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CONVERTIA PTY LTD

Additional Site Investigation

2-6 Pilgrim Avenue & 11-13 Albert Road, Strathfield NSW

E23668.E03_Rev0
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EXECUTIVE SUMMARY

EI Australia (EI) was engaged by Convertia Pty Ltd ('the client'), to conduct an Additional Site Investigation (ASI) of the land parcel known as Site 1, 2-6 Pilgrim Avenue & 11-13 Albert Road, Strathfield NSW ('the site'). The purpose of this investigation was to determine the environmental condition (contamination status) of the site, in support of a development application (DA2020/256) to Strathfield Council and to meet obligations under the *State Environmental Planning Policy (SEPP 55) – Remediation of Land*, for the assessment and management of contaminated soil and groundwater, should this be identified.

Based on the proposed development plans (Ref. Kennedy Associates Architects, Job No. 1361, dated 17 June 2021 attached in **Appendix C**), Site 1 has been designated for the construction of 2 multi-storey mixed-use residential buildings, overlying 4 levels of basement car parking occupying almost the entire site.

This ASI follows a previous (preliminary) investigation completed for the site, which was documented under the following report:

- EI (2018) *Preliminary Site Investigation with Limited Sampling, 2-6 Pilgrim Avenue & 9-13 Albert Road, Strathfield NSW* (Ref. E23668.E01_Rev1, dated 7 February 2018).

Objectives

The objectives of this investigation were to:

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

Findings

The key findings from this ASI were as follows:

- The current site use consists of three residential unit blocks and two individual residential dwellings. There is no evidence of underground storage tanks (USTs) or underground petroleum storage systems (UPSS) on site. A Shells Coles Express service station is operating directly adjacent to the east (Site 2, 9 Albert Street, Strathfield, NSW).
- The previous (preliminary) investigation completed by EI (2018) established that:
  - The site has been used for residential purposes from at least 1943.
  - Limited intrusive investigation at five locations reported concentrations below the adopted criteria (NEPC (2013) residential with minimal opportunities for soil access) with the exception of lead in BH102_0.3-0.4 (2,800 mg/kg).
  - Data gaps following the investigation included groundwater assessment and additional soil investigation to cover the minimum guideline density.
- As part of this ASI, intrusive soil investigation was completed at four locations (BH201, BH202, BH203M and BH204M) and groundwater sampling was completed at two monitoring wells (BH203M and BH204M).

- The site lithology was generalised as a layer of gravelly silt / silty clay filling (various depths averaging 0.35m thickness), overlying natural, silty clay and shale bedrock. Subsurface conditions were consistent with the previous investigation however an average of 1.3m of fill was encountered in EI (2018).
- Standing water level was 7.39 mBGL and 8.14m BGL within the shale bedrock. Groundwater flow direction was inferred from local topography to be north-east, towards Parramatta River.
- All analytical results in representative fill and natural soil samples were found to comply with the adopted health based criteria.
- Hydrocarbon odour was noted during drilling in shale bedrock at 10mBGL at BH204M. The odorous material was not sampled. However no odour was detected during groundwater sampling and laboratory results for hydrocarbons in groundwater in both wells were below the laboratory limit of reporting.
- Contaminant concentrations in the representative groundwater samples were below the adopted criteria, with the exception of minor dissolved metals (chromium and zinc). The metal concentrations in groundwater were considered consistent with natural (background) conditions in long standing, urban environments, rather than site specific impacts. Therefore, the detected metal concentrations are not considered to be cause of environmental concern for the site development.

Based on the findings from this ASI conducted in accordance with the investigation scope agreed with the Client, and with consideration of the Statement of Limitations (**Section 11**), EI concludes that, based on the proposed development:

- There is localised lead impact (2,800 mg/kg) in fill around location BH102 (to a depth of at least 0.4m BGL). However, under the proposed development, bulk excavation of site soils would be performed in order to construct the basement which covers location BH102. It was considered the risk to human health and the environment was low; and
- The site can be made suitable for the proposed development, provided the recommendations detailed in **Section 10** are implemented.

EI makes the following recommendations in relation to the proposed development:

- Prior to proposed site demolition, a suitably qualified and experienced consultant should be engaged to perform a Hazardous Materials Survey on existing site structures to identify potentially hazardous building products that may be released to the environment during demolition works. All identified hazardous materials must be appropriately managed to maintain worker health and safety during demolition works and to prevent spreading of hazardous materials to site soils.
- Fill material within the proposed basement footprint, which will include the lead impacted surficial fill, is to be classified and disposed off-site in accordance with EPA (2014) Waste Classification Guidelines as part of bulk excavation works for the construction of the four level basement carpark. All soil to be disposed offsite is to be classified in accordance with EPA (2014) Waste Classification Guidelines, including VENM.
- A construction environmental management plan (CEMP) is prepared by the principal or earthworks contractor. The CEMP should consider the normal environmental issues that may occur during development such as but not limited to dust, noise, odour, vibration, safety and traffic and also include:
    - Waste management of soils (including fill) to ensure that are appropriately classified for disposal in accordance with the NSW EPA Waste Management Guidelines (Part 1 Classifying Waste); and

  - Provide unexpected finds protocols should any unexpected hydrocarbons contamination or hazardous materials are identified during site earthworks.
- Prior to construction, an additional groundwater monitoring event should be conducted to confirm groundwater results. The groundwater monitoring wells are to be surveyed to provide indicative groundwater flow direction.
- Any material being imported to the site (i.e. for landscaping purposes) should be assessed for potential contamination in accordance with NSW EPA guidelines as being suitable for the intended use or be classified as VENM.
- Preparation of a final site validation report by a suitably qualified environmental consultant, certifying the site suitability of soils and groundwater for future proposed land uses.

1. INTRODUCTION

1.1 Background and Purpose

EI Australia (EI) was engaged by Convertia Pty Ltd ('the client'), to conduct an Additional Site Investigation (ASI) of the land parcel known as Site 1, 2-6 Pilgrim Avenue & 11-13 Albert Road, Strathfield NSW ('the site').

The site is located within the local government area (LGA) of Strathfield Council, as shown in **Appendix A**, **Figure 1**. The site comprises five cadastral allotments, identified as SP8785, Lot 8 & 9 DP15917, Lot A & B DP100558, covering approximately 2,868 m^2 in area, as depicted in **Appendix A, Figure 2**. During the investigation, the site was occupied by single residential dwellings and flats. This investigation applies to Site 1 only. Future long term redevelopment would also encompass Site 2, 9 Albert Road, Strathfield NSW (currently occupied by a service station) which is outside the scope of works for this investigation.

The purpose of this investigation was to determine the environmental condition (contamination status) of the site, in support of a development application (DA2020/256) to Strathfield Council. This ASI enables the developer to meet obligations under the *State Environmental Planning Policy (SEPP 55) – Remediation of Land*, for the assessment and management of contaminated soil and groundwater, should this be identified. It follows on from a previous (preliminary) investigation completed by EI, which assessed both Site 1 and Site 2:

- EI (2018) *Preliminary Site Investigation with Limited Sampling, 2-6 Pilgrim Avenue & 9-13 Albert Road, Strathfield NSW* (Ref. E23668.E01_Rev1, dated 7 February 2018).

1.2 Proposed Development

Based on the proposed development plans (Ref. Kennedy Associates Architects, Job No. 1361, dated 17 June 2021 attached in **Appendix C**), Site 1 has been designated for the construction of 2 multi-storey mixed-use residential buildings, overlying 4 levels of basement car parking occupying almost the entire site. The lowest basement level will have a finished floor level (FFL) of RL -2.55 mAHD. A small setback area is proposed at the perimeter along the northern site boundary, and it is understood that this set back will likely be paved.

1.3 Regulatory Framework

The following regulatory framework and guidelines were considered during this ASI:

- *Contaminated Land Management Act 1997* (the CLM Act 1997);
- *Protection of the Environment Operations Act 1997* (the POEO Act 1997);
- *Environmental Planning and Assessment Act 1979* (the EP&A Act 1997);
- *State Environmental Planning Policy 55 - Remediation of Land* (SEPP 55);
- *Strathfield Local Environmental Plan 2012;*
- EPA (1995) *Sampling Design Guidelines;*
- EPA (2017) *Guidelines for the NSW Site Auditor Scheme;*
- EPA (2020) *Consultants Reporting on Contaminated Land: Contaminated Land Guidelines*; and

- NEPC (2013) *Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater* and *Schedule B(2) Guideline on Site Characterisation,* in the *National Environmental Protection (Assessment of Site Contamination) Amendment Measure 1999.*

1.4 Project Objectives

The objectives of this investigation were to:

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

1.5 Scope of Works

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

Desktop Study

- A review of relevant geological, hydrogeological and soil landscape maps for the project area; and
- A review of the previous environmental investigation report.

Fieldwork and Laboratory Analysis

- Preparation of a Work, Health, Safety and Environmental Plan;
- A review of existing underground services on-site, utilising *Dial-Before-You-Dig* plans;
- A site walkover inspection;
- Drilling of boreholes at 4 targeted locations onsite (BH201, BH202, BH203M, BH204M);
- Installation of 2 groundwater monitoring bores (BH203M & BH204M), within the proposed redevelopment area targeting the boundary with the adjoining service station;
- Multiple level soil sampling within fill and natural soils at each of the test bores;
- Completion of one groundwater monitoring event (GME), with measurement of standing water levels (SWLs) and representative sample collection at each of the installed wells; and
- Laboratory analysis of selected soil and groundwater samples for relevant analytical parameters, as determined from the desktop study and field observations.

Data Analysis and Reporting

This ASI report documents all desk study findings, the conceptual site model, data quality objectives, investigation methodologies and results. It also provides a record of observations made during the site walkover inspection, borehole and monitoring well construction logs and a discussion of laboratory analytical results in regards to potential risks to human health, the environment and the aesthetic condition of the land.

2. SITE DESCRIPTION

2.1 Property Identification, Location and Physical Setting

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

Table 2-1 Site Identification

Attribute	Description
Street Address	2-6 Pilgrim Avenue & 11-13 Albert Road, Strathfield NSW
Location Description	The site is bound by a railway line to the north, Pilgrim Avenue to the west, Albert Road to the south and Site 2 phase of the development to the east (currently a Shell Coles Express service station).
Site Coordinates	Northern-eastern corner of site (GDA2020-MGA56): ▪ Easting: 323522.773; ▪ Northing: 6250584.504 (Source: http://maps.six.nsw.gov.au)
Site Area	2,868 m^2
Lots and DPs	SP8785, Lot 8 & 9 DP15917, Lot A & B DP100558
State Survey Marks	Three State Survey (SS) marks are situated in close proximity to the site: • SS118033 (Approx. 36m south of site on the corner of Raw Square and Everton Road); • SS118032 (Approx. 125m north-east of site on the roundabout of Raw Square and Everton Road); and • SS44174 (Approx. 89m west of site on Elva Street). (Source: http://maps.six.nsw.gov.au)
LGA	Strathfield Council
Parish	Concord
County	Cumberland
Current Zoning	B4 – Mixed Use Zone (Strathfield Local Environmental Plan 2012)

2.2 Surrounding Land Use

The site is situated within an area of mixed use, as described in **Table 2-2**. The local sensitive receptors within close proximity to the site are also identified in this table.

Table 2-2 Surrounding Land Uses

Direction	Land Use Description	Sensitive Receptors (distance from site)
North	Railway Corridor, followed by Leicester Avenue	-
South	Albert Road, followed by residential dwellings and Strathfield Plaza	Low density residential dwellings (35 m South) Strathfield Plaza (200 m south east)

Direction	Land Use Description	Sensitive Receptors (distance from site)
East	Site 2 phase of the development (currently a Shell Coles Express service station), followed by Raw Square, multi-storey mixed-use apartment building and Strathfield Train Station	Multi-storey mixed-use apartment dwelling (40 m east)
West	Pilgrim Avenue, followed by residential apartment dwellings	Two-storey residential apartment dwellings (25 m west) Powells Creek (140 m north west) Laker Reserve (150 m north west)

2.3 Regional Setting

The topography, geology and soil landscape information is summarised in **Table 2-3**.

Table 2-3 Regional Setting

Attribute	Description
Topography	The site topography consists of gently undulating rises on Wianamatta Group shales and Hawkesbury shale with local relief to 30 m and slopes are usually <5%. Crests and ridges are broad (200-600 m) and rounded with convex upper slopes grading into concave lower slopes. The site sits along a ridgeline at approximately 10 mAHD (Source: http://maps.six.nsw.gov.au).
Site Drainage	Stormwater is expected to be collected in stormwater pits and piped to the municipal collection system, which likely flows towards Powells Creek, approx. 140 m north-west of the site.
Regional Geology	The sites regional geology lies within the Wianamatta Group. It comprises Ashfield Shale which consists of laminate and dark grey siltstone and Bringelly Shale consisting of shale, with occasional calcareous claystone, laminate and coal. Ref. 1:100 000 scale Geological Series Sheet 9130 (Sydney).
Soil Landscape	The Soil Conservation Service of NSW Soil and Land Information of the Sydney 1:100,000 Sheet (Chapman and Murphy, 2002) indicates that the northern portion of the site overlies a Blacktown (bt) residual landscape and the southern portion overlies a Disturbed Terrain (xx) Landscape.
Acid Sulfate Soil (ASS) Risk	The Strathfield LEP 2012 Acid Sulfate Soil Map (Sheet ASS_005) indicates that the site lies within an area classified as Class 5 acid sulfate soils. Class 5 is classified as works within 500 m of adjacent Class 1, 2, 3 or 4 land that is below 5 m Australian Height Datum (AHD) and by which the water table is likely to be lowered below 1 mAHD on adjacent Class 1, 2, 3 or 4 land. With reference to the 1:25 000 scale Prospect-Parramatta River Acid Sulfate Soil Risk Map – Edition Two (Ref. Murphy, 1997), the subject land lies within the map class description of No Known Occurrence. In such cases, acid sulfate soils (ASS) are not known or expected to occur and “land management activities are not likely to be affected by ASS materials”.
Nearest Surface Water Feature	Powells Creek, approx. 140 m north-west of the site.

Attribute	Description
Groundwater Flow Direction	The site sits on a ridgeline, groundwater is expected to flow north east, towards a tributary of Parramatta River (1.5 km from the site).

2.4 Site Walkover Inspection

Observations were recorded during a walkover inspection of the site on 17 June 2021. These are summarised below and photographs taken during the inspection are presented in **Appendix D**.

- The current site use consists of three residential unit blocks and two individual residential dwellings;
- The site consists of overgrown green vegetation (including weeds) and patchy grasses with bare soil patches present across all properties;
- All residential properties displayed concrete driveways in poor conditions with cracking and deformation evident;
- There was no evidence of underground storage tanks (USTs) or underground petroleum storage systems (UPSS) on site. However, a Shells Coles Express service station was operating directly adjacent to the east; and
- No other suspicious odours or evidence of gross contamination was observed at the site.

3. PREVIOUS INVESTIGATION

A previous (preliminary) investigation had been completed for both Site 1 and Site 2, which was documented under the following report:

- EI (2018) *Preliminary Site Investigation with Limited Sampling, 2-6 Pilgrim Avenue & 9-13 Albert Road, Strathfield NSW* (Ref. E23668.E01_Rev1, dated 7 February 2018).

A summary of the investigation is provided in **Table 3-1**.

Table 3-1 Summary of Previous Investigation

Project Task	Findings
Objectives	▪ To evaluate the potential for site contamination on the basis of historical land uses, anecdotal and documentary evidence of possible pollutant sources; and ▪ To investigate potential contamination by means of limited intrusive sampling and laboratory analysis, for relevant contaminants of potential concern.
Findings	▪ The report covered both Site 1 and Site 2, with a total area of approximately 4,885m²; ▪ Historical records indicate residential and commercial use since at least the early 1930s. The residential apartment dwellings appear to be evident on site from at least 1943, with the service station occupying the eastern side from the mid-1990s. Site use has remained the same since 1990s to present; ▪ The site and surrounding properties are not reported as being subject to regulation in relation to environmental impacts, as documented in the EPA public registers; ▪ Verbal confirmation of SafeWork NSW records and visual evidence indicated UPSS's to be located at the service station (9 Albert Road); ▪ A site walkover inspection identified the sites current uses consisted of residential and commercial purposes, potential asbestos containing material (ACM) was noted within some of the buildings materials, illegal dumping had previously occurred on site and strong effluent odour and water leakage (likely burst sewer pipe) was evident along the driveway at 11-13 Albert Road; ▪ Soil sampling and analysis was conducted at five test bore locations at Site 1. No boreholes were drilled at the service station (Site 2, 9 Albert Road, Strathfield NSW). The sub-surface layers comprised fill and residual soils overlying clay and weathered shale; ▪ Results of soil samples collected from soil test boreholes indicated the following: ‣ Metals were reported below the adopted human health criteria HIL B, with the exception of lead in BH102_0.3-0.4 (2,800 mg/kg). ‣ Minor metal exceedances of ecological based criteria were reported, however these were not considered to be of concern. ‣ TRH, BTEX and PAH concentrations were all below the corresponding NEPM 2013 health-based criteria; ‣ No pesticides (OCPs, OPPs) or PCBs were reported; and ‣ Asbestos was not identified in laboratory analysed soil samples. ▪ Groundwater was not encountered by EI during the investigation due to refusal in weathered shale. Three shallow groundwater monitoring wells were installed; however they were all reported dry at the time of sampling. Groundwater flow direction was not calculated during this investigation, however, groundwater is anticipated to flow north-east towards Parramatta River; and ▪ The following data gaps, remain that require closure: ‣ Further intrusive investigation of the site to satisfy the sampling density requirements of EPA (1995); ‣ The quality of soils beneath building structure areas of the site not assessed. Provided that the majority of the site is to be bulk excavated for the basement, the supplementary

Project Task	Findings
	investigation may be carried out as part of the waste classification for excavated materials; › The condition of soil and groundwater in the immediate vicinity of current and historical UPSS areas, including bowser islands, fill points, and fuel lines; › The quality of groundwater onsite and down-hydraulic gradient of the service station site, including background groundwater quality migrating onto the site; › Confirmation of groundwater flow direction by survey of groundwater monitoring wells by a licensed surveyor; › Potential presence of hazardous materials present within the existing structures; and › The suitability of retained deep soils to be used for landscaping purposes on the northern perimeter of the site. ▪ Based on the findings from this PSI conducted in accordance with the investigation scope agreed with the Client, and with consideration of the Statement of Limitations, EI conclude that in light of the site access restrictions and constraints, several data gaps remain that will require closure to satisfactorily characterise the fill soils. In view of the proposed development scope, and currently available information, EI consider that the site can be made suitable for the proposed land use, provided recommendations are implemented at a future development application stage. It should be noted that this is not required at the planning proposal stage.
Recommendation	▪ Prior to site demolition, carry out a Hazardous Materials Survey on existing site structures to identify potentially hazardous building products that may be released to the environment during demolition; ▪ Review of available environmental reports previously prepared for the service station site; ▪ Preparation and implementation of a Remedial Action Plan (RAP), which should: › Design supplementary investigations to close the data gaps identified during this investigation; › Outline the remediation requirements for UPSS decommissioning, and remediation and validation activities in accordance with the POEO (UPSS) Regulation 2014 and associated guidance documents, and other contamination that may be identified during data gap closure investigations; › Provide the requirements and procedure for waste classification assessment, in order to enable classification of site soils to be excavated and disposed off-site during the proposed basement excavation, in accordance with the Waste Classification Guidelines (EPA, 2014); and › Provide a SAQP for the validation of remediation activities performed on-site. ▪ Undertake supplementary investigations, and subsequent remediation and validation works for the site, as outlined in the RAP. EI note that due to current site constrains, the additional investigations and remediation works may be conducted after site demolition when access to areas of environmental concern is made available; ▪ Any material being removed from site (including virgin excavated natural materials (VENM)) should be classified for off-site disposal in accordance the EPA (2014) Waste Classification Guidelines; ▪ Any material being imported to the site should be assessed for potential contamination in accordance with NSW EPA guidelines as being suitable for the intended use or be classified as VENM; and ▪ Preparation of a final site validation report by a suitably qualified environmental consultant, certifying site suitability of soils and groundwater for the proposed land use.

4. CONCEPTUAL SITE MODEL

In accordance with NEPC (2013) *Schedule B2 – Guideline on Site Characterisation*, EI developed a CSM that assessed plausible linkages between potential contamination sources, migration pathways and human and environmental receptors.

4.1 Summary of Site History

Based on the historical information (EI, 2018), the site has been used for residential purposes from at least 1943. The adjacent service station occupied Site 2, 9 Albert Road from the mid-1990s.

4.2 Subsurface Conditions

Based on the historical information (EI, 2018), and excluding any surface paving, the sub-surface conditions of the site were generalised as a layer of silt / silty clay filling (ranging between 0.5-2.5m BGL), overlying natural silty clay and shale bedrock.

4.3 Potential Contamination Sources

The potential contamination sources were as follows:

- Unknown type and concentration of contaminants within imported fill soils beneath site structures and in fill areas;
- Weathering of existing building structures (i.e. painted surfaces, metallic structures, cement-fibre sheeting, etc.);
- Hazardous materials, including potential asbestos-containing materials (ACM) in existing buildings onsite;
- Possible impacts historic use of pesticides beneath site structures and in garden areas;
- Impacts from uncontrolled demolition of historic site structures;
- Migration of contamination onto site from adjacent Site 2 service station property (9 Albert Road, Strathfield).

4.4 Emerging Contaminants

Per- and Poly- Fluoroalkyl Substances (PFAS)

EPA (2017) requires that PFAS are considered when investigating land contamination. The probability of PFAS occurrence, which was based on considerations outlined in the *PFAS National Environmental Management Plan* (NEMP 2020), is reviewed in **Table 4-1**. In this instance, the potential for PFAS to be present on-site was low.

Table 4-1 PFAS Decision Tree

Preliminary Screening	Probability of Occurrence[1]
Has an activity listed in NEMP (2020) [2] as being associated with PFAS contamination occurred on-site? If so, list activity.	L
Has an activity listed in NEMP (2020) [2] as being associated with PFAS contamination occurred up-gradient or adjacent to the site? If so, list activity.	L
Did fire training involving the use of suppressants occur on-site between 1970 and 2010?	L

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

Note 1 Probability: L – low (all necessary documentation has been reviewed and there is no recorded instance or compelling rationale); M – moderate (all necessary documentation has been reviewed and there is potential evidence of a recorded instance with compelling rationale); H – high (all necessary documentation has been reviewed and there is evidence of a recorded instance with compelling rationale).
Note 2 Activities listed in Appendix B of NEMP (2020).
Note 3 Runoff from up-gradient PFAS use may impact surface water, soil, sediment and groundwater.
Note 4 PFAS is used wide range of industrial processes and consumer products, including in the manufacture of non-stick cookware, specialised garments and textiles, Scotchguard™ and similar products (used to protect fabric, furniture, leather and carpets from oils and stains), metal plating and in some types of fire-fighting foam. (https://www.nicnas.gov.au/chemical-information/factsheets/chemical-name/perfluorinated-chemicals-pfas)
Note 5 Refer to https://www.epa.nsw.gov.au/your-environment/contaminated-land/pfas-investigation-program.

Emerging Chemicals

The EPA uses Chemical Control Orders (CCOs) as a primary legislative tool under the *Environmentally Hazardous Chemicals Act 1985*, to control chemicals of concern and limit their potential impact on the environment. Considerations for chemicals controlled by CCOs, and other potential emerging chemicals, are outlined in **Table 4-2**. In this instance, the potential for an emerging chemical of concern to be present on-site was limited to the application of organic pesticides (around building footings and perimeters).

