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CADDENS ESTATE PTY LTD

Detailed Site Investigation

68 - 80 O'Connell Street, Caddens NSW

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EXECUTIVE SUMMARY

This Detailed Site Investigation (DSI) has been prepared by EI Australia Pty Ltd (EI) for Caddens Estate Pty Ltd ('the client') to accompany a State Significant Development Application (SSDA) for a mixed-use development (including in-fill affordable housing) at 68 - 80 O'Connell Street, Caddens NSW ('the site'), within the Penrith Local Government Area (LGA).

The site is located 45km north-west of the Sydney central business district, and covers an area of 54,032 m^2 and comprises two cadastral allotments: Lot 2 in Deposited Plan (DP) 1268507 and part of (the eastern portion) Lot 1 in DP 1268507. The site is generally rectangular in shape and at the time of this investigation, the site was occupied by an at-grade car parking area to the west and a vacant grassy land to the east.

The site was designated for redevelopment and this DSI was completed in support of a State Significant Development Application (SSDA) and to address the Secretary's Environmental Assessment Requirement (SEARs) issued for the project (SSD-80875966) on 14 March 2025. It enables the developer to meet obligations under the *Contaminated Land Management Act 1997* and *State Environmental Planning Policy (Resilience and Hazards) 2021*, in particular the requirements for the assessment and management of contaminated soil and groundwater.

Based on the supplied plans, site redevelopment involved the demolition of existing structures, followed by the construction of multiple mixed-use residential and retail buildings overlying one to two-level basements, and with open space areas and local roads.

Objectives

The objectives of this investigation were to:

- Provide a qualitative assessment of the environmental condition of the site, by appraising the potential for contamination on the basis of field observations, historical land uses and other documentary evidence;
- Assess the nature and degree of any soil and groundwater contamination, by means of intrusive sampling and laboratory analysis for the relevant contaminants of potential concern (COPCs); and
- Make recommendations for the appropriate management of any impacted soils and/or groundwater, should site contamination be confirmed.

Findings

The key findings of this DSI were as follows:

- The site is surrounded by established and newly developed low density residential areas of Caddens, Claremont Meadows, Werrington and Kingswood, as envisioned by the Caddens Release Area plan within the PDCP 2014.
- No visual evidence of infrastructure associated with an underground storage tank (UST) was observed on the site. No above-ground storage tank (AST) was present.
- No olfactory indicator of contamination was detected during the inspection.
- The asphalt paving of the western car parking area was in good condition. Minor surface (oil-like) staining was observed.
- One fragment of bonded asbestos containing material was observed on the exposed ground surface in the southern portion of the site (near to O'Connell Street). The fragment was removed for laboratory testing.
- A review of historical information suggested that the site was vacant land since at least 1940s. Between 1970 and 2006, the western portion of the site was used as a theatre

which was demolished circa 2006. After 2021, the western portion of the site was used as an on-grade parking area. The local surroundings consisted of vacant land and rural residential properties since 1940s.

