtered)	S21-Oc64691	CP	%	94			75-125	Pass	
Mercury (filtered)	S21-Oc64691	CP	%	86			75-125	Pass	
Nickel (filtered)	S21-Oc64691	CP	%	94			75-125	Pass	
Zinc (filtered)	S21-Oc64691	CP	%	93			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S21-Oc64692	CP	%	122			70-130	Pass	
TRH >C10-C16	S21-Oc64692	CP	%	127			70-130	Pass	
Spike - % Recovery									
TRH - 2013 NEPM Fractions (after silica gel clean-up)				Result 1					
TRH >C10-C16 (after silica gel clean-up)	S21-Oc64692	CP	%	117			70-130	Pass	
Spike - % Recovery									
TRH - 1999 NEPM Fractions (after silica gel clean-up)				Result 1					
TRH C10-C14 (after silica gel clean-up)	S21-Oc64692	CP	%	111			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1					
Acenaphthene	S21-Oc64692	CP	%	106			70-130	Pass	
Acenaphthylene	S21-Oc64692	CP	%	105			70-130	Pass	
Anthracene	S21-Oc64692	CP	%	91			70-130	Pass	
Benz(a)anthracene	S21-Oc64692	CP	%	116			70-130	Pass	
Benzo(b&j)fluoranthene	S21-Oc64692	CP	%	93			70-130	Pass	
Benzo(g.h.i)perylene	S21-Oc64692	CP	%	106			70-130	Pass	
Benzo(k)fluoranthene	S21-Oc64692	CP	%	72			70-130	Pass	
Chrysene	S21-Oc64692	CP	%	94			70-130	Pass	
Dibenz(a.h)anthracene	S21-Oc64692	CP	%	87			70-130	Pass	
Fluoranthene	S21-Oc64692	CP	%	105			70-130	Pass	
Fluorene	S21-Oc64692	CP	%	110			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S21-Oc64692	CP	%	81			70-130	Pass	
Naphthalene	S21-Oc64692	CP	%	108			70-130	Pass	
Phenanthrene	S21-Oc64692	CP	%	114			70-130	Pass	
Pyrene	S21-Oc64692	CP	%	98			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M21-Oc61744	NCP	%	99			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cadmium	M21-Oc61744	NCP	%	96			75-125	Pass	
Chromium	M21-Oc61744	NCP	%	99			75-125	Pass	
Copper	M21-Oc61744	NCP	%	98			75-125	Pass	
Lead	M21-Oc61744	NCP	%	96			75-125	Pass	
Mercury	M21-Oc61744	NCP	%	102			75-125	Pass	
Nickel	M21-Oc61744	NCP	%	99			75-125	Pass	
Zinc	M21-Oc61744	NCP	%	95			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Oc64681	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S21-Oc64681	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S21-Oc64681	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C10-C16	S21-Oc64681	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S21-Oc64681	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S21-Oc64681	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
TRH - 2013 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH >C10-C16 (after silica gel clean-up)	S21-Oc64681	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34 (after silica gel clean-up)	S21-Oc64681	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40 (after silica gel clean-up)	S21-Oc64681	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
TRH - 1999 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH C10-C14 (after silica gel clean-up)	S21-Oc64681	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28 (after silica gel clean-up)	S21-Oc64681	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36 (after silica gel clean-up)	S21-Oc64681	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C10-C36 (Total) (after silica gel clean-up)	S21-Oc64681	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	S21-Oc64681	CP	mg/L	< 0.004	< 0.004	<1	30%	Pass	
Ferrous Iron - Fe2+	S21-Oc64681	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	M21-Oc58242	NCP	mg/L	1100	920	19	30%	Pass	
Total Suspended Solids Dried at 103–105°C	M21-No13135	NCP	mg/L	29	30	1.0	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	B21-No03619	NCP	mg/L	110	120	9.0	30%	Pass	
Magnesium	B21-No03619	NCP	mg/L	36	26	33	30%	Fail	Q15
Potassium	B21-No03619	NCP	mg/L	18	18	1.0	30%	Pass	
Sodium	B21-No03619	NCP	mg/L	52	42	20	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-Oc64681	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S21-Oc64681	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-Oc64681	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S21-Oc64681	CP	mg/L	0.003	< 0.001	150	30%	Fail	Q15
Lead (filtered)	S21-Oc64681	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	S21-Oc64681	CP	mg/L	0.25	0.26	2.0	30%	Pass	
Mercury (filtered)	S21-Oc64681	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Nickel (filtered)	S21-Oc64681	CP	mg/L	0.004	0.004	<1	30%	Pass	
Zinc (filtered)	S21-Oc64681	CP	mg/L	0.011	0.013	14	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S21-Oc64683	CP	mg/L	0.07	0.07	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	S21-Oc64685	CP	mg/L	24	22	8.0	30%	Pass	
Ferrous Iron - Fe2+	S21-Oc64685	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Sulphate (as SO4)	S21-Oc64685	CP	mg/L	89	68	26	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
pH (at 25 °C)	S21-Oc64687	CP	pH Units	6.4	6.4	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S21-Oc64687	CP	mg/L	< 20	< 20	<1	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S21-Oc64687	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S21-Oc64687	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S21-Oc64687	CP	mg/L	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
pH (at 25 °C)	S21-Oc64688	CP	pH Units	6.7	6.8	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S21-Oc64688	CP	mg/L	40	39	2.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S21-Oc64688	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S21-Oc64688	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S21-Oc64688	CP	mg/L	40	39	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M21-No08321	NCP	mg/L	0.39	0.40	3.0	30%	Pass	
TRH C10-C14	S21-Oc64691	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Naphthalene	M21-No08321	NCP	mg/L	0.14	0.16	8.0	30%	Pass	
TRH C6-C10	M21-No08321	NCP	mg/L	0.84	0.89	6.0	30%	Pass	
TRH >C10-C16	S21-Oc64691	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M21-No08321	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M21-No08321	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M21-No08321	NCP	mg/L	0.016	0.017	8.0	30%	Pass	
m&p-Xylenes	M21-No08321	NCP	mg/L	0.032	0.034	7.0	30%	Pass	
o-Xylene	M21-No08321	NCP	mg/L	0.001	0.001	1.0	30%	Pass	
Xylenes - Total*	M21-No08321	NCP	mg/L	0.033	0.035	6.0	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Oc64691	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dichlorophenol	S21-Oc64691	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Oc64691	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Oc64691	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	S21-Oc64691	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
4-Chloro-3-methylphenol	S21-Oc64691	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Pentachlorophenol	S21-Oc64691	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Oc64691	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Oc64691	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Nitrophenol	S21-Oc64691	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dimethylphenol	S21-Oc64691	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	S21-Oc64691	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Oc64691	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Oc64691	CP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
4-Nitrophenol	S21-Oc64691	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Dinoseb	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Phenol	S21-Oc64691	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
TRH - 2013 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH >C10-C16 (after silica gel clean-up)	S21-Oc64691	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34 (after silica gel clean-up)	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40 (after silica gel clean-up)	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
TRH - 1999 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH C10-C14 (after silica gel clean-up)	S21-Oc64691	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28 (after silica gel clean-up)	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36 (after silica gel clean-up)	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C10-C36 (Total) (after silica gel clean-up)	S21-Oc64691	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Acenaphthene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Acenaphthylene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Anthracene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benz(a)anthracene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(a)pyrene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Chrysene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluoranthene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluorene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Naphthalene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Phenanthrene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Pyrene	S21-Oc64691	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ferrous Iron - Fe2+	S21-Oc64691	CP	mg/L	11	11	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-Oc64691	CP	mg/L	0.003	0.003	5.0	30%	Pass	
Cadmium (filtered)	S21-Oc64691	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-Oc64691	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S21-Oc64691	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead (filtered)	S21-Oc64691	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	S21-Oc64691	CP	mg/L	0.38	0.37	4.0	30%	Pass	
Mercury (filtered)	S21-Oc64691	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S21-Oc64691	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	S21-Oc64691	CP	mg/L	0.022	0.020	7.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	S21-Oc64692	CP	mg/L	38	25	40	30%	Fail	Q15
Sulphate (as SO4)	S21-Oc64692	CP	mg/L	19	17	11	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M21-Oc61744	NCP	mg/L	0.011	0.012	4.0	30%	Pass	
Cadmium	M21-Oc61744	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M21-Oc61744	NCP	mg/L	0.019	0.019	1.0	30%	Pass	
Copper	M21-Oc61744	NCP	mg/L	0.012	0.012	1.0	30%	Pass	
Lead	M21-Oc61744	NCP	mg/L	0.010	0.010	<1	30%	Pass	
Mercury	M21-Oc61744	NCP	mg/L	0.0001	0.0001	9.0	30%	Pass	
Nickel	M21-Oc61744	NCP	mg/L	0.014	0.015	2.0	30%	Pass	
Zinc	M21-Oc61744	NCP	mg/L	0.058	0.065	11	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S21-Oc64697	CP	mg/L	0.12	0.10	15	30%	Pass	

Comments

This report was revised V2 to amend Cyanide LOR to <0.004 mg/L as per COC.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

John Nguyen	Analytical Services Manager
Vivian Wang	Senior Analyst-Volatile (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham / Charlotte Gray	**Purchase Order :** 2127234	**COC Number :**
Office Address :	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2020/2021
Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Email for results :** terry.nham@ghd.com henry.luo@ghd.com charlotte.gray@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols		TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (<0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)		Ferrous Iron	Manganese	pH	TDS	TSS		TRH C6-C10 / BTEX	8 Metals (Total)					
1	CSM_BH02	25/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
2	CSM_BH04	23/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
3	CSM_BH06	25/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
4	CSM_BH08	24/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
5	CSM_BH10S	23/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
6	CSM_BH12S	24/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
7	SRT_BH047	24/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
8	SRT_BH052	24/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
9	GASW_BH10	24/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
~~10~~	~~GASW_BH11~~		~~Water~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~								
11	GASW_BH23	23/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
~~12~~	~~GASW_BH25A~~		~~Water~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~								
13	QC01	24/11/21	Water	X	X																				
14	RB01	25/11/21	Water																	X					
15	Trip Blank	↓	Water																X						
16	Trip Spike		Water																X						

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

	500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag	Sample comments:
1	1		4		2	2			
2	1		4		2	2			All bottles unable to be filtered
3	1		4		2	2			
4	1		4		2	2			
5	1		4		2	2			
6	1		4		2	2			
7	1		4		2	2			
8	1		4		2	2			
9	1		4		2	2			
~~10~~	~~1~~		~~4~~		~~2~~	~~2~~			
11	1		4		2	2			
~~12~~	~~1~~		~~4~~		~~2~~	~~2~~			
13			1		2	2			
14			1						
15					2				
16					2				

Laboratory Staff

Relinquished By:	Received By:
Christie Allen	
Date & Time : 25/11/21 5:15 pm	**Date & Time :**
Signature:	**Signature:**

Turn around time

1 DAY ☐ 2 DAY ☐ 3 DAY ☐
5 DAY ☑ 10 DAY ☐ Other:

Method Of Shipment

☐ Courier
☑ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arrival: 6.9

Report number: #846135

eurofins | mgt

☑ **Sydney**
Unit F3 - 6 Building F, 16 Mars Road, Lane Cove
Phone: +612 9900 8400
Email: enviro.syd@mgtlabmark.com.au

☐ **Brisbane**
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Phone: +617 3902 4600
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☐ **Melbourne**
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
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CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham / Charlotte Gray	**Purchase Order :** 2127234	**COC Number :**
Office Address :	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2020/2021
Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Email for results :** terry.nham@ghd.com henry.luo@ghd.com charlotte.gray@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number:

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols		TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (<0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)		Ferrous Iron	Manganese	pH	TDS	TSS		TRH C6-C10 / BTEX	8 Metals (Total)					
1	SRT_BH050	25/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
2	QC02	24/11/21	Water	PLEASE SEND TO ALS WITH ATTACHED COC																				
3	CSM_BH13	25/11/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
4	CSM_BH14S	~~25/11/21~~	Water	X	X	X		X	X	X	X		X	X	X	X	X								
5		25/11/21																							
6																									
7																									
8																									
9																									
10																									
11																									
12																									
13																									
14																									
15																									
16																									

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag
1		4		2	2		
		1		2	2		
1		4		2	2		
1		4		2	2		

Sample comments: All bottles unable to be filled

Relinquished By:	Laboratory Staff Received By:	Turn around time	Method Of Shipment	Temperature on arrival:
Christie Allen		1 DAY ☐ 2 DAY ☐ 3 DAY ☐	☐ Courier ☑ Hand Delivered ☐ Postal	6.9
Date & Time : 25/11/21 5:15pm	**Date & Time :**	5 DAY ☑ 10 DAY ☐ Other:	**Courier Consignment # :** M+H	**Report number:** #846135
Signature:	**Signature:**			

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

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IANZ # 1327

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43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	GHD Pty Ltd NSW
Contact name:	Henry Luo
Project name:	CENTRAL
Project ID:	2127234
Turnaround time:	5 Day
Date/Time received	Nov 25, 2021 5:29 PM
Eurofins reference	846135

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 6.9 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✓	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Sample QC02 is forwarded to ALS.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Henry Luo - henry.luo@ghd.com.

Note: A copy of these results will also be delivered to the general GHD Pty Ltd NSW email address.

GHD Pty Ltd NSW
Level 15, 133 Castlereagh Street
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Henry Luo**

Report **846135-W-V2**
Project name CENTRAL
Project ID 2127234
Received Date Nov 25, 2021

Client Sample ID			**CSM BH02**	**CSM BH04**	**CSM BH06**	**CSM BH08**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S21-De04182**	**S21-De04183**	**S21-De04184**	**S21-De04185**
Date Sampled			**Nov 25, 2021**	**Nov 23, 2021**	**Nov 25, 2021**	**Nov 24, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	-	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	-	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	100	89	110	95
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	-	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	-	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	-	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	-	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	-	< 0.01	< 0.01

Client Sample ID			CSM BH02	CSM BH04	CSM BH06	CSM BH08
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04182	S21-De04183	S21-De04184	S21-De04185
Date Sampled			Nov 25, 2021	Nov 23, 2021	Nov 25, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	-	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	-	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	-	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	-	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	-	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	-	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	-	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	67	-	72	59
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	-	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	-	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	-	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	-	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	-	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	-	< 0.00001	0.00020
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	-	< 0.00001	0.00020
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	-	< 0.00001	0.00040
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	-	< 0.00001	0.00040
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	-	< 0.00001	0.00030
Chrysene	0.00001	mg/L	< 0.00001	-	< 0.00001	0.00020
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	-	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	-	< 0.00001	0.00020
Fluorene	0.00001	mg/L	< 0.00001	-	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	-	< 0.00001	0.00020
Naphthalene	0.00001	mg/L	< 0.00001	-	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	-	< 0.00001	0.00020
Pyrene	0.00001	mg/L	< 0.00001	-	< 0.00001	0.00030
Total PAH*	0.00001	mg/L	< 0.00001	-	< 0.00001	0.0026
2-Fluorobiphenyl (surr.)	1	%	64	-	66	84
p-Terphenyl-d14 (surr.)	1	%	81	-	89	111
Ammonia (as N)	0.01	mg/L	0.03	0.04	0.07	0.04
Chloride	1	mg/L	130	63	230	93
Cyanide (total)	0.004	mg/L	0.15	< 0.004	0.011	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	0.09	1.6	0.35	< 0.05
pH (at 25 °C)	0.1	pH Units	7.2	7.0	7.1	5.8

Client Sample ID			CSM BH02	CSM BH04	CSM BH06	CSM BH08
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04182	S21-De04183	S21-De04184	S21-De04185
Date Sampled			Nov 25, 2021	Nov 23, 2021	Nov 25, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
Sulphate (as SO4)	5	mg/L	26	50	21	35
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	340	280	500	150
Total Suspended Solids Dried at 103–105°C	5	mg/L	2400	510	190	110
Hardness mg equivalent CaCO3/L	5	mg/L	210	62	200	72
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	250	110	150	99
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	250	110	150	99
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	0.001	0.002	0.010
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese	0.005	mg/L	0.63	0.70	0.21	0.46
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.005	0.014	0.003	0.057
Zinc (filtered)	0.005	mg/L	< 0.005	0.046	0.005	0.090
Alkali Metals						
Calcium	0.5	mg/L	35	6.1	32	8.5
Magnesium	0.5	mg/L	30	11	30	12
Potassium	0.5	mg/L	4.8	2.9	4.9	3.9
Sodium	0.5	mg/L	92	68	97	68

Client Sample ID			CSM BH10S	CSM BH12S	SRT BH047	SRT BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04186	S21-De04187	S21-De04188	S21-De04189
Date Sampled			Nov 23, 2021	Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.9
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.2
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	1.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	1.0
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	1

Client Sample ID			CSM BH10S	CSM BH12S	SRT BH047	SRT BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04186	S21-De04187	S21-De04188	S21-De04189
Date Sampled			Nov 23, 2021	Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	109	108	97	110
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	144	55	61	116
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.9
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.9
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.8
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.9
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001

Client Sample ID			CSM BH10S	CSM BH12S	SRT BH047	SRT BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04186	S21-De04187	S21-De04188	S21-De04189
Date Sampled			Nov 23, 2021	Nov 24, 2021	Nov 24, 2021	Nov 24, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons (Trace level)						
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00002	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	64	75	114	123
p-Terphenyl-d14 (surr.)	1	%	59	80	120	113
Ammonia (as N)	0.01	mg/L	0.06	0.03	0.02	0.03
Chloride	1	mg/L	27	80	20	48
Cyanide (total)	0.004	mg/L	0.005	0.005	0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	< 0.05	5.4	< 0.05	< 0.05
pH (at 25 °C)	0.1	pH Units	6.4	6.6	6.1	6.9
Sulphate (as SO4)	5	mg/L	50	140	14	36
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	150	370	180	240
Total Suspended Solids Dried at 103–105°C	5	mg/L	42	66	34	44
Hardness mg equivalent CaCO3/L	5	mg/L	45	31	43	46
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	25	60	< 20	39
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	25	60	< 20	39
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	0.001	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	0.003	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese	0.005	mg/L	0.58	0.81	0.086	0.043
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.002	0.022	0.004	< 0.001
Zinc (filtered)	0.005	mg/L	< 0.005	0.094	0.034	< 0.005
Alkali Metals						
Calcium	0.5	mg/L	7.7	2.1	5.0	13
Magnesium	0.5	mg/L	6.4	6.3	7.4	3.5
Potassium	0.5	mg/L	2.8	2.1	0.6	1.8
Sodium	0.5	mg/L	26	100	18	43

Client Sample ID			GASW BH23	GASW BH10	QC01	RB01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04190	S21-De04191	S21-De04192	S21-De04193
Date Sampled			Nov 23, 2021	Nov 24, 2021	Nov 24, 2021	Nov 25, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	1.1	< 0.05	-
TRH C15-C28	0.1	mg/L	0.7	0.9	< 0.1	-
TRH C29-C36	0.1	mg/L	< 0.1	0.3	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	0.7	2.3	< 0.1	-
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	1.1	< 0.05	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	1.1	< 0.05	-
TRH >C16-C34	0.1	mg/L	0.8	1.2	< 0.1	-
TRH >C34-C40	0.1	mg/L	< 0.1	0.1	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	0.8	2.4	< 0.1	-
BTEX						
Benzene	0.001	mg/L	0.011	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	83	115	102	-
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	-	-
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	-	-
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	-	-
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	-	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	-	-
Total cresols*	0.01	mg/L	< 0.01	< 0.01	-	-
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
Dinoseb	0.1	mg/L	< 0.1	< 0.1	-	-
Phenol	0.003	mg/L	< 0.003	< 0.003	-	-
Phenol-d6 (surr.)	1	%	54	60	-	-
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	-	-
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	-	-
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	0.7	1.1	-	-
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	0.7	1.1	-	-

Client Sample ID			GASW BH23	GASW BH10	QC01	RB01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04190	S21-De04191	S21-De04192	S21-De04193
Date Sampled			Nov 23, 2021	Nov 24, 2021	Nov 24, 2021	Nov 25, 2021
Test/Reference	LOR	Unit				
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	-	-
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	0.6	0.9	-	-
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	0.2	-	-
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	0.6	1.1	-	-
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
2-Fluorobiphenyl (surr.)	1	%	52	64	56	-
p-Terphenyl-d14 (surr.)	1	%	139	64	125	-
Ammonia (as N)	0.01	mg/L	0.19	0.03	-	-
Chloride	1	mg/L	11	180	-	-
Cyanide (total)	0.004	mg/L	0.005	< 0.004	-	-
Ferrous Iron - Fe2+	0.05	mg/L	6.8	-	-	-
pH (at 25 °C)	0.1	pH Units	7.6	7.2	-	-
Sulphate (as SO4)	5	mg/L	110	< 5	-	-
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	360	660	-	-
Total Suspended Solids Dried at 103–105°C	5	mg/L	16	6500	-	-
Hardness mg equivalent CaCO3/L	5	mg/L	270	340	-	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	190	450	-	-
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	-	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	-	-
Total Alkalinity (as CaCO3)	20	mg/L	190	450	-	-
Heavy Metals						
Arsenic	0.001	mg/L	-	-	-	< 0.001
Arsenic (filtered)	0.001	mg/L	0.002	0.002	< 0.001	-
Cadmium	0.0002	mg/L	-	-	-	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	-
Chromium	0.001	mg/L	-	-	-	< 0.001
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Copper	0.001	mg/L	-	-	-	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	0.019	0.015	-
Lead	0.001	mg/L	-	-	-	< 0.001

Client Sample ID			GASW BH23	GASW BH10	QC01	RB01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04190	S21-De04191	S21-De04192	S21-De04193
Date Sampled			Nov 23, 2021	Nov 24, 2021	Nov 24, 2021	Nov 25, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	0.001	-
Manganese	0.005	mg/L	0.21	0.51	-	-
Mercury	0.0001	mg/L	-	-	-	< 0.0001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	-
Nickel	0.001	mg/L	-	-	-	< 0.001
Nickel (filtered)	0.001	mg/L	< 0.001	0.002	0.046	-
Zinc	0.005	mg/L	-	-	-	< 0.005
Zinc (filtered)	0.005	mg/L	0.033	0.031	0.17	-
Alkali Metals						
Calcium	0.5	mg/L	91	81	-	-
Magnesium	0.5	mg/L	9.7	34	-	-
Potassium	0.5	mg/L	6.7	11	-	-
Sodium	0.5	mg/L	20	100	-	-

Client Sample ID			TRIP SPIKE	TRIP BLANK	SRT BH050	CSM BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04194	S21-De04195	S21-De04203	S21-De04204
Date Sampled			Nov 25, 2021	Nov 25, 2021	Nov 25, 2021	Nov 25, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	-	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	-	-	< 0.1	0.7
TRH C29-C36	0.1	mg/L	-	-	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	< 0.1	0.7
Naphthalene[N02]	0.01	mg/L	-	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	-	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	-	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	< 0.1	0.7
TRH >C34-C40	0.1	mg/L	-	-	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	< 0.1	0.7
BTEX						
Benzene	0.001	mg/L	-	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	-	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	-	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	-	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	-	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	-	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	-	113	93	89
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	-	-	-	< 0.003
2.4-Dichlorophenol	0.003	mg/L	-	-	-	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	-	-	-	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	-	< 0.01
2.6-Dichlorophenol	0.003	mg/L	-	-	-	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	-	-	< 0.01

Client Sample ID			TRIP SPIKE	TRIP BLANK	SRT BH050	CSM BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04194	S21-De04195	S21-De04203	S21-De04204
Date Sampled			Nov 25, 2021	Nov 25, 2021	Nov 25, 2021	Nov 25, 2021
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
Pentachlorophenol	0.01	mg/L	-	-	-	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	-	-	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	-	-	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	-	-	-	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	-	< 0.03
2-Nitrophenol	0.01	mg/L	-	-	-	< 0.01
2.4-Dimethylphenol	0.003	mg/L	-	-	-	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	-	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	-	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	-	< 0.006
Total cresols*	0.01	mg/L	-	-	-	< 0.01
4-Nitrophenol	0.03	mg/L	-	-	-	< 0.03
Dinoseb	0.1	mg/L	-	-	-	< 0.1
Phenol	0.003	mg/L	-	-	-	< 0.003
Phenol-d6 (surr.)	1	%	-	-	-	113
Total Non-Halogenated Phenol*	0.1	mg/L	-	-	-	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	-	-	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	0.6
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	-	-	< 0.1	0.6
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	-	-	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	0.6
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	0.6
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Acenaphthylene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Anthracene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Benz(a)anthracene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Chrysene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Fluoranthene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Fluorene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Naphthalene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Phenanthrene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Pyrene	0.00001	mg/L	-	-	< 0.0002	< 0.00001
Total PAH*	0.00001	mg/L	-	-	< 0.0002	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	-	-	91	91
p-Terphenyl-d14 (surr.)	1	%	-	-	113	91

Client Sample ID			TRIP SPIKE	TRIP BLANK	SRT BH050	CSM BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De04194	S21-De04195	S21-De04203	S21-De04204
Date Sampled			Nov 25, 2021	Nov 25, 2021	Nov 25, 2021	Nov 25, 2021
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	-	-	-	0.03
Chloride	1	mg/L	-	-	-	230
Cyanide (total)	0.004	mg/L	-	-	-	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	-	-	-	0.50
pH (at 25 °C)	0.1	pH Units	-	-	-	7.5
Sulphate (as SO4)	5	mg/L	-	-	-	40
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	-	-	-	630
Total Suspended Solids Dried at 103–105°C	5	mg/L	-	-	-	43
Hardness mg equivalent CaCO3/L	5	mg/L	-	-	-	220
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	-	-	-	170
Carbonate Alkalinity (as CaCO3)	10	mg/L	-	-	-	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	-	-	-	< 20
Total Alkalinity (as CaCO3)	20	mg/L	-	-	-	170
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	-	-	-	0.001
Cadmium (filtered)	0.0002	mg/L	-	-	-	< 0.0002
Chromium (filtered)	0.001	mg/L	-	-	-	< 0.001
Copper (filtered)	0.001	mg/L	-	-	-	0.003
Lead (filtered)	0.001	mg/L	-	-	-	< 0.001
Manganese	0.005	mg/L	-	-	-	0.60
Mercury (filtered)	0.0001	mg/L	-	-	-	< 0.0001
Nickel (filtered)	0.001	mg/L	-	-	-	0.012
Zinc (filtered)	0.005	mg/L	-	-	-	0.007
Alkali Metals						
Calcium	0.5	mg/L	-	-	-	50
Magnesium	0.5	mg/L	-	-	-	22
Potassium	0.5	mg/L	-	-	-	5.7
Sodium	0.5	mg/L	-	-	-	110
Total Recoverable Hydrocarbons						
Naphthalene	1	%	86	-	-	-
TRH C6-C10	1	%	74	-	-	-
TRH C6-C9	1	%	74	-	-	-
BTEX						
Benzene	1	%	77	-	-	-
Ethylbenzene	1	%	87	-	-	-
m&p-Xylenes	1	%	92	-	-	-
o-Xylene	1	%	84	-	-	-
Toluene	1	%	87	-	-	-
Xylenes - Total	1	%	86	-	-	-
4-Bromofluorobenzene (surr.)	1	%	111	-	-	-

Client Sample ID			CSM BH14S
Sample Matrix			Water
Eurofins Sample No.			S21-De04205
Date Sampled			Nov 25, 2021
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	0.02	mg/L	0.03
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	0.3
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	0.3
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	0.03
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	0.03
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	0.3
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	0.3
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	97
Phenols (Halogenated)			
2-Chlorophenol	0.003	mg/L	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01
Phenols (non-Halogenated)			
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006
Total cresols*	0.01	mg/L	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03
Dinoseb	0.1	mg/L	< 0.1
Phenol	0.003	mg/L	< 0.003
Phenol-d6 (surr.)	1	%	91
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)			
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	0.3
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	0.3

Client Sample ID			CSM BH14S
Sample Matrix			Water
Eurofins Sample No.			S21-De04205
Date Sampled			Nov 25, 2021
Test/Reference	LOR	Unit	
TRH - 1999 NEPM Fractions (after silica gel clean-up)			
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	0.2
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	0.2
Polycyclic Aromatic Hydrocarbons (Trace level)			
Acenaphthene	0.00001	mg/L	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	108
p-Terphenyl-d14 (surr.)	1	%	128
Ammonia (as N)	0.01	mg/L	< 0.01
Chloride	1	mg/L	25
Cyanide (total)	0.004	mg/L	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	0.07
pH (at 25 °C)	0.1	pH Units	6.9
Sulphate (as SO4)	5	mg/L	7.4
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	82
Total Suspended Solids Dried at 103–105°C	5	mg/L	9.6
Hardness mg equivalent CaCO3/L	5	mg/L	55
Alkalinity (speciated)			
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	46
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20
Total Alkalinity (as CaCO3)	20	mg/L	46
Heavy Metals			
Arsenic (filtered)	0.001	mg/L	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001
Copper (filtered)	0.001	mg/L	0.004
Lead (filtered)	0.001	mg/L	< 0.001
Manganese	0.005	mg/L	0.012
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001
Zinc (filtered)	0.005	mg/L	< 0.005

Client Sample ID			CSM BH14S
Sample Matrix			Water
Eurofins Sample No.			S21-De04205
Date Sampled			Nov 25, 2021
Test/Reference	LOR	Unit	
Alkali Metals			
Calcium	0.5	mg/L	17
Magnesium	0.5	mg/L	3.0
Potassium	0.5	mg/L	1.8
Sodium	0.5	mg/L	11

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Dec 08, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Dec 07, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Melbourne	Dec 06, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Dec 07, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B6 (filtered metals)			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Dec 08, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8 filtered	Melbourne	Dec 08, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Phenols (Speciated)			
Phenols (Halogenated)	Melbourne	Dec 08, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Dec 08, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Melbourne	Dec 08, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Melbourne	Dec 08, 2021	7 Days
- Method: TRH C6-C36 (Silica Gel Cleanup) - MGT 100A			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	Dec 08, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Ammonia (as N)	Melbourne	Dec 09, 2021	28 Days
- Method: APHA 4500-NH3 Ammonia Nitrogen by FIA			
Cyanide (total)	Melbourne	Dec 06, 2021	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
Ferrous Iron - Fe2+	Melbourne	Dec 15, 2021	7 Days
- Method: LTM-INO-4190 Ferrous Iron in Water by Discrete Analyser			
pH (at 25 °C)	Melbourne	Dec 13, 2021	0 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Total Suspended Solids Dried at 103–105°C	Melbourne	Dec 08, 2021	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Metals M8	Melbourne	Dec 03, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Heavy Metals	Melbourne	Dec 08, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Melbourne	Dec 10, 2021	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Sulphate (as SO4)	Melbourne	Dec 10, 2021	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Dec 13, 2021	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Dissolved Solids Dried at 180°C ± 2°C	Melbourne	Dec 08, 2021	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Eurofins Suite B11D: Na/K/Ca/Mg and Hardness			
Hardness mg equivalent CaCO3/L	Melbourne	Dec 06, 2021	28 Days
- Method: APHA 2340B Hardness by Calculation			
Alkali Metals	Melbourne	Dec 06, 2021	180 Days
- Method: LTM-MET-3010 Alkali Metals Sulfur Silicon Phosphorus by ICP-AES			

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Project Name: CENTRAL
Project ID: 2127234

Order No.: 2127234
Report #: 846135
Phone: 02 9239 7100
Fax: 02 9239 7199

Received: Nov 25, 2021 5:29 PM
Due: Dec 1, 2021
Priority: 5 Day
Contact Name: Henry Luo