Table 4-2 Emerging or Controlled Chemicals

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

Note 1 From burning of certain chemicals, smelting or chemical manufacturing or fire on or near the site.
Note 2 From anti-fouling paints used or removed at boat and ship yards and marinas.
Note 3 From older transformer oils and electrical capacitors

Note 4 Twenty-four mostly organochlorine pesticides and industrial by-products
Note 5 Other chemicals considered as emerging (e.g. 1,4 dioxane; associated with some CVOC).

4.5 Potential Contaminants

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

- Soil - metals (met), total recoverable hydrocarbons (TRH), monocyclic aromatic hydrocarbon compounds benzene, toluene, ethyl-benzene and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAH), organochlorine and organophosphorus pesticides (OCP/ OPP), polychlorinated biphenyls (PCB) and asbestos.
- Groundwater – HM, TRH, BTEX, PAHs, phenols and VOCs.

4.6 Exposure Pathways and Receptors

Potential contamination sources, exposure pathways and human and environmental receptors that were considered relevant for this assessment are summarised in **Table 4-3**.

Table 4-3 Conceptual Site Model

Impacted Media	COPC	Transport Mechanism	Exposure Pathway	Potential Receptor	Potential Risk of Complete Exposure Pathway
Soil	Metals; TRH; BTEX; PAH; OCP/OPP PCB; and Asbestos	Leaching of contaminants from impacted soils to groundwater; Physical erosion and wind mobilisation during ground disturbance activities (e.g. excavation and earthmoving); and Atmospheric dispersion.	Dermal contact; Ingestion; Inhalation; and Biota Uptake.	Site Workers during construction; and Future site users (residents) and maintenance personnel.	L - M
Groundwater	Metals; TRH; BTEX; PAH; VOC; and Phenols.	Interception of water table during excavation; Potential seepage into deep basement intercepting water table (both on site and off-site); Volatilisation of contamination from groundwater to indoor air spaces; and Migration of dissolved phase impacts in groundwater.	Dermal contact; Ingestion; Inhalation of vapours	Site Workers during construction; Future site users (residents) and maintenance personnel; Aquatic ecosystems; Recreational water users.	L - M
Building Materials	Lead; PCB; SMF; and Asbestos.	Release of hazardous materials during uncontrolled demolition of building fabrics.	Ingestion; Dermal contact; and Inhalation of	Demolition workers; and Construction and	L - M

Impacted Media	COPC	Transport Mechanism	Exposure Pathway	Potential Receptor	Potential Risk of Complete Exposure Pathway
			airborne contaminants.	maintenance workers.	

4.7 Data Gap

Based on the CSM derived for the site and the qualitative assessment of risks, EI considered a programme of intrusive investigation of soil and groundwater was warranted to conduct targeted and systematic sampling at locations of known, potential sources of contamination.

5. METHODOLOGY

5.1 Sampling and Analysis Quality Plan (SAQP)

The SAQP ensures that the data collected during environmental works are representative and provide a robust basis for assessment decisions. The SAQP for this ASI included the following:

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

5.2 Data Quality Objectives

In accordance with the NEPC (2013) *Schedule B2 Guideline on Site Characterisation*, the USEPA (2006) *Data Quality Assessment* and EPA (2017) *Guidelines for the NSW Site Auditor Scheme*, data quality objectives (DQO) were developed by the EI investigation team, following the NEPM- / EPA- endorsed, seven step process (**Table 5-1**). In doing so, the appropriate levels of data quantity and quality needed for the specific requirements of the project were established.

Table 5-1 Summary of Project Data Quality Objectives

DQO Step	Details
1. State the Problem Summarise the contamination problem that will require new environmental data, and identify the resources available to resolve the problem; develop a conceptual site model.	Site redevelopment involves the demolition of existing structures, followed by the construction of 2 multi-storey mixed-use residential buildings, overlying 4 levels of basement car parking, as outlined in **Section 1.2**. Based on the proposed land use, the NEPC (2013) setting of residential with minimal opportunities for soil access applies. Previous investigation by EI (2018) identified the potential for soil and/or groundwater contamination due to various possible sources, as listed in **Section 4.3**. A CSM has been developed (**Table 4-3**). The findings of the ASI must provide supportive information on the environmental condition of the site, to determine suitability for the proposed redevelopment.
2. Identify the Goal of the Study (Identify the decisions) Identify the decisions that need to be made on the contamination problem and the new environmental data required to make them.	Based on the objectives outlined in **Section 1.4**, the decisions that need to be made were: ▪ Has the nature, extent and source of any soil and/or groundwater impacts onsite been defined? ▪ What impact do the site specific, geologic and hydrogeological conditions have on the fate and transport of any impacts that may be identified? ▪ Does the level of impact coupled with the fate and transport of identified contaminants represent an unacceptable risk to identified human and/or environmental receptors on or offsite? ▪ Does the collected data provide sufficient information to allow the suitability of the site to be determined, or selection and design of an appropriate remedial strategy, if necessary? ▪ If the data does not provide sufficient information, what data gaps require closure to enable the suitability of the site to be determined, or selection and design of an appropriate remedial strategy?
3. Identify Information Inputs (Identify inputs to decision) Identify the information needed to support any decision and specify which inputs require new environmental measurements.	Inputs to the decision making process included: ▪ The proposed development and land use; ▪ Review of the previous site investigation; ▪ National and NSW EPA guidelines made or approved under the *NSW Contaminated Land Management Act 1997*; ▪ Observations during / from soil and groundwater sampling; and ▪ Laboratory analytical results for the selected soil and groundwater samples. At completion of the ASI, a decision is required regarding the suitability of the site for the proposed redevelopment, or if additional investigation is required to confirm that the site is suitable for that development or if remediation is required to make the site suitable.
4. Define the Boundaries of the Study Specify the spatial and temporal aspects of the environmental media that the data must represent to support decision.	Lateral – The proposed development area, as shown on **Figure 2**, **Appendix A**; Vertical – Investigations were advanced to the depth of natural soils or rock; Temporal – The results were valid for the day samples were collected and remain so as long as no changes occur in regards to site use, and contamination (if present) does not migrate onto the site from off-site sources.

DQO Step	Details
5. Develop the Analytic Approach (Develop a decision rule) To define the parameter of interest, specify the action level, and integrate previous DQO outputs into a single statement that describes a logical basis for choosing from alternative actions.	The decision rules for the investigation were: ▪ If the concentrations of contaminants in the soil and/or groundwater data exceed the adopted criteria, then assess the need to further investigate the extent of impacts onsite. ▪ Decision criteria for QA/QC measures are defined by the Data Quality Indicators (DQI) in **Table 5-2**.
6. Specify Performance or Acceptance Criteria (Specify limits on decision errors) Specify the decision-maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data.	Specific limits for this project were in accordance with National and NSW EPA guidance, and appropriate indicators of data quality and standard procedures for field sampling and handling. This included the following points to quantify tolerable limits: ▪ The null hypothesis for the investigation was that the 95% Upper Confidence Limits (UCL) of the mean for contaminants of concern exceed relevant residential with minimal access to soil land use criteria across the site. ▪ Acceptance of site suitability was based on the probability that: ‣ The 95% UCL of the mean of the data satisfied the given site criteria (thus, a limit on the decision error was 5% that a conclusive statement may be incorrect); ‣ The standard deviation of the results was less than 50% of the relevant remediation acceptance criterion; and ‣ No single result exceeded the remediation acceptance criterion by 250% or more. ▪ Soil and groundwater concentrations for the potential chemicals that were below investigation criteria made or approved by the NSW EPA were treated as acceptable and indicative of suitability for the proposed land use(s). ▪ Samples to determine the presence of asbestos were collected from boreholes at the site. ▪ If contaminant concentrations exceeded the adopted criteria, further investigation was considered prudent. If no contamination was detected, no further action was required.
7. Develop the Detailed Plan for Obtaining Data (Optimise the design for obtaining data) Identify the most resource-effective sampling and analysis design for general data that are expected to satisfy the DQOs.	In order to identify the most resource-effective sampling and analysis design and satisfy the DQOs: ▪ Soil sampling was conducted at 4 locations at targeted parts of the site. ▪ An upper soil profile sample was collected at each borehole location and tested for the COPC, to assess the conditions of the fill layer, and impacts from activities at ground level. ▪ Further discrete, natural samples were analysed for primary metals, TRH, BTEX and PAH. Samples were selected on field observations (including visual and olfactory evidence), giving consideration to the subsurface stratigraphy. ▪ Two groundwater monitoring wells were installed and gauged to assess groundwater quality at the site. ▪ A GME was completed, with laboratory analysis of representative samples for COPCs. ▪ Review of the results was undertaken to determine if further sampling was warranted.

5.3 Data Quality Indicators

To ensure that the investigation data were of an acceptable quality, they were assessed against the quality indicators outlined in **Table 5-2**. Assessment of data quality is presented in **Section 6** and **Appendix I**.

Table 5-2 Data Quality Indicators

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

5.4 Sampling Rationale

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

- Sampling fill and natural soils from 4 borehole locations across accessible and targeted parts of the site;
- Completion of a single groundwater monitoring even (GME), at two installed monitoring wells, to characterise local groundwater conditions. Monitoring wells were installed at targeted locations at the boundary of the service station (Site 2); and
- Laboratory analysis of representative soil and groundwater samples for the potential contaminants.

5.5 Assessment Criteria

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

Table 5-3 Adopted Investigation Levels for Soil and Groundwater

Medium	Guidelines	Rationale
Soil	NEPC (2013) HILs, HSLs and Management Limits for TRH	**Soil Health-based Investigation Levels (HILs)** NEPC (2013) *HIL-B* thresholds for residential settings. **Soil Health-based Screening Levels (HSLs)** NEPC (2013) *HSL-D* thresholds for vapour intrusion at commercial and industrial sites were applied to assess potential human health impacts from residual vapours resulting from petroleum, BTEX and naphthalene (per Section 2.4.8 Schedule B1 NEPC 2013). Preliminary screening for asbestos was based on the laboratory limit of reporting (LOR) of <0.01 w/w%, whereby asbestos is reported to be present or absent in the analysed sample. **Management Limits for Petroleum Hydrocarbons** Where the HSLs and ESLs for petroleum hydrocarbons were exceeded, sample results were also assessed against the NEPC (2013) *Management Limits* for the F1-F4 TRH fractions, to assess propensity for phase-separated hydrocarbons (PSH), fire and explosive hazards and adverse effects on buried infrastructure.
Groundwater	ANZG (2018) GILs for Fresh Waters and NEPC (2013) Groundwater HSLs	**Groundwater Investigation Levels (GILs) for Fresh Waters** ANZG (2018) provides GILs for typical, slightly-moderately disturbed aquatic ecosystems, Trigger Values (TVs) for the 95% level of protection of aquatic ecosystems; however, the 99% TVs were applied for the bio-accumulative analyte (mercury). **Health-based Screening Levels (HSLs)** The NEPC (2013) groundwater HSLs for vapour intrusion were used to assess potential human health impacts from residual vapours resulting from petroleum, BTEX and naphthalene impacts. The *HSL-D* thresholds for commercial and industrial settings were applied.

5.6 Soil Sampling

The soil sampling works conducted at the site are described in **Table 5-4**. Sampling locations are illustrated in **Figure 2**.

Table 5-4 Summary of Soil Sampling Methodology

Activity/Item	Details
Fieldwork	Intrusive soil investigations were conducted on 17 and 18 June 2021, and comprised 4 borehole locations.
Investigation Method	Test bores BH201 and BH202 and BH107M were drilled using solid flight augers. Wells BH203M and BH204M were also drilled using solid flight augers in addition to wash boring and air drilling. Borehole details are presented in the detailed logs attached in **Appendix E**.
Soil Logging	Drilled soils were classified in the field with respect to lithological characteristics and evaluated on a qualitative basis for odour and visual signs of contamination. Soil classifications and descriptions were based on Australian Standard (AS) 1726-2017. Borehole logs are presented in **Appendix E**.
Soil Sampling	Soil samples were collected using a dry grab method (the sampler wearing unused, dedicated nitrile gloves) and placed into laboratory-supplied, acid-washed, solvent-rinsed glass jars, or snap-lock, plastic bags. Blind and split field duplicates were separated from the primary samples and placed into dedicated glass jars. At each location, aliquots of soil were placed into separate zip-lock bags for laboratory asbestos analysis and in-field VOC screening by a photo-ionisation detector (PID).
Soil Vapour Screening	Screening for VOC in soil headspace samples was conducted using a pre-calibrated PID with a 10.6mV ionisation lamp.
Decontamination	Nitrile sampling gloves were replaced between each sampling location. Augers were cleaned of all residual soil between each borehole location.
Management of Soil Cuttings	Soil cuttings were used as backfill for completed boreholes.
Sample Preservation and Transport	Samples were stored in a chilled chest (with frozen ice packs), whilst on-site and in transit to the contracted laboratories. Soil samples were transported to Eurofins (the primary laboratory) under strict chain-of-custody (COC) conditions. Signed COC certificates and sample receipt advice (SRA) were provided by Eurofins for confirmation purposes (**Appendix G**). Split (inter-laboratory) soil field duplicates were submitted to Envirolab Services Pty Ltd (Envirolab; the secondary laboratory) under strict COC conditions. Signed COC forms and SRA were provided by Envirolab for confirmation purposes (**Appendix G**).
Laboratory Analysis and Quality Control	Soil samples were analysed by Eurofins and Envirolab for the COPC. All samples were analysed within the required holding period, as documented in the corresponding laboratory reports (**Appendix H**). In addition to the split (inter-laboratory) field duplicate (analysed by Envirolab), QC testing comprised one blind (intra-laboratory) field duplicate, an equipment rinsate blank, a laboratory-prepared trip spike soil sample and a laboratory-prepared trip blank soil sample, all analysed by SGS.

5.7 Groundwater Sampling

The groundwater sampling works are described in **Table 5-5**. The monitoring well locations are illustrated in **Figure 2**.

Table 5-5 Summary of Groundwater Sampling Methodology

Activity/Item	Details
Fieldwork	Groundwater monitoring well BH203M was installed on 18 June 2021 and BH204M was installed on 17 June 2021. The wells were subsequently developed following installation to remove sediment introduced during drilling. Water level gauging, well purging, field testing and groundwater sampling were conducted on 21 June 2021.
Well Construction	Two bores were converted to groundwater monitoring wells as follows: ▪ BH203M: installed to a depth of 13.1m BGL (screened from 7.1 - 13.1m BGL); ▪ BH204M: installed to a depth of 13.0m BGL (screened from 10.0 - 13.0m BGL). Well construction was in general accordance with the standards described in NUDLC (2012) and involved the following: ▪ 50 mm, Class 18 uPVC, threaded, machine-slotted screen and casing; ▪ Base and top of each well was sealed with a uPVC cap; ▪ Annular, graded sand filter was used to approximately 500 mm above top of screen interval; ▪ Granular bentonite was applied above annular filter to seal the screened interval; ▪ Surface completion comprised of a -0.5 m plastic J-cap closing the well, with a gatic cover at ground level.
Well Development	Well development was conducted for each well after installation. Each well was purged three times the well volume or until dry.
Well Gauging	Monitoring wells were gauged to determine standing water level (SWL) (depth to groundwater) prior to well purging at the commencement of the GME on 17 March 2021. Gauging was conducted with a water/oil interface probe.
Well Purging and Field Testing	The measurement of water quality parameters was conducted repeatedly during purging and the details were recorded onto field data sheets, once water quality parameters stabilised. Field measurements for Dissolved Oxygen (DO), Electrical Conductivity (EC) and pH of the purged water were also recorded during well purging. Purged water volumes removed from each well and field test results are summarised in **Table 7-3**.
Groundwater Sampling	Groundwater samples were collected by a micro-purge system. Water was continuously measured for four parameters (Temperature, EC, Redox, DO, pH). Once three consecutive field measurements were recorded for purged water to within ± 10% for DO, ± 3% for EC , ± 0.2 units for pH, ± 0.2° for temperature and ± 20 mV for redox, this was considered to indicate that representative groundwater quality had been achieved and final physio-chemical measurements were recorded. Groundwater samples were then collected from the micro-purge sampling pump discharge point.
Decontamination Procedure	The water level probe and MicroPurge kit were washed in a solution of potable water and *Decon 90* and then rinsed with potable water.
Sample Preservation	Sample containers were supplied by the laboratory with the following preservatives: ▪ one, 1 litre amber glass, acid-washed and solvent-rinsed bottle; ▪ two, 40ml glass vials, pre-preserved with dilute hydrochloric acid, Teflon-sealed; and ▪ one, 250mL, HDPE bottle, pre-preserved with dilute nitric acid (1mL). Samples for metals analysis were field-filtered using 0.45 µm pore-size membranes. All containers were filled with sample to the brim then capped and stored in insulated chests (containing ice bricks), until completion of the fieldwork and during sample transit to the laboratory.
Sample Transport	After sampling, the ice brick filled chests were transported to Eurofins using strict COC procedures. SRA was provided by the laboratory to document sample condition upon receipt. Copies of the SRA and COC certificates are presented in **Appendix G**. A split (inter-laboratory) field duplicate was submitted to Envirolab under strict COC conditions. Signed COC certificates and sample receipt documentation were provided

Activity/Item	Details
	by Envirolab for confirmation purposes (**Appendix G**).
Laboratory Analysis and Quality Control	Groundwater samples were analysed by Eurofins (primary laboratory) and Envirolab (secondary laboratory) for the COPCs. All samples were analysed within the required holding period, as documented in the corresponding laboratory reports (**Appendix H**). In addition to the split (inter-laboratory) field duplicate (analysed by Envirolab), QC testing comprised a blind (intra-laboratory) field duplicate, an equipment rinsate blank, a laboratory-prepared, trip spike water sample and a laboratory-prepared, trip blank water sample, all tested by Eurofins.

6. DATA QUALITY ASSESSMENT

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

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

Table 6-1 Quality Control Process

Stage	Control	Conformance [Yes, Part, No]	Report Section(s)
Preliminaries	DQO established	Yes	See DQO/DQI, **Section 5.2** and **5.3**
Field work	Suitable documentation of fieldwork observations including borehole logs, field notes.	Yes	See **Appendix E** and **F**
Sampling plan	Use of relevant and appropriate sampling plan (density, type, and location)	Yes	See sample rationale **Section 5.4**
	All media sampled and duplicates collected	Yes	See **Appendix G**
	Use of approved and appropriate sampling methods (soil, groundwater)	Part	Primary sample BH201_4.1-4.3 was not tested. A comparison has been made between the duplicate and triplicate. See **Section 5.6** and **5.7**
	Selection of soil samples according to field PID readings (where VOCs are present)	Part	Hydrocarbon odour was noted during drilling in shale bedrock at 10mBGL at BH204M. The odorous shale bedrock was not sampled and a PID reading was not taken. See **Section 7** and **Appendix E**
	Preservation and storage of samples upon collection and during transport to the laboratory	Yes	See **Section 5.6** and **5.7**
	Appropriate field rinsate and trip blanks taken	Yes	See **Appendix G**
	Completed field and analytical laboratory sample COC procedures and documentation	Yes	See **Appendix G**
Laboratory	Sample holding times within acceptable limits	Yes	See laboratory QA/QC, **Appendix H, I, J**
	Use of appropriate analytical procedures and NATA-accredited laboratories	Yes	See laboratory QA/QC, **Appendix H, I, J**
	LOR/PQL low enough to meet adopted criteria	Yes	See laboratory QA/QC,

Stage	Control	Conformance [Yes, Part, No]	Report Section(s)
			Appendix H, I, J
	Laboratory blanks	Yes	See laboratory QA/QC, **Appendix H, I, J**
	Laboratory duplicates	Yes	See laboratory QA/QC, **Appendix H, I, J**
	Matrix spike/matrix spike duplicates	Yes	See laboratory QA/QC, **Appendix H, I, J**
	Surrogates (or System Monitoring Compounds)	Yes	See laboratory QA/QC, **Appendix H, I, J**
	Analytical results for replicated samples, including field and laboratory duplicates and inter-laboratory duplicates, expressed as Relative Percentage Difference (RPD)	Yes	See laboratory QA/QC, **Appendix H, I, J**
	Checking for the occurrence of apparently unusual or anomalous results (e.g. laboratory results that appear to be inconsistent with field observations or measurements)	Yes	See **Appendix B, E, F**
Reporting	Report reviewed by senior staff to assess project meets desired quality, EPA guidelines and project outcomes.	Yes	See Document Control

7. RESULTS

7.1 Soil Field Results

7.1.1 Sub-Surface Conditions

The general site lithology encountered during the additional soil investigation was a layer of gravelly silt / silty clay filling (various depths averaging 0.35 m thickness), overlying natural, silty clay and shale bedrock. More details are provided in **Table 7-1** and borehole logs are presented in **Appendix E**. Subsurface conditions were consistent with the previous investigation however an average of 1.3m of fill was encountered in EI (2018).

Table 7-1 Generalised Sub-Surface Profile (mBGL)

Layer	Description	Minimum and Maximum Depth
Hardstand	Concrete pavement	0.0 – 0.15
Fill	Silty CLAY; low to medium plasticity, brown, dark grey to black, with trace gravels. Gravelly SILT; brown mottled red to grey, trace sand and gravels.	0.0 – 0.7
Natural	Silty CLAY; low to high plasticity, grey mottled red, brown mottled grey.	0.15 – 5.5
Bedrock	SHALE; weathered, dark grey.	4.1 – 13.1+

Note 1 + Termination depth of deepest borehole.

7.1.2 Field Observations and PID Results

Soil samples were obtained from the test bores at various depths ranging between 0.3-5.5m BGL. All examined soil samples were evaluated on a qualitative basis for odour and visual signs of contamination (e.g. hydrocarbon odours, oil staining, petrochemical filming, asbestos fragments, ash, charcoal) and the following observations were noted:

- Hydrocarbon odour was noted in shale bedrock at 10mBGL at BH204M;
- No fragments of potential asbestos containing materials (ACM) were observed in any of the drilled/examined soil;
- Brick fragments were observed in fill at 0.15 – 1.4mBGL in BH202; and
- VOC concentrations from collected soil headspace samples were low, ranging between 0.3-5.5ppm (**Appendix E**).

7.2 Groundwater Field Results

7.2.1 Monitoring Well Construction

Groundwater monitoring well BH203M was installed on 18 June 2021 and BH204M was installed on 17 June 2021. Construction details for the installed groundwater monitoring wells are summarised in **Table 7-2**.

Table 7-2 Monitoring Well Construction Details

Well ID	Well Depth (m BGL)	Well Stick-up (m)	Screen Interval (m BGL)	Lithology Screened
BH203M	13.1	-0.12	7.1 - 13.1	Shale
BH204M	13.0	-0.09	10.0 - 13.0	Shale

7.2.2 Field Observations

A GME was conducted on 21 June 2021. Field data was recorded before sampling, as presented in **Table 7-3**. Field data sheets and calibration certificate for the water quality meter used are attached in **Appendix F**. Samples were then evaluated on the basis of odour and visual signs of contamination, with the following observations noted:

- Groundwater in the monitoring wells was light grey to brown in colour, with medium to high turbidity;
- No olfactory or visual evidence of contamination was detected in the monitoring wells during sampling;
- No sheens were observed on the sampled groundwater; and
- The observed standing water levels (SWL) were 7.39 mBGL and 8.14m BGL.