- The site and surrounding lands within close proximity (≤250m radius) were free of statutory notices and licensing agreements issued under the *Contaminated Land Management Act 1997* and *Protection of the Environment Operations Act 1997*. The site and surrounding lands were not included on the *List of NSW Contaminated Sites Notified to the EPA*.
- Excluding any hardstand, the sub-surface of the site was generalised as a layer of variable filling (0-3.3m thickness), overlying natural silty clay/sandy clay/sand, with (weathered) siltstone/sandstone/shale bedrock occurring from 0.1-14.7 metres Below Ground Level (mBGL) onwards. The potential for ASS to be present on the site was very low.
- The concentration of potential contaminants in soil did not exceed adopted health-based criteria.
- Contaminant concentrations in the majority of the soil samples did not exceed adopted ecological criteria, except for soil samples were mentioned in **Section 8.2**. However, site inspection did not identify any evidence of stressed vegetation at the site including the designated ecological area. Also, a review of site mapping (Lotsearch, **Appendix F**) indicated that the area within the site has limited cover (<10%) and is a fragmented remnant of original woodland. The concentrations of metals, benzo(a)pyrene and other potential contaminants in other soil samples are low. The risks to the designated deep soil areas are likely low and acceptable, therefore, no further investigation or management required
- The depth to groundwater was 1.8-4.1 mBGL (45.32-59.42 mAHD) and the inferred hydraulic gradient (potentiometric slope) was north-west towards Werrington Creek. Local groundwater conditions were slightly alkaline, brackish to saline and oxidising.
- The concentration of potential contaminants in groundwater was low. The concentration of some priority metals (cadmium, chromium, copper and zinc) marginally exceeded adopted groundwater investigation levels, however the concentrations were considered typical of urban environments and indicative of background) conditions.
- The conceptual site model was considered to appropriately identify contamination sources, migration mechanisms and exposure pathways, as well as potential on-site and off-site receptors. The risk from potential contaminants in soil and groundwater was low and acceptable.

Conclusion

Based on the findings of this DSI, and with consideration of EI's *Statement of Limitations* (**Section 11**), EI concludes that the site is suitable for the proposed development. Recommendations for the construction phase of the development are provided in **Section 10**.

1. INTRODUCTION

1.1. Background and Purpose

This Detailed Site Investigation (DSI) has been prepared by EI Australia (EI) for Caddens Estate Pty Ltd ('the client') to accompany a State Significant Development Application (SSDA) for a mixed-use development (including in-fill affordable housing) at 68 - 80 O'Connell Street, Caddens NSW ('the site'), within the Penrith Local Government Area (LGA).

The site is located 45km north-west of the Sydney central business district, and covers an area of 54,032 m^2 (**Figure 1**, **Appendix A**) and comprises two cadastral allotments: Lot 2 in Deposited Plan (DP) 1268507 and part of (the eastern portion) Lot 1 in DP 1268507. The site is generally rectangular in shape and at the time of this investigation, the site was occupied by an at-grade car parking area to the west and a vacant grassy land to the east (**Figure 2**, **Appendix A**).

The site was designated for redevelopment. and this DSI was completed in support of a State Significant Development Application (SSDA) and to address the requirement of *Condition 13– Contamination and Remediation* of *Planning Secretary's Environmental Assessment Requirements (SEARs)*, issued for the project (SSD-80875966) on 14 March 2025. Specifically, this report has been prepared to respond to the SEARs requirement issued below.

Table 1-1 Specific SEARs Requirement

Item	Description of Requirement	Section reference (this report)
13. Contamination and Remediation	In accordance with Chapter 4 of the *State Environmental Planning Policy* (*Resilience and Hazards*) 2021, assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable (or will be suitable, after remediation) for the development.	Throughout this report, in particular, Sections 8, 9 and 10.

This SSDA also seeks to modify DA17/0995 (pursuant to Clause 4.17(5) of the Environmental Planning and Assessment Act 1979 (EP&A Act) by amending the description of works and removing reference to the Concept DA and Stage 2 works to avoid inconsistency of the proposed works on the existing at-grade car park and south-western corner of the site with that approval.

The aim was to appraise the environmental (potential contamination) and determine the contamination status of the land. It enables the developer to meet obligations under the *Contaminated Land Management Act 1997* and *State Environmental Planning Policy (Resilience and Hazards) 2021*, in particular the requirements for the assessment and management of contaminated soil and groundwater.

Note: EI completed a geotechnical investigation of the site concurrently with this DSI and the corresponding report should be read in conjunction with this report.

1.2. Proposed Development

The SSDA seeks development consent for a mixed-use development (including in-fill affordable housing) comprising a combination of shop-top housing, residential flat buildings and a commercial premise (shop) at 68-80 O'Connell Street, Caddens. The proposed works include site preparation works, excavation, infrastructure, construction of the buildings and associated landscaping works.