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese	pH (at 25 °C)	Total Suspended Solids Dried at 103–105°C	TRH C6-C9	Metals M8	Metals M8 filtered	Phenols (Speciated)	BTEX	TRH (after Silica Gel cleanup)	Total Recoverable Hydrocarbons	Eurofins Suite B6 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217																		X							
Brisbane Laboratory - NATA # 1261 Site # 20794																									
Mayfield Laboratory - NATA # 1261 Site # 25079																									
Perth Laboratory - NATA # 2377 Site # 2370																									
External Laboratory																									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																				
1	CSM BH02	Nov 25, 2021		Water	S21-De04182	X	X	X	X	X	X				X		X		X		X	X		X	X
2	CSM BH04	Nov 23, 2021		Water	S21-De04183	X	X	X	X	X	X	X		X		X					X	X			X
3	CSM BH06	Nov 25, 2021		Water	S21-De04184	X	X	X	X	X	X				X		X		X		X	X		X	X
4	CSM BH08	Nov 24, 2021		Water	S21-De04185	X	X	X	X	X	X				X		X		X		X	X		X	X
5	CSM BH10S	Nov 23, 2021		Water	S21-De04186	X	X	X	X	X	X				X		X		X		X	X		X	X
6	CSM BH12S	Nov 24, 2021		Water	S21-De04187	X	X	X	X	X	X				X		X		X		X	X		X	X
7	SRT BH047	Nov 24, 2021		Water	S21-De04188	X	X	X	X	X	X				X		X		X		X	X		X	X
8	SRT BH052	Nov 24, 2021		Water	S21-De04189	X	X	X	X	X	X				X		X		X		X	X		X	X
9	GASW BH23	Nov 23, 2021		Water	S21-De04190	X	X	X	X	X	X				X		X		X		X	X		X	X

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Order No.: 2127234
Report #: 846135
Phone: 02 9239 7100
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Received: Nov 25, 2021 5:29 PM
Due: Dec 1, 2021
Priority: 5 Day
Contact Name: Henry Luo

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese	pH (at 25 °C)	Total Suspended Solids Dried at 103–105°C	TRH C6-C9	Metals M8	Metals M8 filtered	Phenols (Speciated)	BTEX	TRH (after Silica Gel cleanup)	Total Recoverable Hydrocarbons	Eurofins Suite B6 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217																		X							
Brisbane Laboratory - NATA # 1261 Site # 20794																									
Mayfield Laboratory - NATA # 1261 Site # 25079																									
Perth Laboratory - NATA # 2377 Site # 2370																									
External Laboratory																									
10	GASW BH10	Nov 24, 2021		Water	S21-De04191	X	X		X	X	X				X		X		X		X	X		X	X
11	QC01	Nov 24, 2021		Water	S21-De04192														X					X	
12	RB01	Nov 25, 2021		Water	S21-De04193								X												
13	TRIP SPIKE	Nov 25, 2021		Water	S21-De04194																		X		
14	TRIP BLANK	Nov 25, 2021		Water	S21-De04195															X					
15	SRT BH050	Nov 25, 2021		Water	S21-De04203											X	X	X						X	
16	CSM BH13	Nov 25, 2021		Water	S21-De04204	X	X	X	X	X	X				X		X		X		X	X		X	X
17	CSM BH14S	Nov 25, 2021		Water	S21-De04205	X	X	X	X	X	X				X		X		X		X	X		X	X
Test Counts						12	12	11	12	12	12	1	1	1	11	2	12	1	12	1	12	12	1	13	12

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.4
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

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QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	mg/L	< 0.00001			0.00001	Pass	
Acenaphthylene	mg/L	< 0.00001			0.00001	Pass	
Anthracene	mg/L	< 0.00001			0.00001	Pass	
Benz(a)anthracene	mg/L	< 0.00001			0.00001	Pass	
Benzo(a)pyrene	mg/L	< 0.00001			0.00001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.00001			0.00001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Chrysene	mg/L	< 0.00001			0.00001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.00001			0.00001	Pass	
Fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Fluorene	mg/L	< 0.00001			0.00001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.00001			0.00001	Pass	
Naphthalene	mg/L	< 0.00001			0.00001	Pass	
Phenanthrene	mg/L	< 0.00001			0.00001	Pass	
Pyrene	mg/L	< 0.00001			0.00001	Pass	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Cyanide (total)	mg/L	< 0.004			0.004	Pass	
Ferrous Iron - Fe2+	mg/L	< 0.05			0.05	Pass	
Sulphate (as SO4)	mg/L	< 5			5	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	< 10			10	Pass	
Total Suspended Solids Dried at 103–105°C	mg/L	< 5			5	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Manganese	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Sodium	mg/L	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	113			70-130	Pass	
TRH C10-C14	%	119			70-130	Pass	
Naphthalene	%	101			70-130	Pass	
TRH C6-C10	%	113			70-130	Pass	
TRH >C10-C16	%	128			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	93			70-130	Pass	
Toluene	%	103			70-130	Pass	
Ethylbenzene	%	109			70-130	Pass	
m&p-Xylenes	%	108			70-130	Pass	
Xylenes - Total*	%	106			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	80			25-140	Pass	
2.4-Dichlorophenol	%	40			25-140	Pass	
2.4.5-Trichlorophenol	%	38			25-140	Pass	
2.4.6-Trichlorophenol	%	68			25-140	Pass	
2.6-Dichlorophenol	%	113			25-140	Pass	
4-Chloro-3-methylphenol	%	59			25-140	Pass	
Pentachlorophenol	%	39			25-140	Pass	
Tetrachlorophenols - Total	%	60			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	86			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	60			25-140	Pass	
2-Nitrophenol	%	34			25-140	Pass	
2.4-Dimethylphenol	%	64			25-140	Pass	
2.4-Dinitrophenol	%	56			25-140	Pass	
2-Methylphenol (o-Cresol)	%	30			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	56			25-140	Pass	
4-Nitrophenol	%	37			25-140	Pass	
Dinoseb	%	62			25-140	Pass	
Phenol	%	48			25-140	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	128			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	119			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	%	92			70-130	Pass	
Acenaphthylene	%	97			70-130	Pass	
Anthracene	%	100			70-130	Pass	
Benz(a)anthracene	%	74			70-130	Pass	
Benzo(a)pyrene	%	97			70-130	Pass	
Benzo(b&j)fluoranthene	%	91			70-130	Pass	
Benzo(g.h.i)perylene	%	86			70-130	Pass	
Benzo(k)fluoranthene	%	90			70-130	Pass	
Chrysene	%	91			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibenz(a.h)anthracene	%	78			70-130	Pass	
Fluoranthene	%	95			70-130	Pass	
Fluorene	%	86			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	83			70-130	Pass	
Naphthalene	%	98			70-130	Pass	
Phenanthrene	%	79			70-130	Pass	
Pyrene	%	95			70-130	Pass	
LCS - % Recovery							
Ammonia (as N)	%	105			70-130	Pass	
Chloride	%	115			70-130	Pass	
Cyanide (total)	%	99			70-130	Pass	
Ferrous Iron - Fe2+	%	94			70-130	Pass	
Sulphate (as SO4)	%	103			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	95			70-130	Pass	
Total Suspended Solids Dried at 103–105°C	%	94			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	85			70-130	Pass	
Total Alkalinity (as CaCO3)	%	94			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	105			80-120	Pass	
Cadmium	%	100			80-120	Pass	
Chromium	%	103			80-120	Pass	
Copper	%	101			80-120	Pass	
Lead	%	100			80-120	Pass	
Manganese	%	108			80-120	Pass	
Mercury	%	92			80-120	Pass	
Nickel	%	102			80-120	Pass	
Zinc	%	106			80-120	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	103			80-120	Pass	
Magnesium	%	89			80-120	Pass	
Potassium	%	96			80-120	Pass	
Sodium	%	113			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M21-No68586	NCP	%	95			70-130	Pass	
TRH C10-C14	M21-No66246	NCP	%	108			70-130	Pass	
Naphthalene	M21-No68586	NCP	%	85			70-130	Pass	
TRH C6-C10	M21-No68586	NCP	%	92			70-130	Pass	
TRH >C10-C16	M21-No66246	NCP	%	114			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M21-No68586	NCP	%	89			70-130	Pass	
Toluene	M21-No68586	NCP	%	92			70-130	Pass	
Ethylbenzene	M21-No68586	NCP	%	100			70-130	Pass	
m&p-Xylenes	M21-No68586	NCP	%	98			70-130	Pass	
o-Xylene	M21-No68586	NCP	%	98			70-130	Pass	
Xylenes - Total*	M21-No68586	NCP	%	98			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Chlorophenol	S21-No63185	NCP	%	62			30-130	Pass	
2.4-Dichlorophenol	S21-No63185	NCP	%	53			30-130	Pass	
2.4.5-Trichlorophenol	S21-No63185	NCP	%	56			30-130	Pass	
2.4.6-Trichlorophenol	S21-No63185	NCP	%	46			30-130	Pass	
2.6-Dichlorophenol	S21-No63185	NCP	%	57			30-130	Pass	
4-Chloro-3-methylphenol	S21-No63185	NCP	%	58			30-130	Pass	
Tetrachlorophenols - Total	M21-No55941	NCP	%	108			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S21-No63185	NCP	%	22			30-130	Fail	Q08
2-Nitrophenol	S21-No63185	NCP	%	66			30-130	Pass	
2-Methylphenol (o-Cresol)	S21-No63185	NCP	%	46			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-No63185	NCP	%	47			30-130	Pass	
Dinoseb	M21-No55941	NCP	%	114			30-130	Pass	
Phenol	S21-No63185	NCP	%	50			30-130	Pass	
Spike - % Recovery									
TRH - 2013 NEPM Fractions (after silica gel clean-up)				Result 1					
TRH >C10-C16 (after silica gel clean-up)	M21-No72361	NCP	%	122			70-130	Pass	
Spike - % Recovery									
TRH - 1999 NEPM Fractions (after silica gel clean-up)				Result 1					
TRH C10-C14 (after silica gel clean-up)	M21-No72361	NCP	%	116			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1					
Acenaphthene	S21-No63185	NCP	%	107			70-130	Pass	
Acenaphthylene	S21-No63185	NCP	%	101			70-130	Pass	
Anthracene	S21-No63185	NCP	%	77			70-130	Pass	
Benz(a)anthracene	S21-No63185	NCP	%	79			70-130	Pass	
Benzo(a)pyrene	S21-No63185	NCP	%	74			70-130	Pass	
Benzo(b&j)fluoranthene	S21-No63185	NCP	%	94			70-130	Pass	
Benzo(g.h.i)perylene	S21-No63185	NCP	%	98			70-130	Pass	
Benzo(k)fluoranthene	S21-No63185	NCP	%	93			70-130	Pass	
Chrysene	S21-No63185	NCP	%	83			70-130	Pass	
Dibenz(a.h)anthracene	S21-No63185	NCP	%	84			70-130	Pass	
Fluoranthene	S21-No63185	NCP	%	104			70-130	Pass	
Fluorene	S21-No63185	NCP	%	104			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S21-No63185	NCP	%	88			70-130	Pass	
Naphthalene	S21-No63185	NCP	%	111			70-130	Pass	
Phenanthrene	S21-No63185	NCP	%	93			70-130	Pass	
Pyrene	S21-No63185	NCP	%	101			70-130	Pass	
Spike - % Recovery									
				Result 1					
Cyanide (total)	S21-De03979	NCP	%	126			70-130	Pass	
Total Suspended Solids Dried at 103–105°C	B21-No60472	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Magnesium	S21-De03980	NCP	%	92			75-125	Pass	
Spike - % Recovery									
Alkalinity (speciated)				Result 1					
Total Alkalinity (as CaCO3)	B21-De14612	NCP	%	71			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
Pentachlorophenol	B21-De10234	NCP	%	63			30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Methyl-4.6-dinitrophenol	B21-De10234	NCP	%	51			30-130	Pass	
2.4-Dinitrophenol	B21-De10234	NCP	%	41			30-130	Pass	
4-Nitrophenol	B21-De10234	NCP	%	33			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Manganese	M21-De14312	NCP	%	90			75-125	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2.4-Dimethylphenol	S21-De18764	NCP	%	92			30-130	Pass	
Spike - % Recovery									
				Result 1					
Ammonia (as N)	S21-De04186	CP	%	106			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S21-De04188	CP	%	100			75-125	Pass	
Cadmium (filtered)	S21-De04188	CP	%	97			75-125	Pass	
Chromium (filtered)	S21-De04188	CP	%	98			75-125	Pass	
Copper (filtered)	S21-De04188	CP	%	97			75-125	Pass	
Lead (filtered)	S21-De04188	CP	%	95			75-125	Pass	
Mercury (filtered)	S21-De04188	CP	%	89			75-125	Pass	
Nickel (filtered)	S21-De04188	CP	%	96			75-125	Pass	
Zinc (filtered)	S21-De04188	CP	%	99			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M21-De05698	NCP	%	108			75-125	Pass	
Cadmium	M21-De05698	NCP	%	99			75-125	Pass	
Chromium	M21-De05698	NCP	%	103			75-125	Pass	
Copper	M21-De05698	NCP	%	99			75-125	Pass	
Lead	M21-De05698	NCP	%	99			75-125	Pass	
Mercury	M21-De05698	NCP	%	83			75-125	Pass	
Nickel	M21-De05698	NCP	%	98			75-125	Pass	
Zinc	M21-De05698	NCP	%	107			75-125	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	S21-De04203	CP	%	88			75-125	Pass	
Potassium	S21-De04203	CP	%	90			75-125	Pass	
Sodium	S21-De04203	CP	%	83			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M21-No68590	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	B21-No67225	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	B21-No67225	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	B21-No67225	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Naphthalene	M21-No68590	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M21-No68590	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	B21-No67225	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	B21-No67225	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	B21-No67225	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M21-No68590	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M21-No68590	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M21-No68590	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M21-No68590	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M21-No68590	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M21-No68590	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	B21-No67225	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dichlorophenol	B21-No67225	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4.5-Trichlorophenol	B21-No67225	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	B21-No67225	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	B21-No67225	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
4-Chloro-3-methylphenol	B21-No67225	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Pentachlorophenol	B21-No67225	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Tetrachlorophenols - Total	B21-No67225	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	B21-No67225	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	B21-No67225	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Nitrophenol	B21-No67225	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dimethylphenol	B21-No67225	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	B21-No67225	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Methylphenol (o-Cresol)	B21-No67225	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	B21-No67225	NCP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
4-Nitrophenol	B21-No67225	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Dinoseb	B21-No67225	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Phenol	B21-No67225	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
TRH - 2013 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH >C10-C16 (after silica gel clean-up)	M21-No72360	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34 (after silica gel clean-up)	M21-No72360	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40 (after silica gel clean-up)	M21-No72360	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
TRH - 1999 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH C10-C14 (after silica gel clean-up)	M21-No72360	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28 (after silica gel clean-up)	M21-No72360	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36 (after silica gel clean-up)	M21-No72360	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C10-C36 (Total) (after silica gel clean-up)	M21-No72360	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Acenaphthene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Acenaphthylene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Anthracene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benz(a)anthracene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(a)pyrene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(b&j)fluoranthene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(g.h.i)perylene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(k)fluoranthene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Chrysene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Dibenz(a.h)anthracene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluoranthene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluorene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Naphthalene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Phenanthrene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Pyrene	B21-No67225	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ferrous Iron - Fe2+	M21-De00353	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	S21-No68885	NCP	mg/L	460	380	19	30%	Pass	
Total Suspended Solids Dried at 103–105°C	B21-No60472	NCP	mg/L	98	80	19	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Manganese	M21-De05698	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Magnesium	S21-De03980	NCP	mg/L	33	41	20	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	S21-De04185	CP	mg/L	93	95	2.0	30%	Pass	
Sulphate (as SO4)	S21-De04185	CP	mg/L	35	36	120	30%	Fail	Q15
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S21-De04186	CP	mg/L	0.06	0.03	62	30%	Fail	Q15
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-De04188	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S21-De04188	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-De04188	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S21-De04188	CP	mg/L	0.003	0.003	3.0	30%	Pass	
Lead (filtered)	S21-De04188	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S21-De04188	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S21-De04188	CP	mg/L	0.004	0.004	4.0	30%	Pass	
Zinc (filtered)	S21-De04188	CP	mg/L	0.034	0.035	3.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	S21-De04189	CP	mg/L	< 0.004	< 0.004	<1	30%	Pass	
pH (at 25 °C)	S21-De04189	CP	pH Units	6.9	6.8	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S21-De04189	CP	mg/L	39	38	3.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S21-De04189	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S21-De04189	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S21-De04189	CP	mg/L	39	38	3.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M21-De05698	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M21-De05698	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M21-De05698	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M21-De05698	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	M21-De05698	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	M21-De05698	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M21-De05698	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	M21-De05698	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
pH (at 25 °C)	S21-De04205	CP	pH Units	6.9	7.0	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S21-De04205	CP	mg/L	46	43	6.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S21-De04205	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S21-De04205	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S21-De04205	CP	mg/L	46	43	6.0	30%	Pass	

Comments

This report was revised V2 to update the Cyanide LOR to <0.004 mg/L as per COC.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

John Nguyen	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Phone: +613 8564 5000 Fax: +613 8564 5090
Email: enquiries.melb@mgtlabmark.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS Page 1 of 2

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham / Charlotte Gray	**Purchase Order :** 2127234	**COC Number :**
Office Address :	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2020/2021
Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Email for results :** terry.nham@ghd.com henry.luo@ghd.com charlotte.gray@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols		TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (<0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)		Ferrous Iron	Manganese	pH	TDS	TSS		TRH C6-C10 / BTEX	8 Metals (Total)				
1	CSM_BH02	14/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
2	CSM_BH04	14/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
3	CSM_BH06	15/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
4	CSM_BH08	16/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
5	CSM_BH10S	14/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
6	CSM_BH12S	14/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
7	SRT_BH047	16/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
8	SRT_BH052	16/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
9	GASW_BH10	14/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
~~10~~	~~GASW_BH11~~		~~Water~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~							
11	GASW_BH23	14/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
~~12~~	~~GASW_BH25A~~		~~Water~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~	~~X~~	~~X~~	~~X~~							
13	QC01	14/12/21	Water	X	X																			
14	RB01	16/12/21	Water																	X				
15	Trip Blank		Water																X					
16	Trip Spike		Water																X					

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

	500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag	Sample comments:
1	1		4		2	2			
2	1		4		2	2			
3	1		4		2	2			
4	1		4		2	2			
5	1		4		2	2			
6	1		4		2	2			
7	1		4		2	2			
8	1		4		2	2			
9	X		4		2	2			Not enough for inorgs
~~10~~	~~1~~		~~4~~		~~2~~	~~2~~			Not sampled
11	1		4		2	2			
~~12~~	~~1~~		~~4~~		~~2~~	~~2~~			Not sampled
13			1		2	2			
14			1						
15					2				
16					2				

Laboratory Staff

Relinquished By: Charlotte Gray - GHD
Date & Time : 16/12/21 15:41
Signature:

Received By: MR
Date & Time : 16/12/21 3:47PM
Signature:

Turn around time

1 DAY ☐ 2 DAY ☐ 3 DAY ☐
5 DAY ☑ 10 DAY ☐ Other:

Method Of Shipment

☐ Courier
☑ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arrival: 14.9°C

Report number: 851006

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CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham / Charlotte Gray	**Purchase Order :** 2127234	**COC Number :**
Office Address :	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2020/2021
Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Email for results :** terry.nham@ghd.com henry.luo@ghd.com charlotte.gray@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols		TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (<0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)		Ferrous Iron	Manganese	pH	TDS	TSS		TRH C6-C10 / BTEX	8 Metals (Total)				
1	SRT_BH050	15/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
2	QC02	15/12/21	Water	PLEASE SEND TO ALS WITH ATTACHED COC																				
3	CSM_BH13	15/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
4	CSM_BH14S	15/12/21	Water	X	X	X		X	X	X	X		X	X	X	X	X							
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
13																								
14																								
15																								
16																								

Some common holding times (with correct preservation).
For further information contact the lab

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BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

	500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag	Sample comments:
1	1		4		2	2			500P ½ full.
2			1		2	2			
3	1		4		2	2			
4	1		4		2	2			

Laboratory Staff

Relinquished By: Charlotte Gray - GHD
Date & Time :
Signature:

Received By: MR
Date & Time : 16/12/21 3:47PM
Signature:

Turn around time

1 DAY ☐ 2 DAY ☐ 3 DAY ☐
5 DAY ☑ 10 DAY ☐ Other:

Method Of Shipment

☐ Courier
☑ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arrival: 14.9 °C

Report number: 851006

RE: Attention: Eurofins Sample Receipt Advice - Report 851006 : Site CENTRAL (2127234)

Terry Nham <Terry.Nham@ghd.com>

Sat 12/18/2021 10:25 AM

To: #AU04_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>; John Nguyen <JohnNguyen@eurofins.com>

Cc: Charlotte Gray <Charlotte.Gray@ghd.com>; Henry Luo <Henry.Luo@ghd.com>

EXTERNAL EMAIL*

Hi John and Sample Receipt,
Thanks for sending through the SRA for this batch of samples. Sample RB01 should have been a Total Metals bottle, it must have been accidentally mislabelled! Apologies for this!
Would you be able to update the analysis accordingly?

Regards,

Terry

Terry Nham
BSc (Earth Sciences) / MSc (Spatial Information)
Senior Environmental Scientist – Contamination & Environmental Management

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Please consider the environment before printing this email

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Friday, 17 December 2021 2:22 AM
To: Henry Luo <henry.luo@ghd.com>
Cc: Charlotte Gray <charlotte.gray@ghd.com>; Terry Nham <Terry.Nham@ghd.com>
Subject: Attention: Eurofins Sample Receipt Advice - Report 851006 : Site CENTRAL (2127234)

Dear Valued Client,

No unpreserved inorganics received for GASW_BH10 as per Sampler's comment, TSS, TDS, pH and B11E suite cancelled. Unable to analyse RB01 for total metals, only filtered container was provided, logged for dissolved metals. Sample QC02 (2x amber glass bottles, 1x dissolved metals and 2x glass vials) forwarded to ALS for analysis.

Please find attached a Sample Receipt Advice (SRA), a Summary Sheet and a scanned copy of your Chain-of-Custody (COC). It is important that you check this documentation to ensure that the details are correct such as the Client Job Number, Turn Around Time, any comments in the Notes section and sample numbers as well as the requested analysis. If there are any irregularities then please contact your Eurofins Analytical Services Manager as soon as possible to make certain that they get changed.

Kind regards,
Mickael Ros
Sample Receipt

Eurofins | Environmental Testing
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066

AUSTRALIA
Phone: +61 02 9900 8421
Email: EnviroSampleNSW@eurofins.com
Website: [http://]environment.eurofins.com.au

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Eurofins Environment Testing NZ Limited
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43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	GHD Pty Ltd NSW
Contact name:	Henry Luo
Project name:	CENTRAL
Project ID:	2127234
Turnaround time:	10 Day
Date/Time received	Dec 16, 2021 3:47 PM
Eurofins reference	851006

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 14.9 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✗	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✓	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

No unpreserved inorganics received for GASW_BH10 as per Sampler's comment, TSS, TDS, pH and B11E suite cancelled. Sample QC02 (2x amber glass bottles, 1x dissolved metals and 2x glass vials) forwarded to ALS for analysis.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Henry Luo - henry.luo@ghd.com.

Note: A copy of these results will also be delivered to the general GHD Pty Ltd NSW email address.

GHD Pty Ltd NSW
Level 15, 133 Castlereagh Street
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Henry Luo**

Report **851006-W-V2**
Project name CENTRAL
Project ID 2127234
Received Date Dec 16, 2021

Client Sample ID			**CSM_BH02**	**CSM_BH04**	**CSM_BH06**	**CSM_BH08**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S21-De40129**	**S21-De40130**	**S21-De40131**	**S21-De40132**
Date Sampled			**Dec 14, 2021**	**Dec 14, 2021**	**Dec 15, 2021**	**Dec 16, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	96	96	95	93
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			CSM_BH02	CSM_BH04	CSM_BH06	CSM_BH08
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40129	S21-De40130	S21-De40131	S21-De40132
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 15, 2021	Dec 16, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	54	30	88	82
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00002
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00006
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00005
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00037
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00063
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00051
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00052
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00041
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00055
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00011
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	0.00003	0.00050
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00002
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00049
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00004
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00014
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	0.00064
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	0.00003	0.00506
2-Fluorobiphenyl (surr.)	1	%	50	54	110	87
p-Terphenyl-d14 (surr.)	1	%	110	137	112	102
Ammonia (as N)	0.01	mg/L	0.01	0.05	< 0.01	0.03
Chloride	1	mg/L	160	87	240	110
Cyanide (total)	0.004	mg/L	< 0.004	0.005	< 0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	< 0.05	6.8	1.6	4.7
pH (at 25 °C)	0.1	pH Units	8.5	7.6	7.6	8.1

Client Sample ID			CSM_BH02	CSM_BH04	CSM_BH06	CSM_BH08
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40129	S21-De40130	S21-De40131	S21-De40132
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 15, 2021	Dec 16, 2021
Test/Reference	LOR	Unit				
Sulphate (as SO4)	5	mg/L	28	22	23	47
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	520	140	510	350
Total Suspended Solids Dried at 103–105°C	5	mg/L	630	1300	920	550
Hardness mg equivalent CaCO3/L	5	mg/L	250	95	200	110
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	290	92	130	120
Carbonate Alkalinity (as CaCO3)	10	mg/L	21	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	310	92	130	120
Alkali Metals						
Calcium	0.5	mg/L	41	10	31	12
Magnesium	0.5	mg/L	36	17	30	18
Potassium	0.5	mg/L	5.1	2.8	5.1	4.2
Sodium	0.5	mg/L	99	55	94	75
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	0.003	< 0.001	0.002	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.005	0.39	0.51	0.43
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.012	0.010	0.016	0.003
Zinc (filtered)	0.005	mg/L	0.13	0.23	0.26	0.30

Client Sample ID			CSM_BH10S	CSM_BH12S	SRT_BH047	SRT_BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40133	S21-De40134	S21-De40135	S21-De40136
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 16, 2021	Dec 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			CSM_BH10S	CSM_BH12S	SRT_BH047	SRT_BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40133	S21-De40134	S21-De40135	S21-De40136
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 16, 2021	Dec 16, 2021
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	95	95	94	93
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	72	82	58	73
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Client Sample ID			CSM_BH10S	CSM_BH12S	SRT_BH047	SRT_BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40133	S21-De40134	S21-De40135	S21-De40136
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 16, 2021	Dec 16, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons (Trace level)						
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	0.00001	0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	0.00001	0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	83	96	114	123
p-Terphenyl-d14 (surr.)	1	%	92	112	141	91
Ammonia (as N)	0.01	mg/L	< 0.01	0.02	< 0.01	< 0.01
Chloride	1	mg/L	25	73	18	42
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	0.005	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	< 0.05	7.3	< 0.05	< 0.05
pH (at 25 °C)	0.1	pH Units	6.8	7.7	6.6	7.2
Sulphate (as SO4)	5	mg/L	60	130	14	23
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	150	350	140	130
Total Suspended Solids Dried at 103–105°C	5	mg/L	29	120	68	41
Hardness mg equivalent CaCO3/L	5	mg/L	40	29	43	60
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	59	< 20	24
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	< 20	59	< 20	24
Alkali Metals						
Calcium	0.5	mg/L	4.9	2.0	5.4	17
Magnesium	0.5	mg/L	6.8	5.9	7.1	4.0
Potassium	0.5	mg/L	2.8	2.1	0.6	1.8
Sodium	0.5	mg/L	26	99	17	43
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	0.002	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	0.005	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	0.005	0.006
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.64	0.67	0.022	< 0.005
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.002	0.016	0.004	0.020
Zinc (filtered)	0.005	mg/L	< 0.005	0.065	0.034	0.006

Client Sample ID			GASW_BH10	GASW_BH23	QC01	RB01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40137	S21-De40138	S21-De40139	S21-De40140
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 14, 2021	Dec 16, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	0.05	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	0.05	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	0.03	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
BTEX						
Benzene	0.001	mg/L	< 0.001	0.020	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	94	105	93	-
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	-	-
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	-	-
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	-	-
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	-	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	-	-
Total cresols*	0.01	mg/L	< 0.01	< 0.01	-	-
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
Dinoseb	0.1	mg/L	< 0.1	< 0.1	-	-
Phenol	0.003	mg/L	< 0.003	< 0.003	-	-
Phenol-d6 (surr.)	1	%	73	63	-	-
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	-	-
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	-	-
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	-	-

Client Sample ID			GASW_BH10	GASW_BH23	QC01	RB01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40137	S21-De40138	S21-De40139	S21-De40140
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 14, 2021	Dec 16, 2021
Test/Reference	LOR	Unit				
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	-	-
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
2-Fluorobiphenyl (surr.)	1	%	87	83	50	-
p-Terphenyl-d14 (surr.)	1	%	84	119	96	-
Ammonia (as N)	0.01	mg/L	0.03	0.26	-	-
Chloride	1	mg/L	-	12	-	-
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	-	-
Ferrous Iron - Fe2+	0.05	mg/L	3.3	6.4	-	-
pH (at 25 °C)	0.1	pH Units	-	7.7	-	-
Sulphate (as SO4)	5	mg/L	-	79	-	-
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	-	330	-	-
Total Suspended Solids Dried at 103–105°C	5	mg/L	-	13	-	-
Hardness mg equivalent CaCO3/L	5	mg/L	390	230	-	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	-	160	-	-
Carbonate Alkalinity (as CaCO3)	10	mg/L	-	< 10	-	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	-	< 20	-	-
Total Alkalinity (as CaCO3)	20	mg/L	-	160	-	-
Alkali Metals						
Calcium	0.5	mg/L	83	81	-	-
Magnesium	0.5	mg/L	43	6.1	-	-
Potassium	0.5	mg/L	10	5.9	-	-
Sodium	0.5	mg/L	110	15	-	-
Heavy Metals						
Arsenic	0.001	mg/L	-	-	-	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	0.002	< 0.001	-
Cadmium	0.0002	mg/L	-	-	-	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	-

Client Sample ID			GASW_BH10	GASW_BH23	QC01	RB01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40137	S21-De40138	S21-De40139	S21-De40140
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 14, 2021	Dec 16, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Chromium	0.001	mg/L	-	-	-	< 0.001
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Copper	0.001	mg/L	-	-	-	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Lead	0.001	mg/L	-	-	-	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Manganese (filtered)	0.005	mg/L	0.12	0.19	-	-
Mercury	0.0001	mg/L	-	-	-	< 0.0001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	-
Nickel	0.001	mg/L	-	-	-	< 0.001
Nickel (filtered)	0.001	mg/L	0.001	< 0.001	0.002	-
Zinc	0.005	mg/L	-	-	-	< 0.005
Zinc (filtered)	0.005	mg/L	0.006	0.011	< 0.005	-

Client Sample ID			TRIP BLANK	TRIP SPIKE	SRT_BH050	CSM_BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40141	S21-De40142	S21-De40143	S21-De40144
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 15, 2021	Dec 15, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	-	-	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	-	-	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	-	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	116	-	96	96
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	-	-	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	-	-	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	-	-	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	-	-	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	-	< 0.01	< 0.01

Client Sample ID			TRIP BLANK	TRIP SPIKE	SRT_BH050	CSM_BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40141	S21-De40142	S21-De40143	S21-De40144
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 15, 2021	Dec 15, 2021
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
Pentachlorophenol	0.01	mg/L	-	-	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	-	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	-	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	-	-	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	-	-	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	-	-	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	< 0.006	< 0.006
Total cresols*	0.01	mg/L	-	-	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	-	-	< 0.03	< 0.03
Dinoseb	0.1	mg/L	-	-	< 0.1	< 0.1
Phenol	0.003	mg/L	-	-	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	-	-	96	94
Total Non-Halogenated Phenol*	0.1	mg/L	-	-	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	-	-	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	-	-	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	-	-	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	-	-	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	-	-	126	79
p-Terphenyl-d14 (surr.)	1	%	-	-	149	113