Table 7-3 Groundwater Field Data

Well	SWL (m BGL)	DO (mg/L)	pH	EC (µS/cm)	T (°C)	Redox[1] (mV)
BH203M	7.39	0.17	6.46	5971	20.55	251
BH204M	8.14	0.69	6.6	10.66	19.79	295

Notes:
SWL – standing water level
[1] Field Redox (mV) readings adjusted to Standard Hydrogen Electrode (SHE) by adding field electrode potential (205mV).
DO – Dissolved Oxygen in units of milligrams per litre (mg/L)
EC – groundwater electrical conductivity as measured onsite using portable EC meter
mBGL – metres below ground level (All wells were completed as standpipes with measured stick-down as shown in field notes under **Appendix F**)
mV – millivolts
L – litres (referring to volume of water purged from the well prior to groundwater sample collection)
Redox – Reduction Potential
µS/cm – micro Siemens per centimetre (EC units)

Groundwater samples were observed to be oxidising and slightly acidic (pH).

Groundwater wells were not surveyed and only two wells were installed so therefore an accurate groundwater flow direction could not be established. Based on local topography, groundwater at the adjacent service station (Site 2) is anticipated to flow to the north east.

7.3 Laboratory Analytical Results

7.3.1 Soil Analytical Results

Summary of the soil analytical results for this investigation, with number of tested samples, minimum/maximum analyte concentrations for primary samples and samples found to exceed the criteria, is presented in **Table 7-4**. More detailed tabulation of results showing the concentrations for individual samples alongside the adopted soil criteria, in addition to the previous results (EI, 2018) are presented in **Table B-1** (**Appendix B**).

Table 7-4 Summary of Soil Analytical Results

Number of Primary Samples	Analyte	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Samples Exceeding Criteria
Priority Metals				
6	Arsenic	2.6	22	None
6	Cadmium	<0.4	<0.4	None
6	Chromium (Total)	6.9	35	None
6	Copper	9.3	55	None
6	Lead	15	220	None
6	Mercury	<0.1	<0.1	None
6	Nickel	<5	8.2	None
6	Zinc	14	65	None
PAH				
6	Naphthalene	<0.5	<0.5	None
6	Benzo(a)pyrene	<0.5	<0.5	None
6	Carcinogenic PAH (as B(a)P TEQ)	<0.6	<0.6	None
6	Total PAH	<0.5	1.2	None
BTEX				
6	Benzene	<0.1	<0.1	None
6	Toluene	<0.1	<0.1	None
6	Ethyl benzene	<0.1	<0.1	None
6	Xylenes (Total)	<0.3	<0.3	None
TRH				
6	F1	<20	<20	None
6	F2	<50	58	None
6	F3	<100	190	None
6	F4	<100	<100	None
Pesticides				
4	OCP	<PQL	<PQL	None
4	OPP	<PQL	<PQL	None
PCB				
4	Total PCB	<PQL	<PQL	None

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

PQL: Practical Quantitation Limit

7.3.2 Groundwater Analytical Results

Summary of the groundwater analytical results, with number of tested samples, minimum/maximum analyte concentrations for primary samples and samples found to exceed the GILs, is presented in **Table 7-5**. More detailed tabulation of results showing the concentrations for individual samples alongside the adopted groundwater criteria are presented in **Table B-2** (**Appendix B**).

Table 7-5 Summary of Groundwater Analytical Results

Number of Primary Samples	Analyte	Minimum Concentration (µg/L)	Maximum Concentration (µg/L)	Sample(s) Exceeding GILs
Priority Metals				
2	Arsenic	2	2	None
2	Cadmium	<0.2	<0.2	None
2	Chromium (Total)	2	2	GB-H203M-1 (2 µg/L) GB-H204M-1 (2 µg/L)
2	Copper	1	1	None
2	Lead	1	1	None
2	Mercury	<0.1	<0.1	None
2	Nickel	2	2	None
2	Zinc	36	36	GB-H203M-1 (36 µg/L) GB-H204M-1 (36 µg/L)
PAH				
2	Naphthalene	<1	<1	None
2	Benzo(α)pyrene	<1	<1	None
2	Total PAH	<1	<1	None
BTEX				
2	Benzene	<1	<1	None
2	Toluene	<1	<1	None
2	Ethyl benzene	<1	<1	None
2	o-xylene	<1	<1	None
2	m + p-xylene	<2	<2	None
TRH				
2	F1	<20	<20	None
2	F2	<50	<50	None
2	F3	<100	<100	None
2	F4	<500	<100	None

Number of Primary Samples	Analyte	Minimum Concentration (µg/L)	Maximum Concentration (µg/L)	Sample(s) Exceeding GILs
VOC				
2	Bromodichloromethane	<1	1	None
2	Chloroform	<5	10	None
2	Other VOCs	<PQL	<PQL	None
Phenols				
2	Total Phenols	<PQL	<PQL	None

PQL: Practical Quantitation Limit

8. SITE CHARACTERISATION

8.1 Subsurface Conditions

Based on the borehole logs, the site lithology was generalised as a layer of gravelly silt / silty clay filling (various depths averaging 0.35 thickness), overlying natural, silty clay and shale bedrock. Subsurface conditions were consistent with the previous investigation however an average of 1.3m of fill was encountered in EI (2018).

8.2 Soil Impacts

All analytical results for the potential contaminants in representative fill and natural soil samples were found to comply with the adopted health based criteria.

The previous investigation identified an isolated exceedance of the health based criteria, lead of 2,800 mg/kg at BH102_0.3-0.4. However, under the proposed development, bulk excavation of site soils would be performed in order to construct the basement which covers location BH102. It was considered the risk to human health and the environment was low.

8.3 Groundwater Impacts

Two monitoring wells were installed at targeted locations at the boundary of the adjacent service station (Site 2). Hydrocarbon odour was noted during drilling in shale bedrock at 10mBGL at BH204M. The odorous shale bedrock was not sampled. However no odour was detected during groundwater sampling and laboratory results for hydrocarbons in groundwater in both wells were below the laboratory limit of reporting. From the GME on 21 June 2021, depth to water readings was at 7.39 mBGL and 8.14 mBGL within the shale bedrock.

For all tested samples, the concentrations of the potential chemicals were below the adopted criteria, except for minor dissolved metals (chromium and zinc). Overall, the metal concentrations were consistent with natural (background) conditions in long standing, urban environments and present a low risk. Site soils were not considered to be the source of metal impacts, given their low concentrations in the tested, representative (fill and natural) samples.

8.4 Review of Conceptual Site Model

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

9. CONCLUSION

The property located at 2-6 Pilgrim Avenue & 11-13 Albert Road, Strathfield NSW was the subject of an Additional Site Investigation, which was conducted to assess the nature and degree of on-site contamination associated with current and former uses of the property. The key findings from this ASI were as follows:

- The current site use consists of three residential unit blocks and two individual residential dwellings. There is no evidence of underground storage tanks (USTs) or underground petroleum storage systems (UPSS) on site. A Shells Coles Express service station is operating directly adjacent to the east (Site 2, 9 Albert Street, Strathfield NSW).
- The previous (preliminary) investigation completed by EI (2018) established that:
  - The site has been used for residential purposes from at least 1943.
  - Limited intrusive investigation at five locations reported concentrations below the adopted criteria (NEPC (2013) residential with minimal opportunities for soil access) with the exception of lead in BH102_0.3-0.4 (2,800 mg/kg).
  - Data gaps following the investigation included groundwater assessment and additional soil investigation to cover the minimum guideline density.
- As part of this ASI, intrusive soil investigation was completed at four locations (BH201, BH202, BH203M and BH204M). Groundwater sampling was completed at two monitoring wells (BH203M and BH204M) targeted at the boundary of the service station (Site 2).
- The site lithology was generalised as a layer of gravelly silt / silty clay filling (various depths averaging 0.35m thickness), overlying natural, silty clay and shale bedrock. Subsurface conditions were consistent with the previous investigation however an average of 1.3m of fill was encountered in EI (2018).
- Standing water level was 7.39 mBGL and 8.14m BGL within the shale bedrock. Groundwater flow direction was inferred from local topography to be north-east, towards Parramatta River.
- All analytical results in representative fill and natural soil samples were found to comply with the adopted health based criteria.
- Hydrocarbon odour was noted during drilling in shale bedrock at 10mBGL at BH204M. The odorous material was not sampled. However no odour was detected during groundwater sampling and laboratory results for hydrocarbons in groundwater in both wells were below the laboratory limit of reporting.
- Contaminant concentrations in the representative groundwater samples were below the adopted criteria, with the exception of minor dissolved metals (chromium and zinc). The metal concentrations in groundwater were considered consistent with natural (background) conditions in long standing, urban environments, rather than site specific impacts. Therefore, the detected metal concentrations are not considered to be cause of environmental concern for the site development.

Based on the findings from this ASI conducted in accordance with the investigation scope agreed with the Client, and with consideration of the Statement of Limitations (**Section 11**), EI concludes that, based on the proposed development:

- There is localised lead impact (2,800 mg/kg) in fill around location BH102 (to a depth of at least 0.4m BGL). However, under the proposed development, bulk excavation of site soils would be performed in order to construct the basement which covers location BH102. It was considered the risk to human health and the environment was low; and
- The site can be made suitable for the proposed development, provided the recommendations detailed in **Section 10** are implemented.

10. RECOMMENDATIONS

EI makes the following recommendations in relation to the proposed development:

- Prior to proposed site demolition, a suitably qualified and experienced consultant should be engaged to perform a Hazardous Materials Survey on existing site structures to identify potentially hazardous building products that may be released to the environment during demolition works. All identified hazardous materials must be appropriately managed to maintain worker health and safety during demolition works and to prevent spreading of hazardous materials to site soils.
- Fill material within the proposed basement footprint, which will include the lead impacted surficial fill, is to be classified and disposed off-site in accordance with EPA (2014) Waste Classification Guidelines as part of bulk excavation works for the construction of the four level basement carpark. All soil to be disposed offsite is to be classified in accordance with EPA (2014) Waste Classification Guidelines, including VENM.
- A construction environmental management plan (CEMP) is prepared by the principal or earthworks contractor. The CEMP should consider the normal environmental issues that may occur during development such as but not limited to dust, noise, odour, vibration, safety and traffic and also include:
  - Waste management of soils (including fill) to ensure that are appropriately classified for disposal in accordance with the NSW EPA Waste Management Guidelines (Part 1 Classifying Waste); and
  - Provide unexpected finds protocols should any unexpected hydrocarbons contamination or hazardous materials are identified during site earthworks.
- Prior to construction, an additional groundwater monitoring event should be conducted to confirm groundwater results. The groundwater monitoring wells are to be surveyed to provide indicative groundwater flow direction.
- Any material being imported to the site (i.e. for landscaping purposes) should be assessed for potential contamination in accordance with NSW EPA guidelines as being suitable for the intended use or be classified as VENM.
- Preparation of a final site validation report by a suitably qualified environmental consultant, certifying the site suitability of soils and groundwater for future proposed land uses.

11. STATEMENT OF LIMITATIONS

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

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

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

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

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

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

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

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

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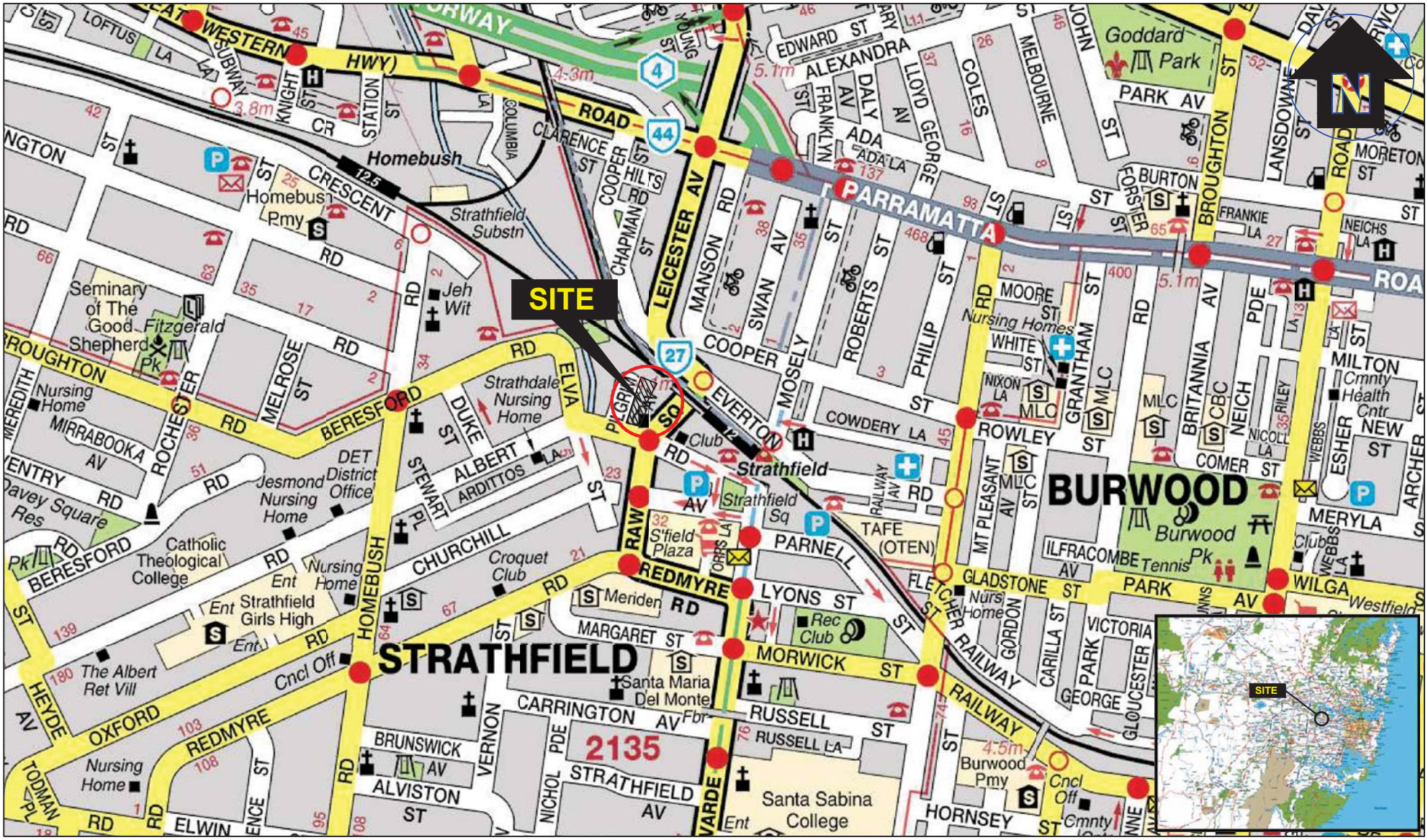
ABBREVIATIONS

ACM	Asbestos-Containing Materials
AHD	Australian Height Datum
ASS	Acid Sulfate Soils
AST	Above-ground Storage Tank
B(α)P	Benzo(α)Pyrene (a PAH compound)
BGL	Below Ground Level
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CCO	Chemical Control Order
COC	Chain of Custody
CSM	Conceptual Site Model
cVOC	Chlorinated Volatile Organic Compounds (a sub-set of the VOC suite)
DA	Development Application
DBYD	Dial Before You Dig
DO	Dissolved Oxygen
DP	Deposited Plan
DSI	Detailed Site Investigation
EC	Electrical Conductivity
EPA	Environment Protection Authority (of New South Wales)
F1	C_6-C_{10} TRH (less the sum of BTEX concentrations)
F2	>C_{10}-C_{16} TRH (less the concentration of naphthalene)
F3	TRH >C16-C34
F4	TRH >C34-C40
FCS	Fibre Cement Sheeting
FFL	Finished Floor Level
GIL	Groundwater Investigation Level
GIPA	Government Information Public Access
GME	Groundwater Monitoring Event
GSW	General Solid Waste
HDPE	High Density Polyethylene
HIL	Health-based Investigation Level
HSL	Health-based Screening Level
km	Kilometres
L	Litres
LEP	Local Environmental Plan
LGA	Local Government Area
LOR	Limit of Reporting (limit of reporting for respective laboratory method)
m	Metres
µg/L	Micrograms per Litre
mg/L	Milligrams per Litre
mV	Millivolts
N/A	Not Applicable
NATA	National Association of Testing Authorities, Australia
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NSW	New South Wales
OCP	Organochlorine Pesticides
OPP	Organophosphate Pesticides

PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
pH	Potential Hydrogen (a measure of the acidity or basicity of an aqueous solution)
PQL	Practical Quantitation Limit (limit of detection for respective laboratory method)
PSH	Phase-Separated Hydrocarbons
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance / Quality Control
Redox	Reduction-Oxidation Potential
RL	Relative Level
SAQP	Sampling and Analysis Quality Plan
SIL	Soil Investigation Level
SRA	Sample Receipt Advice (document confirming laboratory receipt of samples)
SWL	Standing Water Level
TEQ	Toxicity Equivalent Quotient
TPH	Total Petroleum Hydrocarbons (superseded term equivalent to TRH)
TRH	Total Recoverable Hydrocarbons (non-specific analysis of organic compounds)
UCL	Upper Confidence Limit (of the mean)
UPSS	Underground Petroleum Storage System
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VENM	Virgin Excavated Natural Material
VOC	Volatile Organic Compounds (specific organic compounds which are volatile)

Appendix A – Figures



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Scale:	Not To Scale

Convertia Pty Ltd
Additional Site Investigation
2-6 Pilgrim Avenue & 11-13 Albert Road, Strathfield, NSW
Site Locality Plan

Figure: 1

Project: E23668.E03

LEGEND (Note: All locations are approximate)

- Site boundary
- Basement boundary
- UST location
- Groundwater monitoring well location
- Borehole location

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Strathfield NSW
Sampling Location Plan

Figure: 2

Project: E23668.E03.Rev0

Appendix B – Tables

Table B.1 **Summary of Soil Analytical Results** **E23668 - Strathfield**

Sample ID	Material	Date	Heavy Metals								PAHs				BTEX				TRH				TPH		Pesticides		PCBs	Asbestos
			As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	Carcinogenic PAHs (as B(a)P TEQ)	Benzo(a)pyrene	Total PAHs	Naphthalene	Benzene	Toluene	Ethylbenzene	Total Xylenes	F1	F2	F3	F4	C_6-C_9	C_{10}-C_{36}	Total OCPs	Total OPPs	Total	Presence (Yes/No)
EI, 2018																												
BH101_0.3-0.4	Fill	23/1/2018	13	0.3	18	120	530	0.15	8.1	92	0.3	0.2	1	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<20	<110	<1	<1.7	<1	No
BH102_0.3-0.4			5	0.6	9.3	140	2,800	0.43	8.9	190	1.0	0.7	7.4	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<20	<110	<1	<1.7	<1	No
BH103_0.4-0.5			9	<0.3	11	27	72	<0.05	9.7	46	<0.3	0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<20	<110	<1	<1.7	<1	No
BH104_0.3-0.4			8	<0.3	14	67	350	0.08	4.9	83	0.6	0.4	4.4	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<20	<110	<1	<1.7	<1	No
BH105_0.3-0.4			6	<0.3	7.6	6.3	41	<0.05	1.4	9.1	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<20	<110	<1	<1.7	<1	No
BH101_1.0-1.1	Residual Soil		14	<0.3	22	19	33	<0.05	<0.5	13	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<20	<110	N.A.	N.A.	N.A.	N.A.
BH102_1.0-1.1			6	<0.3	31	14	110	<0.05	1.4	22	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<20	<110	N.A.	N.A.	N.A.	N.A.
BH103_1.0-1.1			4	<0.3	11	12	36	<0.05	1	18	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<20	<110	N.A.	N.A.	N.A.	N.A.
BH104_1.5-1.6			7	<0.3	19	17	39	<0.05	0.8	13	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<20	<110	N.A.	N.A.	N.A.	N.A.
EI, 2021																												
BH201-0.3-0.5	Fill	17/6/2021	12	< 0.4	35	9.3	63	< 0.1	< 5	22	<0.8	< 0.5	< 0.5	< 0.5	<0.1	<0.1	<0.1	<0.3	< 20	< 50	< 100	< 100	< 20	88	N.D.	N.D.	N.D.	No
BH202-0.3-0.5			9.2	< 0.4	28	55	220	< 0.1	6.8	27	<0.8	< 0.5	< 0.5	< 0.5	<0.1	<0.1	<0.1	<0.3	< 20	< 50	< 100	< 100	< 20	< 50	N.D.	N.D.	N.D.	No
BH203M-0.4-0.5		18/6/2021	9.6	< 0.4	24	39	180	< 0.1	8.2	61	<0.8	< 0.5	1.2	< 0.5	<0.1	<0.1	<0.1	<0.3	< 20	< 50	180	< 100	< 20	211	N.D.	N.D.	N.D.	No
BH201-3.8-4.0	Natural	17/6/2021	2.6	< 0.4	6.9	31	15	< 0.1	7.6	65	<0.8	< 0.5	< 0.5	< 0.5	<0.1	<0.1	<0.1	<0.3	< 20	58	190	< 100	< 20	288	N.A.	N.A.	N.A.	N.A.
BH204M-0.3-0.5			10	< 0.4	32	15	20	< 0.1	< 5	14	<0.8	< 0.5	< 0.5	< 0.5	<0.1	<0.1	<0.1	<0.3	< 20	< 50	< 100	< 100	< 20	< 50	N.D.	N.D.	N.D.	No
BH204M-1.8-2.0			22	< 0.4	31	29	32	< 0.1	< 5	15	<0.8	< 0.5	< 0.5	< 0.5	<0.1	<0.1	<0.1	<0.3	< 20	< 50	< 100	< 100	< 20	< 50	N.A.	N.A.	N.A.	N.A.
Statistical Analysis																												
Maximum Concentration			22	0.6	35	140	2800	0.43	9.7	190	1	0.7	7.4	< 0.5	<0.1	<0.1	<0.1	<0.3	< 20	58	190	< 100	< 20	288	<1	<1.7	<1	No
SILs																												
HIL B - Residential with Minimal Access to Soil			500	150	500 Cr (VI)	30,000	1,200	120	1,200	60,000	4		400														1	
HSL D - Commercial/ Industrial Soil texture classification – Clay [1]		Source depths (0 m to <1 m. BGL)												NL	4	NL	NL	NL	310	NL								
		Source depths (1 m to <2 m. BGL)												NL	6	NL	NL	NL	480	NL								
		Source depths (2m to <4 m. BGL)												NL	9	NL	NL	NL	NL	NL								
		Source depths (4 m+)												NL	20	NL	NL	NL	NL	NL								
Management Limits – *Residential, parkland and public open space* Fine grained soil texture[1]																			800	1,000	3,500	10,000						
Asbestos Contamination																												Detection

Notes:
All results are recorded in mg/kg (unless otherwise stated)
Highlighted values indicates concentration exceeds Human Health Based Soil Criteria

HIL B NEPC 1999 Amendment 2013 'HIL B' - Health based Residential with minimal opportunities for soil access including dwellings with fully and permanenetly paved yard space such as high-rise buildings and apartments.
HSL D NEPC 1999 Amendment 2013 'HSL D' Health Based Screening Levels based on vapour intrusion values applicable for commercial / industrial settings
NA Not Analysed' i.e. The sample was not analysed
NC Not Calculated'
ND Not Detected' i.e. all concentrations of the compounds within the analyte group were found to be below the laboratory limits of detection
NL Not Limiting' - The soil vapour limit exceeds the soil concentration at which the pore water phase cannot dissolve any more individual chemical
NR No current published Criterion
1 Fine grained soil values were applied for clay
F1 To obtain F1 subtract the sum of BTEX concentrations from the C6-C10 fraction
F2 To obtain F2 subtract Napthalene from the >C10-C16 fraction
F3 (>C16-C34)
F4 (>C34-C40)