Client Sample ID			TRIP BLANK	TRIP SPIKE	SRT_BH050	CSM_BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-De40141	S21-De40142	S21-De40143	S21-De40144
Date Sampled			Dec 14, 2021	Dec 14, 2021	Dec 15, 2021	Dec 15, 2021
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	-	-	< 0.01	< 0.01
Chloride	1	mg/L	-	-	11	210
Cyanide (total)	0.004	mg/L	-	-	< 0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	-	-	< 0.05	3.2
pH (at 25 °C)	0.1	pH Units	-	-	4.7	7.5
Sulphate (as SO4)	5	mg/L	-	-	44	40
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	-	-	100	590
Total Suspended Solids Dried at 103–105°C	5	mg/L	-	-	1400	99
Hardness mg equivalent CaCO3/L	5	mg/L	-	-	54	250
TRH C6-C10	1	%	-	71	-	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	-	-	< 20	200
Carbonate Alkalinity (as CaCO3)	10	mg/L	-	-	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	-	-	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	-	-	< 20	200
Alkali Metals						
Calcium	0.5	mg/L	-	-	17	57
Magnesium	0.5	mg/L	-	-	3.1	27
Potassium	0.5	mg/L	-	-	5.6	6.0
Sodium	0.5	mg/L	-	-	11	120
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	-	-	< 0.001	0.001
Cadmium (filtered)	0.0002	mg/L	-	-	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	-	-	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	-	-	0.005	0.002
Lead (filtered)	0.001	mg/L	-	-	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	-	-	0.024	0.67
Mercury (filtered)	0.0001	mg/L	-	-	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	-	-	0.002	0.038
Zinc (filtered)	0.005	mg/L	-	-	0.015	0.66
Total Recoverable Hydrocarbons						
Naphthalene	1	%	-	100	-	-
TRH C6-C9	1	%	-	74	-	-
BTEX						
Benzene	1	%	-	100	-	-
Ethylbenzene	1	%	-	99	-	-
m&p-Xylenes	1	%	-	110	-	-
o-Xylene	1	%	-	89	-	-
Toluene	1	%	-	100	-	-
Xylenes - Total	1	%	-	94	-	-
4-Bromofluorobenzene (surr.)	1	%	-	113	-	-

Client Sample ID			CSM_BH14S
Sample Matrix			Water
Eurofins Sample No.			S21-De40145
Date Sampled			Dec 15, 2021
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	0.02	mg/L	0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	99
Phenols (Halogenated)			
2-Chlorophenol	0.003	mg/L	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01
Phenols (non-Halogenated)			
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006
Total cresols*	0.01	mg/L	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03
Dinoseb	0.1	mg/L	< 0.1
Phenol	0.003	mg/L	< 0.003
Phenol-d6 (surr.)	1	%	56
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)			
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1

Client Sample ID			CSM_BH14S
Sample Matrix			**Water**
Eurofins Sample No.			**S21-De40145**
Date Sampled			**Dec 15, 2021**
Test/Reference	LOR	Unit	
TRH - 1999 NEPM Fractions (after silica gel clean-up)			
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)			
Acenaphthene	0.00001	mg/L	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	77
p-Terphenyl-d14 (surr.)	1	%	137
Ammonia (as N)	0.01	mg/L	< 0.01
Chloride	1	mg/L	25
Cyanide (total)	0.004	mg/L	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	< 0.05
pH (at 25 °C)	0.1	pH Units	7.5
Sulphate (as SO4)	5	mg/L	5.4
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	110
Total Suspended Solids Dried at 103–105°C	5	mg/L	< 5
Hardness mg equivalent CaCO3/L	5	mg/L	56
Alkalinity (speciated)			
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	43
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20
Total Alkalinity (as CaCO3)	20	mg/L	43
Alkali Metals			
Calcium	0.5	mg/L	17
Magnesium	0.5	mg/L	3.1
Potassium	0.5	mg/L	1.7
Sodium	0.5	mg/L	9.8
Heavy Metals			
Arsenic (filtered)	0.001	mg/L	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001

Client Sample ID			CSM_BH14S
Sample Matrix			Water
Eurofins Sample No.			S21-De40145
Date Sampled			Dec 15, 2021
Test/Reference	LOR	Unit	
Heavy Metals			
Lead (filtered)	0.001	mg/L	< 0.001
Manganese (filtered)	0.005	mg/L	< 0.005
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001
Zinc (filtered)	0.005	mg/L	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B7 (filtered metals/PAH trace level)			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Dec 23, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Dec 23, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Dec 23, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Dec 23, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	Dec 23, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Metals M8 filtered	Melbourne	Dec 23, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Recoverable Hydrocarbons	Sydney	Dec 16, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Phenols (Speciated)			
Phenols (Halogenated)	Melbourne	Dec 23, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Dec 23, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Melbourne	Dec 23, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Melbourne	Dec 23, 2021	7 Days
- Method: TRH C6-C36 (Silica Gel Cleanup) - MGT 100A			
Ammonia (as N)	Melbourne	Dec 23, 2021	28 Days
- Method: APHA 4500-NH3 Ammonia Nitrogen by FIA			
Cyanide (total)	Melbourne	Dec 23, 2021	14 Days
- Method: LTM-INO-4020 Total Free WAD Cyanide by CFA			
Ferrous Iron - Fe2+	Melbourne	Dec 23, 2021	7 Days
- Method: LTM-INO-4190 Ferrous Iron in Water by Discrete Analyser			
pH (at 25 °C)	Melbourne	Dec 23, 2021	0 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Total Suspended Solids Dried at 103–105°C	Melbourne	Dec 23, 2021	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Metals M8	Melbourne	Jan 18, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Heavy Metals (filtered)	Melbourne	Dec 23, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Melbourne	Dec 23, 2021	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Sulphate (as SO4)	Melbourne	Dec 23, 2021	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Dec 23, 2021	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Dissolved Solids Dried at 180°C ± 2°C	Melbourne	Dec 23, 2021	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Eurofins Suite B11D: Na/K/Ca/Mg and Hardness			
Hardness mg equivalent CaCO3/L	Melbourne	Dec 23, 2021	28 Days
- Method: APHA 2340B Hardness by Calculation			
Alkali Metals	Melbourne	Dec 23, 2021	180 Days
- Method: LTM-MET-3010 Alkali Metals Sulfur Silicon Phosphorus by ICP-AES			

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Project Name: CENTRAL
Project ID: 2127234

Order No.: 2127234
Report #: 851006
Phone: 02 9239 7100
Fax: 02 9239 7199

Received: Dec 16, 2021 3:47 PM
Due: Jan 3, 2022
Priority: 10 Day
Contact Name: Henry Luo

Eurofins Analytical Services Manager : John Nguyen

Sample Detail	Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103–105°C	Metals M8	Phenols (Speciated)	TRH (after Silica Gel cleanup)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B7 (filtered metals/PAH trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254	X	X	X	X	X	X	X	X	X	X	X	X		X	X
Sydney Laboratory - NATA # 1261 Site # 18217										X			X	X	
Brisbane Laboratory - NATA # 1261 Site # 20794															
Mayfield Laboratory - NATA # 1261 Site # 25079															
Perth Laboratory - NATA # 2377 Site # 2370															
External Laboratory															

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID														
1	CSM_BH02	Dec 14, 2021		Water	S21-De40129	X	X	X	X	X	X		X	X		X	X		X	X
2	CSM_BH04	Dec 14, 2021		Water	S21-De40130	X	X	X	X	X	X		X	X		X	X		X	X
3	CSM_BH06	Dec 15, 2021		Water	S21-De40131	X	X	X	X	X	X		X	X		X	X		X	X
4	CSM_BH08	Dec 16, 2021		Water	S21-De40132	X	X	X	X	X	X		X	X		X	X		X	X
5	CSM_BH10S	Dec 14, 2021		Water	S21-De40133	X	X	X	X	X	X		X	X		X	X		X	X
6	CSM_BH12S	Dec 14, 2021		Water	S21-De40134	X	X	X	X	X	X		X	X		X	X		X	X
7	SRT_BH047	Dec 16, 2021		Water	S21-De40135	X	X	X	X	X	X		X	X		X	X		X	X
8	SRT_BH052	Dec 16, 2021		Water	S21-De40136	X	X	X	X	X	X		X	X		X	X		X	X
9	GASW_BH10	Dec 14, 2021		Water	S21-De40137	X	X	X	X				X	X		X			X	

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Sample Detail						Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103–105°C	Metals M8	Phenols (Speciated)	TRH (after Silica Gel cleanup)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B7 (filtered metals/PAH trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X	X	X	X	X	X	X	X	X	X	X	X		X	X
Sydney Laboratory - NATA # 1261 Site # 18217															X			X	X	
Brisbane Laboratory - NATA # 1261 Site # 20794																				
Mayfield Laboratory - NATA # 1261 Site # 25079																				
Perth Laboratory - NATA # 2377 Site # 2370																				
External Laboratory																				
10	GASW_BH23	Dec 14, 2021		Water	S21-De40138	X	X	X	X	X	X		X	X		X	X		X	X
11	QC01	Dec 14, 2021		Water	S21-De40139														X	
12	RB01	Dec 16, 2021		Water	S21-De40140							X								
13	TRIP BLANK	Dec 14, 2021		Water	S21-De40141										X					
14	TRIP SPIKE	Dec 14, 2021		Water	S21-De40142													X		
15	SRT_BH050	Dec 15, 2021		Water	S21-De40143	X	X	X	X	X	X		X	X		X	X		X	X
16	CSM_BH13	Dec 15, 2021		Water	S21-De40144	X	X	X	X	X	X		X	X		X	X		X	X
17	CSM_BH14S	Dec 15, 2021		Water	S21-De40145	X	X	X	X	X	X		X	X		X	X		X	X
Test Counts						13	13	13	13	12	12	1	13	13	1	13	12	1	14	12

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.4
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

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QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	mg/L	< 0.00001			0.00001	Pass	
Acenaphthylene	mg/L	< 0.00001			0.00001	Pass	
Anthracene	mg/L	< 0.00001			0.00001	Pass	
Benz(a)anthracene	mg/L	< 0.00001			0.00001	Pass	
Benzo(a)pyrene	mg/L	< 0.00001			0.00001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.00001			0.00001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Chrysene	mg/L	< 0.00001			0.00001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.00001			0.00001	Pass	
Fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Fluorene	mg/L	< 0.00001			0.00001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.00001			0.00001	Pass	
Naphthalene	mg/L	< 0.00001			0.00001	Pass	
Phenanthrene	mg/L	< 0.00001			0.00001	Pass	
Pyrene	mg/L	< 0.00001			0.00001	Pass	
Total PAH*	mg/L	-			0.00001	N/A	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Chloride	mg/L	< 1			1	Pass	
Cyanide (total)	mg/L	< 0.004			0.004	Pass	
Ferrous Iron - Fe2+	mg/L	< 0.05			0.05	Pass	
Sulphate (as SO4)	mg/L	< 5			5	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	< 10			10	Pass	
Total Suspended Solids Dried at 103–105°C	mg/L	< 5			5	Pass	
Hardness mg equivalent CaCO3/L	mg/L	BLK			5	N/A	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (filtered)	mg/L	0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	104			70-130	Pass	
TRH C10-C14	%	118			70-130	Pass	
Naphthalene	%	119			70-130	Pass	
TRH C6-C10	%	100			70-130	Pass	
TRH >C10-C16	%	118			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	103			70-130	Pass	
Toluene	%	111			70-130	Pass	
Ethylbenzene	%	110			70-130	Pass	
m&p-Xylenes	%	106			70-130	Pass	
Xylenes - Total*	%	106			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	130			25-140	Pass	
2.4-Dichlorophenol	%	118			25-140	Pass	
2.4.5-Trichlorophenol	%	95			25-140	Pass	
2.4.6-Trichlorophenol	%	106			25-140	Pass	
2.6-Dichlorophenol	%	85			25-140	Pass	
4-Chloro-3-methylphenol	%	116			25-140	Pass	
Pentachlorophenol	%	72			25-140	Pass	
Tetrachlorophenols - Total	%	97			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	96			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	56			25-140	Pass	
2-Nitrophenol	%	101			25-140	Pass	
2.4-Dimethylphenol	%	26			25-140	Pass	
2.4-Dinitrophenol	%	58			25-140	Pass	
2-Methylphenol (o-Cresol)	%	66			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	70			25-140	Pass	
4-Nitrophenol	%	60			25-140	Pass	
Dinoseb	%	86			25-140	Pass	
Phenol	%	89			25-140	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	118			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	118			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	%	119			70-130	Pass	
Acenaphthylene	%	102			70-130	Pass	
Anthracene	%	101			70-130	Pass	
Benz(a)anthracene	%	84			70-130	Pass	
Benzo(a)pyrene	%	83			70-130	Pass	
Benzo(b&j)fluoranthene	%	125			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(g.h.i)perylene	%	100			70-130	Pass	
Benzo(k)fluoranthene	%	124			70-130	Pass	
Chrysene	%	129			70-130	Pass	
Dibenz(a.h)anthracene	%	74			70-130	Pass	
Fluoranthene	%	80			70-130	Pass	
Fluorene	%	77			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	79			70-130	Pass	
Naphthalene	%	100			70-130	Pass	
Phenanthrene	%	90			70-130	Pass	
Pyrene	%	96			70-130	Pass	
LCS - % Recovery							
Ammonia (as N)	%	106			70-130	Pass	
Chloride	%	110			70-130	Pass	
Cyanide (total)	%	88			70-130	Pass	
Ferrous Iron - Fe2+	%	103			70-130	Pass	
Sulphate (as SO4)	%	111			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	96			70-130	Pass	
Total Suspended Solids Dried at 103–105°C	%	95			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	101			70-130	Pass	
Total Alkalinity (as CaCO3)	%	110			70-130	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	118			80-120	Pass	
Magnesium	%	117			80-120	Pass	
Potassium	%	115			80-120	Pass	
Sodium	%	118			80-120	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	99			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	100			80-120	Pass	
Copper	%	100			80-120	Pass	
Lead	%	101			80-120	Pass	
Mercury	%	105			80-120	Pass	
Nickel	%	101			80-120	Pass	
Zinc	%	101			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M21-De49540	NCP	%	104			70-130	Pass	
TRH C10-C14	M21-De52319	NCP	%	105			70-130	Pass	
Naphthalene	M21-De49540	NCP	%	82			70-130	Pass	
TRH C6-C10	M21-De49540	NCP	%	103			70-130	Pass	
TRH >C10-C16	M21-De52319	NCP	%	114			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M21-De49540	NCP	%	91			70-130	Pass	
Toluene	M21-De49540	NCP	%	92			70-130	Pass	
Ethylbenzene	M21-De49540	NCP	%	93			70-130	Pass	
m&p-Xylenes	M21-De49540	NCP	%	95			70-130	Pass	
o-Xylene	M21-De49540	NCP	%	92			70-130	Pass	
Xylenes - Total*	M21-De49540	NCP	%	94			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	M21-De46599	NCP	%	117			30-130	Pass	
2.4-Dichlorophenol	M21-De46599	NCP	%	102			30-130	Pass	
2.4.5-Trichlorophenol	M21-De46599	NCP	%	90			30-130	Pass	
2.4.6-Trichlorophenol	M21-De46599	NCP	%	65			30-130	Pass	
2.6-Dichlorophenol	M21-De46599	NCP	%	81			30-130	Pass	
4-Chloro-3-methylphenol	M21-De46599	NCP	%	54			30-130	Pass	
Pentachlorophenol	M21-De46599	NCP	%	72			30-130	Pass	
Tetrachlorophenols - Total	M21-De46599	NCP	%	62			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	M21-De46599	NCP	%	106			30-130	Pass	
2-Methyl-4.6-dinitrophenol	M21-De46599	NCP	%	102			30-130	Pass	
2-Nitrophenol	M21-De46599	NCP	%	120			30-130	Pass	
2.4-Dinitrophenol	M21-De46599	NCP	%	88			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M21-De46599	NCP	%	31			30-130	Pass	
4-Nitrophenol	M21-De46599	NCP	%	37			30-130	Pass	
Dinoseb	M21-De46599	NCP	%	113			30-130	Pass	
Phenol	M21-De46599	NCP	%	66			30-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1					
Benzo(a)pyrene	M21-De46599	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	S21-De40129	CP	%	91			75-125	Pass	
Magnesium	S21-De40129	CP	%	89			75-125	Pass	
Potassium	S21-De40129	CP	%	85			75-125	Pass	
Sodium	S21-De40129	CP	%	85			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S21-De40129	CP	%	100			75-125	Pass	
Cadmium (filtered)	S21-De40129	CP	%	99			75-125	Pass	
Chromium (filtered)	S21-De40129	CP	%	102			75-125	Pass	
Copper (filtered)	S21-De40129	CP	%	100			75-125	Pass	
Lead (filtered)	S21-De40129	CP	%	100			75-125	Pass	
Manganese (filtered)	S21-De40129	CP	%	102			75-125	Pass	
Mercury (filtered)	S21-De40129	CP	%	94			75-125	Pass	
Nickel (filtered)	S21-De40129	CP	%	99			75-125	Pass	
Zinc (filtered)	S21-De40129	CP	%	89			75-125	Pass	
Spike - % Recovery									
				Result 1					
Total Suspended Solids Dried at 103–105°C	S21-De40130	CP	%	106			70-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Methylphenol (o-Cresol)	L21-De40073	NCP	%	49			30-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1					
Acenaphthene	L21-De40073	NCP	%	98			70-130	Pass	
Naphthalene	L21-De40073	NCP	%	103			70-130	Pass	
Pyrene	L21-De40073	NCP	%	106			70-130	Pass	
Spike - % Recovery									
				Result 1					
Ammonia (as N)	S21-De40132	CP	%	109			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
				Result 1					
Ferrous Iron - Fe2+	S21-De40133	CP	%	97			70-130	Pass	
Spike - % Recovery									
				Result 1					
Ferrous Iron - Fe2+	S21-De40135	CP	%	104			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S21-De40139	CP	%	103			75-125	Pass	
Cadmium (filtered)	S21-De40139	CP	%	105			75-125	Pass	
Chromium (filtered)	S21-De40139	CP	%	106			75-125	Pass	
Copper (filtered)	S21-De40139	CP	%	104			75-125	Pass	
Lead (filtered)	S21-De40139	CP	%	104			75-125	Pass	
Manganese (filtered)	S21-De40139	CP	%	32			75-125	Fail	Q08
Mercury (filtered)	S21-De40139	CP	%	84			75-125	Pass	
Nickel (filtered)	S21-De40139	CP	%	103			75-125	Pass	
Zinc (filtered)	S21-De40139	CP	%	116			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M22-Ja10973	NCP	%	93			75-125	Pass	
Cadmium	M22-Ja10973	NCP	%	97			75-125	Pass	
Chromium	M22-Ja10973	NCP	%	94			75-125	Pass	
Copper	M22-Ja10973	NCP	%	95			75-125	Pass	
Lead	M22-Ja10973	NCP	%	97			75-125	Pass	
Mercury	M22-Ja10973	NCP	%	88			75-125	Pass	
Nickel	M22-Ja10973	NCP	%	94			75-125	Pass	
Zinc	M22-Ja10973	NCP	%	99			75-125	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	S21-De40143	CP	%	100			75-125	Pass	
Potassium	S21-De40143	CP	%	92			75-125	Pass	
Sodium	S21-De40143	CP	%	92			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M21-De49541	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M21-De52375	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M21-De52375	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M21-De52375	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Naphthalene	M21-De49541	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M21-De49541	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M21-De52375	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M21-De52375	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	M21-De52375	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M21-De49541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M21-De49541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M21-De49541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M21-De49541	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M21-De49541	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M21-De49541	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M21-De50954	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dichlorophenol	M21-De50954	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4.5-Trichlorophenol	M21-De50954	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	M21-De50954	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	N21-De50435	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
4-Chloro-3-methylphenol	M21-De50954	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Pentachlorophenol	M21-De50954	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Tetrachlorophenols - Total	M21-De50954	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M21-De50954	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M21-De50954	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Nitrophenol	M21-De50954	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dimethylphenol	M21-De50954	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	M21-De50954	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M21-De50954	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M21-De50954	NCP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
4-Nitrophenol	M21-De50954	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Dinoseb	M21-De50954	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Phenol	M21-De50954	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Acenaphthene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Acenaphthylene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Anthracene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benz(a)anthracene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(a)pyrene	M21-De50954	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(g.h.i)perylene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(k)fluoranthene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Chrysene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Dibenz(a.h)anthracene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluoranthene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluorene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Naphthalene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Phenanthrene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Pyrene	M21-De51242	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ferrous Iron - Fe2+	S21-De40129	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	S21-De40129	CP	mg/L	520	530	1.5	30%	Pass	
Total Suspended Solids Dried at 103–105°C	S21-De40129	CP	mg/L	630	630	<1	30%	Pass	
Hardness mg equivalent CaCO3/L	S21-De40129	CP	mg/L	250	250	<1	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	S21-De40129	CP	mg/L	41	41	<1	30%	Pass	
Magnesium	S21-De40129	CP	mg/L	36	36	<1	30%	Pass	
Potassium	S21-De40129	CP	mg/L	5.1	5.3	3.0	30%	Pass	
Sodium	S21-De40129	CP	mg/L	99	97	2.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-De40129	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S21-De40129	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-De40129	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S21-De40129	CP	mg/L	0.003	0.003	3.0	30%	Pass	
Lead (filtered)	S21-De40129	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	S21-De40129	CP	mg/L	0.005	< 0.005	1.0	30%	Pass	
Mercury (filtered)	S21-De40129	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S21-De40129	CP	mg/L	0.012	0.012	3.0	30%	Pass	
Zinc (filtered)	S21-De40129	CP	mg/L	0.13	0.13	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ferrous Iron - Fe2+	S21-De40130	CP	mg/L	6.8	6.7	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	S21-De40131	CP	mg/L	< 0.004	< 0.004	<1	30%	Pass	
pH (at 25 °C)	S21-De40131	CP	pH Units	7.6	7.6	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S21-De40131	CP	mg/L	130	140	2.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S21-De40131	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S21-De40131	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S21-De40131	CP	mg/L	130	140	2.0	30%	Pass	
Duplicate									
TRH - 2013 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH >C10-C16 (after silica gel clean-up)	B21-De43619	NCP	mg/L	0.91	0.83	10	30%	Pass	
TRH >C16-C34 (after silica gel clean-up)	B21-De43619	NCP	mg/L	0.4	0.4	9.0	30%	Pass	
TRH >C34-C40 (after silica gel clean-up)	B21-De43619	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
TRH - 1999 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH C10-C14 (after silica gel clean-up)	B21-De43619	NCP	mg/L	1.1	0.98	11	30%	Pass	
TRH C15-C28 (after silica gel clean-up)	B21-De43619	NCP	mg/L	0.6	0.6	4.0	30%	Pass	
TRH C29-C36 (after silica gel clean-up)	B21-De43619	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C10-C36 (Total) (after silica gel clean-up)	B21-De43619	NCP	mg/L	1.7	1.6	9	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S21-De40132	CP	mg/L	0.03	0.06	62	30%	Fail	Q15
Duplicate									
				Result 1	Result 2	RPD			
Ferrous Iron - Fe2+	S21-De40136	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ferrous Iron - Fe2+	S21-De40138	CP	mg/L	6.4	6.4	1.0	30%	Pass	
pH (at 25 °C)	S21-De40138	CP	pH Units	7.7	7.8	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S21-De40138	CP	mg/L	160	150	2.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S21-De40138	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S21-De40138	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S21-De40138	CP	mg/L	160	150	2.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-De40139	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S21-De40139	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-De40139	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S21-De40139	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead (filtered)	S21-De40139	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	S21-De40139	CP	mg/L	0.65	0.62	4.0	30%	Pass	
Mercury (filtered)	S21-De40139	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S21-De40139	CP	mg/L	0.002	0.002	3.0	30%	Pass	
Zinc (filtered)	S21-De40139	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M22-Ja10973	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M22-Ja10973	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M22-Ja10973	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M22-Ja10973	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	M22-Ja10973	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	M22-Ja10973	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M22-Ja10973	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	M22-Ja10973	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	S21-De40143	CP	mg/L	11	11	2.0	30%	Pass	
Cyanide (total)	S21-De40143	CP	mg/L	< 0.004	< 0.004	<1	30%	Pass	
Sulphate (as SO4)	S21-De40143	CP	mg/L	44	44	1.0	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Sodium	S21-De40143	CP	mg/L	11	10	7.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
pH (at 25 °C)	S21-De40144	CP	pH Units	7.5	7.6	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Carbonate Alkalinity (as CaCO3)	S21-De40144	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S21-De40144	CP	mg/L	< 20	< 20	<1	30%	Pass	

Comments

This report was revised V2 to report Cyanide LOR as <0.004 mg/L as requested on COC.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	No
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

John Nguyen	Analytical Services Manager
Vivian Wang	Senior Analyst-Volatile (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham / Charlotte Gray	**Purchase Order :** 2127234	**COC Number :**
Office Address :	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2020/2021
Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Email for results :** terry.nham@ghd.com henry.luo@ghd.com charlotte.gray@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols		TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)		Ferrous Iron	Manganese	pH	TDS	TSS		TRH C6-C10 / BTEX	8 Metals (Total)					
1	CSM_BH02	18/1/22	Water	X	X	X		X	X	X	X		X	X	X	X	X								
2	CSM_BH04	19/1/22	Water	X	X	X		X	X	X	X		X	X	X	X	X								
3	CSM_BH10S	19/1/22	Water	X	X	X		X	X	X	X		X	X	X	X	X								
4	CSM_BH12S	19/1/22	Water	X	X	X		X	X	X	X		X	X	X	X	X								
5	SRT_BH047	19/1/22	Water	X	X	X		X	X	X	X		X	X	X	X	X								
6	SRT_BH052	19/1/22	Water	X	X	X		X	X	X	X		X	X	X	X	X								
7	GASW_BH10	18/1/22	Water	X	X	X		X	X	X	X		X	X	X	X	X								
8	QC01	18/1/22	Water	X	X	X		X	X	X	X		X	X	X	X	X								
9	RB01	18/1/22	Water																	X					
10	Trip Blank	18/1/22	Water																X						
11	Trip Spike	18/1/22	Water																X						
12	SRT_BH050	19/1/22	Water	X	X	X		X	X	X	X		X	X	X	X	X								
13	CSM-BH08	18/1/21	Water	X	X	X		X	X	X	X		X	X	X	X	X								
14																									
15																									
16																									

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

	500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag
1	1		4		2	2		
2	1		4		2	2		
3	1		4		2	2		
4	1		4		2	2		
5	1		4		2	2		
6	1		4		2	2		
7	1		4		2	2		
8	1		4		2	2		
9			1					
10					2			
11					2			
12	1		4		2	2		
13	1		4		2	2		
14								
15								
16								

Sample comments:

Relinquished By: Terry Nham - GHD
Date & Time : 19/1/2022
Signature:

Laboratory Staff
Received By: Koopesh
Date & Time : 19/1/22 2:57 PM
Signature:

Turn around time
1 DAY ☐ 2 DAY ☐ 3 DAY ☐
5 DAY ☒ 10 DAY ☐ Other:

Method Of Shipment
☐ Courier
☒ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arrival: 0

Report number:

eurofins | Environment Testing

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Sample Receipt Advice

Company name:	GHD Pty Ltd NSW
Contact name:	Henry Luo
Project name:	CENTRAL
Project ID:	2127234
Turnaround time:	1 Day
Date/Time received	Jan 19, 2022 12:51 PM
Eurofins reference	856960

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 0 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

No plastic bottle provided for sample QC01, total suspended solids and total dried solids have been cancelled.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Henry Luo - henry.luo@ghd.com.

Note: A copy of these results will also be delivered to the general GHD Pty Ltd NSW email address.