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Table B.2 - Summary of Groundwater Analytical Results

Sample ID	Sampling Date	Metals								PAHs			BTEX					TRHs				VOCs			Total Phenols
		As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	Total PAHs	Benzo(a)pyrene	Naphthalene	Benzene	Toluene	Ethylbenzene	o-xylene	m/p-xylene	F1	F2	F3	F4	Bromodichloromethane	Chloroform	Other VOCs	
GB-H203M-1	21/6/2021	2	< 0.2	2	1	1	< 0.1	2	36	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 2	<20	<50	<100	<100	< 1	< 5	ND	ND
GB-H204M-1		2	< 0.2	2	1	1	< 0.1	2	36	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 2	<20	<50	<100	<100	1	10	ND	ND
Statistical Analysis																									
Maximum Concentration		2	< 0.2	2	1	1	< 0.1	2	36	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 2	<20	<50	<100	<100	1	10	ND	ND
GILs																									
HSL D - *Commercial / industrial* Soil texture classification – Clay	2m to <4m											NL	30,000	NL	NL	NL	NL	NL	NL						
	4m to <8m											NL	30,000	NL	NL	NL	NL	NL	NL						
	8m+											NL	35,000	NL	NL	NL	NL	NL	NL						
GILs	Fresh Waters [1]	24 (AsIII) 13 (AsV)	0.2	1 [3] (Cr VI)	1.4	3.4	0.06 [2]	11	8 [3]		0.1	16	950	180 [4]	80 [4]	350	275 [4]	50 [5]	60 [5]	500 [5]	500 [5]		370		320
	Marine Waters [1]		0.7 [2]	27 (Cr III) 4.4 (Cr IV)	1.3	4.4	0.1 [2]	7	15 [3]		0.1	50 [3]	500 [3]	180 [4]	5 [4]	350 [4]	275 [4]	50 [5]	60 [5]	500 [5]	500 [5]		370		400
	Recreational Water [6]	100	20		1,000 *	100	10	200	3,000*		0.1		10	25*	3*	20 *	20 *						2,500		

Notes:

Highlighted indicates values exceeded criteria

All values are µg/L unless stated otherwise

HSL D	NEPC 1999 Amendment 2013 'HSL D' Health Based Screening Levels for vapour intrusion applicable for commercial / industrial settings.
NL	Not Limiting
F1	To obtain F1 subtract the sum of BTEX concentrations from the C6-C10 fraction.
F2	To obtain F2 subtract naphthalene from the >C10-C16 fraction.
F3	(>C16-C34)
F4	(>C34-C40)
1	NEPM (2013) Groundwater Investigation Levels for fresh and marine water quality, based on ANZECC & ARMCANZ (2000).
2	Chemical for which possible bioaccumulation and secondary poisoning effects should be considered, refer to ANZG (2018) for further guidance.
3	Figure may not protect key species from chronic toxicity, refer to ANZECC & ARMCANZ (2000) for further guidance
4	Low reliability toxicity data, refer to ANZECC & ARMCANZ (2000)
5	In lack of a criteria the laboratory PQL has been used (DEC, 2007).
6	Based on NHMRC (2011 - update August 2018 v.3.5) Drinking Water Guidelines. The lowest of the Health Guideline x10 or the Aesthetic Guideline has been chosen as the assessment criteria. Aesthetic based criteria have been indicated by *

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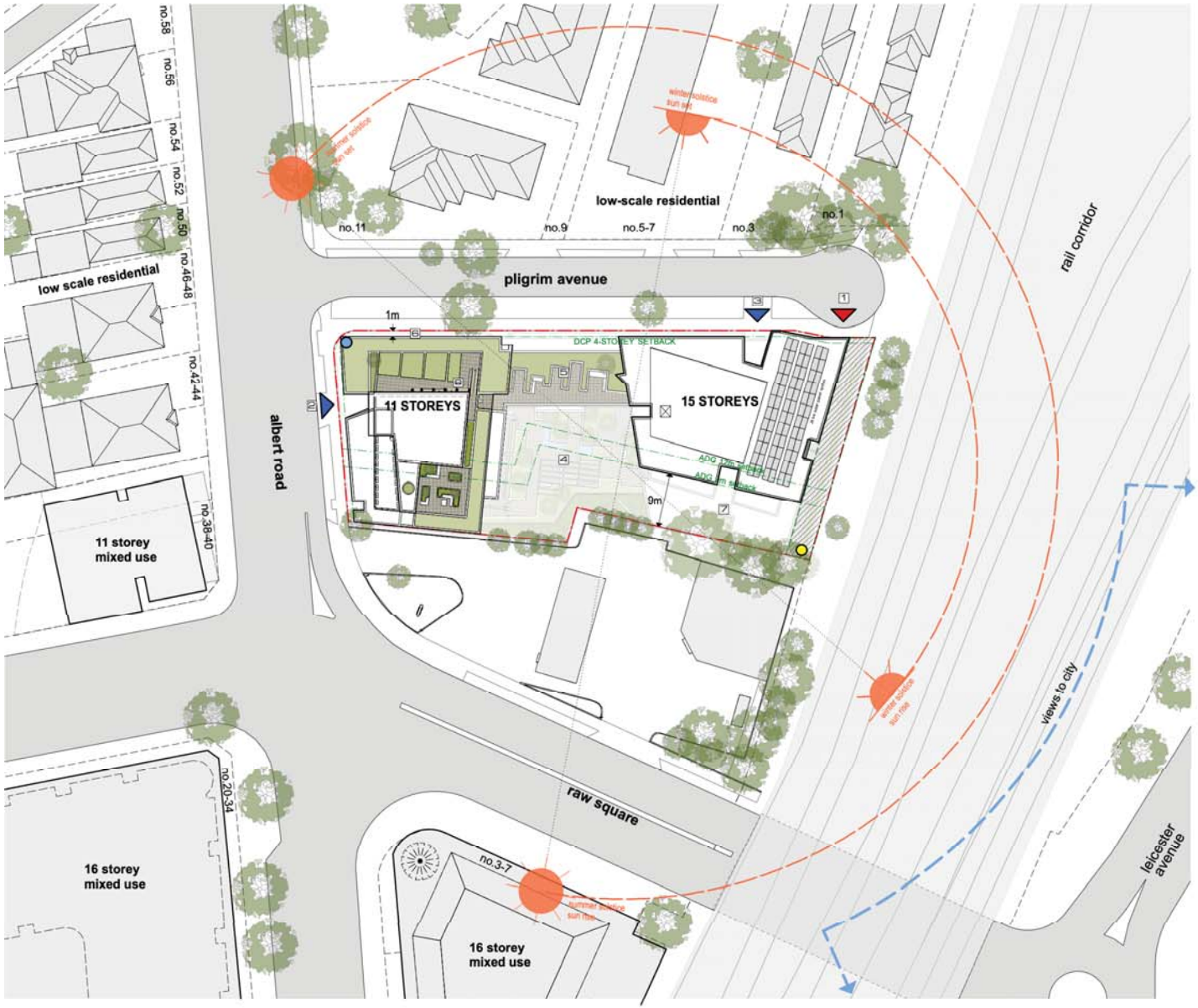
Appendix C – Proposed Development Plans



LEGEND

1. **vehicular access**
   vehicular access to development via Pilgrim avenue
2. **pedestrian access**
   pedestrian access to building A
3. **pedestrian access**
   pedestrian access to building P
4. **communal open space (L01)**
5. **communal open space (L05)**
6. **1 m setback**
   to provide the required setback by DCP R4 zone
7. **9 m setback**
   to provide 18 meter building separation between habitable rooms in buildings up to 8 storeys recommended by ADG
8. **communal open space (L11)**

- **pedestrian entry**
- **vehicular entry**
- **high point on site (RL 10.480)**
- **low point on site (RL 9.030)**

0 5 10 25m
1:500@A2

design analysis - 01 - site plan

proposed development

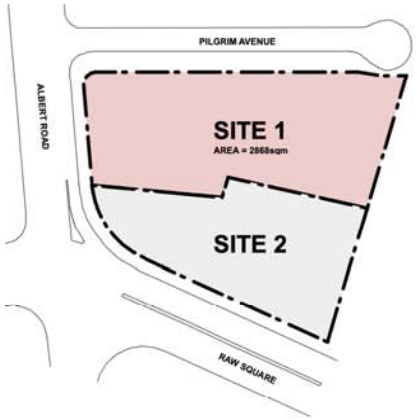
DA AMENDMENTS - 17.06.21

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

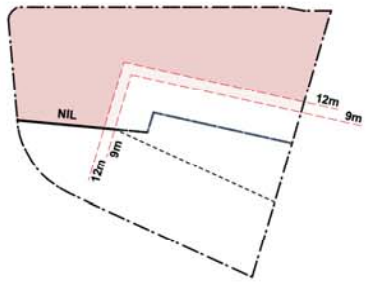
1361 — DA 07 F

F 17/6/21 DA amendments

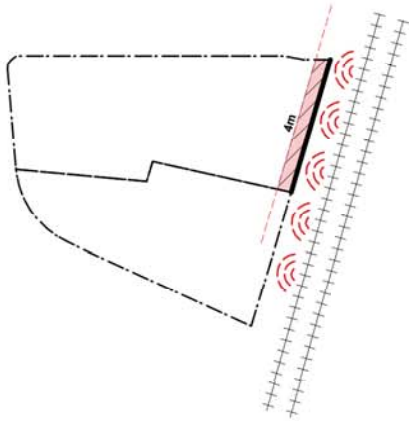


SITE
SITE 1 of 2 under DCP

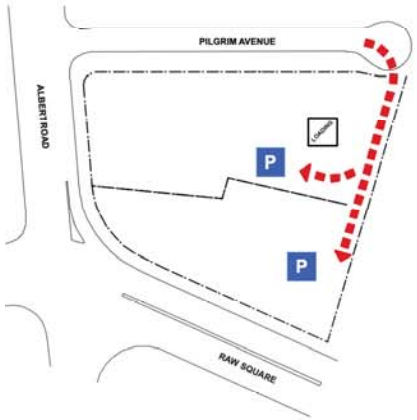
HEIGHT (STOREYS)



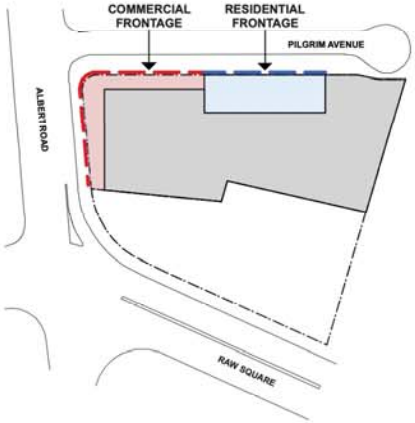
ADG SETBACKS



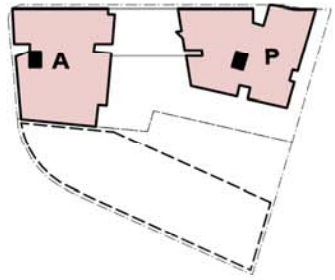
RAIL CORRIDOR BUFFER



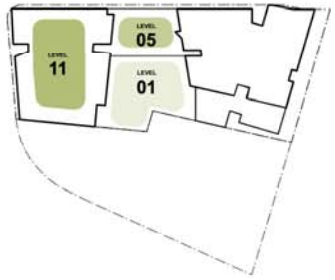
VEHICULAR ACCESS



ACTIVATION



ORGANISATION



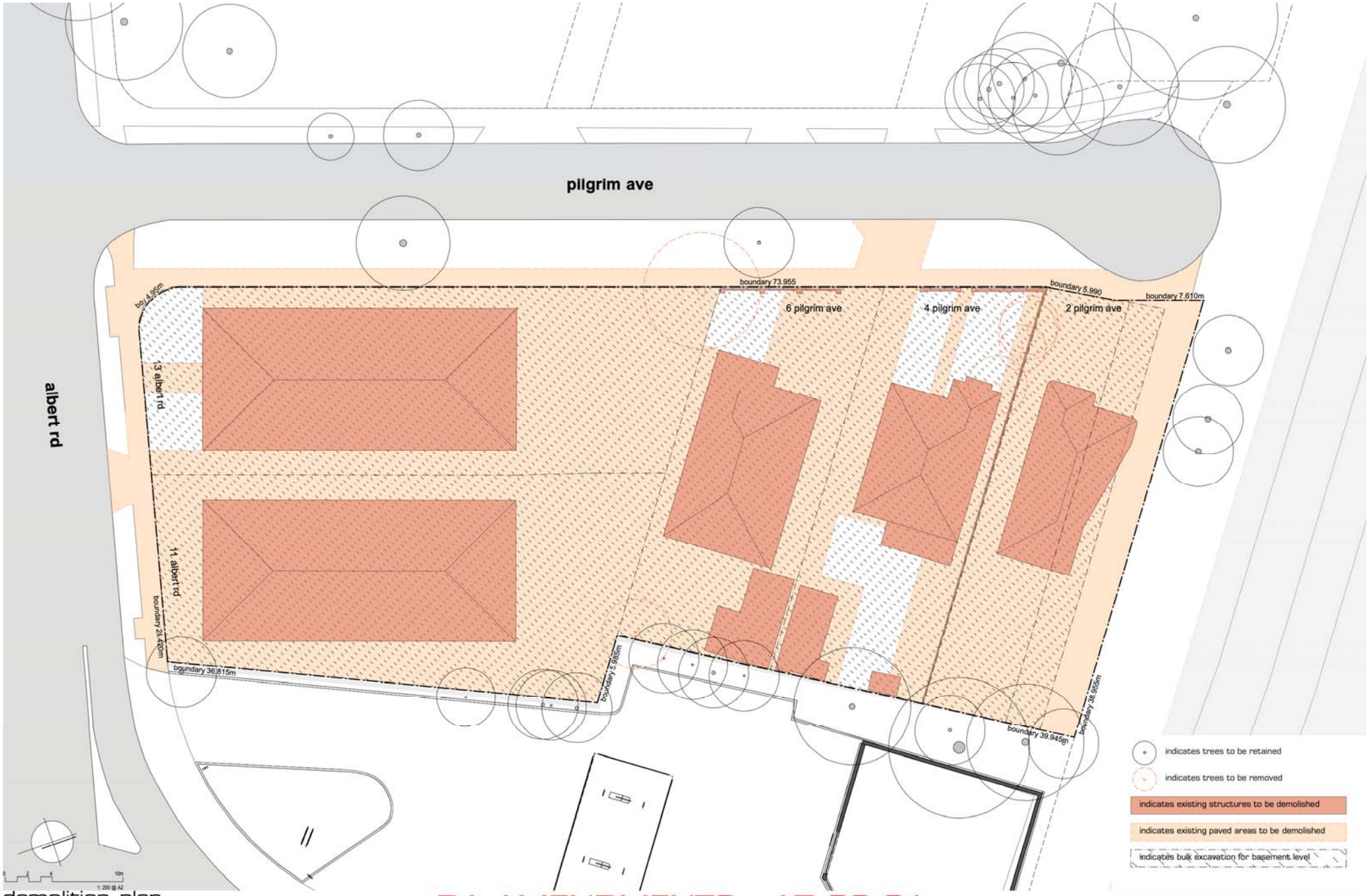
COMMUNAL OPEN SPACE

0 5 10 25m
1:500@A2

design analysis - 03 - program
proposed development

DA AMENDMENTS - 17.06.21

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828



demolition plan

proposed development

DA AMENDMENTS - 17.06.21

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 — DA 11 F

F 17/6/21 DA amendments

proposed basement 04

proposed development

DA AMENDMENTS - 17 .06 .21

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 – DA 12 F

F 17/6/21 DA amendments

proposed basement 03

proposed development

DA AMENDMENTS - 17 .06 .21

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 – DA 13 F

F 17/6/21 DA amendments

proposed basement 02

proposed development

DA AMENDMENTS - 17 .06 .21

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 – DA 14 F

F 17/6/21 DA amendments

proposed basement 01

proposed development

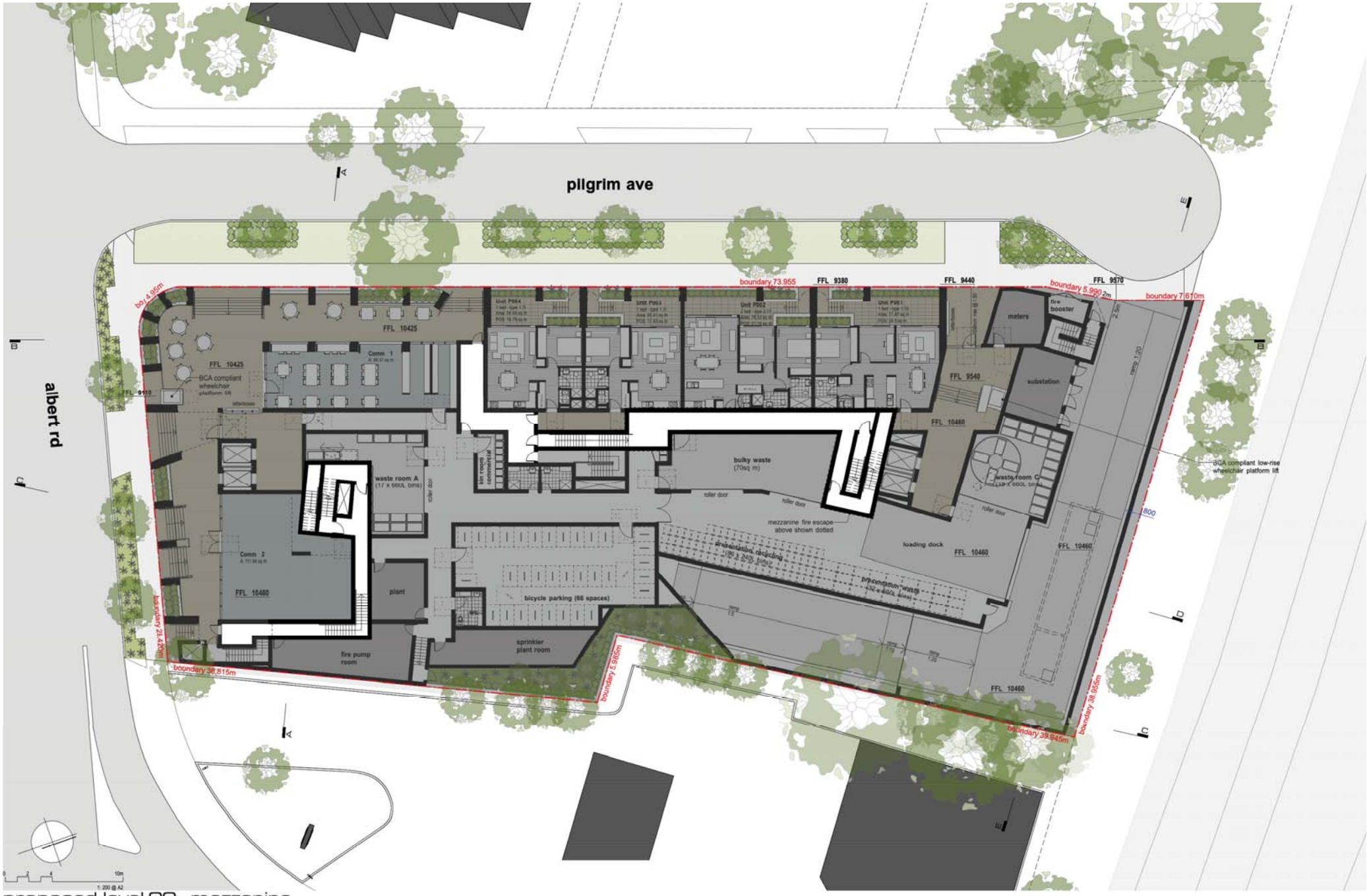
DA AMENDMENTS - 17 .06 .21

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 – DA 15 F

F 17/6/21 DA amendments



proposed level 00 - mezzanine

proposed development

DA AMENDMENTS - 17 .06 .21

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 – DA 16.1 F

F 17/6/21 DA amendments

proposed level 00

proposed development

DA AMENDMENTS - 17 .06 .21

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 – DA 16 F

F 17/6/21 DA amendments

proposed level 01

proposed development

DA AMENDMENTS - 17 .06 .21

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 – DA 17 F

F 17/6/21 DA amendments

face brick
La Paloma
'Miro'

concrete
off form finish
colour - off white

concrete
off form finish
colour - mid grey

bifold screens, window & door frames
powdercoated aluminium
colour - silver

balustrades
clear glass within powdercoated aluminium frame
Colorbond
'surfmist'

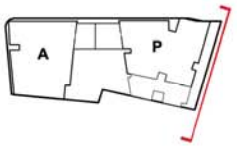
balustrades
powdercoated aluminium
Colorbond
'surfmist'

vertical fin screens
powdercoated aluminium
colour - silver

textured concrete
textured precast concrete panels

vertical planting
stainless steel wire trellis

materials palette
project materials shall be similar or equal to selections itemised above



0 2 4 10m
1: 200 @ A2

NE elevation (rail corridor)

proposed development

DA AMENDMENTS - 17.06.21

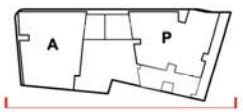
1361 : DA ELEVATION .vwx

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 — DA 32 F

F 17/6/21 DA amendments



materials palette
project materials shall be similar or equal to selections itemised above

0 2 4 10m
1: 200 @ A2

SE elevation (raw square)

proposed development

DA AMENDMENTS - 17.06.21

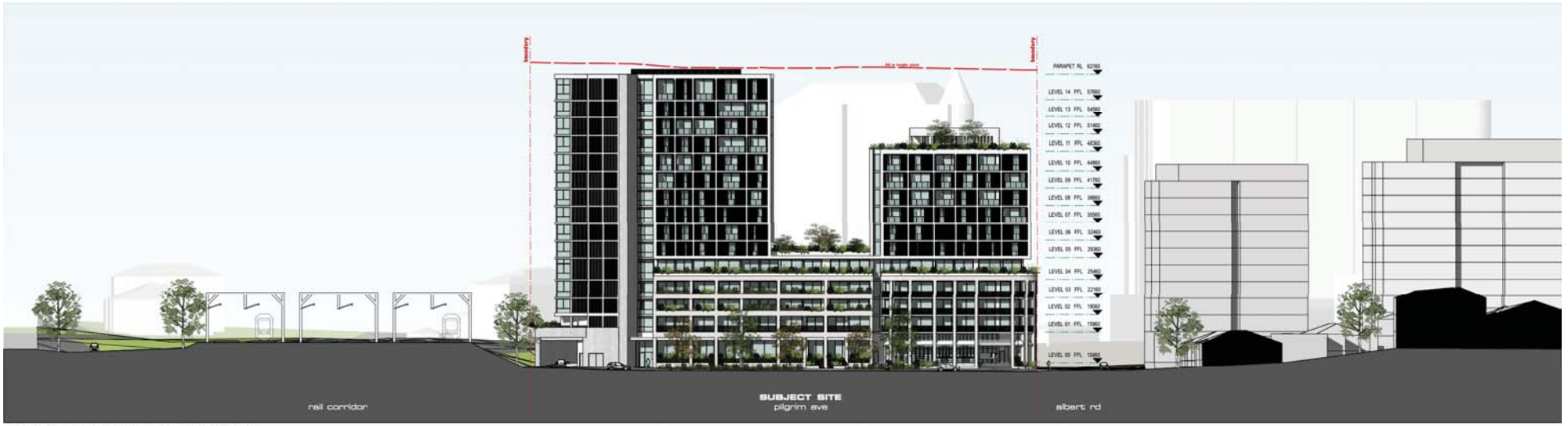
1361 | DA ELEVATION | rev F

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 — DA 33 F

F 17/6/21 DA amendments



PILGRIM AVENUE ELEVATION

RAW SQUARE ELEVATION

1:500 @ A2

streetscape elevations 01

proposed development

DA AMENDMENTS - 17.06.21

11-13 Albert Road, STRATHFIELD

kennedy associates architects level 3 / 1 booth street annandale 2038 p + 61 2 9557 6466 f + 61 2 9557 6477 nominated architect - steve kennedy - registration no. 5828

1361 — DA 35 F

F 17/6/21 DA amendments

Appendix D – Site Photographs

Photograph 1: Drilling at BH201 (17/06/2021).

Photograph 2: Drilling at BH204M (17/06/2021).

Appendix E – Borehole Logs

BOREHOLE: BH201

eiaustralia
Contamination | Remediation | Geotechnical

Project	Additional Site Investigation			Sheet	1 OF 1
Location	11-13 Albert Road + 2-6 Pilgrim Ave, Strathfield, NSW			Date Started	17/6/21
Position	Refer to Figure 2			Date Completed	17/6/21
Job No.	E23668.E03	Contractor	Geosense	Logged TZ	Date:
Client	Convertia Pty Ltd	Drill Rig	Commachio Geo 205	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	CONCRETE: 150mm thickness.	M	-	CONCRETE
				0.15				-	FILL: CLAY; high plasticity, medium brown, with trace gravels, no odour.			FILL
			0.5		BH201_0.3-0.5 PID = 2.3 ppm							
				0.70				CH	CLAY: high plasticity, red with yellow mottling, no odour.			RESIDUAL SOIL
			1.0		BH201_0.8-1 PID = 1.7 ppm							
				1.40				CH	CLAY: high plasticity, grey with red mottling, with trace weathered shale, no odour.			
			1.5		BH201_1.6-2 PID = 0.8 ppm							
			2.0									
				2.40				CL	CLAY: low plasticity, red to dark grey, with weathered shale, no odour.	M - D		
			2.5		BH201_2.6-3 PID = 0.3 ppm							
			3.0									
				3.20				CL	CLAY: low plasticity, red to dark grey, with weathered shale, no odour.	D		
			3.5		BH201_3.8-4 PID = 1.2 ppm							
			4.0		BH201_4.1-4.3 QD1/QT1 PID = 1.2 ppm							
				4.30					Borehole Terminated at 4.30 mBGL; Refusal on shale.			
			4.5									
			5.0									

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

BOREHOLE: BH202

eiaustralia
Contamination | Remediation | Geotechnical

Project	Additional Site Investigation			Sheet	1 OF 1
Location	11-13 Albert Road + 2-6 Pilgrim Ave, Strathfield, NSW			Date Started	17/6/21
Position	Refer to Figure 2			Date Completed	17/6/21
Job No.	E23668.E03	Contractor	Geosense	Logged TZ	Date:
Client	Convertia Pty Ltd	Drill Rig	Commachio Geo 206	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0	0.15				-	CONCRETE: 150mm thickness.			CONCRETE
								-	FILL: CLAY; low to medium plasticity, dark grey to black, with foreign material of bricks, no odour.			FILL
				0.50	BH202_0.3-0.5 PID = 1.3 ppm			CL-CI	CLAY: low to medium plasticity, red with yellow mottling, no odour.			RESIDUAL SOIL
			1		BH202_0.8-1 PID = 3.8 ppm							
				1.40				CI-CH	CLAY: medium to high plasticity, light brown, to medium grey, with trace weathered shale, no odour.			
			2		BH202_1.8-2 PID = 2.1 ppm							
				2.20				CI-CH	CLAY: medium to high plasticity, light brown mottled grey, with trace weathered shale, no odour.	M	-	
			3		BH202_2.8-3 PID = 0.8 ppm							
				3.60				CL	CLAY: low plasticity, dark grey to black with brown mottling, and weathered shale, no odour.			
			4		BH202_3.8-4 PID = 3 ppm							
				4.70	BH202_4.5-4.7 PID = 0.3 ppm				Borehole Terminated at 4.70 mBGL; Refusal on shale.			
			5									
			6									

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

BOREHOLE: BH203M

eiaustralia
Contamination | Remediation | Geotechnical

Project	Additional Site Investigation			Sheet	1 OF 1
Location	11-13 Albert Road + 2-6 Pilgrim Ave, Strathfield, NSW			Date Started	18/6/21
Position	Refer to Figure 2			Date Completed	18/6/21
Job No.	E23668.E03	Contractor	Geosense	Logged TZ	Date:
Client	Convertia Pty Ltd	Drill Rig	Commachio Geo 207	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	PIEZOMETER DETAILS ID / Static Water Level
AD/T	-	21/06/21	0	0.50	BH203M_0.4-0.5			-	FILL: Gravelly SILT; mottled dark brown to dark grey, fine trace of sand and organics, no odour.	M		
					BH203M_0.9-1			-	Silty CLAY: brown mottledred to grey, with trace sand and trace gravels, no odour.			
			2	2.10	BH203M_1.9-2			C	CLAY: grey mottled brown to red, no odour.			
					BH203M_2.9-3							
			4	4.10	BH203M_3.9-4			-	SHALE: extremely weathered rock, no odour.			
RAB			6									
			8									
			10									
			12	13.10					Borehole Terminated at 13.10 mBGL; Refusal on shale.			
			14									

PIEZOMETER DETAILS: Grout Bentonite Concrete; uPVC 50 mm Casing; Bentonite; Sand; uPVC 50 mm Screen

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

BOREHOLE: BH204M

eiaustralia
Contamination | Remediation | Geotechnical

Project	Additional Site Investigation			Sheet	1 OF 1
Location	11-13 Albert Road + 2-6 Pilgrim Ave, Strathfield, NSW			Date Started	17/6/21
Position	Refer to Figure 2			Date Completed	17/6/21
Job No.	E23668.E03	Contractor	Geosense	Logged TZ	Date:
Client	Convertia Pty Ltd	Drill Rig	Commachio Geo 208	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description						
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	PIEZOMETER DETAILS ID / Static Water Level
AD/T	-	21/06/21	0	0.15				-	CONCRETE: 150mm thickness.			
					BH204M_0.3-0.5 PID = 4.8 ppm			CL	CLAY: low plasticity, red with brown mottling, with weathered shale, no odour.			
					BH204M_0.8-1							
				1.40	PID = 3.6 ppm			CL	CLAY: low plasticity, red with grey mottling, with weathered shale, no odour.			
			2		BH204M_1.8-2							
				2.20	PID = 5.5 ppm			CL	CLAY: low plasticity, light brown, with light grey mottling, with weathered shale, no odour.			
			4		BH204M_3.8-4 PID = 0.7 ppm							uPVC 50 mm Casing
				4.80				CL	CLAY: low plasticity, dark grey, with weathered shale, no odour.			Grout Bentonite Concrete
				5.50	BH204M_5.3-5.5 PID = 1.3 ppm			-	SHALE: no odour.			
WB			6							M	-	
			8									Bentonite
RAB			10	10.00					From 10m, Hydrocarbon odour present.			uPVC 50 mm Screen Sand
			12									
				13.00					Borehole Terminated at 13.00 mBGL; Target depth reached.			
			14									

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

Appendix F – Calibration Forms and Field Data Sheets

eiaustralia
Contamination | Remediation | Geotechnical

Water Quality Meter Calibration Log

Instrument: EI WQM 006 (Hanna Multi Parameter 98194 – Serial no. 05410010101)

Room Temperature: 23.0°

Sensor (Unit of measure)	Standard Solutions Used (Item Code / Name)	Solution Batch Number	Temperature Adjusted Calibration Solution Value	Instrument Reading	
				Initial	Post Calibration
DO Saturation (%)	Ambient Air	N/A	100%	100%	100%
	Sodium metabisulfate ~~Lot: BC~~	Lot: BCBT5824	0.0%	~~1.5%~~ 0.8%	0.0%
Temperature (°C)	Thermometer	N/A	22.9°	22.2°	22.8°
Conductivity (µs/cm)	HI7031	Lot: 3424	1413 µs/cm	1950 µs/cm	1950 µs/cm
	HI7030	Lot: 4505	12880 µs/cm	13840 µs/cm	13860 µs/cm
pH	HI7007	Lot: ~~5108~~	7.01	6.86	~~6.86~~ 7.03
	HI7004	Lot: 4663	4.01	4.23	4.05
	HI7010	Lot: 3726	10.01	9.92	10.04
ORP (mV)	HI7021	Lot: 4318	240 mV	227.1 mV	227.9 mV

Calibrated by: LW / ES

Calibration Date: 17/6/21

Next Calibration Due: 17/7/21

Notes:

- pH probe placed in cleaning solution overnight.
- pH solution HI7007 replaced.

WATER SAMPLING FIELD SHEET

eiaustralia

Site Address:	11-13 Albert Rd + 2-6 Pilgram Ave, Strathfield	Job Number:	E23668
Client:	Convertia	Date:	21/6/21
Field Staff:	AS, TB	Sampling Location ID:	BH203W
Well Location:	2-6 Pilgrim Ave,	Round No:	1

MEDIUM ☑Groundwater ☐Surface Water ☐Stormwater ☐Other:

SAMPLING POINT INFO

Well Installation Date:	17/6/21	Stick up / down (m):	−0.12 (+ above ground - below ground)
Initial Well Depth (mBTOC):	13.00m	Screen Interval (mBTOC):	N.00–13.00
Previous Sampling Date:	none	Previous SWL (mBTOC):	

~~PID READINGS~~

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

PRE PURGE

Total Well Depth (mBTOC):	13.00	Well Head Condition:	good
SWL (mBTOC):	7.27	Water Column (m):	5.73

~~PHASE SEPARATED HYDROCARBONS (PSH)~~

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

Field Filtered

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

PURGE AND SAMPLE

Sampling Method ☑Bladder ☐Peristaltic ☐Submersible ☐Other:

Depth of Pump Inlet (mBTOC):	12.5	Fill Timer:	2.5
Pump Pressure Regulator (psi):	30	Discharge Timer:	5
Weather Conditions:	Raining	Cycle:	cpm 2
Pump on time:	1:24	Pump off time:	1:48

WATER QUALITY PARAMETERS

Probe Make and Model: WQM006 Bump Test Date and Time:

Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
1:26	0.5	7.30	18.86	5713	55	0	7.17	grey, high turbidity, No Odour, No sheen
1:28	1.0	7.30	18.45	6086	25.8	0	7.76	↓
1:30	1.5	7.30	20.21	6015	48.6	0	6.92	
1:32	2.0	7.30	20.35	6015	45.8	80.32	6.76	grey/brown, high, no, no
1:34	2.5	7.30	20.47	6005	42.2	0.40	6.65	
1:36	3.0	7.30	20.48	5488	44.9	0.28	6.58	
1:38	3.5	7.30	20.49	5977	43.5	0.22	6.51	
1:40	4.0	7.30	20.55	5971	46.3	0.17	6.46	
Stabilisation range: 3 consecutive readings			±0.2°C	±3%	±20mV	±10%	±0.2	

OTHER COMMENTS/OBSERVATIONS:

GW-QA/QC taken by running off low flow pump

SIGNATURE:

WATER SAMPLING FIELD SHEET

eiaustralia

Site Address:	11-13 Albert Rd + 2-6 Pilgram Ave, Strathfield	Job Number:	E23668
Client:	Convertia	Date:	21/6/21
Field Staff:	AS. TB.	Sampling Location ID	BH204W
Well Location:	2-6 Pilgrim Ave carpark	Round No:	1
MEDIUM	☑Groundwater ☐Surface Water	☐Stormwater	☐Other:
SAMPLING POINT INFO			
Well Installation Date:	17/6/21	Stick up / down (m):	-0.09 (+ above ground - below ground)
Initial Well Depth (mBTOC):	13.0 m	Screen Interval (mBTOC):	9.95 - 12.95
Previous Sampling Date:	N/A	Previous SWL (mBTOC):	dry
PID READINGS			
PID Headspace (ppm):		PID Background (ppm):	
PID Breathing Space (ppm):			
PRE PURGE			
Total Well Depth (mBTOC):	12.95	Well Head Condition:	good
SWL (mBTOC):	8.05	Water Column (m):	4.90
PHASE SEPARATED HYDROCARBONS (PSH)			
Depth to PSH (mBTOC):		PSH Visually Confirmed (Bailer):	
PSH Thickness (mm):			
Field Filtered			
Yes (0.45 µm)	☒	No ☐	(Request lab 0.45 µm filter the sample)
PURGE AND SAMPLE			
Sampling Method	☒Bladder ☐Peristaltic ☐Submersible	☐Other:	
Depth of Pump Inlet (mBTOC):	12.45	Fill Timer:	10/25
Pump Pressure Regulator (psi):	25	Discharge Timer:	5/5
Weather Conditions:	Overcast/Rain	Cycle:	CBM4/2
Pump on time:	12:28	Pump off time:	12:50
WATER QUALITY PARAMETERS			
Probe Make and Model:	WQM006	Bump Test Date and Time:	

Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
CBM4 12:31	1.0	8.10	19.81	12.27	100.3	0	6.92	grey, muddy, high turbidity. No odour, no sheen
12:32	1	8.57	19.94	10.74	87.8	2.31	6.69	
CBM2 12:34	1.5	8.75	19.85	10.68	84.8	0.78	6.65	
12:36	2.0	8.82	19.79	10.65	90.0	0.78	6.61	
12:38	2.5	8.85	19.79	10.66	89.7	0.69	6.60	
Stabilisation range: 3 consecutive readings			±0.2°C	±3%	±20mV	±10%	±0.2	

OTHER COMMENTS/OBSERVATIONS:

GW-QD1/GW-QT1 taken. Changed to CBM2 @12:32

SIGNATURE:

Appendix G – Chain of Custody and Sample Receipt Documentation

Sheet 1 of 1

Site: 2-6 Pilgrim ~~Aven~~ Avenue and 9-14 Albert Road Strathfield

Project No: E23668

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

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM A /TRH/BTEX/PAHs	HM A /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS				TCLP HM B / PAH
BH200-QT	1	J	18/06/21			X				X													

Comments

HM A: Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Zinc

HM B: Arsenic, Cadmium, Chromium, Lead, Mercury, Nickel

Dewatering Suite: pH & EC, TDS / Turbidity NTU, Hardness, Total Cyanide, Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn), TRH (F1, F2, F3, F4), BTEX, PAH, Total Phenol

LABORATORY TURNAROUND

- ☐ Standard
- ☐ 24 Hours
- ☒ 48 Hours
- ☐ 72 Hours
- ☐ Other____

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

Job No: 272095
Date Received: 18/6/2021
Time Received: 1625
Received By: R
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

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

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

Sampler's Name (EI):	Received by (Envirolab)
Print: Ted Zhang	Print: May
Signature	Signature: [signature]
Date: 18/06/21	Date: 18/6/2021

Report with EI Waste Classification Table ☐

Sampler's Comments: Please send the ~~ser~~ report to Joel and Lance chen

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

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

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	EI Australia
Attention	Lab Email

Sample Login Details

Your reference	E23668, Strathfield
Envirolab Reference	272095
Date Sample Received	18/06/2021
Date Instructions Received	18/06/2021
Date Results Expected to be Reported	22/06/2021

Sample Condition

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

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	Acid Extractable metalsin soil
BH200-QT	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Sheet 1 of 1

Site: 2-8 Pilgrim Ave and 9-14 Albert Road, Strathfield

Project No: E23468

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

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	SOIL	WATER	0.45 µm field filtered	OTHER	HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride			TCLP HM [B] /PAH
GW-QT1	1	S, P, VC	21/06/2021			X					X																

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

Job No: 272273

Date Received: 22/6/21

Time Received: 1452

Received By: CM

Temp: Cool/Ambient

Cooling: Ice/icepack

Security: Intact/Broken/None

Comments

HM [A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH

LABORATORY TURNAROUND

- ☐ Standard
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ 72 Hours
- ☐ Other____

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

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

COC March 2018 FORM v.5 - Envirolab

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

Sampler's Name (EI):	Received by (Envirolab):
Print Joel Hohinger	Print emmiem
Signature	Signature CM
Date 22/06/2021	Date 22/6/21 1452

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

Report with EI Waste Classification Table ☐

Sampler's Comments:
Please also copy Linda to

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	EI Australia
Attention	Linda Xiao

Sample Login Details

Your reference	E23668,2-8 Pilgrim Ave& 9-14 Albert Rd,Strathfield
Envirolab Reference	272273
Date Sample Received	22/06/2021
Date Instructions Received	22/06/2021
Date Results Expected to be Reported	23/06/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 water
Turnaround Time Requested	1 day
Temperature on Receipt (°C)	19
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

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

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Sheet 1 of 13

Site: 2-6 Pilgrim Ave, Strathfield NSW

Project No: E23668

Laboratory: EUROFINS, 16 Mars Road, Lane Cove NSW

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHER	Analysis: HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM A /TRH/BTEX/PAHs	HM A /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	Sulphates	Chlorides	HOLD	TCLP HM A / PAH
BH201_0.3-0.5		J, ZLB	17/06/21	AM/PM		X		X															
BH201_0.8-1.0		↓	↓	↓		↓																	
BH201_1.8-2.0																						X	
BH201_2.8-3.0																						X	
BH201_3.8-4.0									X													X	
BH201_4.1-4.3		↓																					
BH200_QD		J								X												X	
~~BH200_QT~~																							
BH202_0.3-0.5		J, ZLB						X															
BH202_0.8-1.0		↓																					
BH202_1.8-2.0																						X	
BH202_2.6-3.0		↓	↓	↓		↓																X	

Comments

HM A
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM B
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH

LABORATORY TURNAROUND

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

Container Type:
= solvent washed, acid rinsed, Tefton sealed glass jar
= solvent washed, acid rinsed glass bottle
= natural HDPE plastic bottle
C = glass vial, Tefton Septum
LB = Zip-Lock Bag

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

Sampler's Name (EI): TZ/CM

Print: Clare Madigan

Signature: Cmadigan

Date: 18-6-21

Received by (~~SGS~~):

Print: M H

Signature:

Date: 18/06/21 3:05 pm

Report with EI Waste Classification Table ☐

Sampler's Comments:
please send to Joel + Ted Zhang.

[redacted]

Report N # 803985

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

COC March 2018 FORM v.4 - SGS

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

Sheet 2 of 3

Site: AS Past Park

Project No: E23668

Laboratory: EUROFINS

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	WATER	SOIL	OTHER	HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM A /TRH/BTEX/PAHs	HM A /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	Sulphates	Chlorides	f1 OL 0	TCLP HM A / PAH
BH202_3.8-4.0		J, ZLB	17/06/21	AM/PM		X																X	
BH202-4.5-4.7																						X	
BH204M_0.3-0.5								X															
BH204M_0.8-1.0																						X	
BH204M_1.8-2.0									X														
BH204M_2.8-3.0																						X	
BH204M_3.8-4.2																						X	
BH204M_5.3-5.5																						X	
BH200-RS		SPVC			X					X													
TB		Lab Prepared			X	X					X												
TS						X					X												

Sample Matrix: WATER, SOIL, OTHER

Analysis: HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos; HM A /TRH/BTEX/PAHs; HM A /TRH/BTEX; BTEX; VOCs; Asbestos; Asbestos Quantification; pH / CEC (cation exchange); pH / EC (electrical conductivity); Dewatering Suite; sPOCAS; PFAS; Sulphates; Chlorides; f1 OL 0; TCLP HM A / PAH

Comments

HM A
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM B
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH

LABORATORY TURNAROUND

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

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

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Contamination | Remediation | Geotechnical

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

COC March 2018 FORM v.4 - SGS

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

Sampler's Name (EI): TZ/-CM	Received by (SGS):
Print: Clare Madigan	Print: M·H
Signature: C Madigan	Signature:
Date: 18-6-21	Date: 18,06,21 3:05pm

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

Report with EI Waste Classification Table ☐

Sampler's Comments:

Report № 803985

Sheet 3 of 3

Site: As last page.

Project No: E23166

Laboratory: EUROFINS

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	WATER	SOIL	OTHER	HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM A /TRH/BTEX/PAHs	HM A /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	Sulphates	Chlorides	HOLD	TCLP HM A / PAH
BH203_0.4-0.5		T	18/06/21	AM/PM		X		X															
BH203_0.9-1.0																							
BH203_1.9-2.0																						X	
BH203_2.9-3.0																						X	
BH203_3.9-4.0																						X	
																						X	

Comments

HM A
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM B
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH

LABORATORY TURNAROUND

- ☐ Standard
- ☐ 24 Hours
- ☒ 48 Hours
- ☐ 72 Hours
- ☐ Other_____

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

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

COC March 2018 FORM v.4 - SGS

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

Sampler's Name (EI): TZ/-cm

Print: Clare Madigan

Signature: cmadigan

Date: 18-6-21

Received by (SGS):

Print: M H Report N# 803980

Signature:

Date: 18/06/21 3:05pm

Report with EI Waste Classification Table ☐

Sampler's Comments:

⊛ = samples do not have 2LB.
please sample asbestos from jar.

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

eurofins | Environment Testing

ABN: 50 005 085 521 www.eurofins.com.au EnviroSales@eurofins.com

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

New Zealand

Auckland
35 O'Rorke Road
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:	EI Australia
Contact name:	Clare Madigan
Project name:	2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID:	E23668
Turnaround time:	2 Day
Date/Time received	Jun 18, 2021 3:05 PM
Eurofins reference	803985

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	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 BH202-2.6-3.0 received as BH202-2.8-3.0, logged as per COC.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Elvis Dsouza on phone : or by email: ElvisDsouza@eurofins.com

Results will be delivered electronically via email to Clare Madigan - clare.madigan@eiaustralia.com.au.