GHD Pty Ltd NSW
Level 15, 133 Castlereagh Street
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

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NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Henry Luo**

Report **856960-W-V2**
Project name CENTRAL
Project ID 2127234
Received Date Jan 19, 2022

Client Sample ID			**CSM_BH02**	**CSM_BH04**	**CSM_BH10S**	**CSM_BH12S**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S22-Ja21839**	**S22-Ja21840**	**S22-Ja21841**	**S22-Ja21842**
Date Sampled			**Jan 18, 2022**	**Jan 18, 2022**	**Jan 18, 2022**	**Jan 18, 2022**
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	72	70	69	69
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	0.2	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	0.2	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	0.2	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	0.2	< 0.1	< 0.1
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			CSM_BH02	CSM_BH04	CSM_BH10S	CSM_BH12S
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ja21839	S22-Ja21840	S22-Ja21841	S22-Ja21842
Date Sampled			Jan 18, 2022	Jan 18, 2022	Jan 18, 2022	Jan 18, 2022
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	34	34	39	36
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	0.06	< 0.05	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	65	65	93	125
p-Terphenyl-d14 (surr.)	1	%	102	108	139	74
Ammonia (as N)	0.01	mg/L	< 0.01	0.03	0.05	0.03
Chloride	1	mg/L	150	72	21	69
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	< 0.004	< 0.004
Ferrous Iron - Fe2+	0.5	mg/L	< 0.5	3.2	< 0.5	4.6
pH (at 25 °C)	0.1	pH Units	7.5	6.5	6.1	6.7

Client Sample ID			CSM_BH02	CSM_BH04	CSM_BH10S	CSM_BH12S
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ja21839	S22-Ja21840	S22-Ja21841	S22-Ja21842
Date Sampled			Jan 18, 2022	Jan 18, 2022	Jan 18, 2022	Jan 18, 2022
Test/Reference	LOR	Unit				
Sulphate (as SO4)	2	mg/L	20	28	45	120
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	240	260	170	380
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	2400	1200	47	84
Hardness mg equivalent CaCO3/L	1	mg/L	290	120	41	32
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	330	120	26	64
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	330	120	26	64
Alkali Metals						
Calcium	0.5	mg/L	46	13	4.6	1.9
Magnesium	0.5	mg/L	42	21	7.1	6.7
Potassium	0.5	mg/L	7.2	6.0	2.9	2.4
Sodium	0.5	mg/L	120	69	36	130
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	0.003	0.002	0.002	0.002
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.013	0.35	0.47	0.53
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.007	0.051	< 0.001	0.011
Zinc (filtered)	0.005	mg/L	< 0.005	0.008	< 0.005	0.051

Client Sample ID			SRT_BH047	SRT_BH052	GASW_BH10	[G01]QC01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ja21843	S22-Ja21844	S22-Ja21845	S22-Ja21846
Date Sampled			Jan 19, 2022	Jan 19, 2022	Jan 18, 2022	Jan 18, 2022
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	71	69	71	68
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	0.4	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	0.4	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	0.07	< 0.05

Client Sample ID			SRT_BH047	SRT_BH052	GASW_BH10	[G01]QC01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ja21843	S22-Ja21844	S22-Ja21845	S22-Ja21846
Date Sampled			Jan 19, 2022	Jan 19, 2022	Jan 18, 2022	Jan 18, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	0.07	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	0.5	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	0.57	< 0.1
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	-
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
Phenol-d6 (surr.)	1	%	35	37	37	-
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002

Client Sample ID			SRT_BH047	SRT_BH052	GASW_BH10	[G01]QC01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ja21843	S22-Ja21844	S22-Ja21845	S22-Ja21846
Date Sampled			Jan 19, 2022	Jan 19, 2022	Jan 18, 2022	Jan 18, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons (Trace level)						
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00002
2-Fluorobiphenyl (surr.)	1	%	54	134	83	72
p-Terphenyl-d14 (surr.)	1	%	107	105	144	55
Ammonia (as N)	0.01	mg/L	< 0.01	0.03	0.01	-
Chloride	1	mg/L	16	32	240	-
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	< 0.004	-
Ferrous Iron - Fe2+	0.5	mg/L	< 0.5	< 0.5	3.2	-
pH (at 25 °C)	0.1	pH Units	6.1	6.3	7.7	-
Sulphate (as SO4)	2	mg/L	12	12	< 2	-
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	130	180	590	-
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	19	81	290	-
Hardness mg equivalent CaCO3/L	1	mg/L	43	29	370	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	440	-
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	-
Total Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	440	-
Alkali Metals						
Calcium	0.5	mg/L	4.8	5.4	77	-
Magnesium	0.5	mg/L	7.6	3.8	44	-
Potassium	0.5	mg/L	0.7	1.4	9.8	-
Sodium	0.5	mg/L	22	40	120	-
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	0.004	0.002	0.002	0.002
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.015	0.018	0.094	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.006
Zinc (filtered)	0.005	mg/L	0.026	0.007	< 0.005	< 0.005

Client Sample ID			SRT_BH050	CSM_BH08	RB01	TRIP BLANK
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ja21847	S22-Ja21848	S22-Ja21849	S22-Ja21850
Date Sampled			Jan 19, 2022	Jan 18, 2022	Jan 18, 2022	Jan 18, 2022
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	-	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	-	< 0.003
4-Bromofluorobenzene (surr.)	1	%	74	72	-	71
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	-	-
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	-	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	-	-
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	-	-
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	-	-
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	-	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	-	-
Total cresols*	0.01	mg/L	< 0.01	< 0.01	-	-
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
Dinoseb	0.1	mg/L	< 0.1	< 0.1	-	-
Phenol	0.003	mg/L	< 0.003	< 0.003	-	-
Phenol-d6 (surr.)	1	%	36	38	-	-
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	-	-
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	-	-
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	-	-

Client Sample ID			SRT_BH050	CSM_BH08	RB01	TRIP BLANK
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ja21847	S22-Ja21848	S22-Ja21849	S22-Ja21850
Date Sampled			Jan 19, 2022	Jan 18, 2022	Jan 18, 2022	Jan 18, 2022
Test/Reference	LOR	Unit				
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	-	-
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	-	-
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	-	-
2-Fluorobiphenyl (surr.)	1	%	88	103	-	-
p-Terphenyl-d14 (surr.)	1	%	130	56	-	-
Ammonia (as N)	0.01	mg/L	0.05	0.03	-	-
Chloride	1	mg/L	12	110	-	-
Cyanide (total)	0.004	mg/L	< 0.005	0.27	-	-
Ferrous Iron - Fe2+	0.5	mg/L	< 0.5	5.8	-	-
pH (at 25 °C)	0.1	pH Units	4.9	7.1	-	-
Sulphate (as SO4)	2	mg/L	35	38	-	-
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	170	420	-	-
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	95	96	-	-
Hardness mg equivalent CaCO3/L	1	mg/L	58	120	-	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	140	-	-
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	-	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	-	-
Total Alkalinity (as CaCO3)	20	mg/L	< 20	140	-	-
Alkali Metals						
Calcium	0.5	mg/L	17	13	-	-
Magnesium	0.5	mg/L	3.5	21	-	-
Potassium	0.5	mg/L	5.5	4.4	-	-
Sodium	0.5	mg/L	14	97	-	-
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	-
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Copper (filtered)	0.001	mg/L	0.003	0.002	< 0.001	-

Client Sample ID			SRT_BH050	CSM_BH08	RB01	TRIP BLANK
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S22-Ja21847**	**S22-Ja21848**	**S22-Ja21849**	**S22-Ja21850**
Date Sampled			**Jan 19, 2022**	**Jan 18, 2022**	**Jan 18, 2022**	**Jan 18, 2022**
Test/Reference	LOR	Unit				
Heavy Metals						
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Manganese (filtered)	0.005	mg/L	0.015	0.32	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	-
Nickel (filtered)	0.001	mg/L	< 0.001	0.032	< 0.001	-
Zinc (filtered)	0.005	mg/L	0.006	< 0.005	< 0.005	-

Client Sample ID			TRIP SPIKE
Sample Matrix			**Water**
Eurofins Sample No.			**S22-Ja21851**
Date Sampled			**Jan 18, 2022**
Test/Reference	LOR	Unit	
TRH C6-C10	1	%	77
Total Recoverable Hydrocarbons			
Naphthalene	1	%	120
TRH C6-C9	1	%	79
BTEX			
Benzene	1	%	110
Ethylbenzene	1	%	110
m&p-Xylenes	1	%	110
o-Xylene	1	%	100
Toluene	1	%	110
Xylenes - Total	1	%	110
4-Bromofluorobenzene (surr.)	1	%	72

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
BTEX	Sydney	Jan 20, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons	Sydney	Jan 21, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 20, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B6 (filtered metals)			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jan 21, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 20, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8 filtered	Sydney	Feb 10, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Phenols (Halogenated)	Sydney	Jan 20, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Jan 20, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Sydney	Jan 20, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Sydney	Jan 20, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	Jan 28, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Ammonia (as N)	Sydney	Jan 21, 2022	28 Days
- Method: LTM-INO-4200 Ammonia by Discrete Analyser			
Cyanide (total)	Sydney	Jan 21, 2022	14 Days
- Method: E054 Total Cyanide			
Ferrous Iron - Fe2+	Sydney	Feb 10, 2022	7 Days
- Method: LTM-INO-4190 Ferrous Iron in Water by Discrete Analyser			
pH (at 25 °C)	Sydney	Jan 21, 2022	0 Hour
- Method: LTM-GEN-7090 pH in water by ISE			
Total Suspended Solids Dried at 103°C–105°C	Sydney	Jan 21, 2022	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Heavy Metals (filtered)	Sydney	Feb 10, 2022	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Sydney	Jan 20, 2022	28 Days
- Method: In-house method LTM-INO-4270 Anions by Ion Chromatography			
Sulphate (as SO4)	Sydney	Jan 20, 2022	28 Days
- Method: In-house method LTM-INO-4270 Sulphate by Ion Chromatograph			
Alkalinity (speciated)	Melbourne	Jan 22, 2022	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Dissolved Solids Dried at 180°C ± 2°C	Sydney	Jan 20, 2022	7 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Eurofins Suite B11D: Na/K/Ca/Mg and Hardness			
Hardness mg equivalent CaCO3/L	Sydney	Jan 25, 2022	28 Days
- Method: E020.1 Hardness in water			
Alkali Metals	Sydney	Jan 25, 2022	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

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Company Name: GHD Pty Ltd NSW
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NSW 2000

Project Name: CENTRAL
Project ID: 2127234

Order No.: 2127234
Report #: 856960
Phone: 02 9239 7100
Fax: 02 9239 7199

Received: Jan 19, 2022 12:51 PM
Due: Feb 16, 2022
Priority: 1 Day
Contact Name: Henry Luo

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103°C–105°C	Metals M8 filtered	Phenols (Speciated)	TRH (after Silica Gel cleanup)	Eurofins Suite B6 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254																		X		X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA # 1261 Site # 20794																					
Mayfield Laboratory - NATA # 1261 Site # 25079																					
Perth Laboratory - NATA # 2377 Site # 2370																					
External Laboratory																					
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																
1	CSM_BH02	Jan 18, 2022		Water	S22-Ja21839	X	X	X	X	X	X		X	X	X		X	X		X	X
2	CSM_BH04	Jan 18, 2022		Water	S22-Ja21840	X	X	X	X	X	X		X	X	X		X	X		X	X
3	CSM_BH10S	Jan 18, 2022		Water	S22-Ja21841	X	X	X	X	X	X		X	X	X		X	X		X	X
4	CSM_BH12S	Jan 18, 2022		Water	S22-Ja21842	X	X	X	X	X	X		X	X	X		X	X		X	X
5	SRT_BH047	Jan 19, 2022		Water	S22-Ja21843	X	X	X	X	X	X		X	X	X		X	X		X	X
6	SRT_BH052	Jan 19, 2022		Water	S22-Ja21844	X	X	X	X	X	X		X	X	X		X	X		X	X
7	GASW_BH10	Jan 18, 2022		Water	S22-Ja21845	X	X	X	X	X	X		X	X	X		X	X		X	X
8	QC01	Jan 18, 2022		Water	S22-Ja21846										X					X	
9	SRT_BH050	Jan 19, 2022		Water	S22-Ja21847	X	X	X	X	X	X		X	X	X		X	X		X	X

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NSW 2000

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Sample Detail						Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103°C–105°C	Metals M8 filtered	Phenols (Speciated)	TRH (after Silica Gel cleanup)	Eurofins Suite B6 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254																		X		X	X
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA # 1261 Site # 20794																					
Mayfield Laboratory - NATA # 1261 Site # 25079																					
Perth Laboratory - NATA # 2377 Site # 2370																					
External Laboratory																					
10	CSM_BH08	Jan 18, 2022		Water	S22-Ja21848	X	X	X	X	X	X		X	X	X		X	X		X	X
11	RB01	Jan 18, 2022		Water	S22-Ja21849							X									
12	TRIP BLANK	Jan 18, 2022		Water	S22-Ja21850											X					
13	TRIP SPIKE	Jan 18, 2022		Water	S22-Ja21851														X		
Test Counts						9	9	9	9	9	9	1	9	9	10	1	9	9	1	10	9

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

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QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	mg/L	< 0.00001			0.00001	Pass	
Acenaphthylene	mg/L	< 0.00001			0.00001	Pass	
Anthracene	mg/L	< 0.00001			0.00001	Pass	
Benz(a)anthracene	mg/L	< 0.00001			0.00001	Pass	
Benzo(a)pyrene	mg/L	< 0.00001			0.00001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.00001			0.00001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Chrysene	mg/L	< 0.00001			0.00001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.00001			0.00001	Pass	
Fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Fluorene	mg/L	< 0.00001			0.00001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.00001			0.00001	Pass	
Naphthalene	mg/L	< 0.00001			0.00001	Pass	
Phenanthrene	mg/L	< 0.00001			0.00001	Pass	
Pyrene	mg/L	< 0.00001			0.00001	Pass	
Method Blank							
Chloride	mg/L	< 1			1	Pass	
Cyanide (total)	mg/L	< 0.004			0.004	Pass	
Ferrous Iron - Fe2+	mg/L	< 0.5			0.5	Pass	
Sulphate (as SO4)	mg/L	< 2			2	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	< 10			10	Pass	
Total Suspended Solids Dried at 103°C–105°C	mg/L	< 5			5	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	97			70-130	Pass	
Toluene	%	93			70-130	Pass	
Ethylbenzene	%	95			70-130	Pass	
m&p-Xylenes	%	94			70-130	Pass	
o-Xylene	%	97			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Xylenes - Total*	%	95			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	84			70-130	Pass	
TRH C10-C14	%	114			70-130	Pass	
Naphthalene	%	113			70-130	Pass	
TRH C6-C10	%	84			70-130	Pass	
TRH >C10-C16	%	110			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	104			25-140	Pass	
2.4-Dichlorophenol	%	93			25-140	Pass	
2.4.5-Trichlorophenol	%	89			25-140	Pass	
2.4.6-Trichlorophenol	%	90			25-140	Pass	
2.6-Dichlorophenol	%	93			25-140	Pass	
4-Chloro-3-methylphenol	%	87			25-140	Pass	
Pentachlorophenol	%	85			25-140	Pass	
Tetrachlorophenols - Total	%	95			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	75			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	113			25-140	Pass	
2-Nitrophenol	%	113			25-140	Pass	
2.4-Dimethylphenol	%	90			25-140	Pass	
2.4-Dinitrophenol	%	123			25-140	Pass	
2-Methylphenol (o-Cresol)	%	84			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	68			25-140	Pass	
4-Nitrophenol	%	75			25-140	Pass	
Dinoseb	%	93			25-140	Pass	
Phenol	%	95			25-140	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	96			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	95			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	%	101			70-130	Pass	
Acenaphthylene	%	98			70-130	Pass	
Anthracene	%	83			70-130	Pass	
Benz(a)anthracene	%	71			70-130	Pass	
Benzo(a)pyrene	%	104			70-130	Pass	
Benzo(b&j)fluoranthene	%	78			70-130	Pass	
Benzo(g.h.i)perylene	%	101			70-130	Pass	
Benzo(k)fluoranthene	%	76			70-130	Pass	
Chrysene	%	81			70-130	Pass	
Dibenz(a.h)anthracene	%	81			70-130	Pass	
Fluoranthene	%	74			70-130	Pass	
Fluorene	%	72			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	86			70-130	Pass	
Naphthalene	%	90			70-130	Pass	
Phenanthrene	%	106			70-130	Pass	
Pyrene	%	73			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ammonia (as N)	%	87			70-130	Pass	
Chloride	%	117			70-130	Pass	
Cyanide (total)	%	106			70-130	Pass	
Ferrous Iron - Fe2+	%	122			70-130	Pass	
Sulphate (as SO4)	%	97			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	96			70-130	Pass	
Total Suspended Solids Dried at 103°C–105°C	%	92			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	84			70-130	Pass	
Total Alkalinity (as CaCO3)	%	92			70-130	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	101			80-120	Pass	
Magnesium	%	107			80-120	Pass	
Potassium	%	103			80-120	Pass	
Sodium	%	105			80-120	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	99			80-120	Pass	
Cadmium (filtered)	%	94			80-120	Pass	
Chromium (filtered)	%	111			80-120	Pass	
Copper (filtered)	%	115			80-120	Pass	
Lead (filtered)	%	114			80-120	Pass	
Manganese (filtered)	%	85			80-120	Pass	
Mercury (filtered)	%	107			80-120	Pass	
Nickel (filtered)	%	107			80-120	Pass	
Zinc (filtered)	%	104			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1					
Acenaphthene	M22-Ja39889	NCP	%	94			70-130	Pass	
Acenaphthylene	M22-Ja39889	NCP	%	121			70-130	Pass	
Anthracene	M22-Ja39889	NCP	%	74			70-130	Pass	
Benz(a)anthracene	M22-Ja39889	NCP	%	104			70-130	Pass	
Benzo(a)pyrene	L22-Ja22454	NCP	%	80			70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ja39889	NCP	%	87			70-130	Pass	
Benzo(g.h.i)perylene	M22-Ja39889	NCP	%	125			70-130	Pass	
Benzo(k)fluoranthene	M22-Ja39889	NCP	%	126			70-130	Pass	
Chrysene	M22-Ja39889	NCP	%	94			70-130	Pass	
Dibenz(a.h)anthracene	M22-Ja39889	NCP	%	115			70-130	Pass	
Fluoranthene	M22-Ja39889	NCP	%	92			70-130	Pass	
Fluorene	M22-Ja39889	NCP	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ja39889	NCP	%	123			70-130	Pass	
Naphthalene	M22-Ja39889	NCP	%	88			70-130	Pass	
Phenanthrene	M22-Ja39889	NCP	%	78			70-130	Pass	
Pyrene	M22-Ja39889	NCP	%	92			70-130	Pass	
Spike - % Recovery									
				Result 1					
Ammonia (as N)	S22-Ja20388	NCP	%	96			70-130	Pass	
Chloride	S22-Ja17970	NCP	%	104			70-130	Pass	
Sulphate (as SO4)	S22-Ja17970	NCP	%	98			70-130	Pass	
Total Suspended Solids Dried at 103°C–105°C	S22-Ja29700	NCP	%	106			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	S22-Ja26420	NCP	%	102			75-125	Pass	
Magnesium	S22-Ja26420	NCP	%	108			75-125	Pass	
Potassium	S22-Ja26420	NCP	%	103			75-125	Pass	
Sodium	S22-Ja26420	NCP	%	107			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S22-Ja21844	CP	%	85			70-130	Pass	
TRH >C10-C16	S22-Ja21844	CP	%	98			70-130	Pass	
Spike - % Recovery									
				Result 1					
Ferrous Iron - Fe2+	S22-Ja21844	CP	%	124			70-130	Pass	
Spike - % Recovery									
TRH - 2013 NEPM Fractions (after silica gel clean-up)				Result 1					
TRH >C10-C16 (after silica gel clean-up)	S22-Ja21848	CP	%	105			70-130	Pass	
Spike - % Recovery									
TRH - 1999 NEPM Fractions (after silica gel clean-up)				Result 1					
TRH C10-C14 (after silica gel clean-up)	S22-Ja21848	CP	%	103			70-130	Pass	
Spike - % Recovery									
				Result 1					
Ferrous Iron - Fe2+	S22-Ja21848	CP	%	109			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S22-Ja21849	CP	%	85			75-125	Pass	
Cadmium (filtered)	S22-Ja21849	CP	%	81			75-125	Pass	
Chromium (filtered)	S22-Ja21849	CP	%	92			75-125	Pass	
Copper (filtered)	S22-Ja21849	CP	%	95			75-125	Pass	
Lead (filtered)	S22-Ja21849	CP	%	93			75-125	Pass	
Manganese (filtered)	S22-Ja21849	CP	%	81			75-125	Pass	
Mercury (filtered)	S22-Ja21849	CP	%	96			75-125	Pass	
Nickel (filtered)	S22-Ja21849	CP	%	92			75-125	Pass	
Zinc (filtered)	S22-Ja21849	CP	%	87			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Acenaphthene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Acenaphthylene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Anthracene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benz(a)anthracene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(a)pyrene	L22-Ja22452	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(g.h.i)perylene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(k)fluoranthene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Chrysene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Dibenz(a.h)anthracene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluoranthene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluorene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Naphthalene	M22-Ja26327	NCP	mg/L	0.00005	0.00006	21	30%	Pass	
Phenanthrene	M22-Ja26327	NCP	mg/L	0.00003	0.00004	39	30%	Fail	Q15
Pyrene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
Chloride	S22-Ja17970	NCP	mg/L	33	33	2.0	30%	Pass	
Cyanide (total)	S22-Ja21839	CP	mg/L	< 0.004	< 0.004	<1	30%	Pass	
Sulphate (as SO4)	S22-Ja17970	NCP	mg/L	22	22	1.0	30%	Pass	
Total Suspended Solids Dried at 103°C–105°C	S22-Ja21839	CP	mg/L	2400	2700	12	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	M22-Ja21566	NCP	mg/L	22	22	<1	30%	Pass	
Carbonate Alkalinity (as CaCO3)	M22-Ja21566	NCP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	M22-Ja21566	NCP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	M22-Ja21566	NCP	mg/L	22	22	<1	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	S22-Ja21839	CP	mg/L	46	46	2.0	30%	Pass	
Magnesium	S22-Ja21839	CP	mg/L	42	43	2.0	30%	Pass	
Potassium	S22-Ja21839	CP	mg/L	7.2	7.6	5.0	30%	Pass	
Sodium	S22-Ja21839	CP	mg/L	120	120	3.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S22-Ja21839	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S22-Ja21839	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S22-Ja21839	CP	mg/L	0.001	0.001	12	30%	Pass	
Copper (filtered)	S22-Ja21839	CP	mg/L	0.003	0.003	1.0	30%	Pass	
Lead (filtered)	S22-Ja21839	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	S22-Ja21839	CP	mg/L	0.013	0.013	2.0	30%	Pass	
Mercury (filtered)	S22-Ja21839	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S22-Ja21839	CP	mg/L	0.007	0.006	25	30%	Pass	
Zinc (filtered)	S22-Ja21839	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S22-Ja21840	CP	mg/L	0.03	0.02	27	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S22-Ja21844	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S22-Ja21844	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S22-Ja21844	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S22-Ja21844	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S22-Ja21844	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S22-Ja21844	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S22-Ja21844	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Naphthalene	S22-Ja21844	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S22-Ja21844	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
TRH - 2013 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH >C10-C16 (after silica gel clean-up)	S22-Ja21844	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34 (after silica gel clean-up)	S22-Ja21844	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40 (after silica gel clean-up)	S22-Ja21844	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
TRH - 1999 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH C10-C14 (after silica gel clean-up)	S22-Ja21844	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28 (after silica gel clean-up)	S22-Ja21844	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36 (after silica gel clean-up)	S22-Ja21844	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ferrous Iron - Fe2+	S22-Ja21844	CP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S22-Ja21845	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S22-Ja21845	CP	mg/L	0.4	0.4	11	30%	Pass	
TRH C29-C36	S22-Ja21845	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C10-C16	S22-Ja21845	CP	mg/L	0.07	0.07	3.0	30%	Pass	
TRH >C16-C34	S22-Ja21845	CP	mg/L	0.5	0.4	9.0	30%	Pass	
TRH >C34-C40	S22-Ja21845	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ferrous Iron - Fe2+	S22-Ja21845	CP	mg/L	3.2	3.3	1.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S22-Ja21847	CP	mg/L	0.05	0.05	6.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S22-Ja21847	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S22-Ja21847	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S22-Ja21847	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S22-Ja21847	CP	mg/L	0.003	0.004	14	30%	Pass	
Lead (filtered)	S22-Ja21847	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	S22-Ja21847	CP	mg/L	0.015	0.013	9.0	30%	Pass	
Mercury (filtered)	S22-Ja21847	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S22-Ja21847	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	S22-Ja21847	CP	mg/L	0.006	0.005	13	30%	Pass	

Comments

This report was revised V2 to amend analysis for QC01 to suite B6 and Trace PAH as requested.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

John Nguyen	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Joseph Edouard	Senior Analyst-Organic (VIC)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Page 1 of 1

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham / Charlotte Gray	**Purchase Order :** 2127234	**COC Number :**
Office Address : Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2020/2021
	Email for results : terry.nham@ghd.com henry.luo@ghd.com charlotte.gray@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols	TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (<0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)	Ferrous Iron	Manganese	pH	TDS	TSS	TRH C6-C10 / BTEX	8 Metals (Total)	BTEX
1	CSM_BH06	27/01/22	Water	X	X	X	X	X	X	X	X	X	X	X	X			
2	~~CSM_BH08~~	~~27/01/22~~	~~Water~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~			
3	CSM_BH13	27/01/22	Water	X	X	X	X	X	X	X	X	X	X	X	X			
4	CSM_BH14S	27/01/22	Water	X	X	X	X	X	X	X	X	X	X	X	X			
5	Trip Spike	27/01/22	Water															X
6	Trip Blank	27/01/22	Water													X		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		
16																		

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag
1		4		2	2		
~~1~~		~~4~~		~~2~~	~~2~~		
1		4		2	2		
1		4		2	2		

Sample comments:

Laboratory Staff

Relinquished By: Charlotte Gray
Date & Time : 27/01/22 14:29
Signature:

Received By: S DALLI
Date & Time : 27/1 2:32pm
Signature:

Turn around time

1 DAY ☐ 2 DAY ☐ 3 DAY ☐
5 DAY ☑ 10 DAY ☐ Other:

Method Of Shipment

☐ Courier
☑ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arrival: 1.5°C.

Report number: 858641

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Sample Receipt Advice

Company name:	GHD Pty Ltd NSW
Contact name:	Henry Luo
Project name:	CENTRAL
Project ID:	2127234
Turnaround time:	5 Day
Date/Time received	Jan 27, 2022 2:32 PM
Eurofins reference	858641

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 1.5 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Henry Luo - henry.luo@ghd.com.

Note: A copy of these results will also be delivered to the general GHD Pty Ltd NSW email address.

GHD Pty Ltd NSW
Level 15, 133 Castlereagh Street
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Henry Luo**

Report **858641-W-V2**
Project name CENTRAL
Project ID 2127234
Received Date Jan 27, 2022

Client Sample ID			**CSM_BH06**	**CSM_BH13**	**CSM_BH14S**	**TRIP SPIKE**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S22-Ja34356**	**S22-Ja34357**	**S22-Ja34358**	**S22-Ja34359**
Date Sampled			**Jan 27, 2022**	**Jan 27, 2022**	**Jan 27, 2022**	**Jan 27, 2022**
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	100	95	95	-
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	-

Client Sample ID			CSM_BH06	CSM_BH13	CSM_BH14S	TRIP SPIKE
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ja34356	S22-Ja34357	S22-Ja34358	S22-Ja34359
Date Sampled			Jan 27, 2022	Jan 27, 2022	Jan 27, 2022	Jan 27, 2022
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	-
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
Phenol-d6 (surr.)	1	%	34	78	82	-
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
2-Fluorobiphenyl (surr.)	1	%	72	77	74	-
p-Terphenyl-d14 (surr.)	1	%	51	106	110	-
Ammonia (as N)	0.01	mg/L	0.02	< 0.01	< 0.01	-
Chloride	1	mg/L	190	190	24	-
Cyanide (total)	0.004	mg/L	0.004	0.004	< 0.004	-
Ferrous Iron - Fe2+	0.05	mg/L	0.97	4.8	< 0.05	-
pH (at 25 °C)	0.1	pH Units	7.8	7.5	7.7	-

Client Sample ID			CSM_BH06	CSM_BH13	CSM_BH14S	TRIP SPIKE
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ja34356	S22-Ja34357	S22-Ja34358	S22-Ja34359
Date Sampled			Jan 27, 2022	Jan 27, 2022	Jan 27, 2022	Jan 27, 2022
Test/Reference	LOR	Unit				
Sulphate (as SO4)	5	mg/L	24	40	< 5	-
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	570	660	150	-
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	160	630	14	-
Hardness mg equivalent CaCO3/L	5	mg/L	480	520	83	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	150	270	54	-
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	-
Total Alkalinity (as CaCO3)	20	mg/L	150	270	54	-
Alkali Metals						
Calcium	0.5	mg/L	34	59	21	-
Magnesium	0.5	mg/L	38	29	4.7	-
Potassium	0.5	mg/L	6.2	6.2	3.0	-
Sodium	0.5	mg/L	110	120	18	-
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	0.001	< 0.001	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	-
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Copper (filtered)	0.001	mg/L	0.013	0.007	< 0.001	-
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Manganese (filtered)	0.005	mg/L	0.27	0.45	0.006	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	-
Nickel (filtered)	0.001	mg/L	0.003	0.010	< 0.001	-
Zinc (filtered)	0.005	mg/L	< 0.005	0.009	< 0.005	-
BTEX						
Benzene	1	%	-	-	-	95
Ethylbenzene	1	%	-	-	-	84
m&p-Xylenes	1	%	-	-	-	91
o-Xylene	1	%	-	-	-	89
Toluene	1	%	-	-	-	91
Xylenes - Total	1	%	-	-	-	90
4-Bromofluorobenzene (surr.)	1	%	-	-	-	97

Client Sample ID			TRIP BLANK
Sample Matrix			Water
Eurofins Sample No.			S22-Ja34360
Date Sampled			Jan 27, 2022
Test/Reference	LOR	Unit	
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	101

Client Sample ID			TRIP BLANK
Sample Matrix			**Water**
Eurofins Sample No.			**S22-Ja34360**
Date Sampled			**Jan 27, 2022**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	0.02	mg/L	< 0.02
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
BTEX	Melbourne	Jan 29, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Melbourne	Jan 29, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jan 29, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B6 (filtered metals)			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jan 31, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jan 31, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8 filtered	Melbourne	Jan 29, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Phenols (Speciated)			
Phenols (Halogenated)	Melbourne	Jan 29, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Jan 29, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Melbourne	Jan 31, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Melbourne	Jan 31, 2022	7 Days
- Method: TRH C6-C36 (Silica Gel Cleanup) - MGT 100A			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	Jan 31, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Ammonia (as N)	Melbourne	Jan 29, 2022	28 Days
- Method: APHA 4500-NH3 Ammonia Nitrogen by FIA			
Cyanide (total)	Sydney	Jan 31, 2022	14 Days
- Method: E054 Total Cyanide			
Ferrous Iron - Fe2+	Melbourne	Feb 10, 2022	7 Days
- Method: LTM-INO-4190 Ferrous Iron in Water by Discrete Analyser			
pH (at 25 °C)	Melbourne	Jan 29, 2022	0 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Total Suspended Solids Dried at 103°C–105°C	Melbourne	Jan 29, 2022	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Heavy Metals (filtered)	Melbourne	Feb 10, 2022	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Melbourne	Jan 29, 2022	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Sulphate (as SO4)	Melbourne	Jan 29, 2022	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Jan 29, 2022	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Dissolved Solids Dried at 180°C ± 2°C	Melbourne	Jan 29, 2022	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Eurofins Suite B11D: Na/K/Ca/Mg and Hardness			
Hardness mg equivalent CaCO3/L	Melbourne	Jan 29, 2022	28 Days
- Method: APHA 2340B Hardness by Calculation			
Alkali Metals	Melbourne	Jan 29, 2022	180 Days
- Method: LTM-MET-3010 Alkali Metals Sulfur Silicon Phosphorus by ICP-AES			

eurofins | Environment Testing

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Phone : 0800 856 450
IANZ # 1290

Company Name: GHD Pty Ltd NSW
Address: Level 15, 133 Castlereagh Street
Sydney
NSW 2000

Project Name: CENTRAL
Project ID: 2127234

Order No.: 2127234
Report #: 858641
Phone: 02 9239 7100
Fax: 02 9239 7199

Received: Jan 27, 2022 2:32 PM
Due: Feb 3, 2022
Priority: 5 Day
Contact Name: Henry Luo

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103°C–105°C	Phenols (Speciated)	TRH (after Silica Gel cleanup)	Eurofins Suite B6 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEX	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X		X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217							X													
Brisbane Laboratory - NATA # 1261 Site # 20794																				
Mayfield Laboratory - NATA # 1261 Site # 25079																				
Perth Laboratory - NATA # 2377 Site # 2370																				
External Laboratory																				
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**															
1	CSM_BH06	Jan 27, 2022		Water	S22-Ja34356	X	X	X	X	X	X	X	X	X		X	X		X	X
2	CSM_BH13	Jan 27, 2022		Water	S22-Ja34357	X	X	X	X	X	X	X	X	X		X	X		X	X
3	CSM_BH14S	Jan 27, 2022		Water	S22-Ja34358	X	X	X	X	X	X	X	X	X		X	X		X	X
4	TRIP SPIKE	Jan 27, 2022		Water	S22-Ja34359													X		
5	TRIP BLANK	Jan 27, 2022		Water	S22-Ja34360										X					
Test Counts						3	3	3	3	3	3	3	3	3	1	3	3	1	3	3