Global Leader - Results you can trust

eurofins | Environment Testing

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

New Zealand

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: EI Australia
Address: Suite 6.01, 55 Miller Street
Pyrmont
NSW 2009

Project Name: 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID: E23668

Order No.:
Report #: 803985
Phone: 02 9516 0722
Fax:

Received: Jun 18, 2021 3:05 PM
Due: Jun 22, 2021
Priority: 2 Day
Contact Name: Clare Madigan

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins Suite B7	Eurofins Suite B6	BTEX	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	BH201-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36775			X				X
2	BH202-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36776			X				X
3	BH204M-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36777			X				X
4	BH203-0.4-0.5	Jun 17, 2021		Soil	S21-Jn36778			X				X
5	BH201-3.8-4.0	Jun 17, 2021		Soil	S21-Jn36779			X	X			
6	BH204M-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36780			X	X			
7	BH200-QD	Jun 17, 2021		Soil	S21-Jn36781			X		X		
8	BH200-RS	Jun 17, 2021		Water	S21-Jn36782					X		

eurofins | Environment Testing

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

New Zealand

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: EI Australia
Address: Suite 6.01, 55 Miller Street
Pyrmont
NSW 2009

Project Name: 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID: E23668

Order No.:
Report #: 803985
Phone: 02 9516 0722
Fax:

Received: Jun 18, 2021 3:05 PM
Due: Jun 22, 2021
Priority: 2 Day
Contact Name: Clare Madigan

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins Suite B7	Eurofins Suite B6	BTEX	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
9	TRIP SPIKE	Jun 17, 2021		Soil	S21-Jn36783						X	
10	TRIP SPIKE LAB	Jun 17, 2021		Soil	S21-Jn36784						X	
11	TRIP BLANK	Jun 17, 2021		Soil	S21-Jn36785		X					
12	BH202-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36786	X						
13	BH201-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36787	X						
14	BH201-2.8-3.0	Jun 17, 2021		Soil	S21-Jn36788	X						
15	BH201-4.1-4.3	Jun 17, 2021		Soil	S21-Jn36789	X						
16	BH202-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36790	X						
17	BH204M-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36791	X						

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ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

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Phone : 0800 856 450
IANZ # 1290

Company Name: EI Australia
Address: Suite 6.01, 55 Miller Street
Pyrmont
NSW 2009

Project Name: 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID: E23668

Order No.:
Report #: 803985
Phone: 02 9516 0722
Fax:

Received: Jun 18, 2021 3:05 PM
Due: Jun 22, 2021
Priority: 2 Day
Contact Name: Clare Madigan

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins Suite B7	Eurofins Suite B6	BTEX	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
18	BH202-2.6-3.0	Jun 17, 2021		Soil	S21-Jn36792	X						
19	BH202-3.8-4.0	Jun 17, 2021		Soil	S21-Jn36793	X						
20	BH202-4.5-4.7	Jun 17, 2021		Soil	S21-Jn36794	X						
21	BH204M-2.8-3.0	Jun 17, 2021		Soil	S21-Jn36795	X						
22	BH204M-3.8-4.2	Jun 17, 2021		Soil	S21-Jn36796	X						
23	BH204M-5.3-5.5	Jun 17, 2021		Soil	S21-Jn36797	X						
24	BH203-0.9-1.0	Jun 17, 2021		Soil	S21-Jn36798	X						
25	BH203-1.9-2.0	Jun 17, 2021		Soil	S21-Jn36799	X						
26	BH203-2.9-3.0	Jun 17, 2021		Soil	S21-Jn36800	X						

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Company Name: EI Australia
Address: Suite 6.01, 55 Miller Street
Pyrmont
NSW 2009

Project Name: 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID: E23668

Order No.:
Report #: 803985
Phone: 02 9516 0722
Fax:

Received: Jun 18, 2021 3:05 PM
Due: Jun 22, 2021
Priority: 2 Day
Contact Name: Clare Madigan

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins Suite B7	Eurofins Suite B6	BTEX	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
27	BH203-3.9-4.0	Jun 17, 2021		Soil	S21-Jn36801	X						
28	BH201-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36869	X						
Test Counts						17	1	7	2	2	2	4

Sheet 1 of 1

Site: 2-6 Pilgrim Ave, Strathfield

Project No: E25668

Laboratory: Eurofins Environment Testing Pty Ltd
6 / 16 Mars Road
Lane Cove NSW 2066
P: 02 9900 8400

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	phenols		TCLP HM [B] / PAH
GW-BH203M-1		S,P,VC	21/6/21	p.m.		X				X			X												X		
GW-BH204M-1		S,P,VC				X				X			X												X		
GW-QD1		S,P,VC				X					X																
GW-QR1		S,P,VC				X					X																
GW-QRB1		S,P,VC				X					X																
GW-TB1		VC				X						X															
GW-TB2		VC				X						X															

Comments

HM [A]
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Zinc

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

Dewatering Suite
pH & EC
TDS / TDU
Hardness
Total Cyanide
Metals (Al, As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)
TRH (F1, F2, F3, F4)
BTEX
PAH

LABORATORY TURNAROUND

- ☐ Standard
- ☒ 24 Hours
- ☐ 48 Hours
- ☐ 72 Hours
- ☐ Other____

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

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

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (Eurofins):
Print: Ted Zhang	Print: Lena D.
Signature:	Signature:
Date: 21/6/21	Date: 21/06/21 2:54 PM

Sampler's Comments:
Please CC joel.heiniger@eiaustralia.com.au

9.9°C Report N# 804362

#

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

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

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Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	EI Australia
Contact name:	Ted Zhang
Project name:	2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID:	E23668
Turnaround time:	1 Day
Date/Time received	Jun 21, 2021 2:54 PM
Eurofins reference	804362

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	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

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Elvis Dsouza on phone : or by email: ElvisDsouza@eurofins.com

Results will be delivered electronically via email to Ted Zhang - ted.zhang@eiaustralia.com.au.

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Company Name: EI Australia
Address: Suite 6.01, 55 Miller Street
Pyrmont
NSW 2009

Project Name: 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID: E23668

Order No.:
Report #: 804362
Phone: 02 9516 0722
Fax:

Received: Jun 21, 2021 2:54 PM
Due: Jun 22, 2021
Priority: 1 Day
Contact Name: Ted Zhang

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						Metals M8	BTEX	Volatile Organics	Eurofins Suite B1	Eurofins Suite B4A	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271											
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
Mayfield Laboratory - NATA Site # 25079											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	GB-H203M-1	Jun 21, 2021		Water	S21-Jn39997			X		X	
2	GB-H204M-1	Jun 21, 2021		Water	S21-Jn39998			X		X	
3	GW-QD1	Jun 21, 2021		Water	S21-Jn39999	X			X		
4	GW-QR1	Jun 21, 2021		Water	S21-Jn40000	X			X		
5	GW-QRB1	Jun 21, 2021		Water	S21-Jn40001	X			X		
6	GW-TB1	Jun 21, 2021		Water	S21-Jn40002		X				
7	GW-TS1	Jun 21, 2021		Water	S21-Jn40003						X
Test Counts						3	1	2	3	2	1

Grace Tuckwell

From: Linda Xiao - EIAustralia <linda.xiao@eiaustralia.com.au>
Sent: Thursday, 24 June 2021 6:04 PM
To: #AU04_Enviro_Sample_NSW
Cc: Clare Madigan - EIAustralia; Joel Heininger - EIAustralia
Subject: E23668 Strathfield
Attachments: 804362-W_report.pdf; 804362_2-6 PILGRIM AVE - STRATHFIELD NSW.CSV; 804362_COC.PDF

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL*

Hi team,

Metal results for GB-H203M-1 and GB-H204M-1 seem to be missing even though it was requested on the COC?

Could you please advise ASAP tomorrow morning?

Kind regards,

Linda Xiao
BE (Civil (Environmental))
Environmental / Civil Engineer - Project Coordinator

T 02 9516 0722 **M** 0433 355 487
E linda.xiao@eiaustralia.com.au

Suite 6.01, 55 Miller Street
Pyrmont, NSW 2009

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Sample Receipt Advice

Company name:	EI Australia
Contact name:	Ted Zhang
Project name:	2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID:	E23668
Turnaround time:	Overnight
Date/Time received	Jun 24, 2021 6:04 PM
Eurofins reference	805633

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	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

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:

Elvis Dsouza on phone : or by email: ElvisDsouza@eurofins.com

Results will be delivered electronically via email to Ted Zhang - ted.zhang@eiaustralia.com.au.

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Company Name: EI Australia
Address: Suite 6.01, 55 Miller Street
Pyrmont
NSW 2009

Project Name: 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID: E23668

Order No.:
Report #: 805633
Phone: 02 9516 0722
Fax:

Received: Jun 24, 2021 6:04 PM
Due: Jun 25, 2021
Priority: Overnight
Contact Name: Ted Zhang

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						Metals M8	Metals M8 filtered
Melbourne Laboratory - NATA Site # 1254							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory - NATA Site # 25079							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	GB-H203M-1	Jun 21, 2021		Water	S21-Jn49705	X	X
2	GB-H204M-1	Jun 21, 2021		Water	S21-Jn49706		X
3	GW-QD1	Jun 21, 2021		Water	S21-Jn49766		X
Test Counts						1	3

Appendix H – Laboratory Analytical Reports

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 272095

Client Details

Client	EI Australia
Attention	Lab Email
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details

Your Reference	**E23668, Strathfield**
Number of Samples	1 Soil
Date samples received	18/06/2021
Date completed instructions received	18/06/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	22/06/2021
Date of Issue	22/06/2021

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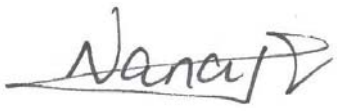
Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Giovanni Agosti, Group Technical Manager
Steven Luong, Organics Supervisor
Thomas Beenie, Lab Technician

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		272095-1
Your Reference	UNITS	BH200-QT
Date Sampled		18/06/2021
Type of sample		Soil
Date extracted	-	21/06/2021
Date analysed	-	22/06/2021
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	74

svTRH (C10-C40) in Soil		
Our Reference		272095-1
Your Reference	UNITS	BH200-QT
Date Sampled		18/06/2021
Type of sample		Soil
Date extracted	-	21/06/2021
Date analysed	-	22/06/2021
TRH C_{10} - C_{14}	mg/kg	64
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
TRH >C_{10} -C_{16}	mg/kg	69
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	69
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	70
Surrogate o-Terphenyl	%	95

Acid Extractable metals in soil		
Our Reference		272095-1
Your Reference	UNITS	BH200-QT
Date Sampled		18/06/2021
Type of sample		Soil
Date prepared	-	22/06/2021
Date analysed	-	22/06/2021
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	4
Copper	mg/kg	56
Lead	mg/kg	24
Mercury	mg/kg	<0.1
Nickel	mg/kg	15
Zinc	mg/kg	170

Moisture		
Our Reference	UNITS	272095-1
Your Reference		BH200-QT
Date Sampled		18/06/2021
Type of sample		Soil
Date prepared	-	21/06/2021
Date analysed	-	22/06/2021
Moisture	%	10

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			21/06/2021	[NT]	[NT]	[NT]	[NT]	21/06/2021	[NT]
Date analysed	-			22/06/2021	[NT]	[NT]	[NT]	[NT]	22/06/2021	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	109	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	109	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	113	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	104	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	111	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	121	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			21/06/2021	[NT]	[NT]	[NT]	[NT]	21/06/2021	[NT]
Date analysed	-			22/06/2021	[NT]	[NT]	[NT]	[NT]	22/06/2021	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	130	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	122	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	130	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	130	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	122	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	130	[NT]
Surrogate o-Terphenyl	%		Org-020	103	[NT]	[NT]	[NT]	[NT]	125	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			22/06/2021	[NT]	[NT]	[NT]	[NT]	22/06/2021	[NT]
Date analysed	-			22/06/2021	[NT]	[NT]	[NT]	[NT]	22/06/2021	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	104	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	98	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]

Result Definitions	
NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Envirolab Services Pty Ltd
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12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 272273

Client Details

Client	EI Australia
Attention	Linda Xiao
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details

Your Reference	**E23668,2-8 Pilgrim Ave& 9-14 Albert Rd,Strathfield**
Number of Samples	1 water
Date samples received	22/06/2021
Date completed instructions received	22/06/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	23/06/2021
Date of Issue	23/06/2021

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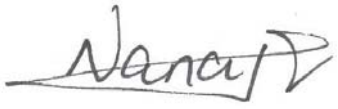
Results Approved By
Dragana Tomas, Senior Chemist
Hannah Nguyen, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Water		
Our Reference		272273-1
Your Reference	UNITS	GW-QT1
Date Sampled		21/06/2021
Type of sample		water
Date extracted	-	22/06/2021
Date analysed	-	22/06/2021
TRH C_6 - C_9	µg/L	<10
TRH C_6 - C_{10}	µg/L	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	99
Surrogate toluene-d8	%	99
Surrogate 4-BFB	%	100

svTRH (C10-C40) in Water		
Our Reference		272273-1
Your Reference	UNITS	GW-QT1
Date Sampled		21/06/2021
Type of sample		water
Date extracted	-	23/06/2021
Date analysed	-	23/06/2021
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	<100
TRH C_{29} - C_{36}	µg/L	<100
TRH >C_{10} - C_{16}	µg/L	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50
TRH >C_{16} - C_{34}	µg/L	<100
TRH >C_{34} - C_{40}	µg/L	<100
Surrogate o-Terphenyl	%	86

HM in water - total		
Our Reference		272273-1
Your Reference	UNITS	GW-QT1
Date Sampled		21/06/2021
Type of sample		water
Date prepared	-	23/06/2021
Date analysed	-	23/06/2021
Arsenic-Total	µg/L	2
Cadmium-Total	µg/L	<0.1
Chromium-Total	µg/L	<1
Copper-Total	µg/L	3
Lead-Total	µg/L	<1
Mercury-Total	µg/L	<0.05
Nickel-Total	µg/L	12
Zinc-Total	µg/L	37

Method ID	Methodology Summary
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			22/06/2021	[NT]	[NT]	[NT]	[NT]	22/06/2021	[NT]
Date analysed	-			22/06/2021	[NT]	[NT]	[NT]	[NT]	22/06/2021	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	112	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	112	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	115	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	99	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate toluene-d8	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate 4-BFB	%		Org-023	102	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			23/06/2021	[NT]	[NT]	[NT]	[NT]	23/06/2021	[NT]
Date analysed	-			23/06/2021	[NT]	[NT]	[NT]	[NT]	23/06/2021	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	99	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	108	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	99	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	108	[NT]
Surrogate o-Terphenyl	%		Org-020	83	[NT]	[NT]	[NT]	[NT]	95	[NT]

QUALITY CONTROL: HM in water - total						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			23/06/2021	[NT]	[NT]	[NT]	[NT]	23/06/2021	[NT]
Date analysed	-			23/06/2021	[NT]	[NT]	[NT]	[NT]	23/06/2021	[NT]
Arsenic-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Cadmium-Total	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Chromium-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Copper-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Lead-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Mercury-Total	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	106	[NT]
Nickel-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Zinc-Total	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]

Result Definitions

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NA	Test not required
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PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
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For VOCs in water samples, three vials are required for duplicate or spike analysis.

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Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Certificate of Analysis

EI Australia
Suite 6.01, 55 Miller Street
Pyrmont
NSW 2009

NATA Accredited
Accreditation Number 1261
Site Number 18217

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 and proficiency testing scheme providers reports.

Attention:	Clare Madigan
Report	803985-AID
Project Name	2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID	E23668
Received Date	Jun 18, 2021
Date Reported	Jun 22, 2021

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID E23668
Date Sampled Jun 17, 2021
Report 803985-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH201-0.3-0.5	21-Jn36775	Jun 17, 2021	Approximate Sample 317g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH202-0.3-0.5	21-Jn36776	Jun 17, 2021	Approximate Sample 271g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH204M-0.3-0.5	21-Jn36777	Jun 17, 2021	Approximate Sample 323g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH203-0.4-0.5	21-Jn36778	Jun 17, 2021	Approximate Sample 35g Sample consisted of: Brown coarse-grained clayey soil and rocks bitumen	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

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
Asbestos - LTM-ASB-8020	Sydney	Jun 19, 2021	Indefinite

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Australia

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Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
46-48 Banksia Road
Welshpool WA 6106
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

New Zealand

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: EI Australia
Address: Suite 6.01, 55 Miller Street
Pyrmont
NSW 2009

Project Name: 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID: E23668

Order No.:
Report #: 803985
Phone: 02 9516 0722
Fax:

Received: Jun 18, 2021 3:05 PM
Due: Jun 22, 2021
Priority: 2 Day
Contact Name: Clare Madigan

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins Suite B7	Eurofins Suite B6	BTEX	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	BH201-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36775			X				X
2	BH202-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36776			X				X
3	BH204M-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36777			X				X
4	BH203-0.4-0.5	Jun 17, 2021		Soil	S21-Jn36778			X				X
5	BH201-3.8-4.0	Jun 17, 2021		Soil	S21-Jn36779			X	X			
6	BH204M-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36780			X	X			
7	BH200-QD	Jun 17, 2021		Soil	S21-Jn36781			X		X		
8	BH200-RS	Jun 17, 2021		Water	S21-Jn36782					X		

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Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
9	TRIP SPIKE	Jun 17, 2021		Soil	S21-Jn36783						X	
10	TRIP BLANK	Jun 17, 2021		Soil	S21-Jn36785		X					
11	BH202-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36786	X						
12	BH201-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36787	X						
13	BH201-2.8-3.0	Jun 17, 2021		Soil	S21-Jn36788	X						
14	BH201-4.1-4.3	Jun 17, 2021		Soil	S21-Jn36789	X						
15	BH202-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36790	X						
16	BH204M-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36791	X						
17	BH202-2.6-3.0	Jun 17, 2021		Soil	S21-Jn36792	X						
18	BH202-3.8-4.0	Jun 17, 2021		Soil	S21-Jn36793	X						

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Project ID: E23668

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Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
19	BH202-4.5-4.7	Jun 17, 2021		Soil	S21-Jn36794	X						
20	BH204M-2.8-3.0	Jun 17, 2021		Soil	S21-Jn36795	X						
21	BH204M-3.8-4.2	Jun 17, 2021		Soil	S21-Jn36796	X						
22	BH204M-5.3-5.5	Jun 17, 2021		Soil	S21-Jn36797	X						
23	BH203-0.9-1.0	Jun 17, 2021		Soil	S21-Jn36798	X						
24	BH203-1.9-2.0	Jun 17, 2021		Soil	S21-Jn36799	X						
25	BH203-2.9-3.0	Jun 17, 2021		Soil	S21-Jn36800	X						
26	BH203-3.9-4.0	Jun 17, 2021		Soil	S21-Jn36801	X						
27	BH201-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36869	X						

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Company Name:	EI Australia	**Order No.:**		**Received:**	Jun 18, 2021 3:05 PM
Address:	Suite 6.01, 55 Miller Street Pyrmont NSW 2009	**Report #:**	803985	**Due:**	Jun 22, 2021
		Phone:	02 9516 0722	**Priority:**	2 Day
		Fax:		**Contact Name:**	Clare Madigan
Project Name:	2-6 PILGRIM AVE - STRATHFIELD NSW				
Project ID:	E23668				

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail	HOLD	BTEX	Moisture Set	Eurofins Suite B7	Eurofins Suite B6	BTEX	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271							
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory - NATA Site # 25079							
External Laboratory							
Test Counts	17	1	7	2	2	1	4

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. 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 Sample Receipt Advice.

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.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Jn36778: The sample received was not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-sample to be analysed accurately represented the sample received.

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
N/A	Not applicable

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Authorised by:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

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.

EI Australia
Suite 6.01, 55 Miller Street
Pyrmont
NSW 2009

NATA Accredited
Accreditation Number 1261
Site Number 18217

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 and proficiency testing scheme providers reports.

Attention: **Clare Madigan**

Report **803985-S**
Project name 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID E23668
Received Date Jun 18, 2021

Client Sample ID			BH201-0.3-0.5	BH202-0.3-0.5	BH204M-0.3-0.5	BH203-0.4-0.5
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S21-Jn36775**	**S21-Jn36776**	**S21-Jn36777**	**S21-Jn36778**
Date Sampled			**Jun 17, 2021**	**Jun 17, 2021**	**Jun 17, 2021**	**Jun 17, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	140
TRH C29-C36	50	mg/kg	88	< 50	< 50	71
TRH C10-C36 (Total)	50	mg/kg	88	< 50	< 50	211
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	180
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	180
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	105	98	103	98
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			BH201-0.3-0.5	BH202-0.3-0.5	BH204M-0.3-0.5	BH203-0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn36775	S21-Jn36776	S21-Jn36777	S21-Jn36778
Date Sampled			Jun 17, 2021	Jun 17, 2021	Jun 17, 2021	Jun 17, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	1.2
2-Fluorobiphenyl (surr.)	1	%	103	89	89	122
p-Terphenyl-d14 (surr.)	1	%	102	91	93	124
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	107	87	86	117
Tetrachloro-m-xylene (surr.)	1	%	124	104	107	INT
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			BH201-0.3-0.5	BH202-0.3-0.5	BH204M-0.3-0.5	BH203-0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn36775	S21-Jn36776	S21-Jn36777	S21-Jn36778
Date Sampled			Jun 17, 2021	Jun 17, 2021	Jun 17, 2021	Jun 17, 2021
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	88	84	85	102
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	107	87	86	117
Tetrachloro-m-xylene (surr.)	1	%	124	104	107	INT
Heavy Metals						
Arsenic	2	mg/kg	12	9.2	10	9.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	35	28	32	24
Copper	5	mg/kg	9.3	55	15	39
Lead	5	mg/kg	63	220	20	180
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	6.8	< 5	8.2
Zinc	5	mg/kg	22	27	14	61
% Moisture	1	%	19	21	20	13

Client Sample ID			BH201-3.8-4.0	BH204M-1.8-2.0	BH200-QD	TRIP SPIKE
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn36779	S21-Jn36780	S21-Jn36781	S21-Jn36783
Date Sampled			Jun 17, 2021	Jun 17, 2021	Jun 17, 2021	Jun 17, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	55	< 20	60	-
TRH C15-C28	50	mg/kg	170	< 50	170	-
TRH C29-C36	50	mg/kg	63	< 50	63	-
TRH C10-C36 (Total)	50	mg/kg	288	< 50	293	-
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	29	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	29	-
TRH >C10-C16	50	mg/kg	58	< 50	64	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	58	< 50	64	-
TRH >C16-C34	100	mg/kg	190	< 100	180	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	248	< 100	244	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	107	113	104	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	106	76	-	-
p-Terphenyl-d14 (surr.)	1	%	107	74	-	-
Heavy Metals						
Arsenic	2	mg/kg	2.6	22	< 2	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	6.9	31	< 5	-
Copper	5	mg/kg	31	29	38	-

Client Sample ID			BH201-3.8-4.0	BH204M-1.8-2.0	BH200-QD	TRIP SPIKE
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn36779	S21-Jn36780	S21-Jn36781	S21-Jn36783
Date Sampled			Jun 17, 2021	Jun 17, 2021	Jun 17, 2021	Jun 17, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	15	32	19	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	7.6	< 5	11	-
Zinc	5	mg/kg	65	15	180	-
% Moisture	1	%	8.2	14	7.7	-
BTEX						
Benzene	1	%	-	-	-	92
Ethylbenzene	1	%	-	-	-	85
m&p-Xylenes	1	%	-	-	-	85
o-Xylene	1	%	-	-	-	86
Toluene	1	%	-	-	-	88
Xylenes - Total	1	%	-	-	-	85
4-Bromofluorobenzene (surr.)	1	%	-	-	-	103

Client Sample ID			TRIP BLANK
Sample Matrix			Soil
Eurofins Sample No.			S21-Jn36785
Date Sampled			Jun 17, 2021
Test/Reference	LOR	Unit	
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	110

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	Sydney	Jun 18, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 18, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 18, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jun 18, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jun 18, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Jun 21, 2021	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Jun 21, 2021	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Jun 21, 2021	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8	Sydney	Jun 21, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Jun 18, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			

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Pyrmont
NSW 2009

Project Name: 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID: E23668

Order No.:
Report #: 803985
Phone: 02 9516 0722
Fax:

Received: Jun 18, 2021 3:05 PM
Due: Jun 22, 2021
Priority: 2 Day
Contact Name: Clare Madigan