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

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QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	mg/L	< 0.00001			0.00001	Pass	
Acenaphthylene	mg/L	< 0.00001			0.00001	Pass	
Anthracene	mg/L	< 0.00001			0.00001	Pass	
Benz(a)anthracene	mg/L	< 0.00001			0.00001	Pass	
Benzo(a)pyrene	mg/L	< 0.00001			0.00001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.00001			0.00001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Chrysene	mg/L	< 0.00001			0.00001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.00001			0.00001	Pass	
Fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Fluorene	mg/L	< 0.00001			0.00001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.00001			0.00001	Pass	
Naphthalene	mg/L	< 0.00001			0.00001	Pass	
Phenanthrene	mg/L	< 0.00001			0.00001	Pass	
Pyrene	mg/L	< 0.00001			0.00001	Pass	
Total PAH*	mg/L	< 0.00001			0.00001	Pass	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Chloride	mg/L	< 1			1	Pass	
Cyanide (total)	mg/L	0.004			0.004	Pass	
Ferrous Iron - Fe2+	mg/L	< 0.05			0.05	Pass	
Sulphate (as SO4)	mg/L	< 5			5	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	10			10	Pass	
Total Suspended Solids Dried at 103°C–105°C	mg/L	< 5			5	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	100			70-130	Pass	
Toluene	%	96			70-130	Pass	
Ethylbenzene	%	90			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	83			70-130	Pass	
Xylenes - Total*	%	87			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	100			70-130	Pass	
TRH C10-C14	%	109			70-130	Pass	
Naphthalene	%	89			70-130	Pass	
TRH C6-C10	%	100			70-130	Pass	
TRH >C10-C16	%	112			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	69			25-140	Pass	
2.4-Dichlorophenol	%	34			25-140	Pass	
2.4.5-Trichlorophenol	%	66			25-140	Pass	
2.4.6-Trichlorophenol	%	96			25-140	Pass	
2.6-Dichlorophenol	%	34			25-140	Pass	
4-Chloro-3-methylphenol	%	77			25-140	Pass	
Pentachlorophenol	%	75			25-140	Pass	
Tetrachlorophenols - Total	%	69			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	47			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	98			25-140	Pass	
2-Nitrophenol	%	96			25-140	Pass	
2.4-Dimethylphenol	%	101			25-140	Pass	
2.4-Dinitrophenol	%	40			25-140	Pass	
2-Methylphenol (o-Cresol)	%	32			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	38			25-140	Pass	
4-Nitrophenol	%	51			25-140	Pass	
Dinoseb	%	51			25-140	Pass	
Phenol	%	68			25-140	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	112			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	109			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	%	72			70-130	Pass	
Acenaphthylene	%	83			70-130	Pass	
Anthracene	%	78			70-130	Pass	
Benz(a)anthracene	%	78			70-130	Pass	
Benzo(a)pyrene	%	88			70-130	Pass	
Benzo(b&j)fluoranthene	%	95			70-130	Pass	
Benzo(g.h.i)perylene	%	86			70-130	Pass	
Benzo(k)fluoranthene	%	91			70-130	Pass	
Chrysene	%	102			70-130	Pass	
Dibenz(a.h)anthracene	%	75			70-130	Pass	
Fluoranthene	%	99			70-130	Pass	
Fluorene	%	91			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	74			70-130	Pass	
Naphthalene	%	76			70-130	Pass	
Phenanthrene	%	85			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	%	88			70-130	Pass	
LCS - % Recovery							
Ammonia (as N)	%	108			70-130	Pass	
Cyanide (total)	%	87			70-130	Pass	
Ferrous Iron - Fe2+	%	98			70-130	Pass	
Sulphate (as SO4)	%	109			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	97			70-130	Pass	
Total Suspended Solids Dried at 103°C–105°C	%	91			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	93			70-130	Pass	
Total Alkalinity (as CaCO3)	%	103			70-130	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	101			80-120	Pass	
Magnesium	%	115			80-120	Pass	
Potassium	%	111			80-120	Pass	
Sodium	%	98			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
BTEX				Result 1					
Benzene	M22-Ja34987	NCP	%	100			70-130	Pass	
Toluene	M22-Ja34987	NCP	%	102			70-130	Pass	
Ethylbenzene	M22-Ja34987	NCP	%	103			70-130	Pass	
m&p-Xylenes	M22-Ja34987	NCP	%	104			70-130	Pass	
o-Xylene	M22-Ja34987	NCP	%	104			70-130	Pass	
Xylenes - Total*	M22-Ja34987	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M22-Ja34987	NCP	%	117			70-130	Pass	
TRH C10-C14	M22-Ja35143	NCP	%	108			70-130	Pass	
Naphthalene	M22-Ja34987	NCP	%	91			70-130	Pass	
TRH C6-C10	M22-Ja34987	NCP	%	118			70-130	Pass	
TRH >C10-C16	M22-Ja35143	NCP	%	105			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	L22-Ja22454	NCP	%	82			30-130	Pass	
2.4-Dichlorophenol	L22-Ja22454	NCP	%	64			30-130	Pass	
2.4.5-Trichlorophenol	L22-Ja22454	NCP	%	61			30-130	Pass	
2.4.6-Trichlorophenol	L22-Ja22454	NCP	%	90			30-130	Pass	
2.6-Dichlorophenol	L22-Ja22454	NCP	%	68			30-130	Pass	
4-Chloro-3-methylphenol	L22-Ja22454	NCP	%	111			30-130	Pass	
Pentachlorophenol	B22-Ja17702	NCP	%	46			30-130	Pass	
Tetrachlorophenols - Total	L22-Ja22454	NCP	%	41			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	L22-Ja22454	NCP	%	75			30-130	Pass	
2-Methyl-4.6-dinitrophenol	L22-Ja22454	NCP	%	67			30-130	Pass	
2-Nitrophenol	L22-Ja22454	NCP	%	98			30-130	Pass	
2.4-Dimethylphenol	B22-Ja17702	NCP	%	42			30-130	Pass	
2.4-Dinitrophenol	L22-Ja22454	NCP	%	43			30-130	Pass	
2-Methylphenol (o-Cresol)	L22-Ja22454	NCP	%	57			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	L22-Ja22454	NCP	%	77			30-130	Pass	
4-Nitrophenol	L22-Ja22454	NCP	%	45			30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dinoseb	L22-Ja22454	NCP	%	74			30-130	Pass	
Phenol	L22-Ja22454	NCP	%	70			30-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1					
Acenaphthene	M22-Ja39889	NCP	%	94			70-130	Pass	
Acenaphthylene	M22-Ja39889	NCP	%	121			70-130	Pass	
Anthracene	M22-Ja39889	NCP	%	74			70-130	Pass	
Benz(a)anthracene	M22-Ja39889	NCP	%	104			70-130	Pass	
Benzo(a)pyrene	L22-Ja22454	NCP	%	80			70-130	Pass	
Benzo(b&j)fluoranthene	M22-Ja39889	NCP	%	87			70-130	Pass	
Benzo(g.h.i)perylene	M22-Ja39889	NCP	%	125			70-130	Pass	
Benzo(k)fluoranthene	M22-Ja39889	NCP	%	126			70-130	Pass	
Chrysene	M22-Ja39889	NCP	%	94			70-130	Pass	
Dibenz(a.h)anthracene	M22-Ja39889	NCP	%	115			70-130	Pass	
Fluoranthene	M22-Ja39889	NCP	%	92			70-130	Pass	
Fluorene	M22-Ja39889	NCP	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ja39889	NCP	%	123			70-130	Pass	
Naphthalene	M22-Ja39889	NCP	%	88			70-130	Pass	
Phenanthrene	M22-Ja39889	NCP	%	78			70-130	Pass	
Pyrene	M22-Ja39889	NCP	%	92			70-130	Pass	
Spike - % Recovery									
				Result 1					
Ammonia (as N)	S22-Ja34356	CP	%	108			70-130	Pass	
Total Suspended Solids Dried at 103°C–105°C	M22-Ja30255	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	M22-Ja36641	NCP	%	89			75-125	Pass	
Magnesium	M22-Ja38899	NCP	%	123			75-125	Pass	
Potassium	S22-Ja31485	NCP	%	91			75-125	Pass	
Sodium	M22-Ja36641	NCP	%	86			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S22-Ja34356	CP	%	69			75-125	Fail	Q08
Cadmium (filtered)	S22-Ja34356	CP	%	75			75-125	Pass	
Chromium (filtered)	S22-Ja34356	CP	%	76			75-125	Pass	
Copper (filtered)	S22-Ja34356	CP	%	67			75-125	Fail	Q08
Lead (filtered)	S22-Ja34356	CP	%	87			75-125	Pass	
Manganese (filtered)	S22-Ja34356	CP	%	34			75-125	Fail	Q08
Mercury (filtered)	S22-Ja34356	CP	%	61			75-125	Fail	Q08
Nickel (filtered)	S22-Ja34356	CP	%	78			75-125	Pass	
Zinc (filtered)	S22-Ja34356	CP	%	64			75-125	Fail	Q08
Spike - % Recovery									
				Result 1					
Cyanide (total)	S22-Ja34357	CP	%	83			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M22-Ja31323	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M22-Ja31323	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M22-Ja31323	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M22-Ja31323	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M22-Ja31323	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M22-Ja31323	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M22-Ja31323	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M22-Ja30307	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M22-Ja30307	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M22-Ja30307	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Naphthalene	M22-Ja31323	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M22-Ja31323	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M22-Ja30307	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M22-Ja30307	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	M22-Ja30307	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	B22-Ja28882	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dichlorophenol	B22-Ja28882	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4.5-Trichlorophenol	B22-Ja28882	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	B22-Ja28882	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	B22-Ja28882	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
4-Chloro-3-methylphenol	B22-Ja28882	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Pentachlorophenol	B22-Ja28882	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Tetrachlorophenols - Total	B22-Ja28882	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	B22-Ja28882	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	B22-Ja28882	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Nitrophenol	B22-Ja28882	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dimethylphenol	B22-Ja28882	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	B22-Ja28882	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Methylphenol (o-Cresol)	B22-Ja28882	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	B22-Ja28882	NCP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
4-Nitrophenol	B22-Ja28882	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Dinoseb	B22-Ja28882	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Phenol	B22-Ja28882	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Acenaphthene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Acenaphthylene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Anthracene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benz(a)anthracene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(a)pyrene	B22-Ja28882	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(g.h.i)perylene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(k)fluoranthene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Chrysene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Dibenz(a.h)anthracene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluoranthene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluorene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Naphthalene	M22-Ja26327	NCP	mg/L	0.00005	0.00006	21	30%	Pass	
Phenanthrene	M22-Ja26327	NCP	mg/L	0.00003	0.00004	39	30%	Fail	Q15
Pyrene	M22-Ja26327	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S22-Ja34356	CP	mg/L	0.02	0.02	25	30%	Pass	
Chloride	S22-Ja34314	NCP	mg/L	40	40	130	30%	Fail	Q15
Cyanide (total)	S22-Ja34356	CP	mg/L	0.004	0.004	2.0	30%	Pass	
Ferrous Iron - Fe2+	L22-Fe08893	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
pH (at 25 °C)	M22-Ja39882	NCP	pH Units	8.2	8.2	pass	30%	Pass	
Sulphate (as SO4)	S22-Ja34314	NCP	mg/L	12	13	6.0	30%	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	M22-Ja33732	NCP	mg/L	740	730	1.1	30%	Pass	
Total Suspended Solids Dried at 103°C–105°C	M22-Ja33748	NCP	mg/L	61	61	<1	30%	Pass	
Hardness mg equivalent CaCO3/L	S22-Ja31485	NCP	mg/L	40000	40000	2.0	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	M22-Ja39882	NCP	mg/L	1100	1100	1.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	M22-Ja39882	NCP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	M22-Ja39882	NCP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	M22-Ja39882	NCP	mg/L	1100	1100	1.0	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	M22-Ja36641	NCP	mg/L	8.6	8.8	3.0	30%	Pass	
Magnesium	M22-Ja36641	NCP	mg/L	< 5	< 5	<1	30%	Pass	
Potassium	M22-Ja36641	NCP	mg/L	< 5	< 5	<1	30%	Pass	
Sodium	M22-Ja36641	NCP	mg/L	15	15	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S22-Ja34356	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S22-Ja34356	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S22-Ja34356	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S22-Ja34356	CP	mg/L	0.013	0.013	<1	30%	Pass	
Lead (filtered)	S22-Ja34356	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	S22-Ja34356	CP	mg/L	0.27	0.27	<1	30%	Pass	
Mercury (filtered)	S22-Ja34356	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S22-Ja34356	CP	mg/L	0.003	0.003	<1	30%	Pass	
Zinc (filtered)	S22-Ja34356	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Comments

This report was revised V2 to amend analysis to Ferrous Iron and Manganese (filtered) for all samples as per COC.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

John Nguyen	Analytical Services Manager
Charl Du Preez	Senior Analyst-Inorganic (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Email: enviro.bris@mgtlabmark.com.au

☐ **Melbourne**
2 Kingston Town Close, Oakleigh, VIC 3166
Phone: +613 8564 5000 Fax: +613 8564 5090
Email: enquiries.melb@mgtlabmark.com.au

CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham / Charlotte Gray	**Purchase Order :** 2127234	**COC Number :**
Office Address :	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2020/2021
Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Email for results :** terry.nham@ghd.com henry.luo@ghd.com charlotte.gray@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Analytes

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols		TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (<0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)		Ferrous Iron	Manganese	pH	TDS	TSS		TRH C6-C10 / BTEX	8 Metals (Total)					
1	CSM_BH02		Water	X	X	X		X	X	X	X		X	X	X	X	X								
2	CSM_BH04		Water	X	X	X		X	X	X	X		X	X	X	X	X								
3	CSM_BH06		Water	X	X	X		X	X	X	X		X	X	X	X	X								
4	CSM_BH08		Water	X	X	X		X	X	X	X		X	X	X	X	X								
5	CSM_BH10S		Water	X	X	X		X	X	X	X		X	X	X	X	X								
6	CSM_BH12S		Water	X	X	X		X	X	X	X		X	X	X	X	X								
7	SRT_BH047		Water	X	X	X		X	X	X	X		X	X	X	X	X								
8	SRT_BH052		Water	X	X	X		X	X	X	X		X	X	X	X	X								
9	GASW_BH10		Water	X	X	X		X	X	X	X		X	X	X	X	X								
10	CSM_BH13		Water	X	X	X		X	X	X	X		X	X	X	X	X								
11	CSM_BH14S		Water	X	X	X		X	X	X	X		X	X	X	X	X								
12	QC01		Water	X	X																				
13	QC02		Water	PLEASE SEND TO ALS WITH ATTACHED COC																					
14	RB01		Water																	X					
15	Trip Blank		Water																X						
16	Trip Spike		Water																X						

Containers:

500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag	Sample comments:
1		4		2	2			
1		4		2	2			
1		4		2	2			
1		4		2	2			
1		4		2	2			
1		4		2	2			
1		4		2	2			
1		4		2	2			
1		4		2	2			
1		4		2	2			½ full 500P
1		4		2	2			
1		4		2	2			
		1		2	2			
		1		2	2			Send to ALS.
		1						
				2				
				2				

Laboratory Staff

Relinquished By: Charlotte Gray - GHD	**Received By:** A-S	**Turn around time**
Date & Time 10/2/22 5:40pm	**Date & Time :** 10/2/22 5:46pm	1 DAY ☐ 2 DAY ☐ 3 DAY ☐
Signature:	**Signature:**	5 DAY ☑ 10 DAY ☐ Other:

Method Of Shipment

☐ Courier
☐ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arrival:

Report number:

862315

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CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham / Charlotte Gray	**Purchase Order :** 2127234	**COC Number :**
Office Address :	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2020/2021
Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Email for results :** terry.nham@ghd.com henry.luo@ghd.com charlotte.gray@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols		TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (<0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)		Ferrous Iron	Manganese	pH	TDS	TSS		TRH C6-C10 / BTEX	8 Metals (Total)				
1	SRT_BH050		Water	X	X	X		X	X	X	X		~~X~~	X	X	X	X							
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
13																								
14																								
15																								
16																								

Some common holding times (with correct preservation).
For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
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Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag
1		~~4~~ 3		2	2		

Sample comments: 1/2 full 500P

Relinquished By: Charlotte Gray - GHD	Laboratory Staff	Turn around time	Method Of Shipment	Temperature on arrival:
Date & Time :	Received By: A. J Alex	1 DAY ☐ 2 DAY ☐ 3 DAY ☐	☐ Courier	
Signature:	Date & Time : 10/2/22 5:40 PM	5 DAY ☑ 10 DAY ☐ Other:	☑ Hand Delivered	Report number:
	Signature:		☐ Postal	
			Courier Consignment # :	

862315

RE: Attention;Eurofins Sample Receipt Advice - Report 862315 : Site CENTRAL (2127234)

Charlotte Gray <Charlotte.Gray@ghd.com>

Fri 2/11/2022 11:55 AM

To: #AU04_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>

Cc: Henry Luo <Henry.Luo@ghd.com>; Terry Nham <Terry.Nham@ghd.com>

CAUTION: EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins.

Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Hi Alireza,

Thanks for picking up that error, CSM_BH06 was conducted on 9 February and incorrectly labelled CSM_BH13. It should be as follows:

Current sample ID	Updated and correct sample ID
CSM_BH13 (9 Feb 2022)	CSM_BH06 (9 Feb 2022)
CSM_BH13 (10 Feb 2022)	CSM_BH13 (10 Feb 2022)

Kind regards,

Charlotte Gray
Environmental Engineer - Contamination and Environmental Management

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Level 15 133 Castlereagh St Sydney NSW 2000
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The Power of Commitment

Connect

Please consider the environment before printing this email

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Thursday, 10 February 2022 11:46 PM
To: Henry Luo <henry.luo@ghd.com>
Cc: Charlotte Gray <charlotte.gray@ghd.com>; Terry Nham <Terry.Nham@ghd.com>
Subject: Attention;Eurofins Sample Receipt Advice - Report 862315 : Site CENTRAL (2127234)

Dear Valued Client,

Sample CSM_BH06 is missing. Analysis cancelled. Sample CSM_BH13 received 2 sets with different sampling dates (9 and 10 Feb 2022), the one sampled on 10 Feb put on hold. Please confirm the analysis. Sample QC02 (2semi volatile ambers, 1 filtered metals, and 2 glass vials) sent to ALS.

Please find attached a Sample Receipt Advice (SRA), a Summary Sheet and a scanned copy of your Chain-of-Custody (COC). It is important that you check this documentation to ensure that the details are correct such as the Client Job Number, Turn Around Time, any comments in the Notes section and sample numbers as well as the requested analysis. If there are any irregularities then please contact your Eurofins Analytical Services Manager as soon as possible to make certain that they get changed.

Kind regards,
Alireza Aghajani Shahrivar
Sample Receipt

Eurofins | Environmental Testing
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone: +61 02 9900 8421
Email: EnviroSampleNSW@eurofins.com
Website: [http://]environment.eurofins.com.au

View our latest EnviroNotes
How did we do? Provide your feedback here



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eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

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PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

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ABN: 91 05 0159 898

Perth
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Welshpool WA 6106
Phone : +61 8 6253 4444
NATA # 2377 Site # 2370

Eurofins Environment Testing NZ Limited
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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	GHD Pty Ltd NSW
Contact name:	Henry Luo
Project name:	CENTRAL
Project ID:	2127234
Turnaround time:	5 Day
Date/Time received	Feb 10, 2022 5:46 PM
Eurofins reference	862315

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : 11.1 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✓	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Sample QC02 (2semi volatile ambers, 1 filtered metals, and 2 glass vials) sent to ALS.
Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

John Nguyen on phone : or by email: JohnNguyen@eurofins.com

Results will be delivered electronically via email to Henry Luo - henry.luo@ghd.com.

Note: A copy of these results will also be delivered to the general GHD Pty Ltd NSW email address.

GHD Pty Ltd NSW
Level 15, 133 Castlereagh Street
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
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Attention: **Henry Luo**

Report **862315-W**
Project name CENTRAL
Project ID 2127234
Received Date Feb 10, 2022

Client Sample ID			**CSM_BH02**	**CSM_BH04**	**CSM_BH08**	**CSM_BH10S**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S22-Fe19499**	**S22-Fe19500**	**S22-Fe19501**	**S22-Fe19502**
Date Sampled			**Feb 10, 2022**	**Feb 09, 2022**	**Feb 10, 2022**	**Feb 09, 2022**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	102	103	102	95
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			CSM_BH02	CSM_BH04	CSM_BH08	CSM_BH10S
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19499	S22-Fe19500	S22-Fe19501	S22-Fe19502
Date Sampled			Feb 10, 2022	Feb 09, 2022	Feb 10, 2022	Feb 09, 2022
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	68	114	64	93
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	106	63	107	142
p-Terphenyl-d14 (surr.)	1	%	108	61	100	121
Ammonia (as N)	0.01	mg/L	< 0.01	0.01	0.02	< 0.01
Chloride	1	mg/L	43	93	110	24
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	< 0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	0.23	4.6	5.6	< 0.05
pH (at 25 °C)	0.1	pH Units	7.9	6.8	8.0	6.6

Client Sample ID			CSM_BH02	CSM_BH04	CSM_BH08	CSM_BH10S
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19499	S22-Fe19500	S22-Fe19501	S22-Fe19502
Date Sampled			Feb 10, 2022	Feb 09, 2022	Feb 10, 2022	Feb 09, 2022
Test/Reference	LOR	Unit				
Sulphate (as SO4)	5	mg/L	35	32	44	50
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	260	260	350	170
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	1300	1100	320	42
Hardness mg equivalent CaCO3/L	5	mg/L	81	92	120	41
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	100	100	120	25
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	100	100	120	25
Alkali Metals						
Calcium	0.5	mg/L	11	9.1	13	4.9
Magnesium	0.5	mg/L	13	17	20	7.0
Potassium	0.5	mg/L	3.0	3.3	4.6	3.2
Sodium	0.5	mg/L	59	72	92	37
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	0.003	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	0.0003	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	0.003	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	0.003	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	0.002	0.003	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.10	0.40	0.38	0.57
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.008	0.10	0.037	0.002
Zinc (filtered)	0.005	mg/L	< 0.005	0.081	0.034	< 0.005

Client Sample ID			CSM_BH12S	SRT_BH047	SRT_BH052	GASW_BH10
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19503	S22-Fe19504	S22-Fe19505	S22-Fe19506
Date Sampled			Feb 08, 2022	Feb 08, 2022	Feb 08, 2022	Feb 08, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	0.20
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.4
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.2
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.8
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	0.14
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	0.14
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.5
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.64

Client Sample ID			CSM_BH12S	SRT_BH047	SRT_BH052	GASW_BH10
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19503	S22-Fe19504	S22-Fe19505	S22-Fe19506
Date Sampled			Feb 08, 2022	Feb 08, 2022	Feb 08, 2022	Feb 08, 2022
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	89	98	104	98
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	0.004
Phenol-d6 (surr.)	1	%	47	89	91	65
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.3
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.3
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	0.08
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.2
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.38
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Client Sample ID			CSM_BH12S	SRT_BH047	SRT_BH052	GASW_BH10
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19503	S22-Fe19504	S22-Fe19505	S22-Fe19506
Date Sampled			Feb 08, 2022	Feb 08, 2022	Feb 08, 2022	Feb 08, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons (Trace level)						
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	87	140	55	110
p-Terphenyl-d14 (surr.)	1	%	79	135	150	111
Ammonia (as N)	0.01	mg/L	0.03	< 0.01	0.01	< 0.01
Chloride	1	mg/L	67	17	40	180
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	< 0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	9.3	< 0.05	< 0.05	4.3
pH (at 25 °C)	0.1	pH Units	7.6	6.4	6.8	8.1
Sulphate (as SO4)	5	mg/L	120	26	28	< 5
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	370	130	200	800
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	87	5.0	18	4200
Hardness mg equivalent CaCO3/L	5	mg/L	28	43	32	370
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	78	< 20	< 20	390
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	78	< 20	< 20	390
Alkali Metals						
Calcium	0.5	mg/L	1.7	5.0	6.7	76
Magnesium	0.5	mg/L	5.6	7.5	3.8	43
Potassium	0.5	mg/L	2.2	1.2	1.3	10
Sodium	0.5	mg/L	120	24	43	130
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.002	< 0.001	< 0.001	0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	0.003	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.58	0.033	0.023	0.12
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.009	0.003	0.001	< 0.001
Zinc (filtered)	0.005	mg/L	0.031	0.026	< 0.005	< 0.005

Client Sample ID			CSM_BH06	CSM_BH14S	QC01	RB01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19507	S22-Fe19508	S22-Fe19509	S22-Fe19510
Date Sampled			Feb 09, 2022	Feb 09, 2022	Feb 08, 2022	Feb 10, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	0.02	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	0.02	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	0.02	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	103	101	104	-
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	-	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	-	-
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	-	-
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	-	-
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	-	-
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	-	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	-	-
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	-	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	-	-
Total cresols*	0.01	mg/L	< 0.01	< 0.01	-	-
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	-	-
Dinoseb	0.1	mg/L	< 0.1	< 0.1	-	-
Phenol	0.003	mg/L	< 0.003	< 0.003	-	-
Phenol-d6 (surr.)	1	%	76	112	-	-
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	-	-
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	-	-
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	-	-

Client Sample ID			CSM_BH06	CSM_BH14S	QC01	RB01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19507	S22-Fe19508	S22-Fe19509	S22-Fe19510
Date Sampled			Feb 09, 2022	Feb 09, 2022	Feb 08, 2022	Feb 10, 2022
Test/Reference	LOR	Unit				
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	-	-
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	-	-
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	-
2-Fluorobiphenyl (surr.)	1	%	124	63	107	-
p-Terphenyl-d14 (surr.)	1	%	113	58	103	-
Ammonia (as N)	0.01	mg/L	0.02	< 0.01	-	-
Chloride	1	mg/L	200	26	-	-
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	-	-
Ferrous Iron - Fe2+	0.05	mg/L	1.3	< 0.05	-	-
pH (at 25 °C)	0.1	pH Units	7.1	7.7	-	-
Sulphate (as SO4)	5	mg/L	30	8.9	-	-
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	600	160	-	-
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	340	< 5	-	-
Hardness mg equivalent CaCO3/L	5	mg/L	230	74	-	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	170	64	-	-
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	-	-
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	-	-
Total Alkalinity (as CaCO3)	20	mg/L	170	64	-	-
Alkali Metals						
Calcium	0.5	mg/L	34	22	-	-
Magnesium	0.5	mg/L	34	4.6	-	-
Potassium	0.5	mg/L	5.2	2.5	-	-
Sodium	0.5	mg/L	120	17	-	-
Heavy Metals						
Arsenic	0.001	mg/L	-	-	-	< 0.001
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Cadmium	0.0002	mg/L	-	-	-	< 0.0002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	-

Client Sample ID			CSM_BH06	CSM_BH14S	QC01	RB01
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19507	S22-Fe19508	S22-Fe19509	S22-Fe19510
Date Sampled			Feb 09, 2022	Feb 09, 2022	Feb 08, 2022	Feb 10, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Chromium	0.001	mg/L	-	-	-	< 0.001
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Copper	0.001	mg/L	-	-	-	0.001
Copper (filtered)	0.001	mg/L	0.065	0.001	0.003	-
Lead	0.001	mg/L	-	-	-	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Manganese (filtered)	0.005	mg/L	0.23	0.014	-	-
Mercury	0.0001	mg/L	-	-	-	< 0.0001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	-
Nickel	0.001	mg/L	-	-	-	< 0.001
Nickel (filtered)	0.001	mg/L	0.061	0.001	0.004	-
Zinc	0.005	mg/L	-	-	-	< 0.005
Zinc (filtered)	0.005	mg/L	0.22	< 0.005	0.027	-

Client Sample ID			TRIP BLANK	TRIP SPIKE	SRT_BH050	CSM_BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19511	S22-Fe19512	S22-Fe19513	S22-Fe19515
Date Sampled			Feb 02, 2022	Feb 02, 2022	Feb 08, 2022	Feb 10, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	-	-	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	-	-	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	-	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	92	-	79	107
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	-	-	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	-	-	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	-	-	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	-	-	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	-	< 0.01	< 0.01

Client Sample ID			TRIP BLANK	TRIP SPIKE	SRT_BH050	CSM_BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19511	S22-Fe19512	S22-Fe19513	S22-Fe19515
Date Sampled			Feb 02, 2022	Feb 02, 2022	Feb 08, 2022	Feb 10, 2022
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
Pentachlorophenol	0.01	mg/L	-	-	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	-	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	-	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	-	-	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	-	-	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	-	-	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	< 0.006	< 0.006
Total cresols*	0.01	mg/L	-	-	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	-	-	< 0.03	< 0.03
Dinoseb	0.1	mg/L	-	-	< 0.1	< 0.1
Phenol	0.003	mg/L	-	-	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	-	-	87	52
Total Non-Halogenated Phenol*	0.1	mg/L	-	-	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	-	-	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	-	-	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	-	-	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	-	-	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	-	-	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	-	-	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	-	-	139	89
p-Terphenyl-d14 (surr.)	1	%	-	-	141	79

Client Sample ID			TRIP BLANK	TRIP SPIKE	SRT_BH050	CSM_BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Fe19511	S22-Fe19512	S22-Fe19513	S22-Fe19515
Date Sampled			Feb 02, 2022	Feb 02, 2022	Feb 08, 2022	Feb 10, 2022
Test/Reference	LOR	Unit				
Ammonia (as N)	0.01	mg/L	-	-	< 0.01	0.01
Chloride	1	mg/L	-	-	9.9	220
Cyanide (total)	0.004	mg/L	-	-	< 0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	-	-	-	3.1
pH (at 25 °C)	0.1	pH Units	-	-	4.9	8.1
Sulphate (as SO4)	5	mg/L	-	-	44	38
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	-	-	160	640
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	-	-	73	68
Hardness mg equivalent CaCO3/L	5	mg/L	-	-	54	230
TRH C6-C10	1	%	-	88	-	-
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	-	-	< 20	180
Carbonate Alkalinity (as CaCO3)	10	mg/L	-	-	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	-	-	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	-	-	< 20	180
Alkali Metals						
Calcium	0.5	mg/L	-	-	16	50
Magnesium	0.5	mg/L	-	-	3.2	27
Potassium	0.5	mg/L	-	-	5.6	5.4
Sodium	0.5	mg/L	-	-	16	130
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	-	-	< 0.001	0.004
Cadmium (filtered)	0.0002	mg/L	-	-	< 0.0002	0.0003
Chromium (filtered)	0.001	mg/L	-	-	< 0.001	0.002
Copper (filtered)	0.001	mg/L	-	-	0.002	0.005
Lead (filtered)	0.001	mg/L	-	-	< 0.001	0.002
Manganese (filtered)	0.005	mg/L	-	-	0.035	0.54
Mercury (filtered)	0.0001	mg/L	-	-	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	-	-	0.002	0.011
Zinc (filtered)	0.005	mg/L	-	-	0.009	0.008
Total Recoverable Hydrocarbons						
Naphthalene	1	%	-	120	-	-
TRH C6-C9	1	%	-	90	-	-
BTEX						
Benzene	1	%	-	120	-	-
Ethylbenzene	1	%	-	110	-	-
m&p-Xylenes	1	%	-	110	-	-
o-Xylene	1	%	-	110	-	-
Toluene	1	%	-	110	-	-
Xylenes - Total	1	%	-	110	-	-
4-Bromofluorobenzene (surr.)	1	%	-	84	-	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B7 (filtered metals/PAH trace level)			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Feb 15, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Feb 15, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Feb 15, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Feb 15, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	Feb 15, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Metals M8 filtered	Melbourne	Feb 15, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Recoverable Hydrocarbons	Sydney	Feb 10, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Phenols (Speciated)			
Phenols (Halogenated)	Melbourne	Feb 15, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Feb 15, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Melbourne	Feb 15, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Melbourne	Feb 15, 2022	7 Days
- Method: TRH C6-C36 (Silica Gel Cleanup) - MGT 100A			
Ammonia (as N)	Melbourne	Feb 15, 2022	28 Days
- Method: APHA 4500-NH3 Ammonia Nitrogen by FIA			
Cyanide (total)	Sydney	Feb 12, 2022	14 Days
- Method: E054 Total Cyanide			
Ferrous Iron - Fe2+	Melbourne	Feb 15, 2022	7 Days
- Method: LTM-INO-4190 Ferrous Iron in Water by Discrete Analyser			
pH (at 25 °C)	Melbourne	Feb 15, 2022	0 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Total Suspended Solids Dried at 103°C–105°C	Melbourne	Feb 15, 2022	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Metals M8	Sydney	Feb 10, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Heavy Metals (filtered)	Melbourne	Feb 15, 2022	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Melbourne	Feb 15, 2022	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Sulphate (as SO4)	Melbourne	Feb 15, 2022	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Feb 15, 2022	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Dissolved Solids Dried at 180°C ± 2°C	Melbourne	Feb 15, 2022	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Eurofins Suite B11D: Na/K/Ca/Mg and Hardness			
Hardness mg equivalent CaCO3/L	Melbourne	Feb 15, 2022	28 Days
- Method: APHA 2340B Hardness by Calculation			
Alkali Metals	Melbourne	Feb 15, 2022	180 Days
- Method: LTM-MET-3010 Alkali Metals Sulfur Silicon Phosphorus by ICP-AES			

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Project Name: CENTRAL
Project ID: 2127234

Order No.: 2127234
Report #: 862315
Phone: 02 9239 7100
Fax: 02 9239 7199

Received: Feb 10, 2022 5:46 PM
Due: Feb 18, 2022
Priority: 5 Day
Contact Name: Henry Luo

Eurofins Analytical Services Manager : John Nguyen

Sample Detail	Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103°C–105°C	Metals M8	Phenols (Speciated)	TRH (after Silica Gel cleanup)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B7 (filtered metals/PAH trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254	X		X	X	X	X		X	X	X	X	X		X	X
Sydney Laboratory - NATA # 1261 Site # 18217		X					X			X	X		X	X	
Brisbane Laboratory - NATA # 1261 Site # 20794															
Mayfield Laboratory - NATA # 1261 Site # 25079															
Perth Laboratory - NATA # 2377 Site # 2370															
External Laboratory															