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins Suite B7	Eurofins Suite B6	BTEX	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	BH201-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36775			X				X
2	BH202-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36776			X				X
3	BH204M-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36777			X				X
4	BH203-0.4-0.5	Jun 17, 2021		Soil	S21-Jn36778			X				X
5	BH201-3.8-4.0	Jun 17, 2021		Soil	S21-Jn36779			X	X			
6	BH204M-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36780			X	X			
7	BH200-QD	Jun 17, 2021		Soil	S21-Jn36781			X		X		
8	BH200-RS	Jun 17, 2021		Water	S21-Jn36782					X		

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Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
9	TRIP SPIKE	Jun 17, 2021		Soil	S21-Jn36783						X	
10	TRIP SPIKE LAB	Jun 17, 2021		Soil	S21-Jn36784						X	
11	TRIP BLANK	Jun 17, 2021		Soil	S21-Jn36785		X					
12	BH202-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36786	X						
13	BH201-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36787	X						
14	BH201-2.8-3.0	Jun 17, 2021		Soil	S21-Jn36788	X						
15	BH201-4.1-4.3	Jun 17, 2021		Soil	S21-Jn36789	X						
16	BH202-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36790	X						
17	BH204M-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36791	X						

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Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
18	BH202-2.6-3.0	Jun 17, 2021		Soil	S21-Jn36792	X						
19	BH202-3.8-4.0	Jun 17, 2021		Soil	S21-Jn36793	X						
20	BH202-4.5-4.7	Jun 17, 2021		Soil	S21-Jn36794	X						
21	BH204M-2.8-3.0	Jun 17, 2021		Soil	S21-Jn36795	X						
22	BH204M-3.8-4.2	Jun 17, 2021		Soil	S21-Jn36796	X						
23	BH204M-5.3-5.5	Jun 17, 2021		Soil	S21-Jn36797	X						
24	BH203-0.9-1.0	Jun 17, 2021		Soil	S21-Jn36798	X						
25	BH203-1.9-2.0	Jun 17, 2021		Soil	S21-Jn36799	X						
26	BH203-2.9-3.0	Jun 17, 2021		Soil	S21-Jn36800	X						

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Sample Detail						HOLD	BTEX	Moisture Set	Eurofins Suite B7	Eurofins Suite B6	BTEX	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
27	BH203-3.9-4.0	Jun 17, 2021		Soil	S21-Jn36801	X						
28	BH201-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36869	X						
Test Counts						17	1	7	2	2	2	4

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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

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 5.3
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

QC - Acceptance Criteria

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%

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 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.5			0.5	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.5			0.5	Pass	
Aroclor-1242	mg/kg	< 0.5			0.5	Pass	
Aroclor-1248	mg/kg	< 0.5			0.5	Pass	
Aroclor-1254	mg/kg	< 0.5			0.5	Pass	
Aroclor-1260	mg/kg	< 0.5			0.5	Pass	
Total PCB*	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	93			70-130	Pass	
TRH C10-C14	%	95			70-130	Pass	
Naphthalene	%	83			70-130	Pass	
TRH C6-C10	%	92			70-130	Pass	
TRH >C10-C16	%	90			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	87			70-130	Pass	
Toluene	%	87			70-130	Pass	
Ethylbenzene	%	86			70-130	Pass	
m&p-Xylenes	%	88			70-130	Pass	
o-Xylene	%	88			70-130	Pass	
Xylenes - Total*	%	88			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	89			70-130	Pass	
Acenaphthylene	%	90			70-130	Pass	
Anthracene	%	88			70-130	Pass	
Benz(a)anthracene	%	81			70-130	Pass	
Benzo(a)pyrene	%	85			70-130	Pass	
Benzo(b&j)fluoranthene	%	90			70-130	Pass	
Benzo(g.h.i)perylene	%	75			70-130	Pass	
Benzo(k)fluoranthene	%	96			70-130	Pass	
Chrysene	%	85			70-130	Pass	
Dibenz(a.h)anthracene	%	73			70-130	Pass	
Fluoranthene	%	86			70-130	Pass	
Fluorene	%	81			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	76			70-130	Pass	
Naphthalene	%	91			70-130	Pass	
Phenanthrene	%	89			70-130	Pass	
Pyrene	%	86			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	85			70-130	Pass	
4.4'-DDD	%	77			70-130	Pass	
4.4'-DDE	%	91			70-130	Pass	
4.4'-DDT	%	76			70-130	Pass	
a-BHC	%	81			70-130	Pass	
Aldrin	%	88			70-130	Pass	
b-BHC	%	81			70-130	Pass	
d-BHC	%	83			70-130	Pass	
Dieldrin	%	84			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan I	%	84			70-130	Pass	
Endosulfan II	%	81			70-130	Pass	
Endosulfan sulphate	%	78			70-130	Pass	
Endrin	%	74			70-130	Pass	
Endrin aldehyde	%	71			70-130	Pass	
Endrin ketone	%	75			70-130	Pass	
g-BHC (Lindane)	%	85			70-130	Pass	
Heptachlor	%	77			70-130	Pass	
Heptachlor epoxide	%	81			70-130	Pass	
Hexachlorobenzene	%	87			70-130	Pass	
Methoxychlor	%	73			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	107			70-130	Pass	
Dimethoate	%	73			70-130	Pass	
Ethion	%	90			70-130	Pass	
Fenitrothion	%	88			70-130	Pass	
Methyl parathion	%	106			70-130	Pass	
Mevinphos	%	108			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	89			70-130	Pass	
Aroclor-1260	%	91			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			80-120	Pass	
Cadmium	%	101			80-120	Pass	
Chromium	%	102			80-120	Pass	
Copper	%	105			80-120	Pass	
Lead	%	106			80-120	Pass	
Mercury	%	107			80-120	Pass	
Nickel	%	105			80-120	Pass	
Zinc	%	106			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	S21-Jn37516	NCP	%	118			70-130	Pass	
TRH >C10-C16	S21-Jn37516	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S21-Jn36181	NCP	%	87			70-130	Pass	
Acenaphthylene	S21-Jn36181	NCP	%	72			70-130	Pass	
Anthracene	S21-Jn36181	NCP	%	77			70-130	Pass	
Benz(a)anthracene	S21-Jn36181	NCP	%	82			70-130	Pass	
Benzo(a)pyrene	S21-Jn36181	NCP	%	84			70-130	Pass	
Benzo(b&j)fluoranthene	S21-Jn36181	NCP	%	117			70-130	Pass	
Benzo(g.h.i)perylene	S21-Jn30191	NCP	%	99			70-130	Pass	
Benzo(k)fluoranthene	S21-Jn36181	NCP	%	117			70-130	Pass	
Chrysene	S21-Jn36181	NCP	%	106			70-130	Pass	
Dibenz(a.h)anthracene	S21-Jn30191	NCP	%	83			70-130	Pass	
Fluoranthene	S21-Jn36181	NCP	%	125			70-130	Pass	
Fluorene	S21-Jn40852	NCP	%	89			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jn40852	NCP	%	75			70-130	Pass	
Naphthalene	S21-Jn36181	NCP	%	91			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	S21-Jn36181	NCP	%	108			70-130	Pass	
Pyrene	S21-Jn40852	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S21-Jn40852	NCP	%	80			70-130	Pass	
4.4'-DDE	S21-Jn40852	NCP	%	84			70-130	Pass	
a-BHC	S21-Jn40852	NCP	%	73			70-130	Pass	
Aldrin	S21-Jn40852	NCP	%	82			70-130	Pass	
b-BHC	S21-Jn40852	NCP	%	73			70-130	Pass	
d-BHC	S21-Jn40852	NCP	%	77			70-130	Pass	
Dieldrin	S21-Jn40852	NCP	%	78			70-130	Pass	
Endosulfan I	S21-Jn40852	NCP	%	75			70-130	Pass	
Endosulfan II	S21-Jn40852	NCP	%	74			70-130	Pass	
g-BHC (Lindane)	S21-Jn40852	NCP	%	80			70-130	Pass	
Hexachlorobenzene	S21-Jn40852	NCP	%	85			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S21-Jn40852	NCP	%	80			70-130	Pass	
Aroclor-1260	S21-Jn40852	NCP	%	85			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S21-Jn40713	NCP	%	103			70-130	Pass	
Naphthalene	S21-Jn40713	NCP	%	96			70-130	Pass	
TRH C6-C10	S21-Jn40713	NCP	%	101			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jn40713	NCP	%	96			70-130	Pass	
Toluene	S21-Jn40713	NCP	%	95			70-130	Pass	
Ethylbenzene	S21-Jn40713	NCP	%	97			70-130	Pass	
m&p-Xylenes	S21-Jn40713	NCP	%	98			70-130	Pass	
o-Xylene	S21-Jn40713	NCP	%	98			70-130	Pass	
Xylenes - Total*	S21-Jn40713	NCP	%	98			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Jn36780	CP	%	92			75-125	Pass	
Cadmium	S21-Jn36780	CP	%	94			75-125	Pass	
Chromium	S21-Jn36780	CP	%	90			75-125	Pass	
Copper	S21-Jn36780	CP	%	94			75-125	Pass	
Lead	S21-Jn36780	CP	%	88			75-125	Pass	
Mercury	S21-Jn36780	CP	%	97			75-125	Pass	
Nickel	S21-Jn36780	CP	%	91			75-125	Pass	
Zinc	S21-Jn36780	CP	%	90			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	S21-Jn40848	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S21-Jn39211	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Jn39211	NCP	mg/kg	240	200	19	30%	Pass	
TRH C29-C36	S21-Jn39211	NCP	mg/kg	360	300	19	30%	Pass	
Naphthalene	S21-Jn40848	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Jn40848	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S21-Jn39211	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Jn39211	NCP	mg/kg	510	420	19	30%	Pass	
TRH >C34-C40	S21-Jn39211	NCP	mg/kg	150	120	23	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jn40848	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Jn40848	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Jn40848	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Jn40848	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Jn40848	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Jn40848	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Jn36775	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S21-Jn36775	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S21-Jn36775	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S21-Jn36775	CP	mg/kg	< 2	< 2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Demeton-S	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S21-Jn36775	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S21-Jn36775	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S21-Jn36775	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S21-Jn35098	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S21-Jn35098	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S21-Jn35098	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S21-Jn35098	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S21-Jn35098	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S21-Jn35098	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S21-Jn35098	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Total PCB*	S21-Jn35098	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Jn36482	NCP	%	6.8	8.2	19	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jn36778	CP	mg/kg	9.6	9.4	2.0	30%	Pass	
Cadmium	S21-Jn36778	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Jn36778	CP	mg/kg	24	25	3.0	30%	Pass	
Copper	S21-Jn36778	CP	mg/kg	39	37	5.0	30%	Pass	
Lead	S21-Jn36778	CP	mg/kg	180	170	8.0	30%	Pass	
Mercury	S21-Jn36778	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Jn36778	CP	mg/kg	8.2	8.5	3.0	30%	Pass	
Zinc	S21-Jn36778	CP	mg/kg	61	69	11	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jn36779	CP	mg/kg	2.6	4.1	44	30%	Fail	Q15
Cadmium	S21-Jn36779	CP	mg/kg	< 0.4	0.4	63	30%	Fail	Q15
Chromium	S21-Jn36779	CP	mg/kg	6.9	8.7	23	30%	Pass	
Copper	S21-Jn36779	CP	mg/kg	31	51	51	30%	Fail	Q15
Lead	S21-Jn36779	CP	mg/kg	15	22	37	30%	Fail	Q15
Mercury	S21-Jn36779	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Jn36779	CP	mg/kg	7.6	11	34	30%	Fail	Q15
Zinc	S21-Jn36779	CP	mg/kg	65	110	47	30%	Fail	Q15

Comments

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.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
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:

Elvis Dsouza	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)

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.

EI Australia
Suite 6.01, 55 Miller Street
Pyrmont
NSW 2009

Attention: **Clare Madigan**

Report **803985-W**
Project name 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID E23668
Received Date Jun 18, 2021

Client Sample ID			**BH200-RS**
Sample Matrix			**Water**
Eurofins Sample No.			**S21-Jn36782**
Date Sampled			**Jun 17, 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	%	94
Heavy Metals			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	< 0.001
Zinc	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
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jun 18, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 18, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 18, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jun 18, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Sydney	Jun 21, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

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Company Name: EI Australia
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Pyrmont
NSW 2009

Project Name: 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID: E23668

Order No.:
Report #: 803985
Phone: 02 9516 0722
Fax:

Received: Jun 18, 2021 3:05 PM
Due: Jun 22, 2021
Priority: 2 Day
Contact Name: Clare Madigan

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						HOLD	BTEX	Moisture Set	Eurofins Suite B7	Eurofins Suite B6	BTEX	EI Australia Waste Class:TRH/BTEXN/PAH/OCP/OPP/Metals
Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	BH201-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36775			X				X
2	BH202-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36776			X				X
3	BH204M-0.3-0.5	Jun 17, 2021		Soil	S21-Jn36777			X				X
4	BH203-0.4-0.5	Jun 17, 2021		Soil	S21-Jn36778			X				X
5	BH201-3.8-4.0	Jun 17, 2021		Soil	S21-Jn36779			X	X			
6	BH204M-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36780			X	X			
7	BH200-QD	Jun 17, 2021		Soil	S21-Jn36781			X		X		
8	BH200-RS	Jun 17, 2021		Water	S21-Jn36782					X		

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Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
9	TRIP SPIKE	Jun 17, 2021		Soil	S21-Jn36783						X	
10	TRIP SPIKE LAB	Jun 17, 2021		Soil	S21-Jn36784						X	
11	TRIP BLANK	Jun 17, 2021		Soil	S21-Jn36785		X					
12	BH202-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36786	X						
13	BH201-1.8-2.0	Jun 17, 2021		Soil	S21-Jn36787	X						
14	BH201-2.8-3.0	Jun 17, 2021		Soil	S21-Jn36788	X						
15	BH201-4.1-4.3	Jun 17, 2021		Soil	S21-Jn36789	X						
16	BH202-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36790	X						
17	BH204M-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36791	X						

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Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
18	BH202-2.6-3.0	Jun 17, 2021		Soil	S21-Jn36792	X						
19	BH202-3.8-4.0	Jun 17, 2021		Soil	S21-Jn36793	X						
20	BH202-4.5-4.7	Jun 17, 2021		Soil	S21-Jn36794	X						
21	BH204M-2.8-3.0	Jun 17, 2021		Soil	S21-Jn36795	X						
22	BH204M-3.8-4.2	Jun 17, 2021		Soil	S21-Jn36796	X						
23	BH204M-5.3-5.5	Jun 17, 2021		Soil	S21-Jn36797	X						
24	BH203-0.9-1.0	Jun 17, 2021		Soil	S21-Jn36798	X						
25	BH203-1.9-2.0	Jun 17, 2021		Soil	S21-Jn36799	X						
26	BH203-2.9-3.0	Jun 17, 2021		Soil	S21-Jn36800	X						

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Melbourne Laboratory - NATA Site # 1254 & 14271												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
27	BH203-3.9-4.0	Jun 17, 2021		Soil	S21-Jn36801	X						
28	BH201-0.8-1.0	Jun 17, 2021		Soil	S21-Jn36869	X						
Test Counts						17	1	7	2	2	2	4

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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

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 5.3
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

QC - Acceptance Criteria

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%

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 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	89			70-130	Pass	
TRH C10-C14	%	102			70-130	Pass	
Naphthalene	%	91			70-130	Pass	
TRH C6-C10	%	89			70-130	Pass	
TRH >C10-C16	%	100			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	92			70-130	Pass	
Toluene	%	94			70-130	Pass	
Ethylbenzene	%	93			70-130	Pass	
m&p-Xylenes	%	93			70-130	Pass	
o-Xylene	%	93			70-130	Pass	
Xylenes - Total*	%	93			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	92			80-120	Pass	
Cadmium	%	93			80-120	Pass	
Chromium	%	96			80-120	Pass	
Copper	%	92			80-120	Pass	
Lead	%	90			80-120	Pass	
Mercury	%	101			80-120	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel			%	94			80-120	Pass	
Zinc			%	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 C6-C9	S21-Jn40156	NCP	%	72			70-130	Pass	
TRH C10-C14	S21-Jn35227	NCP	%	101			70-130	Pass	
Naphthalene	S21-Jn40156	NCP	%	73			70-130	Pass	
TRH C6-C10	S21-Jn40156	NCP	%	72			70-130	Pass	
TRH >C10-C16	S21-Jn35227	NCP	%	101			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jn40156	NCP	%	72			70-130	Pass	
Toluene	S21-Jn40156	NCP	%	73			70-130	Pass	
Ethylbenzene	S21-Jn40156	NCP	%	75			70-130	Pass	
m&p-Xylenes	S21-Jn40156	NCP	%	76			70-130	Pass	
o-Xylene	S21-Jn40156	NCP	%	76			70-130	Pass	
Xylenes - Total*	S21-Jn40156	NCP	%	76			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Jn27896	NCP	%	95			75-125	Pass	
Cadmium	S21-Jn27896	NCP	%	94			75-125	Pass	
Chromium	S21-Jn27896	NCP	%	91			75-125	Pass	
Copper	S21-Jn27896	NCP	%	75			75-125	Pass	
Lead	S21-Jn27896	NCP	%	85			75-125	Pass	
Mercury	S21-Jn27896	NCP	%	94			75-125	Pass	
Nickel	S21-Jn27896	NCP	%	86			75-125	Pass	
Zinc	S21-Jn27896	NCP	%	89			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	N21-Jn33285	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S21-Jn38598	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S21-Jn38598	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S21-Jn38598	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Naphthalene	N21-Jn33285	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	N21-Jn33285	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	S21-Jn38598	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S21-Jn38598	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S21-Jn38598	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	N21-Jn33285	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	N21-Jn33285	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	N21-Jn33285	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	N21-Jn33285	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	N21-Jn33285	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	N21-Jn33285	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jn40159	NCP	mg/L	0.002	< 0.001	50	30%	Fail	Q15
Cadmium	S21-Jn40159	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S21-Jn40159	NCP	mg/L	0.017	0.016	5.0	30%	Pass	
Copper	S21-Jn40159	NCP	mg/L	0.002	0.001	32	30%	Fail	Q15
Lead	S21-Jn40159	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S21-Jn40159	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S21-Jn40159	NCP	mg/L	0.002	0.002	4.0	30%	Pass	
Zinc	S21-Jn40159	NCP	mg/L	0.019	0.020	6.0	30%	Pass	

Comments

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:

Elvis Dsouza	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)

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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Attention: **Ted Zhang**

Report **804362-W**
Project name 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID E23668
Received Date Jun 21, 2021

Client Sample ID			GB-H203M-1	GB-H204M-1	GW-QD1	GW-QR1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn39997	S21-Jn39998	S21-Jn39999	S21-Jn40000
Date Sampled			Jun 21, 2021	Jun 21, 2021	Jun 21, 2021	Jun 21, 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	%	103	105	101	98
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	-	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	-	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	-	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	-	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	-	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	-	-

Client Sample ID			GB-H203M-1	GB-H204M-1	GW-QD1	GW-QR1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn39997	S21-Jn39998	S21-Jn39999	S21-Jn40000
Date Sampled			Jun 21, 2021	Jun 21, 2021	Jun 21, 2021	Jun 21, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	-	-
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	-	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	-	-
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	-	-
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	-	-
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	-	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	-	-
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	-	-
Benzene	0.001	mg/L	< 0.001	< 0.001	-	-
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	-	-
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	-	-
Bromodichloromethane	0.001	mg/L	< 0.001	0.001	-	-
Bromoform	0.001	mg/L	< 0.001	< 0.001	-	-
Bromomethane	0.001	mg/L	< 0.001	< 0.001	-	-
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	-	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	-	-
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	-	-
Chloroethane	0.001	mg/L	< 0.001	< 0.001	-	-
Chloroform	0.005	mg/L	< 0.005	0.010	-	-
Chloromethane	0.001	mg/L	< 0.001	< 0.001	-	-
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	-	-
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	-	-
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	-	-
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	-	-
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	-	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	-	-
Iodomethane	0.001	mg/L	< 0.001	< 0.001	-	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	-	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	-	-
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	-	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	-	-
Styrene	0.001	mg/L	< 0.001	< 0.001	-	-
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	-	-
Toluene	0.001	mg/L	< 0.001	< 0.001	-	-
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	-	-
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	-	-
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	-	-
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	-	-
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	-	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	-	-
Total MAH*	0.003	mg/L	< 0.003	< 0.003	-	-
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	0.01	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	0.01	-	-
4-Bromofluorobenzene (surr.)	1	%	103	105	-	-
Toluene-d8 (surr.)	1	%	103	101	-	-

Client Sample ID			GB-H203M-1	GB-H204M-1	GW-QD1	GW-QR1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn39997	S21-Jn39998	S21-Jn39999	S21-Jn40000
Date Sampled			Jun 21, 2021	Jun 21, 2021	Jun 21, 2021	Jun 21, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	-	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	-	-
Total PAH*	0.001	mg/L	< 0.001	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	58	86	-	-
p-Terphenyl-d14 (surr.)	1	%	54	84	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.03	< 0.003	-	-
2.4-Dichlorophenol	0.003	mg/L	< 0.03	< 0.003	-	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.1	< 0.01	-	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.1	< 0.01	-	-
2.6-Dichlorophenol	0.003	mg/L	< 0.03	< 0.003	-	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.1	< 0.01	-	-
Pentachlorophenol	0.01	mg/L	< 0.1	< 0.01	-	-
Tetrachlorophenols - Total	0.03	mg/L	< 0.3	< 0.03	-	-
Total Halogenated Phenol*	0.01	mg/L	< 0.1	< 0.01	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 1	< 0.1	-	-
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.3	< 0.03	-	-
2-Nitrophenol	0.01	mg/L	< 0.1	< 0.01	-	-
2.4-Dimethylphenol	0.003	mg/L	< 0.03	< 0.003	-	-
2.4-Dinitrophenol	0.03	mg/L	< 0.3	< 0.03	-	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.03	< 0.003	-	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.06	< 0.006	-	-
Total cresols*	0.002	mg/L	< 0.06	< 0.006	-	-
4-Nitrophenol	0.03	mg/L	< 0.3	< 0.03	-	-
Dinoseb	0.1	mg/L	< 1	< 0.1	-	-
Phenol	0.003	mg/L	< 0.03	< 0.003	-	-
Phenol-d6 (surr.)	1	%	INT	21	-	-
Total Non-Halogenated Phenol*	0.1	mg/L	< 1	< 0.1	-	-
Heavy Metals						
Arsenic	0.001	mg/L	-	-	0.003	< 0.001
Cadmium	0.0002	mg/L	-	-	< 0.0002	< 0.0002
Chromium	0.001	mg/L	-	-	0.002	< 0.001
Copper	0.001	mg/L	-	-	0.004	< 0.001
Lead	0.001	mg/L	-	-	< 0.001	< 0.001

Client Sample ID			GB-H203M-1	GB-H204M-1	GW-QD1	GW-QR1
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn39997	S21-Jn39998	S21-Jn39999	S21-Jn40000
Date Sampled			Jun 21, 2021	Jun 21, 2021	Jun 21, 2021	Jun 21, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Mercury	0.0001	mg/L	-	-	< 0.0001	< 0.0001
Nickel	0.001	mg/L	-	-	0.012	< 0.001
Zinc	0.005	mg/L	-	-	0.034	< 0.005