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID														
1	CSM_BH02	Feb 10, 2022		Water	S22-Fe19499	X	X	X	X	X	X		X	X		X	X		X	X
2	CSM_BH04	Feb 09, 2022		Water	S22-Fe19500	X	X	X	X	X	X		X	X		X	X		X	X
3	CSM_BH08	Feb 10, 2022		Water	S22-Fe19501	X	X	X	X	X	X		X	X		X	X		X	X
4	CSM_BH10S	Feb 09, 2022		Water	S22-Fe19502	X	X	X	X	X	X		X	X		X	X		X	X
5	CSM_BH12S	Feb 08, 2022		Water	S22-Fe19503	X	X	X	X	X	X		X	X		X	X		X	X
6	SRT_BH047	Feb 08, 2022		Water	S22-Fe19504	X	X	X	X	X	X		X	X		X	X		X	X
7	SRT_BH052	Feb 08, 2022		Water	S22-Fe19505	X	X	X	X	X	X		X	X		X	X		X	X
8	GASW_BH10	Feb 08, 2022		Water	S22-Fe19506	X	X	X	X	X	X		X	X		X	X		X	X
9	CSM_BH06	Feb 09, 2022		Water	S22-Fe19507	X	X	X	X	X	X		X	X		X	X		X	X

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NSW 2000

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Order No.: 2127234
Report #: 862315
Phone: 02 9239 7100
Fax: 02 9239 7199

Received: Feb 10, 2022 5:46 PM
Due: Feb 18, 2022
Priority: 5 Day
Contact Name: Henry Luo

Eurofins Analytical Services Manager : John Nguyen

Sample Detail						Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103°C–105°C	Metals M8	Phenols (Speciated)	TRH (after Silica Gel cleanup)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Eurofins Suite B7 (filtered metals/PAH trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X		X	X	X	X		X	X	X	X	X		X	X
Sydney Laboratory - NATA # 1261 Site # 18217							X					X			X	X		X	X	
Brisbane Laboratory - NATA # 1261 Site # 20794																				
Mayfield Laboratory - NATA # 1261 Site # 25079																				
Perth Laboratory - NATA # 2377 Site # 2370																				
External Laboratory																				
10	CSM_BH14S	Feb 09, 2022		Water	S22-Fe19508	X	X	X	X	X	X		X	X		X	X		X	X
11	QC01	Feb 08, 2022		Water	S22-Fe19509														X	
12	RB01	Feb 10, 2022		Water	S22-Fe19510							X								
13	TRIP BLANK	Feb 02, 2022		Water	S22-Fe19511										X					
14	TRIP SPIKE	Feb 02, 2022		Water	S22-Fe19512													X		
15	SRT_BH050	Feb 08, 2022		Water	S22-Fe19513	X	X		X	X	X		X	X		X	X		X	X
16	CSM_BH13	Feb 10, 2022		Water	S22-Fe19515	X	X	X	X	X	X		X	X		X	X		X	X
Test Counts						12	12	11	12	12	12	1	12	12	1	12	12	1	13	12

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

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QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Total PAH*	mg/L	-			0.00001	N/A	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Chloride	mg/L	< 1			1	Pass	
Cyanide (total)	mg/L	< 0.004			0.004	Pass	
Ferrous Iron - Fe2+	mg/L	< 0.05			0.05	Pass	
Sulphate (as SO4)	mg/L	< 5			5	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	10			10	Pass	
Total Suspended Solids Dried at 103°C–105°C	mg/L	< 5			5	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	121			70-130	Pass	
TRH C10-C14	%	88			70-130	Pass	
Naphthalene	%	105			70-130	Pass	
TRH C6-C10	%	120			70-130	Pass	
TRH >C10-C16	%	104			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	107			70-130	Pass	
Toluene	%	109			70-130	Pass	
Ethylbenzene	%	108			70-130	Pass	
m&p-Xylenes	%	108			70-130	Pass	
Xylenes - Total*	%	108			70-130	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	104			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	88			70-130	Pass	
LCS - % Recovery							
Ammonia (as N)	%	102			70-130	Pass	
Chloride	%	110			70-130	Pass	
Cyanide (total)	%	95			70-130	Pass	
Ferrous Iron - Fe2+	%	92			70-130	Pass	
Sulphate (as SO4)	%	98			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	94			70-130	Pass	
Total Suspended Solids Dried at 103°C–105°C	%	91			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	91			70-130	Pass	
Total Alkalinity (as CaCO3)	%	101			70-130	Pass	
LCS - % Recovery							

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Alkali Metals									
Calcium			%	81			80-120	Pass	
Magnesium			%	88			80-120	Pass	
Potassium			%	85			80-120	Pass	
Sodium			%	102			80-120	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	99			80-120	Pass	
Cadmium			%	116			80-120	Pass	
Chromium			%	101			80-120	Pass	
Copper			%	101			80-120	Pass	
Lead			%	101			80-120	Pass	
Mercury			%	97			80-120	Pass	
Nickel			%	101			80-120	Pass	
Zinc			%	99			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M22-Fe22792	NCP	%	129			70-130	Pass	
Naphthalene	M22-Fe22792	NCP	%	98			70-130	Pass	
TRH C6-C10	M22-Fe22792	NCP	%	127			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M22-Fe22792	NCP	%	127			70-130	Pass	
Toluene	M22-Fe22792	NCP	%	126			70-130	Pass	
Ethylbenzene	M22-Fe22792	NCP	%	121			70-130	Pass	
m&p-Xylenes	M22-Fe22792	NCP	%	120			70-130	Pass	
o-Xylene	M22-Fe22792	NCP	%	123			70-130	Pass	
Xylenes - Total*	M22-Fe22792	NCP	%	121			70-130	Pass	
Spike - % Recovery									
				Result 1					
Ammonia (as N)	M22-Fe30626	NCP	%	92			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S22-Fe19499	CP	%	89			75-125	Pass	
Cadmium (filtered)	S22-Fe19499	CP	%	97			75-125	Pass	
Chromium (filtered)	S22-Fe19499	CP	%	91			75-125	Pass	
Copper (filtered)	S22-Fe19499	CP	%	88			75-125	Pass	
Lead (filtered)	S22-Fe19499	CP	%	86			75-125	Pass	
Manganese (filtered)	S22-Fe19499	CP	%	33			75-125	Fail	Q08
Mercury (filtered)	S22-Fe19499	CP	%	90			75-125	Pass	
Nickel (filtered)	S22-Fe19499	CP	%	84			75-125	Pass	
Zinc (filtered)	S22-Fe19499	CP	%	92			75-125	Pass	
Spike - % Recovery									
				Result 1					
Ammonia (as N)	S22-Fe19500	CP	%	99			70-130	Pass	
Cyanide (total)	S22-Fe19500	CP	%	88			70-130	Pass	
Total Suspended Solids Dried at 103°C–105°C	M22-Fe21424	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	S22-Fe19501	CP	%	85			75-125	Pass	
Magnesium	S22-Fe19501	CP	%	86			75-125	Pass	
Potassium	S22-Fe19501	CP	%	86			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Sodium	S22-Fe19501	CP	%	83			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S22-Fe19509	CP	%	90			75-125	Pass	
Cadmium (filtered)	S22-Fe19509	CP	%	92			75-125	Pass	
Chromium (filtered)	S22-Fe19509	CP	%	91			75-125	Pass	
Copper (filtered)	S22-Fe19509	CP	%	90			75-125	Pass	
Lead (filtered)	S22-Fe19509	CP	%	86			75-125	Pass	
Manganese (filtered)	S22-Fe19509	CP	%	89			75-125	Pass	
Mercury (filtered)	S22-Fe19509	CP	%	85			75-125	Pass	
Nickel (filtered)	S22-Fe19509	CP	%	89			75-125	Pass	
Zinc (filtered)	S22-Fe19509	CP	%	89			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S22-Fe22402	NCP	%	118			75-125	Pass	
Cadmium	S22-Fe22402	NCP	%	108			75-125	Pass	
Chromium	S22-Fe22402	NCP	%	113			75-125	Pass	
Copper	S22-Fe22402	NCP	%	104			75-125	Pass	
Lead	S22-Fe22402	NCP	%	100			75-125	Pass	
Mercury	S22-Fe22402	NCP	%	107			75-125	Pass	
Nickel	S22-Fe22402	NCP	%	105			75-125	Pass	
Zinc	S22-Fe22402	NCP	%	103			75-125	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	S22-Fe19513	CP	%	89			75-125	Pass	
Magnesium	S22-Fe19513	CP	%	95			75-125	Pass	
Potassium	S22-Fe19513	CP	%	91			75-125	Pass	
Sodium	S22-Fe19513	CP	%	94			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M22-Fe22790	NCP	mg/L	0.04	0.04	4.0	30%	Pass	
Naphthalene	M22-Fe22790	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M22-Fe22790	NCP	mg/L	0.04	0.04	5.0	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M22-Fe22790	NCP	mg/L	0.016	0.016	<1	30%	Pass	
Toluene	M22-Fe22790	NCP	mg/L	0.001	0.001	1.0	30%	Pass	
Ethylbenzene	M22-Fe22790	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M22-Fe22790	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M22-Fe22790	NCP	mg/L	0.002	0.002	1.0	30%	Pass	
Xylenes - Total*	M22-Fe22790	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	M22-Fe30626	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Chloride	S22-Fe19499	CP	mg/L	43	43	1.0	30%	Pass	
Ferrous Iron - Fe2+	S22-Fe19499	CP	mg/L	0.23	0.22	1.0	30%	Pass	
pH (at 25 °C)	S22-Fe19499	CP	pH Units	7.9	7.8	pass	30%	Pass	
Sulphate (as SO4)	S22-Fe19499	CP	mg/L	35	35	1.0	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S22-Fe19499	CP	mg/L	100	110	4.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S22-Fe19499	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S22-Fe19499	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S22-Fe19499	CP	mg/L	100	110	4.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S22-Fe19499	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S22-Fe19499	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S22-Fe19499	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S22-Fe19499	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead (filtered)	S22-Fe19499	CP	mg/L	0.002	0.002	<1	30%	Pass	
Manganese (filtered)	S22-Fe19499	CP	mg/L	0.10	0.10	<1	30%	Pass	
Mercury (filtered)	S22-Fe19499	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S22-Fe19499	CP	mg/L	0.008	0.008	<1	30%	Pass	
Zinc (filtered)	S22-Fe19499	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S22-Fe19500	CP	mg/L	0.01	0.02	43	30%	Fail	Q15
pH (at 25 °C)	S22-Fe19500	CP	pH Units	6.8	6.9	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S22-Fe19500	CP	mg/L	100	90	14	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S22-Fe19500	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S22-Fe19500	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S22-Fe19500	CP	mg/L	100	90	14	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Hardness mg equivalent CaCO3/L	S22-Fe19501	CP	mg/L	120	120	1.0	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	S22-Fe19501	CP	mg/L	13	13	<1	30%	Pass	
Magnesium	S22-Fe19501	CP	mg/L	20	20	1.0	30%	Pass	
Potassium	S22-Fe19501	CP	mg/L	4.6	4.3	7.0	30%	Pass	
Sodium	S22-Fe19501	CP	mg/L	92	93	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Total Dissolved Solids Dried at 180°C ± 2°C	S22-Fe19503	CP	mg/L	370	350	5.5	30%	Pass	
Total Suspended Solids Dried at 103°C–105°C	S22-Fe19503	CP	mg/L	87	90	2.9	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ferrous Iron - Fe2+	S22-Fe19508	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S22-Fe19509	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S22-Fe19509	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S22-Fe19509	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S22-Fe19509	CP	mg/L	0.003	0.003	6.0	30%	Pass	
Lead (filtered)	S22-Fe19509	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	S22-Fe19509	CP	mg/L	0.018	0.017	<1	30%	Pass	
Mercury (filtered)	S22-Fe19509	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S22-Fe19509	CP	mg/L	0.004	0.003	17	30%	Pass	
Zinc (filtered)	S22-Fe19509	CP	mg/L	0.027	0.026	3.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N22-Fe20333	NCP	mg/L	0.002	0.001	21	30%	Pass	
Cadmium	N22-Fe20333	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	N22-Fe20333	NCP	mg/L	0.006	0.006	6.0	30%	Pass	
Copper	N22-Fe20333	NCP	mg/L	0.005	0.005	3.0	30%	Pass	
Lead	N22-Fe20333	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	N22-Fe20333	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	N22-Fe20333	NCP	mg/L	0.002	0.002	3.0	30%	Pass	
Zinc	N22-Fe20333	NCP	mg/L	0.009	0.025	96	30%	Fail	Q15
Duplicate									
				Result 1	Result 2	RPD			
Chloride	S22-Fe19513	CP	mg/L	9.9	10.0	<1	30%	Pass	
Sulphate (as SO4)	S22-Fe19513	CP	mg/L	44	44	<1	30%	Pass	
Hardness mg equivalent CaCO3/L	S22-Fe19513	CP	mg/L	54	55	2.0	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	S22-Fe19513	CP	mg/L	16	17	2.0	30%	Pass	
Magnesium	S22-Fe19513	CP	mg/L	3.2	3.3	2.0	30%	Pass	
Potassium	S22-Fe19513	CP	mg/L	5.6	5.7	2.0	30%	Pass	
Sodium	S22-Fe19513	CP	mg/L	16	17	1.0	30%	Pass	

Comments

Eurofins | Environment Testing accreditation number 1261, site 18217 is currently in progress of a controlled transition to a new custom built location at 179 Magowar Road, Girraween, NSW 2145. All results on this report denoted as being performed by Eurofins | Environment Testing Unit F3, Building F, 16 Mars road, Lane Cove West, NSW 2066, corporate site 18217, will have been performed on either Lane Cove or new Girraween site

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

John Nguyen	Analytical Services Manager
Charl Du Preez	Senior Analyst-Inorganic (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)
John Nguyen	Senior Analyst-Metal (NSW)
Joseph Edouard	Senior Analyst-Organic (VIC)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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CHAIN OF CUSTODY RECORD

CLIENT DETAILS

Company Name : GHD Pty Ltd, Sydney	**Contact Name :** Terry Nham	**Purchase Order :** 2127234	**COC Number :**
Office Address :	**Project Manager :** Henry Luo	**PROJECT Number :** 2127234	**Eurofins | mgt quote ID :** GHD Rates 2022
Level 15, 133 Castlereagh Street, Sydney NSW 2000	**Email for results :** terry.nham@ghd.com henry.luo@ghd.com	**PROJECT Name :** Central	**Data output format:** ESDAT

Special Directions & Comments :

Eurofins | mgt DI water batch number:

Analytes

	Sample ID	Date	Matrix	TRH, BTEXN, 8 Metals (Dissolved) (Suite B6)	PAH - Trace LOR	Phenols		TRH (with Silica Gel Cleanup)	Cyanide - Trace Level (<0.004 mg/L)	Ammonia	Cation (B11D) and Anion (B11E)		Ferrous Iron	Manganese	pH	TDS	TSS		TRH C6-C10 / BTEX	8 Metals (Total)				
1	CSM_BH02	18/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
2	CSM_BH04	16/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
3	CSM_BH06	17/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
4	CSM_BH08	17/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
5	CSM_BH10S	16/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
6	CSM_BH12S	18/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
7	SRT_BH047	16/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
8	SRT_BH052	16/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
9	SRT_BH050	16/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
10	GASW_BH10	18/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
11	CSM_BH13	17/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
12	CSM_BH14S	17/3/22	Water	X	X	X		X	X	X	X		X	X	X	X	X							
13	QC01	16/3/22	Water	X	X																			
14	RB01	17/3/22	Water																	X				
15	Trip Blank	17/3/22	Water																X					
16	Trip Spike	17/3/22	Water																X					

Some common holding times (with correct preservation). For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers:

	500P	250P	60P	1LA	40mL vial	200mL A	Jar	Bag
1	1		4		2	2		
2	1		4		2	2		
3	1		4		2	2		
4	1		4		2	2		
5	1		4		2	2		
6	1		4		2	2		
7	1		4		2	2		
8	1		4		2	2		
9	1		4		2	2		
10	1		4		2	2		
11	1		4		2	2		
12	1		4		2	2		
13			1		2	2		
14			1					
15					2			
16					2			

Sample comments:

Laboratory Staff

Relinquished By: Terry Nham - GHD
Date & Time : 18/3/2022
Signature:

Received By: S. DALLI
Date & Time : 18/3/22 7:19pm
Signature:

Turn around time

1 DAY ☐ 2 DAY ☐ 3 DAY ☐
5 DAY ☑ 10 DAY ☐ Other:

Method Of Shipment

☐ Courier
☒ Hand Delivered
☐ Postal
Courier Consignment # :

Temperature on arrival: 0-7

Report number: 872459

eurofins | Environment Testing

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Sample Receipt Advice

Company name:	GHD Pty Ltd NSW
Contact name:	Henry Luo
Project name:	CENTRAL
Project ID:	2127234
Turnaround time:	5 Day
Date/Time received	Mar 18, 2022 3:19 PM
Eurofins reference	872459

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of chilled sample on the batch as recorded by Eurofins Sample Receipt : .7 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Emma Beesley on phone : or by email: EmmaBeesley@eurofins.com

Results will be delivered electronically via email to Henry Luo - henry.luo@ghd.com.

Note: A copy of these results will also be delivered to the general GHD Pty Ltd NSW email address.

GHD Pty Ltd NSW
Level 15, 133 Castlereagh Street
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Henry Luo**

Report **872459-W-V2**
Project name CENTRAL
Project ID 2127234
Received Date Mar 18, 2022

Client Sample ID			**CSM_BH02**	**CSM_BH04**	**CSM_BH06**	**CSM_BH08**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S22-Ma37583**	**S22-Ma37584**	**S22-Ma37585**	**S22-Ma37586**
Date Sampled			**Mar 18, 2022**	**Mar 16, 2022**	**Mar 17, 2022**	**Mar 17, 2022**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	104	102	102	102
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			CSM_BH02	CSM_BH04	CSM_BH06	CSM_BH08
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ma37583	S22-Ma37584	S22-Ma37585	S22-Ma37586
Date Sampled			Mar 18, 2022	Mar 16, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	45	77	50	128
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	80	108	128	78
p-Terphenyl-d14 (surr.)	1	%	100	136	54	81
Ammonia (as N)	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Chloride	1	mg/L	140	71	200	100
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	< 0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	0.13	3.3	0.73	6.3
pH (at 25 °C)	0.1	pH Units	7.4	6.7	7.4	6.8

Client Sample ID			CSM_BH02	CSM_BH04	CSM_BH06	CSM_BH08
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ma37583	S22-Ma37584	S22-Ma37585	S22-Ma37586
Date Sampled			Mar 18, 2022	Mar 16, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
Sulphate (as SO4)	5	mg/L	24	36	21	44
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	470	260	520	350
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	630	330	65	6.7
Hardness mg equivalent CaCO3/L	5	mg/L	230	76	190	100
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	340	120	160	160
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	340	120	160	160
Alkali Metals						
Calcium	0.5	mg/L	35	8.2	26	9.8
Magnesium	0.5	mg/L	34	13	29	19
Potassium	0.5	mg/L	5.5	2.9	5.4	4.4
Sodium	0.5	mg/L	100	69	110	85
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	0.022	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.018	0.41	0.38	0.42
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.010	0.027	0.009	0.007
Zinc (filtered)	0.005	mg/L	0.026	0.13	0.094	0.043

Client Sample ID			CSM_BH10S	CSM_BH12S	SRT_BH047	SRT_BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ma37587	S22-Ma37588	S22-Ma37589	S22-Ma37590
Date Sampled			Mar 16, 2022	Mar 18, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	0.06	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	0.16	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	0.14	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	0.14	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	0.14	< 0.1

Client Sample ID			CSM_BH10S	CSM_BH12S	SRT_BH047	SRT_BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ma37587	S22-Ma37588	S22-Ma37589	S22-Ma37590
Date Sampled			Mar 16, 2022	Mar 18, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	0.002	< 0.001	0.002	0.003
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	104	106	105	105
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	88	59	94	58
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	0.10	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	< 0.1	0.1	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001

Client Sample ID			CSM_BH10S	CSM_BH12S	SRT_BH047	SRT_BH052
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ma37587	S22-Ma37588	S22-Ma37589	S22-Ma37590
Date Sampled			Mar 16, 2022	Mar 18, 2022	Mar 16, 2022	Mar 16, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons (Trace level)						
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	133	54	64	101
p-Terphenyl-d14 (surr.)	1	%	144	62	81	116
Ammonia (as N)	0.01	mg/L	< 0.01	< 0.01	2.4	< 0.01
Chloride	1	mg/L	24	66	17	40
Cyanide (total)	0.004	mg/L	0.006	< 0.004	< 0.004	0.004
Ferrous Iron - Fe2+	0.05	mg/L	0.14	7.7	0.11	0.09
pH (at 25 °C)	0.1	pH Units	5.8	6.3	5.7	5.6
Sulphate (as SO4)	5	mg/L	51	130	12	15
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	150	360	120	150
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	32	70	19	5.4
Hardness mg equivalent CaCO3/L	5	mg/L	41	27	42	30
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	35	92	< 20	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	35	92	< 20	< 20
Alkali Metals						
Calcium	0.5	mg/L	5.3	2.1	5.4	5.8
Magnesium	0.5	mg/L	6.6	5.3	7.0	3.8
Potassium	0.5	mg/L	2.9	2.0	0.7	0.8
Sodium	0.5	mg/L	30	110	19	38
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	0.003	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.61	0.63	0.018	0.020
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	0.002	0.012	0.004	< 0.001
Zinc (filtered)	0.005	mg/L	0.007	0.047	0.032	< 0.005

Client Sample ID			SRT_BH050	GASW_BH10	CSM_BH13	CSM_BH14S
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ma37591	S22-Ma37592	S22-Ma37593	S22-Ma37594
Date Sampled			Mar 16, 2022	Mar 18, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	1.4	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	0.7	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	2.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	1.7	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	1.7	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	0.3	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	2	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	0.003	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	102	104	105	104
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
Total cresols*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	0.012	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	80	64	56	59
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH - 2013 NEPM Fractions (after silica gel clean-up)						
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05	1.7	< 0.05	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1	0.1	< 0.1	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total) (after silica-gel clean up)*	0.1	mg/L	< 0.1	1.8	< 0.1	< 0.1

Client Sample ID			SRT_BH050	GASW_BH10	CSM_BH13	CSM_BH14S
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ma37591	S22-Ma37592	S22-Ma37593	S22-Ma37594
Date Sampled			Mar 16, 2022	Mar 18, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
TRH - 1999 NEPM Fractions (after silica gel clean-up)						
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05	1.3	< 0.05	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1	0.5	< 0.1	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1	1.8	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Acenaphthylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Naphthalene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Pyrene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Total PAH*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001	< 0.00001
2-Fluorobiphenyl (surr.)	1	%	92	65	96	93
p-Terphenyl-d14 (surr.)	1	%	96	66	96	104
Ammonia (as N)	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Chloride	1	mg/L	11	190	190	16
Cyanide (total)	0.004	mg/L	< 0.004	< 0.004	< 0.004	< 0.004
Ferrous Iron - Fe2+	0.05	mg/L	0.07	4.8	7.2	0.17
pH (at 25 °C)	0.1	pH Units	5.0	7.0	7.0	7.2
Sulphate (as SO4)	5	mg/L	40	< 5	33	6.4
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	150	640	520	110
Total Suspended Solids Dried at 103°C–105°C	5	mg/L	30	1400	39	6.9
Hardness mg equivalent CaCO3/L	5	mg/L	74	300	180	73
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	480	130	90
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	< 20	480	130	90
Alkali Metals						
Calcium	0.5	mg/L	25	64	35	22
Magnesium	0.5	mg/L	3.0	34	23	4.5
Potassium	0.5	mg/L	5.9	11	4.9	2.6
Sodium	0.5	mg/L	11	110	140	12
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	0.002	< 0.001	< 0.001
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	0.002	< 0.001

Client Sample ID			SRT_BH050	GASW_BH10	CSM_BH13	CSM_BH14S
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ma37591	S22-Ma37592	S22-Ma37593	S22-Ma37594
Date Sampled			Mar 16, 2022	Mar 18, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
Heavy Metals						
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Manganese (filtered)	0.005	mg/L	0.013	0.11	0.52	0.028
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	< 0.001	0.023	< 0.001
Zinc (filtered)	0.005	mg/L	0.010	< 0.005	0.059	< 0.005

Client Sample ID			QC01	RB01	TRIP BLANK	TRIP SPIKE
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ma37595	S22-Ma37596	S22-Ma37597	S22-Ma37598
Date Sampled			Mar 16, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	-	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	-	-
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	-	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-	-
BTEX						
Benzene	0.001	mg/L	< 0.001	-	< 0.001	-
Toluene	0.001	mg/L	0.002	-	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	-	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	103	-	95	-
Polycyclic Aromatic Hydrocarbons (Trace level)						
Acenaphthene	0.00001	mg/L	< 0.00001	-	-	-
Acenaphthylene	0.00001	mg/L	< 0.00001	-	-	-
Anthracene	0.00001	mg/L	< 0.00001	-	-	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(a)pyrene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	-	-	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	-	-	-
Chrysene	0.00001	mg/L	< 0.00001	-	-	-
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	-	-	-
Fluoranthene	0.00001	mg/L	< 0.00001	-	-	-
Fluorene	0.00001	mg/L	< 0.00001	-	-	-
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	-	-	-
Naphthalene	0.00001	mg/L	< 0.00001	-	-	-

Client Sample ID			QC01	RB01	TRIP BLANK	TRIP SPIKE
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S22-Ma37595	S22-Ma37596	S22-Ma37597	S22-Ma37598
Date Sampled			Mar 16, 2022	Mar 17, 2022	Mar 17, 2022	Mar 17, 2022
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons (Trace level)						
Phenanthrene	0.00001	mg/L	< 0.00001	-	-	-
Pyrene	0.00001	mg/L	< 0.00001	-	-	-
Total PAH*	0.00001	mg/L	< 0.00001	-	-	-
2-Fluorobiphenyl (surr.)	1	%	80	-	-	-
p-Terphenyl-d14 (surr.)	1	%	82	-	-	-
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	-	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	-	-
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	-	-
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	-	-
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Nickel (filtered)	0.001	mg/L	0.002	< 0.001	-	-
Zinc (filtered)	0.005	mg/L	0.006	< 0.005	-	-
Total Recoverable Hydrocarbons						
Naphthalene	1	%	-	-	-	80
TRH C6-C10	1	%	-	-	-	82
TRH C6-C9	1	%	-	-	-	81
BTEX						
Benzene	1	%	-	-	-	96
Ethylbenzene	1	%	-	-	-	95
m&p-Xylenes	1	%	-	-	-	94
o-Xylene	1	%	-	-	-	90
Toluene	1	%	-	-	-	94
Xylenes - Total	1	%	-	-	-	91
4-Bromofluorobenzene (surr.)	1	%	-	-	-	97

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Mar 27, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 24, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Melbourne	Mar 24, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Mar 24, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Eurofins Suite B6 (filtered metals)			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 27, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8 filtered	Melbourne	Mar 24, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Phenols (Speciated)			
Phenols (Halogenated)	Melbourne	Mar 27, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Mar 27, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Melbourne	Mar 27, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Melbourne	Mar 27, 2022	7 Days
- Method: TRH C6-C36 (Silica Gel Cleanup) - MGT 100A			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	Mar 27, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Ammonia (as N)	Melbourne	Mar 24, 2022	28 Days
- Method: APHA 4500-NH3 Ammonia Nitrogen by FIA			
Cyanide (total)	Sydney	Mar 21, 2022	14 Days
- Method: E054 Total Cyanide			
Ferrous Iron - Fe2+	Melbourne	Apr 08, 2022	7 Days
- Method: LTM-INO-4190 Ferrous Iron in Water by Discrete Analyser			
pH (at 25 °C)	Melbourne	Mar 24, 2022	0 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Total Suspended Solids Dried at 103°C–105°C	Melbourne	Mar 24, 2022	7 Days
- Method: LTM-INO-4070 Analysis of Suspended Solids in Water by Gravimetry			
Heavy Metals (filtered)	Melbourne	Mar 24, 2022	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B11E: Cl/SO4/Alkalinity			
Chloride	Melbourne	Mar 24, 2022	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Sulphate (as SO4)	Melbourne	Mar 24, 2022	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Mar 24, 2022	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
Total Dissolved Solids Dried at 180°C ± 2°C	Melbourne	Mar 24, 2022	28 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
Eurofins Suite B11D: Na/K/Ca/Mg and Hardness			
Hardness mg equivalent CaCO3/L	Melbourne	Mar 24, 2022	28 Days
- Method: APHA 2340B Hardness by Calculation			
Alkali Metals	Melbourne	Mar 24, 2022	180 Days
- Method: LTM-MET-3010 Alkali Metals Sulfur Silicon Phosphorus by ICP-AES			

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Company Name: GHD Pty Ltd NSW
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Project Name: CENTRAL
Project ID: 2127234

Order No.: 2127234
Report #: 872459
Phone: 02 9239 7100
Fax: 02 9239 7199

Received: Mar 18, 2022 3:19 PM
Due: Mar 25, 2022
Priority: 5 Day
Contact Name: Henry Luo

Eurofins Analytical Services Manager : Emma Beesley

Sample Detail						Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103°C–105°C	Metals M8 filtered	Phenols (Speciated)	TRH (after Silica Gel cleanup)	Eurofins Suite B6 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217							X														
Brisbane Laboratory - NATA # 1261 Site # 20794																					
Mayfield Laboratory - NATA # 1261 Site # 25079																					
Perth Laboratory - NATA # 2377 Site # 2370																					
External Laboratory																					
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**																
1	CSM_BH02	Mar 18, 2022		Water	S22-Ma37583	X	X	X	X	X	X		X	X	X		X	X		X	X
2	CSM_BH04	Mar 16, 2022		Water	S22-Ma37584	X	X	X	X	X	X		X	X	X		X	X		X	X
3	CSM_BH06	Mar 17, 2022		Water	S22-Ma37585	X	X	X	X	X	X		X	X	X		X	X		X	X
4	CSM_BH08	Mar 17, 2022		Water	S22-Ma37586	X	X	X	X	X	X		X	X	X		X	X		X	X
5	CSM_BH10S	Mar 16, 2022		Water	S22-Ma37587	X	X	X	X	X	X		X	X	X		X	X		X	X
6	CSM_BH12S	Mar 18, 2022		Water	S22-Ma37588	X	X	X	X	X	X		X	X	X		X	X		X	X
7	SRT_BH047	Mar 16, 2022		Water	S22-Ma37589	X	X	X	X	X	X		X	X	X		X	X		X	X
8	SRT_BH052	Mar 16, 2022		Water	S22-Ma37590	X	X	X	X	X	X		X	X	X		X	X		X	X
9	SRT_BH050	Mar 16, 2022		Water	S22-Ma37591	X	X	X	X	X	X		X	X	X		X	X		X	X

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Company Name: GHD Pty Ltd NSW
Address: Level 15, 133 Castlereagh Street
Sydney
NSW 2000

Project Name: CENTRAL
Project ID: 2127234

Order No.: 2127234
Report #: 872459
Phone: 02 9239 7100
Fax: 02 9239 7199

Received: Mar 18, 2022 3:19 PM
Due: Mar 25, 2022
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Contact Name: Henry Luo

Eurofins Analytical Services Manager : Emma Beesley

Sample Detail						Ammonia (as N)	Cyanide (total)	Ferrous Iron - Fe2+	Manganese (filtered)	pH (at 25 °C)	Total Suspended Solids Dried at 103°C–105°C	Metals M8 filtered	Phenols (Speciated)	TRH (after Silica Gel cleanup)	Eurofins Suite B6 (filtered metals)	BTEXN and Volatile TRH	Eurofins Suite B11D: Na/K/Ca/Mg and Hardness	Eurofins Suite B11E: Cl/SO4/Alkalinity	BTEXN and Volatile TRH	Polycyclic Aromatic Hydrocarbons (Trace level)	Total Dissolved Solids Dried at 180°C ± 2°C
Melbourne Laboratory - NATA # 1261 Site # 1254						X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA # 1261 Site # 18217							X														
Brisbane Laboratory - NATA # 1261 Site # 20794																					
Mayfield Laboratory - NATA # 1261 Site # 25079																					
Perth Laboratory - NATA # 2377 Site # 2370																					
External Laboratory																					
10	GASW_BH10	Mar 18, 2022		Water	S22-Ma37592	X	X	X	X	X	X		X	X	X		X	X		X	X
11	CSM_BH13	Mar 17, 2022		Water	S22-Ma37593	X	X	X	X	X	X		X	X	X		X	X		X	X
12	CSM_BH14S	Mar 17, 2022		Water	S22-Ma37594	X	X	X	X	X	X		X	X	X		X	X		X	X
13	QC01	Mar 16, 2022		Water	S22-Ma37595										X					X	
14	RB01	Mar 17, 2022		Water	S22-Ma37596							X									
15	TRIP BLANK	Mar 17, 2022		Water	S22-Ma37597											X					
16	TRIP SPIKE	Mar 17, 2022		Water	S22-Ma37598														X		
Test Counts						12	12	12	12	12	12	1	12	12	13	1	12	12	1	13	12

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

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QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C29-C36 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	mg/L	< 0.00001			0.00001	Pass	
Acenaphthylene	mg/L	< 0.00001			0.00001	Pass	
Anthracene	mg/L	< 0.00001			0.00001	Pass	
Benz(a)anthracene	mg/L	< 0.00001			0.00001	Pass	
Benzo(a)pyrene	mg/L	< 0.00001			0.00001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.00001			0.00001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Chrysene	mg/L	< 0.00001			0.00001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.00001			0.00001	Pass	
Fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Fluorene	mg/L	< 0.00001			0.00001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.00001			0.00001	Pass	
Naphthalene	mg/L	< 0.00001			0.00001	Pass	
Phenanthrene	mg/L	< 0.00001			0.00001	Pass	
Pyrene	mg/L	< 0.00001			0.00001	Pass	
Method Blank							
Ammonia (as N)	mg/L	< 0.01			0.01	Pass	
Chloride	mg/L	< 1			1	Pass	
Cyanide (total)	mg/L	< 0.004			0.004	Pass	
Ferrous Iron - Fe2+	mg/L	< 0.05			0.05	Pass	
Sulphate (as SO4)	mg/L	< 5			5	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	< 10			10	Pass	
Total Suspended Solids Dried at 103°C–105°C	mg/L	< 5			5	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Alkali Metals							
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	109			70-130	Pass	
TRH C10-C14	%	91			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	%	99			70-130	Pass	
Naphthalene	%	94			70-130	Pass	
TRH C6-C10	%	104			70-130	Pass	
TRH C6-C10	%	115			70-130	Pass	
TRH >C10-C16	%	98			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	95			70-130	Pass	
Toluene	%	93			70-130	Pass	
Ethylbenzene	%	110			70-130	Pass	
m&p-Xylenes	%	112			70-130	Pass	
Xylenes - Total*	%	107			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	56			25-140	Pass	
2.4-Dichlorophenol	%	46			25-140	Pass	
2.4.5-Trichlorophenol	%	37			25-140	Pass	
2.4.6-Trichlorophenol	%	38			25-140	Pass	
2.6-Dichlorophenol	%	37			25-140	Pass	
4-Chloro-3-methylphenol	%	46			25-140	Pass	
Pentachlorophenol	%	72			25-140	Pass	
Tetrachlorophenols - Total	%	50			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	65			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	53			25-140	Pass	
2-Nitrophenol	%	41			25-140	Pass	
2.4-Dinitrophenol	%	71			25-140	Pass	
2-Methylphenol (o-Cresol)	%	100			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	31			25-140	Pass	
4-Nitrophenol	%	43			25-140	Pass	
Dinoseb	%	33			25-140	Pass	
Phenol	%	42			25-140	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	108			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	102			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	82			70-130	Pass	
Anthracene	%	82			70-130	Pass	
Benz(a)anthracene	%	101			70-130	Pass	
Benzo(a)pyrene	%	95			70-130	Pass	
Benzo(b&j)fluoranthene	%	104			70-130	Pass	
Benzo(g.h.i)perylene	%	77			70-130	Pass	
Benzo(k)fluoranthene	%	73			70-130	Pass	
Chrysene	%	102			70-130	Pass	
Dibenz(a.h)anthracene	%	77			70-130	Pass	
Fluoranthene	%	106			70-130	Pass	
Fluorene	%	105			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	81			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	%	108			70-130	Pass	
Phenanthrene	%	97			70-130	Pass	
Pyrene	%	86			70-130	Pass	
LCS - % Recovery							
Ammonia (as N)	%	104			70-130	Pass	
Chloride	%	102			70-130	Pass	
Cyanide (total)	%	117			70-130	Pass	
Ferrous Iron - Fe2+	%	114			70-130	Pass	
Sulphate (as SO4)	%	105			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	99			70-130	Pass	
Total Suspended Solids Dried at 103°C–105°C	%	96			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	72			70-130	Pass	
Total Alkalinity (as CaCO3)	%	103			70-130	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	90			80-120	Pass	
Magnesium	%	105			80-120	Pass	
Potassium	%	108			80-120	Pass	
Sodium	%	93			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	M22-Ma50017	NCP	%	89			70-130	Pass	
TRH >C10-C16	M22-Ma50017	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	M22-Ma51080	NCP	%	101			75-125	Pass	
Magnesium	S22-Ma39643	NCP	%	83			75-125	Pass	
Potassium	M22-Ma53340	NCP	%	80			75-125	Pass	
Sodium	S22-Ma39643	NCP	%	87			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	M22-Ma37930	NCP	%	99			75-125	Pass	
Cadmium (filtered)	M22-Ma37930	NCP	%	100			75-125	Pass	
Chromium (filtered)	M22-Ma37930	NCP	%	97			75-125	Pass	
Copper (filtered)	M22-Ma37930	NCP	%	90			75-125	Pass	
Lead (filtered)	M22-Ma37930	NCP	%	98			75-125	Pass	
Manganese (filtered)	M22-Ma37930	NCP	%	67			75-125	Fail	Q08
Mercury (filtered)	M22-Ma37930	NCP	%	104			75-125	Pass	
Nickel (filtered)	M22-Ma37930	NCP	%	94			75-125	Pass	
Zinc (filtered)	M22-Ma37930	NCP	%	98			75-125	Pass	
Spike - % Recovery									
				Result 1					
Cyanide (total)	S22-Ma37584	CP	%	87			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M22-Ma56293	NCP	%	122			70-130	Pass	
Naphthalene	M22-Ma56293	NCP	%	97			70-130	Pass	
TRH C6-C10	M22-Ma56293	NCP	%	118			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M22-Ma56293	NCP	%	93			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Toluene	M22-Ma56293	NCP	%	103			70-130	Pass	
Ethylbenzene	M22-Ma56293	NCP	%	108			70-130	Pass	
m&p-Xylenes	M22-Ma56293	NCP	%	105			70-130	Pass	
o-Xylene	M22-Ma56293	NCP	%	101			70-130	Pass	
Xylenes - Total*	M22-Ma56293	NCP	%	103			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	M22-Ma54243	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M22-Ma54243	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M22-Ma54243	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C10-C16	M22-Ma54243	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M22-Ma54243	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	M22-Ma54243	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	L22-Ma38165	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dichlorophenol	L22-Ma38165	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4.5-Trichlorophenol	L22-Ma38165	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	L22-Ma38165	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	L22-Ma38165	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
4-Chloro-3-methylphenol	L22-Ma38165	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Pentachlorophenol	L22-Ma38165	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Tetrachlorophenols - Total	L22-Ma38165	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	L22-Ma38165	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	L22-Ma38165	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Nitrophenol	L22-Ma38165	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dimethylphenol	L22-Ma38165	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	L22-Ma38165	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Methylphenol (o-Cresol)	L22-Ma38165	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	L22-Ma38165	NCP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
4-Nitrophenol	L22-Ma38165	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Dinoseb	L22-Ma38165	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Phenol	L22-Ma38165	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Acenaphthene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Acenaphthylene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Anthracene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benz(a)anthracene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(a)pyrene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(b&j)fluoranthene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(g.h.i)perylene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(k)fluoranthene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Chrysene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Dibenz(a.h)anthracene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluoranthene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluorene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Naphthalene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Phenanthrene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Pyrene	L22-Ma38165	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	S22-Ma37583	CP	mg/L	< 0.004	< 0.004	<1	30%	Pass	
Sulphate (as SO4)	S22-Ma37583	CP	mg/L	24	24	1.0	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	M22-Ma51080	NCP	mg/L	54	54	1.0	30%	Pass	
Magnesium	S22-Ma39643	NCP	mg/L	7.9	6.5	24	30%	Pass	
Potassium	M22-Ma53340	NCP	mg/L	8.4	7.7	8.0	30%	Pass	
Sodium	S22-Ma39643	NCP	mg/L	15	11	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	M22-Ma37930	NCP	mg/L	0.001	0.001	1.0	30%	Pass	
Cadmium (filtered)	M22-Ma37930	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	M22-Ma37930	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	M22-Ma37930	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead (filtered)	M22-Ma37930	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese (filtered)	M22-Ma37930	NCP	mg/L	0.39	0.39	2.0	30%	Pass	
Mercury (filtered)	M22-Ma37930	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	M22-Ma37930	NCP	mg/L	0.008	0.007	3.0	30%	Pass	
Zinc (filtered)	M22-Ma37930	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
pH (at 25 °C)	S22-Ma37584	CP	pH Units	6.7	6.8	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S22-Ma37584	CP	mg/L	120	120	3.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S22-Ma37584	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S22-Ma37584	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S22-Ma37584	CP	mg/L	120	120	3.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chloride	S22-Ma37589	CP	mg/L	17	17	1.0	30%	Pass	
Sulphate (as SO4)	S22-Ma37589	CP	mg/L	12	12	1.0	30%	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	S22-Ma37589	CP	mg/L	120	110	11	30%	Pass	
Total Suspended Solids Dried at 103°C–105°C	S22-Ma37589	CP	mg/L	19	17	11	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Ammonia (as N)	S22-Ma37590	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Ferrous Iron - Fe2+	S22-Ma37590	CP	mg/L	0.09	0.15	44	30%	Fail	Q15
Duplicate									
				Result 1	Result 2	RPD			
Cyanide (total)	S22-Ma37594	CP	mg/L	< 0.004	< 0.004	<1	30%	Pass	
pH (at 25 °C)	S22-Ma37594	CP	pH Units	7.2	7.2	pass	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	S22-Ma37594	CP	mg/L	90	77	16	30%	Pass	
Carbonate Alkalinity (as CaCO3)	S22-Ma37594	CP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	S22-Ma37594	CP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	S22-Ma37594	CP	mg/L	90	77	16	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M22-Ma55921	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Naphthalene	M22-Ma55921	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M22-Ma55921	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M22-Ma55921	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M22-Ma55921	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M22-Ma55921	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M22-Ma55921	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M22-Ma55921	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M22-Ma55921	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Comments

V2- new version to import ferrous iron on all samples as per client request.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Andrew Black	Analytical Services Manager
Mary Makarios	Senior Analyst (NSW)
Dilani Samarakoon	Senior Analyst (NSW)
Joseph Edouard	Senior Analyst (VIC)
Edward Lee	Senior Analyst (VIC)
Carroll Lee	Senior Analyst (NSW)
Scott Beddoes	Senior Analyst (NSW)
Harry Bacalis	Senior Analyst (NSW)
Caitlin Breeze	Senior Analyst (VIC)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2139173**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234	Date Samples Received	: 29-Oct-2021 12:40
Order number	: 2127234	Date Analysis Commenced	: 02-Nov-2021
C-O-C number	: ----	Issue Date	: 05-Nov-2021 13:59
Sampler	: TERRY NHAM		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP132: Where reported, Total PAH reported as the sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
				Sampling date / time	27-Oct-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2139173-001	--------	--------	--------	--------
					Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.002**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ **Total Xylenes**	----	2	µg/L		<2	----	----	----	----
^ **Sum of BTEX**	----	1	µg/L		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
				Sampling date / time	27-Oct-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2139173-001	--------	--------	--------	--------
					Result	----	----	----	----
EP132B: Polynuclear Aromatic Hydrocarbons									
3-Methylcholanthrene	56-49-5	0.1	µg/L		<0.1	----	----	----	----
2-Methylnaphthalene	91-57-6	0.1	µg/L		<0.1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L		<0.1	----	----	----	----
Acenaphthene	83-32-9	0.1	µg/L		<0.1	----	----	----	----
Acenaphthylene	208-96-8	0.1	µg/L		<0.1	----	----	----	----
Anthracene	120-12-7	0.1	µg/L		<0.1	----	----	----	----
Benz(a)anthracene	56-55-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(a)pyrene	50-32-8	0.05	µg/L		**0.10**	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L		**0.1**	----	----	----	----
Benzo(e)pyrene	192-97-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.1	µg/L		<0.1	----	----	----	----
Chrysene	218-01-9	0.1	µg/L		<0.1	----	----	----	----
Coronene	191-07-1	0.1	µg/L		<0.1	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L		<0.1	----	----	----	----
Fluoranthene	206-44-0	0.1	µg/L		**0.1**	----	----	----	----
Fluorene	86-73-7	0.1	µg/L		<0.1	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L		<0.1	----	----	----	----
Naphthalene	91-20-3	0.1	µg/L		<0.1	----	----	----	----
Perylene	198-55-0	0.1	µg/L		<0.1	----	----	----	----
Phenanthrene	85-01-8	0.1	µg/L		<0.1	----	----	----	----
Pyrene	129-00-0	0.1	µg/L		**0.1**	----	----	----	----
^ Sum of PAHs	----	0.05	µg/L		**0.4**	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.05	µg/L		**0.1**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**111**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**110**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**109**	----	----	----	----
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**73.0**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%		**87.0**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		**75.0**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	135
Anthracene-d10	1719-06-8	48	138
4-Terphenyl-d14	1718-51-0	48	144

QUALITY CONTROL REPORT

Work Order	: **ES2139173**	Page	: 1 of 6
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234	Date Samples Received	: 29-Oct-2021
Order number	: 2127234	Date Analysis Commenced	: 02-Nov-2021
C-O-C number	: ----	Issue Date	: 05-Nov-2021
Sampler	: TERRY NHAM		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3991112)									
EM2121510-004	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.017	0.017	0.0	0% - 50%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.042	0.042	0.0	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.042	0.042	0.0	No Limit
ES2139247-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.008	0.007	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 3991113)									
ES2139173-001	QC02	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2139242-007	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3987899)									
ES2139020-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	30	30	0.0	No Limit
ES2139233-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3987899)									
ES2139020-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	30	30	0.0	No Limit
ES2139233-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 3987899)									
ES2139020-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2139233-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3991112)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	94.2	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	95.5	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	93.5	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	92.0	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	93.3	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	90.4	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	90.7	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 3991113)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	97.5	83.0	105
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3986951)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	65.1	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	84.2	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	84.2	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3987899)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	88.6	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3986951)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	77.7	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	66.5	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	92.7	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3987899)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	88.9	75.0	127
EP080: BTEXN (QCLot: 3987899)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	90.5	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	93.0	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	95.1	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	94.6	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	99.6	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	114	70.0	120
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 3987312)								
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	2 µg/L	82.7	60.0	120
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	2 µg/L	60.8	59.0	123
EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	2 µg/L	109	36.0	144

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 3987312) - continued								
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	2 µg/L	66.8	64.0	122
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	2 µg/L	78.8	64.0	126
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	2 µg/L	71.2	65.0	127
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	2 µg/L	78.8	64.0	130
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	76.6	64.0	126
EP132: Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L	<0.1	2 µg/L	76.1	62.0	126
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	2 µg/L	75.0	62.0	126
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	2 µg/L	73.4	56.0	126
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	2 µg/L	72.4	68.0	130
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	2 µg/L	75.8	66.0	130
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	2 µg/L	71.5	35.0	133
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	2 µg/L	74.3	58.0	128
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	2 µg/L	73.5	65.0	127
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	2 µg/L	76.4	64.0	124
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	2 µg/L	75.0	57.0	127
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	2 µg/L	58.0	54.0	128
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	2 µg/L	75.6	66.0	130
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	2 µg/L	69.4	65.0	129
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	2 µg/L	72.8	66.0	128

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3991112)							
ES2139012-008	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	92.9	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	94.1	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	91.7	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	92.9	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	73.9	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	91.1	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	93.0	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 3991113)							
ES2139012-007	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	89.8	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3987899)							
ES2139020-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	106	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3987899)							
ES2139020-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	102	70.0	130
EP080: BTEXN (QCLot: 3987899)							
ES2139020-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	88.2	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	88.0	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	92.5	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	88.7	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	93.6	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	96.3	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2139173**	Page	: 1 of 4
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Telephone	: +61-2-8784 8555
Project	: 2127234	Date Samples Received	: 29-Oct-2021
Site	:	Issue Date	: 05-Nov-2021
Sampler	: TERRY NHAM	No. of samples received	: 1
Order number	: 2127234	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	3	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	14	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	3	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	14	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
QC02	**27-Oct-2021**	**----**	----	----	**03-Nov-2021**	25-Apr-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
QC02	**27-Oct-2021**	**----**	----	----	**03-Nov-2021**	24-Nov-2021	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
QC02	**27-Oct-2021**	**02-Nov-2021**	03-Nov-2021	✓	**03-Nov-2021**	12-Dec-2021	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
QC02	**27-Oct-2021**	**04-Nov-2021**	10-Nov-2021	✓	**04-Nov-2021**	10-Nov-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
QC02	**27-Oct-2021**	**02-Nov-2021**	03-Nov-2021	✓	**03-Nov-2021**	12-Dec-2021	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
QC02	**27-Oct-2021**	**04-Nov-2021**	10-Nov-2021	✓	**04-Nov-2021**	10-Nov-2021	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
QC02	**27-Oct-2021**	**04-Nov-2021**	10-Nov-2021	✓	**04-Nov-2021**	10-Nov-2021	✓
EP132B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP132)							
QC02	**27-Oct-2021**	**02-Nov-2021**	03-Nov-2021	✓	**02-Nov-2021**	12-Dec-2021	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	3	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	14	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	3	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	14	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	WATER	In house: Referenced to USEPA 3640 (GPC Cleanup), 8270 GCMS Capiliary column, SIM mode. This method is compliant with NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	In house: Referenced to USEPA 3510 (Extraction) / In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with echange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600 E: gladstone@alsglobal.com
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☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: GHD Pty Ltd	**TURNAROUND REQUIREMENTS** (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☒ Standard TAT (List due date):	STANDARD TAT
OFFICE: Sydney		☐ Non Standard or urgent TAT (List due date):	
PROJECT: 2127234 Central	**ALS QUOTE NO.:**	EN/005/20	
ORDER NUMBER: 2127234			
PROJECT MANAGER: Henry Luo	**CONTACT PH:** 02 9239 7044 / 0414 090 002		
SAMPLER: Terry Nham	**SAMPLER MOBILE:** 0403 251 883		
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):** ESDAT		
Email Reports to: henry.luo@ghd.com terry.nham@ghd.com charlotte.gray@ghd.com			
Email Invoice to (will default to PM if no other addresses are listed):			

COC SEQUENCE NUMBER (Circle)

COC: (1) 2 3 4 5 6 7

OF: (1) 2 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: 2.9 °C

Other comment:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Terry Nham (GHD)	JJuana6		FMD
DATE/TIME: 29/10/2021	DATE/TIME: 29/10/21 12:40	DATE/TIME:	DATE/TIME: 29/10/21 3pm AB

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

| ALS USE | SAMPLE DETAILS MATRIX: SOLID (S) WATER (W) | | | CONTAINER INFORMATION | | ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required). | | |

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2144215**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234 Central	Date Samples Received	: 03-Dec-2021 17:30
Order number	: 2127234	Date Analysis Commenced	: 06-Dec-2021
C-O-C number	: ----	Issue Date	: 10-Dec-2021 15:41
Sampler	: CHARLOTTE GRAY		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP132: Where reported, Total PAH reported as the sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
				Sampling date / time	24-Nov-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2144215-001	--------	--------	--------	--------
					Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.019**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.076**	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ **Total Xylenes**	----	2	µg/L		<2	----	----	----	----
^ **Sum of BTEX**	----	1	µg/L		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
				Sampling date / time	24-Nov-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2144215-001	--------	--------	--------	--------
					Result	----	----	----	----
EP132B: Polynuclear Aromatic Hydrocarbons									
3-Methylcholanthrene	56-49-5	0.1	µg/L		<0.1	----	----	----	----
2-Methylnaphthalene	91-57-6	0.1	µg/L		<0.1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L		<0.1	----	----	----	----
Acenaphthene	83-32-9	0.1	µg/L		<0.1	----	----	----	----
Acenaphthylene	208-96-8	0.1	µg/L		<0.1	----	----	----	----
Anthracene	120-12-7	0.1	µg/L		<0.1	----	----	----	----
Benz(a)anthracene	56-55-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(a)pyrene	50-32-8	0.05	µg/L		<0.05	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(e)pyrene	192-97-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.1	µg/L		<0.1	----	----	----	----
Chrysene	218-01-9	0.1	µg/L		<0.1	----	----	----	----
Coronene	191-07-1	0.1	µg/L		<0.1	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L		<0.1	----	----	----	----
Fluoranthene	206-44-0	0.1	µg/L		<0.1	----	----	----	----
Fluorene	86-73-7	0.1	µg/L		<0.1	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L		<0.1	----	----	----	----
Naphthalene	91-20-3	0.1	µg/L		<0.1	----	----	----	----
Perylene	198-55-0	0.1	µg/L		<0.1	----	----	----	----
Phenanthrene	85-01-8	0.1	µg/L		<0.1	----	----	----	----
Pyrene	129-00-0	0.1	µg/L		<0.1	----	----	----	----
^ Sum of PAHs	----	0.05	µg/L		<0.05	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.05	µg/L		<0.05	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**108**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**104**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**102**	----	----	----	----
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**67.8**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%		**84.5**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		**78.8**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	135
Anthracene-d10	1719-06-8	48	138
4-Terphenyl-d14	1718-51-0	48	144

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2144215**	Page	: 1 of 6
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234 Central	Date Samples Received	: 03-Dec-2021
Order number	: 2127234	Date Analysis Commenced	: 06-Dec-2021
C-O-C number	: ----	Issue Date	: 10-Dec-2021
Sampler	: CHARLOTTE GRAY		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

ilac-MRA NATA
Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

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Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4062187)									
ES2144066-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0002	0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.004	58.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.095	0.096	0.0	0% - 50%
ES2144214-002	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0005	0.0004	27.1	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.060	0.058	2.3	0% - 20%
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.742	0.734	1.1	0% - 20%
EG035F: Dissolved Mercury by FIMS (QC Lot: 4062189)									
ES2144214-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4063642)									
ES2143970-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2144718-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4063642)									
ES2143970-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2144718-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 4063642)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 4063642) - continued									
ES2143970-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2144718-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4062187)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	89.6	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	89.8	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	89.2	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	91.0	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	87.1	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	90.6	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	92.5	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 4062189)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	96.6	83.0	105
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4057788)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	86.4	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	76.5	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	76.9	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4063642)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	78.5	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4057788)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	67.3	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	75.1	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	79.0	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4063642)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	83.6	75.0	127
EP080: BTEXN (QCLot: 4063642)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	88.4	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	91.2	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	93.3	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	91.8	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	98.6	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	99.8	70.0	120
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 4055895)								
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	2 µg/L	98.7	60.0	120
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	2 µg/L	66.8	59.0	123
EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	2 µg/L	87.6	36.0	144

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 4055895) - continued								
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	2 µg/L	72.4	64.0	122
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	2 µg/L	71.2	64.0	126
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	2 µg/L	94.0	65.0	127
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	2 µg/L	101	64.0	130
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	97.0	64.0	126
EP132: Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L	<0.1	2 µg/L	97.9	62.0	126
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	2 µg/L	95.0	62.0	126
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	2 µg/L	96.8	56.0	126
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	2 µg/L	91.4	68.0	130
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	2 µg/L	95.7	66.0	130
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	2 µg/L	107	35.0	133
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	2 µg/L	99.4	58.0	128
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	2 µg/L	97.1	65.0	127
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	2 µg/L	80.0	64.0	124
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	2 µg/L	100	57.0	127
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	2 µg/L	64.7	54.0	128
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	2 µg/L	97.9	66.0	130
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	2 µg/L	85.5	65.0	129
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	2 µg/L	96.6	66.0	128

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4062187)							
ES2144134-001	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	87.7	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	87.6	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	87.9	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	90.2	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	86.1	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	88.3	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	88.8	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 4062189)							
ES2144214-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	95.4	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4063642)							
ES2143970-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	104	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4063642)							
ES2143970-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	104	70.0	130
EP080: BTEXN (QCLot: 4063642)							
ES2143970-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	97.7	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	97.3	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	103	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	102	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	105	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	99.2	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2144215**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Telephone	: +61-2-8784 8555
Project	: 2127234 Central	Date Samples Received	: 03-Dec-2021
Site	:	Issue Date	: 10-Dec-2021
Sampler	: CHARLOTTE GRAY	No. of samples received	: 1
Order number	: 2127234	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Analysis Holding Time Compliance

Matrix: **WATER**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP080/071: Total Petroleum Hydrocarbons						
Amber Glass Bottle - Unpreserved						
QC02	06-Dec-2021	01-Dec-2021	**5**	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions						
Amber Glass Bottle - Unpreserved						
QC02	06-Dec-2021	01-Dec-2021	**5**	----	----	----
EP132B: Polynuclear Aromatic Hydrocarbons						
Amber Glass Bottle - Unpreserved						
QC02	06-Dec-2021	01-Dec-2021	**5**	----	----	----

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	7	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	19	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	7	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	19	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
QC02	**24-Nov-2021**	**----**	----	----	**08-Dec-2021**	23-May-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
QC02	**24-Nov-2021**	**----**	----	----	**09-Dec-2021**	22-Dec-2021	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
QC02	**24-Nov-2021**	**06-Dec-2021**	01-Dec-2021	×	**10-Dec-2021**	15-Jan-2022	✓
Amber VOC Vial - HCl (EP080)							
QC02	**24-Nov-2021**	**08-Dec-2021**	08-Dec-2021	✓	**08-Dec-2021**	08-Dec-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
QC02	**24-Nov-2021**	**06-Dec-2021**	01-Dec-2021	×	**10-Dec-2021**	15-Jan-2022	✓
Amber VOC Vial - HCl (EP080)							
QC02	**24-Nov-2021**	**08-Dec-2021**	08-Dec-2021	✓	**08-Dec-2021**	08-Dec-2021	✓
EP080: BTEXN							
Amber VOC Vial - HCl (EP080)							
QC02	**24-Nov-2021**	**08-Dec-2021**	08-Dec-2021	✓	**08-Dec-2021**	08-Dec-2021	✓
EP132B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP132)							
QC02	**24-Nov-2021**	**06-Dec-2021**	01-Dec-2021	×	**07-Dec-2021**	15-Jan-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	7	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	19	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	7	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	19	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	WATER	In house: Referenced to USEPA 3640 (GPC Cleanup), 8270 GCMS Capiliary column, SIM mode. This method is compliant with NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	In house: Referenced to USEPA 3510 (Extraction) / In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with echange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com
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☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600 E: gladstone@alsglobal.com
☐MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com
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☐MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
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☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: GHD Pty Ltd	**TURNAROUND REQUIREMENT** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics) ☑ Standard TAT (List due date): STANDARD TAT ☐ Non Standard or urgent TAT (List due date):		**FOR LABORATORY USE ONLY (Circle)** Custody Seal Intact? Yes No N/A
OFFICE: Sydney			Free ice / frozen ice bricks present upon receipt? Yes No N/A
PROJECT: 2127234 Central	**ALS QUOTE NO.:** EN/005/20	**COC SEQUENCE NUMBER (Circle)** COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: 16.3 °C
ORDER NUMBER: 2127234		OF: 1 2 3 4 5 6 7	Other comments:
PROJECT MANAGER: Henry Luo	**CONTACT PH:** 02 9239 7044 / 0414 090 002		
SAMPLER: Charlotte Grey	**SAMPLER MOBILE:** 0403 251 883	**RELINQUISHED BY:** Christie Allen	**RECEIVED BY:** Sophie Yee
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):** ESDAT	DATE/TIME: 25/11/21 5:15pm	DATE/TIME: 03/12/21 1730
Email Reports to: henry.luo@ghd.com terry.nham@ghd.com charlotte.gray@ghd.com		**RELINQUISHED BY:**	**RECEIVED BY:**
Email Invoice to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

| ALS USE | SAMPLE DETAILS MATRIX: SOLID (S) WATER (W) | | | CONTAINER INFORMATION | | ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required). | | |

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2146398**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234	Date Samples Received	: 17-Dec-2021 15:00
Order number	: 2127234	Date Analysis Commenced	: 20-Dec-2021
C-O-C number	: ----	Issue Date	: 30-Dec-2021 15:23
Sampler	: Charlotte Gray		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP132: Where reported, Total PAH reported as the sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
				Sampling date / time	15-Dec-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2146398-001	--------	--------	--------	--------
					Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		**0.001**	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.033**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.572**	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ **Total Xylenes**	----	2	µg/L		<2	----	----	----	----
^ **Sum of BTEX**	----	1	µg/L		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
				Sampling date / time	15-Dec-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2146398-001	--------	--------	--------	--------
					Result	----	----	----	----
EP132B: Polynuclear Aromatic Hydrocarbons									
3-Methylcholanthrene	56-49-5	0.1	µg/L		<0.1	----	----	----	----
2-Methylnaphthalene	91-57-6	0.1	µg/L		<0.1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L		<0.1	----	----	----	----
Acenaphthene	83-32-9	0.1	µg/L		<0.1	----	----	----	----
Acenaphthylene	208-96-8	0.1	µg/L		<0.1	----	----	----	----
Anthracene	120-12-7	0.1	µg/L		<0.1	----	----	----	----
Benz(a)anthracene	56-55-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(a)pyrene	50-32-8	0.05	µg/L		<0.05	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(e)pyrene	192-97-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.1	µg/L		<0.1	----	----	----	----
Chrysene	218-01-9	0.1	µg/L		<0.1	----	----	----	----
Coronene	191-07-1	0.1	µg/L		<0.1	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L		<0.1	----	----	----	----
Fluoranthene	206-44-0	0.1	µg/L		<0.1	----	----	----	----
Fluorene	86-73-7	0.1	µg/L		<0.1	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L		<0.1	----	----	----	----
Naphthalene	91-20-3	0.1	µg/L		<0.1	----	----	----	----
Perylene	198-55-0	0.1	µg/L		<0.1	----	----	----	----
Phenanthrene	85-01-8	0.1	µg/L		<0.1	----	----	----	----
Pyrene	129-00-0	0.1	µg/L		<0.1	----	----	----	----
^ Sum of PAHs	----	0.05	µg/L		<0.05	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.05	µg/L		<0.05	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**92.8**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**101**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**95.2**	----	----	----	----
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**59.8**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%		**74.8**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		**62.1**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	135
Anthracene-d10	1719-06-8	48	138
4-Terphenyl-d14	1718-51-0	48	144