Client Sample ID			GW-QRB1	GW-TB1	GW-TS1
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S21-Jn40001	S21-Jn40002	S21-Jn40003
Date Sampled			Jun 21, 2021	Jun 21, 2021	Jun 21, 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	< 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	%	96	101	-
Heavy Metals					
Arsenic	0.001	mg/L	< 0.001	-	-
Cadmium	0.0002	mg/L	< 0.0002	-	-
Chromium	0.001	mg/L	< 0.001	-	-
Copper	0.001	mg/L	< 0.001	-	-
Lead	0.001	mg/L	< 0.001	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-
Nickel	0.001	mg/L	< 0.001	-	-
Zinc	0.005	mg/L	< 0.005	-	-
BTEX					
Benzene	1	%	-	-	100
Ethylbenzene	1	%	-	-	100
m&p-Xylenes	1	%	-	-	110
o-Xylene	1	%	-	-	98
Toluene	1	%	-	-	100
Xylenes - Total	1	%	-	-	100
4-Bromofluorobenzene (surr.)	1	%	-	-	99

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	Sydney	Jun 21, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 21, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 21, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jun 21, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jun 21, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Jun 21, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Jun 21, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Volatile Organics	Sydney	Jun 21, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Metals M8	Sydney	Jun 22, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

eurofins | Environment Testing

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Company Name: EI Australia
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Pyrmont
NSW 2009

Project Name: 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID: E23668

Order No.:
Report #: 804362
Phone: 02 9516 0722
Fax:

Received: Jun 21, 2021 2:54 PM
Due: Jun 22, 2021
Priority: 1 Day
Contact Name: Ted Zhang

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						Metals M8	BTEX	Volatile Organics	Eurofins Suite B1	Eurofins Suite B4A	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271											
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
Mayfield Laboratory - NATA Site # 25079											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	GB-H203M-1	Jun 21, 2021		Water	S21-Jn39997			X		X	
2	GB-H204M-1	Jun 21, 2021		Water	S21-Jn39998			X		X	
3	GW-QD1	Jun 21, 2021		Water	S21-Jn39999	X			X		
4	GW-QR1	Jun 21, 2021		Water	S21-Jn40000	X			X		
5	GW-QRB1	Jun 21, 2021		Water	S21-Jn40001	X			X		
6	GW-TB1	Jun 21, 2021		Water	S21-Jn40002		X				
7	GW-TS1	Jun 21, 2021		Water	S21-Jn40003						X
Test Counts						3	1	2	3	2	1

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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

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 5.3
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

QC - Acceptance Criteria

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%

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 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Benzene	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	87			70-130	Pass	
TRH C10-C14	%	71			70-130	Pass	
Naphthalene	%	78			70-130	Pass	
TRH C6-C10	%	79			70-130	Pass	
TRH >C10-C16	%	72			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	90			70-130	Pass	
Toluene	%	93			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	95			70-130	Pass	
o-Xylene	%	94			70-130	Pass	
Xylenes - Total*	%	95			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	125			70-130	Pass	
1.1.1-Trichloroethane	%	110			70-130	Pass	
1.2-Dichlorobenzene	%	90			70-130	Pass	
1.2-Dichloroethane	%	112			70-130	Pass	
Benzene	%	83			70-130	Pass	
Ethylbenzene	%	86			70-130	Pass	
m&p-Xylenes	%	87			70-130	Pass	
o-Xylene	%	87			70-130	Pass	
Toluene	%	85			70-130	Pass	
Trichloroethene	%	97			70-130	Pass	
Xylenes - Total*	%	87			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	86			70-130	Pass	
Acenaphthylene	%	75			70-130	Pass	
Anthracene	%	90			70-130	Pass	
Benz(a)anthracene	%	72			70-130	Pass	
Benzo(a)pyrene	%	76			70-130	Pass	
Benzo(b&j)fluoranthene	%	70			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(g.h.i)perylene	%	79			70-130	Pass	
Benzo(k)fluoranthene	%	76			70-130	Pass	
Chrysene	%	72			70-130	Pass	
Dibenz(a.h)anthracene	%	72			70-130	Pass	
Fluoranthene	%	79			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	75			70-130	Pass	
Naphthalene	%	100			70-130	Pass	
Phenanthrene	%	72			70-130	Pass	
Pyrene	%	79			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	75			30-130	Pass	
2.4-Dichlorophenol	%	97			30-130	Pass	
2.4.5-Trichlorophenol	%	91			30-130	Pass	
2.4.6-Trichlorophenol	%	114			30-130	Pass	
2.6-Dichlorophenol	%	109			30-130	Pass	
4-Chloro-3-methylphenol	%	74			30-130	Pass	
Pentachlorophenol	%	112			30-130	Pass	
Tetrachlorophenols - Total	%	109			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Methyl-4.6-dinitrophenol	%	113			30-130	Pass	
2-Nitrophenol	%	115			30-130	Pass	
2.4-Dimethylphenol	%	90			30-130	Pass	
2.4-Dinitrophenol	%	41			30-130	Pass	
2-Methylphenol (o-Cresol)	%	57			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	52			30-130	Pass	
4-Nitrophenol	%	34			30-130	Pass	
Dinoseb	%	124			30-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			80-120	Pass	
Cadmium	%	96			80-120	Pass	
Chromium	%	95			80-120	Pass	
Copper	%	91			80-120	Pass	
Lead	%	90			80-120	Pass	
Mercury	%	97			80-120	Pass	
Nickel	%	93			80-120	Pass	
Zinc	%	92			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	S21-Jn38582	NCP	%	90			70-130	Pass	
TRH >C10-C16	S21-Jn38582	NCP	%	89			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S21-Jn35228	NCP	%	116			70-130	Pass	
1.1.1-Trichloroethane	S21-Jn35228	NCP	%	101			70-130	Pass	
1.2-Dichlorobenzene	S21-Jn35228	NCP	%	88			70-130	Pass	
1.2-Dichloroethane	S21-Jn35228	NCP	%	97			70-130	Pass	
Trichloroethene	S21-Jn35228	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Arsenic	S21-Jn39596	NCP	%	99			75-125	Pass	
Cadmium	S21-Jn39596	NCP	%	98			75-125	Pass	
Chromium	S21-Jn39596	NCP	%	95			75-125	Pass	
Copper	S21-Jn39596	NCP	%	91			75-125	Pass	
Lead	S21-Jn39596	NCP	%	93			75-125	Pass	
Mercury	S21-Jn39596	NCP	%	102			75-125	Pass	
Nickel	S21-Jn39596	NCP	%	92			75-125	Pass	
Zinc	S21-Jn39596	NCP	%	88			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S21-Jn40000	CP	%	89			70-130	Pass	
Naphthalene	S21-Jn40000	CP	%	93			70-130	Pass	
TRH C6-C10	S21-Jn40000	CP	%	90			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jn40000	CP	%	95			70-130	Pass	
Toluene	S21-Jn40000	CP	%	98			70-130	Pass	
Ethylbenzene	S21-Jn40000	CP	%	98			70-130	Pass	
m&p-Xylenes	S21-Jn40000	CP	%	99			70-130	Pass	
o-Xylene	S21-Jn40000	CP	%	100			70-130	Pass	
Xylenes - Total*	S21-Jn40000	CP	%	99			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	S21-Jn38598	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S21-Jn38598	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S21-Jn38598	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C10-C16	S21-Jn38598	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S21-Jn38598	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S21-Jn38598	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Propanone (Acetone)	S21-Jn39892	NCP	mg/L	0.041	0.045	10	30%	Pass	
4-Chlorotoluene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Allyl chloride	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Bromochloromethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon disulfide	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	S21-Jn39892	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.2-Dichloroethene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	S21-Jn39892	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S21-Jn27373	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jn39999	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Naphthalene	S21-Jn39999	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S21-Jn39999	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jn39999	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S21-Jn39999	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S21-Jn39999	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S21-Jn39999	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	S21-Jn39999	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S21-Jn39999	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jn39596	NCP	mg/L	0.005	0.005	2.0	30%	Pass	
Cadmium	S21-Jn39596	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S21-Jn39596	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S21-Jn39596	NCP	mg/L	0.007	0.006	6.0	30%	Pass	
Lead	S21-Jn39596	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S21-Jn39596	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S21-Jn39596	NCP	mg/L	0.010	0.010	7.0	30%	Pass	
Zinc	S21-Jn39596	NCP	mg/L	0.024	0.029	18	30%	Pass	

Comments

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.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

Elvis Dsouza	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)

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.

El Australia
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Pyrmont
NSW 2009

NATA Accredited
Accreditation Number 1261
Site Number 18217

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: **Ted Zhang**

Report **805633-W**
Project name 2-6 PILGRIM AVE - STRATHFIELD NSW
Project ID E23668
Received Date Jun 24, 2021

Client Sample ID			**GB-H203M-1**	**GB-H204M-1**	**GW-QD1**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S21-Jn49705**	**S21-Jn49706**	**S21-Jn49766**
Date Sampled			**Jun 21, 2021**	**Jun 21, 2021**	**Jun 21, 2021**
Test/Reference	LOR	Unit			
Heavy Metals					
Arsenic	0.001	mg/L	0.002	-	-
Arsenic (filtered)	0.001	mg/L	0.002	0.002	0.002
Cadmium	0.0002	mg/L	< 0.0002	-	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002
Chromium	0.001	mg/L	0.002	-	-
Chromium (filtered)	0.001	mg/L	0.002	0.002	< 0.001
Copper	0.001	mg/L	< 0.001	-	-
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	0.002
Lead	0.001	mg/L	< 0.001	-	-
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001
Mercury	0.0001	mg/L	< 0.0001	-	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001
Nickel	0.001	mg/L	0.002	-	-
Nickel (filtered)	0.001	mg/L	0.002	0.002	0.009
Zinc	0.005	mg/L	0.037	-	-
Zinc (filtered)	0.005	mg/L	0.036	0.036	0.028

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
Metals M8	Sydney	Jun 24, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Metals M8 filtered	Sydney	Jun 24, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

eurofins | Environment Testing

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NATA # 1261 Site # 18217

Brisbane
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Murarrie QLD 4172
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NATA # 1261 Site # 20794

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Welshpool WA 6106
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NATA # 1261
Site # 23736

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Phone : +61 2 4968 8448
NATA # 1261 Site # 25079

New Zealand

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35 O'Rorke Road
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Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name:	EI Australia	**Order No.:**	
Address:	Suite 6.01, 55 Miller Street Pyrmont NSW 2009	**Report #:**	805633
		Phone:	02 9516 0722
		Fax:	
Project Name:	2-6 PILGRIM AVE - STRATHFIELD NSW		
Project ID:	E23668		

Received:	Jun 24, 2021 6:04 PM
Due:	Jun 25, 2021
Priority:	Overnight
Contact Name:	Ted Zhang

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						Metals M8	Metals M8 filtered
Melbourne Laboratory - NATA Site # 1254							
Sydney Laboratory - NATA Site # 18217						X	X
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
Mayfield Laboratory - NATA Site # 25079							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	GB-H203M-1	Jun 21, 2021		Water	S21-Jn49705	X	X
2	GB-H204M-1	Jun 21, 2021		Water	S21-Jn49706		X
3	GW-QD1	Jun 21, 2021		Water	S21-Jn49766		X
Test Counts						1	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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

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 5.3
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

QC - Acceptance Criteria

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%

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 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
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	
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							
Heavy Metals							
Arsenic	%	90			80-120	Pass	
Arsenic (filtered)	%	93			80-120	Pass	
Cadmium	%	94			80-120	Pass	
Cadmium (filtered)	%	98			80-120	Pass	
Chromium	%	88			80-120	Pass	
Chromium (filtered)	%	96			80-120	Pass	
Copper	%	84			80-120	Pass	
Copper (filtered)	%	96			80-120	Pass	
Lead	%	85			80-120	Pass	
Lead (filtered)	%	95			80-120	Pass	
Mercury	%	93			80-120	Pass	
Mercury (filtered)	%	102			80-120	Pass	
Nickel	%	87			80-120	Pass	
Nickel (filtered)	%	97			80-120	Pass	
Zinc	%	88			80-120	Pass	
Zinc (filtered)	%	94			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Jn48339	NCP	%	115			75-125	Pass	
Arsenic (filtered)	S21-Jn48339	NCP	%	112			75-125	Pass	
Cadmium	S21-Jn48339	NCP	%	98			75-125	Pass	
Cadmium (filtered)	S21-Jn48339	NCP	%	98			75-125	Pass	
Chromium	S21-Jn48339	NCP	%	80			75-125	Pass	
Chromium (filtered)	S21-Jn48339	NCP	%	80			75-125	Pass	
Copper	S21-Jn33239	NCP	%	111			75-125	Pass	
Lead	S21-Jn33239	NCP	%	112			75-125	Pass	
Mercury	S21-Jn33239	NCP	%	107			75-125	Pass	
Mercury (filtered)	S21-Jn48339	NCP	%	82			75-125	Pass	
Nickel	S21-Jn33239	NCP	%	109			75-125	Pass	
Zinc	S21-Jn33239	NCP	%	93			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-Jn47337	NCP	mg/L	0.032	0.032	2.0	30%	Pass	
Cadmium (filtered)	S21-Jn47337	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-Jn47337	NCP	mg/L	0.008	0.008	4.0	30%	Pass	
Copper (filtered)	S21-Jn47337	NCP	mg/L	0.006	0.006	1.0	30%	Pass	
Lead (filtered)	S21-Jn47337	NCP	mg/L	0.002	0.002	1.0	30%	Pass	
Mercury (filtered)	S21-Jn47337	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S21-Jn47337	NCP	mg/L	0.004	0.004	2.0	30%	Pass	
Zinc (filtered)	S21-Jn47337	NCP	mg/L	0.020	0.020	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jn49706	CP	mg/L	0.002	0.002	6.0	30%	Pass	
Cadmium	S21-Jn49706	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S21-Jn49706	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S21-Jn49706	CP	mg/L	0.002	0.002	4.0	30%	Pass	
Lead	S21-Jn49706	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S21-Jn49706	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S21-Jn49706	CP	mg/L	0.010	0.012	19	30%	Pass	
Zinc	S21-Jn49706	CP	mg/L	0.037	0.047	26	30%	Pass	

Comments

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

Authorised by:

Elvis Dsouza	Analytical Services Manager
John Nguyen	Senior Analyst-Metal (NSW)

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.

Appendix I – QA/QC Assessment

I1.1 Quality Assurance / Quality Control Program

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

Table I-1 Project QC Measures

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

Task	Description	Project
Trip Spikes	Trip spike (TS) samples were to be submitted to the primary laboratory for BTEX analysis, the results for which were reported within the RPD acceptance levels for trip spike recovery. It was therefore concluded that satisfactory sample transport and handling conditions were achieved.	Two trip spike samples were submitted to the primary laboratories for BTEX analysis, the results of which were reported within the RPD acceptance levels for trip spike recovery. It was therefore concluded that satisfactory sample transport and handling conditions were achieved.
Duplicates	Field duplicate samples were analysed as follows: ▪ intra-laboratory duplicate samples at a rate of 1 in 20 primary samples (as per NEPM); and ▪ inter-laboratory duplicate samples at a rate of 1 in 20 primary samples (as per NEPM). Field and laboratory acceptable limits between 30-50% RPD as stated by AS4482.1–2005. RPDs that exceed this range may be considered acceptable where: ▪ Results are less than 10 times the limits of reporting (LOR); ▪ Results are less than 20 times the LOR and the RPD is less than 50%; or ▪ Heterogeneous materials or volatile compounds are encountered. Non-compliance is to be documented in the report and the sample re-analysed or a higher level conservatively adopted.	Partly satisfied - primary sample BH201_4.1-4.3 was not tested. A comparison has been made between the duplicate and triplicate. Generally, samples complied with RPD calculations. Soil results can exhibit wide variations in results due to sample heterogeneity, which can in turn exaggerate RPDs. Additionally, some RPD exceedance calculations can be attributed to low limits of reporting. Field QC samples and calculated RPD values are presented in **Table I-5**. Copies of laboratory reports are included in **Appendix H**.
Laboratory QA/QC		
Laboratory Analysis	The laboratories selected are NATA accredited for the analytes selected and perform their own internal QA/QC programs.	Yes Eurofins - primary laboratory Envirolab - secondary laboratory
	Appropriate detection limits were used for the analyses to be undertaken.	Practical Quantitation Limits for all tested parameters during the ASI are presented in summary tables.
Holding Times	Holding times are the maximum permissible elapsed time in days from the collection of the sample to its extraction and/or analysis. All extraction and analyses should be completed within standard guidelines.	Assessment of holding times has been undertaken by the laboratory.

Task	Description	Project
Method Blanks	The method blank sample is laboratory prepared, containing the reagents used to prepare the sample for final analysis. The purpose of this procedure is to identify contamination in the reagent materials and assess potential bias in the sample analysis due to contaminated reagents. The QC criterion aims to find no detectable contamination in the reagents. Each analysis procedure should be subject to a method blank analysis. The results of each should indicate that contaminants were not detected.	Assessment of method blanks has been undertaken by the laboratory.
Laboratory Duplicates	Laboratory duplicates are field samples that are split in the laboratory and subsequently analysed a number of times in the same batch. These sub-samples are selected by the laboratory to assess the accuracy and precision of the analytical method. The selected laboratories should undertake QA/QC procedures such as calibration standards, laboratory control samples, surrogates, reference materials, sample duplicates and matrix spikes. Intra-laboratory duplicates should be performed at a frequency of 1 per 10 samples.	Assessment of laboratory duplicates has been undertaken by the laboratory.
Laboratory Control Standard	A laboratory control standard is a standard reference material used in preparing primary standards. The concentration should be equivalent to a mid-range standard to confirm the primary calibration. Laboratory control samples should be performed on a frequency of 1 per 20 samples or at least one per analytical run.	Assessment of laboratory control standards has been undertaken by the laboratory.
Matrix Spikes / Matrix Spike Duplicates	Matric spikes are field samples to which a predetermined stock solution of known concentration has been added. The samples are then analysed for recovery of the known addition. Recoveries should be within the stated laboratory control limits of 70 to 130% and duplicates should have RPDs of less than 50%.	Assessment of matrix spikes has been undertaken by the laboratory.

Task	Description	Project
Surrogate Spikes	Surrogate spikes provide a means of checking, for every analysis that no gross errors have occurred at any stage of the procedure leading to significant analyte loss. Recoveries should be within the stated laboratory control limits of 70 to 130%.	Assessment of surrogate spikes has been undertaken by the laboratory.
Conclusion	The QA/QC indicators should either all comply with the required standards or showed no variations that would have no significant effect on the quality of the data.	Assessment of the investigation QA/QC is presented in the following sections.

I1.2 Calculation of Relative Percentage Difference

The RPD values were calculated using the following equation:

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

Where:

C_O = Concentration obtained for the primary sample; and

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

I2.1 Field QA/QC

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

Table I-2 Field QC Sampling Program

Matrix	Primary QA Sample	Duplicate (Primary Lab)	Triplicate (Secondary Lab)	Total Duplicates
Soil	BH201_4.1-4.3	BH200-QD	BH200-QT	2
Groundwater	GB-H204M-1	GW-QD1	GW-QT1	2

I2.2 Field Data Quality Indicators

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

Table I-3 Field Data Quality Indicators

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

I2.3 Conclusion for the Field QA/QC

All field work, including equipment decontamination and sample preservation and transport, was conducted in accordance with the SAQP and SOPs, which were devised with reference to industry-approved guidelines. Appropriate QC measures were integrated into each sampling event and the DQI were met, or if not, the variability was suitably justified.

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

I2.4 Laboratory QA/QC

Primary and intra-laboratory duplicate samples were analysed by Eurofins, with inter-laboratory duplicate samples analysed by Envirolab. All laboratories are accredited by NATA for the analyses undertaken. A discussion of the laboratory DQIs is presented below.

Table I-4 Laboratory Data Quality Indicators

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

I2.5 Conclusions for the Laboratory QA/QC

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

I2.6 Summary of Project QA/QC

The project DQOs specified in **Section 6**, **Table 6-1** were considered to have been achieved. The adopted QA/QC program ensured that the data collated during the ASI were accurate, precise and representative of the (final) site conditions. It was therefore considered that the data were sufficiently precise and accurate and that the results could be used for ASI interpretative purposes.

Table I-5 Summary of QA/QC results for Investigation samples

Sample identification	Sampled Date	Description	TRH				BTEX				Heavy Metals							
			F1*	F2**	F3 (>C_{16} - C_{34})	F4 (>C_{34} - C_{40})	Benzene	Toluene	Ethylbenzene	Xylene (total)	Arsenic	Cadmium	Chromium (Total)	Copper	Lead	Mercury	Nickel	Zinc
Intra-laboratory Duplicate																		
GB-H204M-1	21/6/2021	Groundwater	<20	<50	<100	<100	<1	<1	<1	<3	2	< 0.2	2	1	1	< 0.1	2	36
GW-QT1		Replicate of GB-H204M-1	<10	<50	<100	<100	<1	<1	<1	<3	2	<0.1	<1	3	<1	<0.05	12	37
RPD			***NA***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***NA***	**80.00**	**100.00**	***0.00***	***NA***	**142.86**	***2.74***
Inter-laboratory Duplicate																		
BH200-QT	17/6/2021	Replicate of BH200-QD	<25	69	<100	<100	<0.2	<0.5	<1	<2	<4	<0.4	4	56	24	<0.1	15	170
BH200-QD		Replicate of BH200-QT	29	64	180	<100	<0.1	<0.1	<0.1	<0.3	< 2	< 0.4	< 5	38	19	< 0.1	11	180
RPD			***19.28***	***7.52***	**69.57**	***0.00***	***NA***	***NA***	***NA***	***NA***	***NA***	***NA***	***30.77***	***38.30***	***23.26***	***NA***	***30.77***	***5.71***
GB-H204M-1	21/6/2021	Groundwater	<20	<50	<100	<100	<1	<1	<1	<3	2	< 0.2	2	1	1	< 0.1	2	36
GW-QD1		Replicate of GB-H204M-1	<20	<50	<100	<100	<1	<1	<1	<3	3	< 0.2	2	4	< 1	< 0.1	12	34
RPD			***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***40.00***	***0.00***	***0.00***	**120.00**	***0.00***	***0.00***	**142.86**	***5.71***
Trip blank	17/06/2021	Trip blank (soil)	-	-	-	-	<0.1	<0.1	<0.1	<0.3	-	-	-	-	-	-	-	-
Trip spike		Trip spike (soil)	-	-	-	-	[92%]	[88%]	[85%]	[85%]	-	-	-	-	-	-	-	-
BH200-RS		Rinsate	<20	<50	<100	<100	<1	<1	<1	<3	<1	<0.1	<1	<1	<1	<0.1	<1	<5
GW-TB1	21/06/2021	Trip blank (water)	-	-	-	-	<1	<1	<1	<3	-	-	-	-	-	-	-	-
GW-TS1		Trip spike (water)	-	-	-	-	[100%]	[100%]	[100%]	[98%]	-	-	-	-	-	-	-	-
GW-QR1		Rinsate	<20	<50	<100	<100	<1	<1	<1	<3	<1	<0.1	<1	<1	<1	<0.1	<1	<5

Indicates values where a single result is found to be less than detection, with the duplicate sample found to be over the detection limit.

RPD exceeds 30-50% range referenced from AS4482.1 (2005)

NOTE:

All soil results are reported in mg/kg . All water results are reported in µg/L.

* - to obtain F1 subtract the sum of BTEX concentrations from the C_6-C_{10} fraction

** - to obtain F2 subtract naphthalene from the > C_{10}-C_{16} fraction

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