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2146398**	Page	: 1 of 6
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234	Date Samples Received	: 17-Dec-2021
Order number	: 2127234	Date Analysis Commenced	: 20-Dec-2021
C-O-C number	: ----	Issue Date	: 30-Dec-2021
Sampler	: Charlotte Gray		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4092043)									
ES2146428-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.539	0.522	3.2	0% - 20%
		EG020A-F: Lead	7439-92-1	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.183	0.182	0.8	0% - 20%
ES2146442-002	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.005	<0.005	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 4092044)									
ES2146441-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2146443-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4096804)									
ES2146334-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2146398-001	QC02	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4096804)									
ES2146334-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2146398-001	QC02	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 4096804)									
ES2146334-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2146398-001	QC02	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4092043)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	93.6	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	94.2	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	93.4	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	91.4	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	93.1	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	90.7	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	92.9	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 4092044)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	97.4	83.0	105
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4087140)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	69.0	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	90.9	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	89.1	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4096804)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	78.8	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4087140)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	73.5	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	93.5	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	82.3	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4096804)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	81.8	75.0	127
EP080: BTEXN (QCLot: 4096804)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	77.4	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	85.7	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	90.9	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	93.3	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	92.3	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	112	70.0	120
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 4087650)								
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	2 µg/L	90.2	60.0	120
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	2 µg/L	66.4	59.0	123
EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	2 µg/L	115	36.0	144

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 4087650) - continued								
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	2 µg/L	70.9	64.0	122
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	2 µg/L	71.3	64.0	126
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	2 µg/L	83.5	65.0	127
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	2 µg/L	86.2	64.0	130
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	87.1	64.0	126
EP132: Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L	<0.1	2 µg/L	87.3	62.0	126
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	2 µg/L	86.2	62.0	126
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	2 µg/L	85.6	56.0	126
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	2 µg/L	85.2	68.0	130
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	2 µg/L	86.5	66.0	130
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	2 µg/L	84.2	35.0	133
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	2 µg/L	85.8	58.0	128
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	2 µg/L	84.5	65.0	127
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	2 µg/L	74.4	64.0	124
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	2 µg/L	86.9	57.0	127
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	2 µg/L	62.9	54.0	128
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	2 µg/L	86.6	66.0	130
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	2 µg/L	82.1	65.0	129
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	2 µg/L	84.1	66.0	128

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4092043)							
ES2146428-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	95.9	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	101	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	99.9	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	99.2	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	94.6	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	97.6	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	102	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 4092044)							
ES2146398-001	QC02	EG035F: Mercury	7439-97-6	0.01 mg/L	93.4	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4096804)							
ES2146334-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	91.6	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4096804)							
ES2146334-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	89.6	70.0	130
EP080: BTEXN (QCLot: 4096804)							
ES2146334-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	85.2	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	91.6	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	91.9	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	93.9	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	94.0	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	91.2	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2146398**	Page	: 1 of 4
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Telephone	: +61-2-8784 8555
Project	: 2127234	Date Samples Received	: 17-Dec-2021
Site	:	Issue Date	: 30-Dec-2021
Sampler	: Charlotte Gray	No. of samples received	: 1
Order number	: 2127234	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	16	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	16	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / ***Container*** / Client Sample ID(s)	***Sample Date***	*Extraction / Preparation* ***Date extracted***	*Due for extraction*	*Evaluation*	*Analysis* ***Date analysed***	*Due for analysis*	*Evaluation*
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
QC02	**15-Dec-2021**	**----**	----	----	**22-Dec-2021**	13-Jun-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
QC02	**15-Dec-2021**	**----**	----	----	**23-Dec-2021**	12-Jan-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
QC02	**15-Dec-2021**	**20-Dec-2021**	22-Dec-2021	✓	**23-Dec-2021**	29-Jan-2022	✓
Clear glass VOC vial - HCl (EP080)							
QC02	**15-Dec-2021**	**24-Dec-2021**	29-Dec-2021	✓	**24-Dec-2021**	29-Dec-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
QC02	**15-Dec-2021**	**20-Dec-2021**	22-Dec-2021	✓	**23-Dec-2021**	29-Jan-2022	✓
Clear glass VOC vial - HCl (EP080)							
QC02	**15-Dec-2021**	**24-Dec-2021**	29-Dec-2021	✓	**24-Dec-2021**	29-Dec-2021	✓
EP080: BTEXN							
Clear glass VOC vial - HCl (EP080)							
QC02	**15-Dec-2021**	**24-Dec-2021**	29-Dec-2021	✓	**24-Dec-2021**	29-Dec-2021	✓
EP132B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP132)							
QC02	**15-Dec-2021**	**20-Dec-2021**	22-Dec-2021	✓	**20-Dec-2021**	29-Jan-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	2	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	16	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	16	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	WATER	In house: Referenced to USEPA 3640 (GPC Cleanup), 8270 GCMS Capiliary column, SIM mode. This method is compliant with NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	In house: Referenced to USEPA 3510 (Extraction) / In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with echange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com
☐BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com
☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600 E: gladstone@alsglobal.com
☐MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
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☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: GHD Pty Ltd	**TURNAROUND REQUIREMENTS** ☐ Standard TAT (List due date):	STANDARD TAT	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: Sydney	(Standard TAT may be longer for some tests e.g., Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):		Custody Seal Intact? Yes / No / N/A
PROJECT: 2127234 Central	**ALS QUOTE NO.:** EN/005/20	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes / No / N/A
ORDER NUMBER: 2127234		COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Henry Luo	**CONTACT PH:** 02 9239 7044 / 0414 090 002	OF: 1 2 3 4 5 6 7	Other comment: 18.3
SAMPLER: Charlotte Gray	**SAMPLER MOBILE:** 0439 447 411	**RELINQUISHED BY:**	**RECEIVED BY:**
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):** ESDAT	Charlotte Gray (GHD)	
Email Reports to: henry.luo@ghd.com terry.nham@ghd.com charlotte.gray@ghd.com		DATE/TIME: 16/12/24 15:41	DATE/TIME: 17/12/24 1500
Email Invoice to (will default to PM if no other addresses are listed):		**RELINQUISHED BY:** DATE/TIME:	**RECEIVED BY:** DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).																	
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	TRH / BTEXN / 8 Metals (W-5)	PAH - Ultra Trace (EP132B)																
1	QC02	15/12/24	Water		5	X	X																
					TOTAL																		

Environmental Division Sydney
Work Order Reference
ES2146398

Telephone : +61-2-8784 8555

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber G
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plas
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

...erved Plastic; F = Formaldehyde Preserved Glass;

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2201646**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234 Central	Date Samples Received	: 19-Jan-2022 14:30
Order number	: 2127234	Date Analysis Commenced	: 21-Jan-2022
C-O-C number	: ----	Issue Date	: 27-Jan-2022 12:14
Sampler	: TERRY NHAM		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP132: Where reported, Total PAH reported as the sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	QC02	----	----	----	----
			Sampling date / time	18-Jan-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2201646-001	--------	--------	--------	--------
				Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	**0.052**	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	**0.010**	----	----	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L	<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L	<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L	<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L	<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L	<100	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L	<100	----	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	----	----	----	----
Toluene	108-88-3	2	µg/L	<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	----
^ **Total Xylenes**	----	2	µg/L	<2	----	----	----	----
^ **Sum of BTEX**	----	1	µg/L	<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
				Sampling date / time	18-Jan-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2201646-001	--------	--------	--------	--------
					Result	----	----	----	----
EP132B: Polynuclear Aromatic Hydrocarbons									
3-Methylcholanthrene	56-49-5	0.1	µg/L		<0.1	----	----	----	----
2-Methylnaphthalene	91-57-6	0.1	µg/L		<0.1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L		<0.1	----	----	----	----
Acenaphthene	83-32-9	0.1	µg/L		<0.1	----	----	----	----
Acenaphthylene	208-96-8	0.1	µg/L		<0.1	----	----	----	----
Anthracene	120-12-7	0.1	µg/L		<0.1	----	----	----	----
Benz(a)anthracene	56-55-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(a)pyrene	50-32-8	0.05	µg/L		<0.05	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(e)pyrene	192-97-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.1	µg/L		<0.1	----	----	----	----
Chrysene	218-01-9	0.1	µg/L		<0.1	----	----	----	----
Coronene	191-07-1	0.1	µg/L		<0.1	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L		<0.1	----	----	----	----
Fluoranthene	206-44-0	0.1	µg/L		<0.1	----	----	----	----
Fluorene	86-73-7	0.1	µg/L		<0.1	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L		<0.1	----	----	----	----
Naphthalene	91-20-3	0.1	µg/L		<0.1	----	----	----	----
Perylene	198-55-0	0.1	µg/L		<0.1	----	----	----	----
Phenanthrene	85-01-8	0.1	µg/L		<0.1	----	----	----	----
Pyrene	129-00-0	0.1	µg/L		<0.1	----	----	----	----
^ Sum of PAHs	----	0.05	µg/L		<0.05	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.05	µg/L		<0.05	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**110**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**108**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**103**	----	----	----	----
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**56.0**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%		**70.0**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		**60.5**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	135
Anthracene-d10	1719-06-8	48	138
4-Terphenyl-d14	1718-51-0	48	144

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2201646**	Page	: 1 of 6
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234 Central	Date Samples Received	: 19-Jan-2022
Order number	: 2127234	Date Analysis Commenced	: 21-Jan-2022
C-O-C number	: ----	Issue Date	: 27-Jan-2022
Sampler	: TERRY NHAM		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4133881)									
ES2201671-002	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0001	0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.002	0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.003	0.004	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.025	0.029	13.1	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 4133879)									
ES2201498-006	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	0.0002	0.0002	0.0	No Limit
ES2201677-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4131810)									
ES2201275-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2201660-003	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4131810)									
ES2201275-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2201660-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 4131810)									
ES2201275-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 4131810) - continued									
ES2201275-001	Anonymous	EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2201660-003	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4133881)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	93.1	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	91.8	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	91.6	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	90.8	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	90.7	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	92.1	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	93.4	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 4133879)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	94.1	83.0	105
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4130935)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	80.0	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	79.5	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	88.4	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4131810)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	88.9	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4130935)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	67.7	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	79.1	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	87.5	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4131810)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	89.8	75.0	127
EP080: BTEXN (QCLot: 4131810)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	99.1	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	96.7	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	94.9	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	93.1	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	95.3	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	98.1	70.0	120
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 4134398)								
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	2 µg/L	82.8	60.0	120
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	2 µg/L	70.5	59.0	123
EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	2 µg/L	83.1	36.0	144

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 4134398) - continued								
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	2 µg/L	72.5	64.0	122
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	2 µg/L	74.0	64.0	126
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	2 µg/L	75.1	65.0	127
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	2 µg/L	79.4	64.0	130
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	77.1	64.0	126
EP132: Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L	<0.1	2 µg/L	78.1	62.0	126
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	2 µg/L	75.4	62.0	126
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	2 µg/L	76.6	56.0	126
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	2 µg/L	74.9	68.0	130
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	2 µg/L	76.9	66.0	130
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	2 µg/L	76.5	35.0	133
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	2 µg/L	76.4	58.0	128
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	2 µg/L	76.8	65.0	127
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	2 µg/L	74.4	64.0	124
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	2 µg/L	77.8	57.0	127
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	2 µg/L	68.6	54.0	128
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	2 µg/L	75.8	66.0	130
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	2 µg/L	74.3	65.0	129
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	2 µg/L	76.3	66.0	128

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4133881)							
ES2201646-001	QC02	EG020A-F: Arsenic	7440-38-2	1 mg/L	90.8	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	92.5	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	91.5	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	91.6	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	91.3	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	90.7	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	92.3	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 4133879)							
ES2201498-005	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	93.0	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4131810)							
ES2201275-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	105	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4131810)							
ES2201275-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	101	70.0	130
EP080: BTEXN (QCLot: 4131810)							
ES2201275-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	96.1	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	95.4	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	93.9	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	93.2	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	93.6	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	87.9	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2201646**	Page	: 1 of 4
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Telephone	: +61-2-8784 8555
Project	: 2127234 Central	Date Samples Received	: 19-Jan-2022
Site	:	Issue Date	: 27-Jan-2022
Sampler	: TERRY NHAM	No. of samples received	: 1
Order number	: 2127234	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	3	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	9	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	3	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	9	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
QC02	**18-Jan-2022**	**----**	----	----	**24-Jan-2022**	17-Jul-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
QC02	**18-Jan-2022**	**----**	----	----	**25-Jan-2022**	15-Feb-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
QC02	**18-Jan-2022**	**21-Jan-2022**	25-Jan-2022	✓	**24-Jan-2022**	02-Mar-2022	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
QC02	**18-Jan-2022**	**21-Jan-2022**	01-Feb-2022	✓	**21-Jan-2022**	01-Feb-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
QC02	**18-Jan-2022**	**21-Jan-2022**	25-Jan-2022	✓	**24-Jan-2022**	02-Mar-2022	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
QC02	**18-Jan-2022**	**21-Jan-2022**	01-Feb-2022	✓	**21-Jan-2022**	01-Feb-2022	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
QC02	**18-Jan-2022**	**21-Jan-2022**	01-Feb-2022	✓	**21-Jan-2022**	01-Feb-2022	✓
EP132B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP132)							
QC02	**18-Jan-2022**	**24-Jan-2022**	25-Jan-2022	✓	**24-Jan-2022**	05-Mar-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	3	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	9	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	3	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	9	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	WATER	In house: Referenced to USEPA 3640 (GPC Cleanup), 8270 GCMS Capiliary column, SIM mode. This method is compliant with NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	In house: Referenced to USEPA 3510 (Extraction) / In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with echange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600 E: gladstone@alsglobal.com
☐MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com
☐MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com
☐MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com
☐NEWCASTLE 5 Rose Gum Road Warabrook NSW 2304 Ph: 02 4968 9433 E: samples.newcastle@alsglobal.com
☐NOWRA 4/13 Geary Place North Nowra NSW 2541 Ph: 024423 2063 E: nowra@alsglobal.com
☐PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsglobal.com
☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com
☐TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townesville.environmental@alsglobal.com
☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: GHD Pty Ltd	**TURNAROUND REQUIREMENTS** (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	☒ Standard TAT (List due date): STANDARD TAT	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: Sydney		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT: 2127234 Central	**ALS QUOTE NO.:** EN/005/20	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: 2127234		COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: 1.8 °C
PROJECT MANAGER: Henry Luo	**CONTACT PH:** 02 9239 7044 / 0414 090 002	OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER: Terry Nham	**SAMPLER MOBILE:** 0403 251 883	**RELINQUISHED BY:**	**RECEIVED BY:**
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):** ESDAT	Terry Nham (GHD)	Juliana G
Email Reports to: henry.luo@ghd.com terry.nham@ghd.com charlotte.gray@ghd.com		DATE/TIME: 19/1/22	DATE/TIME: 19/01/22 1230pm
Email Invoice to (will default to PM if no other addresses are listed):		**RELINQUISHED BY:**	**RECEIVED BY:** AJ
COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:		DATE/TIME:	DATE/TIME: 19/1/22 1430

| ALS USE | SAMPLE DETAILS MATRIX: SOLID (S) WATER (W) | | | CONTAINER INFORMATION | | ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required). | | |

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2204819**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234	Date Samples Received	: 11-Feb-2022 16:20
Order number	: ----	Date Analysis Commenced	: 14-Feb-2022
C-O-C number	: ----	Issue Date	: 18-Feb-2022 16:09
Sampler	: CHARLOTTE GRAY		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP132: Where reported, Total PAH reported as the sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
				Sampling date / time	09-Feb-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2204819-001	--------	--------	--------	--------
					Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.002**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ **Total Xylenes**	----	2	µg/L		<2	----	----	----	----
^ **Sum of BTEX**	----	1	µg/L		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC02	----	----	----	----
				Sampling date / time	09-Feb-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2204819-001	--------	--------	--------	--------
					Result	----	----	----	----
EP132B: Polynuclear Aromatic Hydrocarbons									
3-Methylcholanthrene	56-49-5	0.1	µg/L		<0.1	----	----	----	----
2-Methylnaphthalene	91-57-6	0.1	µg/L		<0.1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L		<0.1	----	----	----	----
Acenaphthene	83-32-9	0.1	µg/L		<0.1	----	----	----	----
Acenaphthylene	208-96-8	0.1	µg/L		<0.1	----	----	----	----
Anthracene	120-12-7	0.1	µg/L		<0.1	----	----	----	----
Benz(a)anthracene	56-55-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(a)pyrene	50-32-8	0.05	µg/L		<0.05	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(e)pyrene	192-97-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.1	µg/L		<0.1	----	----	----	----
Chrysene	218-01-9	0.1	µg/L		<0.1	----	----	----	----
Coronene	191-07-1	0.1	µg/L		<0.1	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L		<0.1	----	----	----	----
Fluoranthene	206-44-0	0.1	µg/L		<0.1	----	----	----	----
Fluorene	86-73-7	0.1	µg/L		<0.1	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L		<0.1	----	----	----	----
Naphthalene	91-20-3	0.1	µg/L		<0.1	----	----	----	----
Perylene	198-55-0	0.1	µg/L		<0.1	----	----	----	----
Phenanthrene	85-01-8	0.1	µg/L		<0.1	----	----	----	----
Pyrene	129-00-0	0.1	µg/L		<0.1	----	----	----	----
^ Sum of PAHs	----	0.05	µg/L		<0.05	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.05	µg/L		<0.05	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**107**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**104**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**108**	----	----	----	----
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**64.0**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%		**90.7**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		**79.8**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	135
Anthracene-d10	1719-06-8	48	138
4-Terphenyl-d14	1718-51-0	48	144

QUALITY CONTROL REPORT

Work Order	: **ES2204819**	Page	: 1 of 6
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234	Date Samples Received	: 11-Feb-2022
Order number	: ----	Date Analysis Commenced	: 14-Feb-2022
C-O-C number	: ----	Issue Date	: 18-Feb-2022
Sampler	: CHARLOTTE GRAY		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4175285)									
ES2204743-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
ES2204768-008	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 4175287)									
ES2204768-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2204819-001	QC02	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4174330)									
CA2200937-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2204819-001	QC02	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4174330)									
CA2200937-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2204819-001	QC02	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 4174330)									
CA2200937-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2204819-001	QC02	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4175285)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	93.9	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	96.8	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	97.0	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	91.4	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	95.7	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	91.0	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	92.2	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 4175287)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	93.9	83.0	105
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4170576)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	89.5	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	93.1	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	85.4	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4174330)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	75.0	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4170576)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	88.7	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	91.3	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	98.9	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4174330)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	79.8	75.0	127
EP080: BTEXN (QCLot: 4174330)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	82.8	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	87.8	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	94.9	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	94.4	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	97.7	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	97.3	70.0	120
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 4170627)								
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	2 µg/L	72.9	60.0	120
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	2 µg/L	63.9	59.0	123
EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	2 µg/L	99.8	36.0	144

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 4170627) - continued								
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	2 µg/L	69.5	64.0	122
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	2 µg/L	83.2	64.0	126
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	2 µg/L	73.3	65.0	127
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	2 µg/L	76.4	64.0	130
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	71.7	64.0	126
EP132: Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L	<0.1	2 µg/L	73.8	62.0	126
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	2 µg/L	71.2	62.0	126
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	2 µg/L	70.9	56.0	126
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	2 µg/L	70.2	68.0	130
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	2 µg/L	77.0	66.0	130
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	2 µg/L	69.8	35.0	133
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	2 µg/L	71.2	58.0	128
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	2 µg/L	76.1	65.0	127
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	2 µg/L	75.5	64.0	124
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	2 µg/L	71.0	57.0	127
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	2 µg/L	59.4	54.0	128
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	2 µg/L	72.0	66.0	130
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	2 µg/L	73.0	65.0	129
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	2 µg/L	76.3	66.0	128

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4175285)							
ES2204743-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	126	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	116	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	112	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	74.4	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	113	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	116	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	118	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 4175287)							
ES2204768-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	92.4	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4174330)							
CA2200937-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	94.1	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4174330)							
CA2200937-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	95.7	70.0	130
EP080: BTEXN (QCLot: 4174330)							
CA2200937-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	99.7	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	96.3	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	104	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	104	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	106	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	102	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2204819**	Page	: 1 of 4
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Telephone	: +61-2-8784 8555
Project	: 2127234	Date Samples Received	: 11-Feb-2022
Site	:	Issue Date	: 18-Feb-2022
Sampler	: CHARLOTTE GRAY	No. of samples received	: 1
Order number	: ----	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	3	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	3	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / ***Container*** / *Client Sample ID(s)*	***Sample Date***	*Extraction / Preparation* ***Date extracted***	*Due for extraction*	*Evaluation*	*Analysis* ***Date analysed***	*Due for analysis*	*Evaluation*
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
QC02	**09-Feb-2022**	**----**	----	----	**16-Feb-2022**	08-Aug-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
QC02	**09-Feb-2022**	**----**	----	----	**17-Feb-2022**	09-Mar-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
QC02	**09-Feb-2022**	**14-Feb-2022**	16-Feb-2022	✓	**17-Feb-2022**	26-Mar-2022	✓
Amber VOC Vial - HCl (EP080)							
QC02	**09-Feb-2022**	**16-Feb-2022**	23-Feb-2022	✓	**16-Feb-2022**	23-Feb-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
QC02	**09-Feb-2022**	**14-Feb-2022**	16-Feb-2022	✓	**17-Feb-2022**	26-Mar-2022	✓
Amber VOC Vial - HCl (EP080)							
QC02	**09-Feb-2022**	**16-Feb-2022**	23-Feb-2022	✓	**16-Feb-2022**	23-Feb-2022	✓
EP080: BTEXN							
Amber VOC Vial - HCl (EP080)							
QC02	**09-Feb-2022**	**16-Feb-2022**	23-Feb-2022	✓	**16-Feb-2022**	23-Feb-2022	✓
EP132B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP132)							
QC02	**09-Feb-2022**	**14-Feb-2022**	16-Feb-2022	✓	**17-Feb-2022**	26-Mar-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	2	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	3	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	3	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	WATER	In house: Referenced to USEPA 3640 (GPC Cleanup), 8270 GCMS Capiliary column, SIM mode. This method is compliant with NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	In house: Referenced to USEPA 3510 (Extraction) / In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with echange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

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☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: GHD Pty Ltd	**TURNAROUND REQUIREMENT:** ☐ Standard TAT (List due date):	STANDARD TAT	**FOR LABORATORY USE ONLY (Circle)**
OFFICE: Sydney	(Standard TAT may be longer for some tests e.g., Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):		Custody Seal Intact? Yes No N/A
PROJECT: 2127234 Central	**ALS QUOTE NO.:** EN/005/20	COC SEQUENCE NUMBER (Circle)	Cool ice / frozen ice brick present upon receipt? Yes No N/A
ORDER NUMBER: 2127234		COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER: Henry Luo	**CONTACT PH:** 02 9239 7044 / 0414 090 002	OF: 1 2 3 4 5 6 7	Other comments: 1 S-2
SAMPLER: Charlotte Gray	**SAMPLER MOBILE:** 0439 447 411	**RELINQUISHED BY:**	**RECEIVED BY:**	**RELINQUISHED BY:**	**RECEIVED BY:**
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):** ESDAT	Charlotte Gray (GHD)			
Email Reports to: henry.luo@ghd.com terry.nham@ghd.com charlotte.gray@ghd.com		DATE/TIME: 10/2/22	DATE/TIME: 11/2/22 1620	DATE/TIME:	DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):					

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price)
Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION				
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS	TRH / BTEXN / 8 Metals (W-5)	PAH - Ultra Trace (EP132B)	
	QC02		Water	2 x AG, 2 x vials, 1 x metals	5	X	X	
					TOTAL			

Environmental Division
Sydney
Work Order Reference
ES2204819

Telephone : + 61-2-8784 8555

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2209602**	Page	: 1 of 5
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234 Central	Date Samples Received	: 17-Mar-2022 16:00
Order number	: 2127234	Date Analysis Commenced	: 21-Mar-2022
C-O-C number	: ----	Issue Date	: 24-Mar-2022 13:14
Sampler	: TERRY NHAM		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP080: Positive result for ES2209602-01 is confirmed by re-analysis.
- EP132: Where reported, Total PAH reported as the sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC2	----	----	----	----
				Sampling date / time	16-Mar-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2209602-001	--------	--------	--------	--------
					Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		**2**	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ **Total Xylenes**	----	2	µg/L		<2	----	----	----	----
^ **Sum of BTEX**	----	1	µg/L		**2**	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QC2	----	----	----	----
				Sampling date / time	16-Mar-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2209602-001	--------	--------	--------	--------
					Result	----	----	----	----
EP132B: Polynuclear Aromatic Hydrocarbons									
3-Methylcholanthrene	56-49-5	0.1	µg/L		<0.1	----	----	----	----
2-Methylnaphthalene	91-57-6	0.1	µg/L		<0.1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L		<0.1	----	----	----	----
Acenaphthene	83-32-9	0.1	µg/L		<0.1	----	----	----	----
Acenaphthylene	208-96-8	0.1	µg/L		<0.1	----	----	----	----
Anthracene	120-12-7	0.1	µg/L		<0.1	----	----	----	----
Benz(a)anthracene	56-55-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(a)pyrene	50-32-8	0.05	µg/L		<0.05	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L		<0.1	----	----	----	----
Benzo(e)pyrene	192-97-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L		<0.1	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.1	µg/L		<0.1	----	----	----	----
Chrysene	218-01-9	0.1	µg/L		<0.1	----	----	----	----
Coronene	191-07-1	0.1	µg/L		<0.1	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L		<0.1	----	----	----	----
Fluoranthene	206-44-0	0.1	µg/L		<0.1	----	----	----	----
Fluorene	86-73-7	0.1	µg/L		<0.1	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L		<0.1	----	----	----	----
Naphthalene	91-20-3	0.1	µg/L		<0.1	----	----	----	----
Perylene	198-55-0	0.1	µg/L		<0.1	----	----	----	----
Phenanthrene	85-01-8	0.1	µg/L		<0.1	----	----	----	----
Pyrene	129-00-0	0.1	µg/L		<0.1	----	----	----	----
^ Sum of PAHs	----	0.05	µg/L		<0.05	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.05	µg/L		<0.05	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**100**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**95.6**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**98.6**	----	----	----	----
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**71.0**	----	----	----	----
Anthracene-d10	1719-06-8	0.1	%		**90.2**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%		**82.3**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	135
Anthracene-d10	1719-06-8	48	138
4-Terphenyl-d14	1718-51-0	48	144

QUALITY CONTROL REPORT

Work Order	: **ES2209602**	Page	: 1 of 6
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Contact	: Sarah Mathew
Address	: LEVEL 15, 133 CASTLEREAGH STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 9239 7100	Telephone	: +61-2-8784 8555
Project	: 2127234 Central	Date Samples Received	: 17-Mar-2022
Order number	: 2127234	Date Analysis Commenced	: 21-Mar-2022
C-O-C number	: ----	Issue Date	: 24-Mar-2022
Sampler	: TERRY NHAM		
Site	:		
Quote number	: EN/005		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4240709)									
ES2209425-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	0.0002	0.0002	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.003	99.2	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.023	0.021	8.6	0% - 20%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	17.2	16.1	6.1	0% - 20%
ES2209274-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.010	0.008	20.5	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 4240712)									
ES2209602-001	QC2	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4241375)									
ES2209520-002	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2209259-002	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	70	70	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4241375)									
ES2209520-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2209259-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	80	80	0.0	No Limit
EP080: BTEXN (QC Lot: 4241375)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 4241375) - continued									
ES2209520-002	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2209259-002	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4240709)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	99.6	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	97.3	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	96.9	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	95.5	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	92.0	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	96.8	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	95.5	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 4240712)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	95.9	83.0	105
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4240044)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	56.8	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	79.6	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	77.8	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4241375)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	91.2	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4240044)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	59.0	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	76.6	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	68.6	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4241375)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	93.9	75.0	127
EP080: BTEXN (QCLot: 4241375)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	90.4	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	95.0	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	96.3	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	96.8	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	95.0	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	96.9	70.0	120
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 4241411)								
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	2 µg/L	105	60.0	120
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	2 µg/L	70.7	59.0	123
EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	2 µg/L	134	36.0	144

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 4241411) - continued								
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	2 µg/L	76.1	64.0	122
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	2 µg/L	77.2	64.0	126
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	2 µg/L	82.2	65.0	127
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	2 µg/L	88.3	64.0	130
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	89.2	64.0	126
EP132: Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L	<0.1	2 µg/L	93.1	62.0	126
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	2 µg/L	85.0	62.0	126
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	2 µg/L	85.5	56.0	126
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	2 µg/L	84.8	68.0	130
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	2 µg/L	85.3	66.0	130
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	2 µg/L	80.4	35.0	133
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	2 µg/L	86.4	58.0	128
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	2 µg/L	89.2	65.0	127
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	2 µg/L	80.2	64.0	124
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	2 µg/L	76.4	57.0	127
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	2 µg/L	66.1	54.0	128
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	2 µg/L	85.5	66.0	130
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	2 µg/L	80.7	65.0	129
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	2 µg/L	89.0	66.0	128

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4240709)							
ES2209243-005	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	93.0	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	94.9	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	91.8	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	96.8	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	102	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	95.4	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	94.6	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 4240712)							
ES2209517-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	83.5	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4241375)							
ES2209259-002	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	115	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4241375)							
ES2209259-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	112	70.0	130
EP080: BTEXN (QCLot: 4241375)							
ES2209259-002	Anonymous	EP080: Benzene	71-43-2	25 µg/L	112	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	104	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	109	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	110	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	110	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	91.3	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2209602**	Page	: 1 of 4
Client	: **GHD PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR HENRY LUO	Telephone	: +61-2-8784 8555
Project	: 2127234 Central	Date Samples Received	: 17-Mar-2022
Site	:	Issue Date	: 24-Mar-2022
Sampler	: TERRY NHAM	No. of samples received	: 1
Order number	: 2127234	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	3	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	11	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	0	3	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	11	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
QC2	**16-Mar-2022**	**----**	----	----	**22-Mar-2022**	12-Sep-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
QC2	**16-Mar-2022**	**----**	----	----	**23-Mar-2022**	13-Apr-2022	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
QC2	**16-Mar-2022**	**21-Mar-2022**	23-Mar-2022	✓	**23-Mar-2022**	30-Apr-2022	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
QC2	**16-Mar-2022**	**23-Mar-2022**	30-Mar-2022	✓	**23-Mar-2022**	30-Mar-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
QC2	**16-Mar-2022**	**21-Mar-2022**	23-Mar-2022	✓	**23-Mar-2022**	30-Apr-2022	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
QC2	**16-Mar-2022**	**23-Mar-2022**	30-Mar-2022	✓	**23-Mar-2022**	30-Mar-2022	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
QC2	**16-Mar-2022**	**23-Mar-2022**	30-Mar-2022	✓	**23-Mar-2022**	30-Mar-2022	✓
EP132B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP132)							
QC2	**16-Mar-2022**	**22-Mar-2022**	23-Mar-2022	✓	**23-Mar-2022**	01-May-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	3	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	11	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	3	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	11	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	WATER	In house: Referenced to USEPA 3640 (GPC Cleanup), 8270 GCMS Capiliary column, SIM mode. This method is compliant with NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	In house: Referenced to USEPA 3510 (Extraction) / In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with echange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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CLIENT: GHD Pty Ltd	TURNAROUND REQUIREMENTS (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☒ Standard TAT (List due date): STANDARD TAT ☐ Non Standard or urgent TAT (List due date):	FOR LABORATORY USE ONLY (Circle) Custody Seal Intact? Yes No N/A
OFFICE: Sydney			Free ice / frozen ice bricks present upon receipt? Yes No N/A
PROJECT: 2127234 Central	ALS QUOTE NO.: EN/005/20	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 7 OF: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: 13 °C
ORDER NUMBER: 2127234			Other comment:
PROJECT MANAGER: Henry Luo	CONTACT PH: 02 9239 7044 / 0414 090 002		
SAMPLER: Terry Nham	SAMPLER MOBILE: 0403 251 883	RELINQUISHED BY: Terry Nham (GHD)	RECEIVED BY: Juliana G
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default): ESDAT	DATE/TIME: 16/3/22	DATE/TIME: 17/3/22 4PM
Email Reports to: henry.luo@ghd.com terry.nham@ghd.com		RELINQUISHED BY:	RECEIVED BY: AP
Email Invoice to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME: 17/3/22 1900

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

| ALS USE | SAMPLE DETAILS MATRIX: SOLID (S) WATER (W) | | | CONTAINER INFORMATION | | ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required). | | |