Specially, site redevelopment involves the following items to be prepared:

- Demolition of an existing at grade car park;
- Construction of 4 × 4 – 6 storey shop top housing buildings at 68 O'Connell Street, Caddens, comprising:
  - 177 residential dwellings;
  - ground floor commercial, retail and medical uses;
- Construction of a single storey commercial premises (shop) located at the south western corner of 68 O'Connell Street;
- Construction of basement carparking to service the shop top housing, ground floor commercial and commercial premises at the southwestern corner;
- Construction of 11 × 4 – 7 storey residential flat buildings at 80 O'Connell Street, including:
  - 305 residential dwellings;
  - Basement carparking
- Internal roads;
- Associated infrastructure and services; and
- Landscaping and communal open spaces including a 'public square'.

Based on the client supplied plans (**Appendix C**), prepared by GroupGSA on 1 August 2025 (ref. A252106, SSDA2050/2051/2060/2061/2062/2070/2071/2072). Three basement levels are designated for the proposed development occupying the eastern portion of 68 O'Connell Street. The lowest level (Basement level 3) and Basement level 2 are proposed to have finished floor levels (FFL) of 38.90 and 42.10 meters Australian Height Datum (mAHD) respectively, with basement level 1 is proposed to have a FFL of 45.30 mAHD.

Two basements occupies in the northern and southern portions of the site at 80 O'Connell Street. The lowest level of the basement of which comprising two levels designated to occupy the northern portion is proposed to have FFLs ranging from 49.50 to 50.10 mAHD, and Basement level 1 is proposed to have FFLs ranging from 52.50 to 53 mAHD.

The lowest level of the basement of which comprising three levels designated to occupy the southern portion is proposed to have FFLs ranging from 50.10 to 52.15, and Basement level 2 is proposed to have a FFL of 55.10 mAHD. Basement Level 1 is proposed to have FFLs ranging from 56.20 to 58.40 mAHD.

Locally deeper excavations might be required for footings, lift overrun pits, crane pads and service trenches. A deep soil zone for landscaping is proposed in the northern portion, identified as a threatened ecological community (TEC) area, of Shale Plains Woodland.

1.3. Project Objectives

The objectives of this investigation were to:

- Provide a qualitative assessment of the environmental condition of the site, by appraising the potential for contamination on the basis of field observations, historical land uses and other documentary evidence;
- Assess the nature and degree of any soil and groundwater contamination, by means of intrusive sampling and laboratory analysis for the relevant potential contaminants; and
- Make recommendations for the appropriate management of any impacted soils and/or groundwater, should site contamination be confirmed.

1.4. Scope of Works

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

Desktop Study

- Review of relevant (hydro)geological and soil landscape maps for the project area;
- A search for groundwater bore records within close vicinity (500m radius) of the site;
- Review of site history, based on an environmental risk and planning report compiled by Lotsearch Pty Ltd (Lotsearch), aerial photographs (dating back to 1943) and property files archived by Penrith City Council;
- A search of SafeWork NSW records, for information relating to the storage of hazardous chemicals, including possible underground tank approvals and locations;
- Searches of public registers maintained by the NSW Environment Protection Authority (EPA) for statutory notices and licensing agreements issued under the *Contaminated Land Management Act 1997* and *Protection of the Environment Operations Act 1997*;
- A search of the *List of NSW Contaminated Sites Notified to the EPA*;
- Presentation of a conceptual site model (CSM); and
- Data interpretation and reporting.

Fieldwork and Laboratory Analysis

- Review of existing underground services on-site, utilising *Dial-Before-You-Dig* plans and electro-magnetic equipment operated by a licensed locator;
- A detailed site walkover inspection;
- Drilling of test boreholes at 55 locations (BHA1M to BHH7M), distributed in a systematic grid across the site;
- Multiple level sampling of fill and natural soils at each of the boreholes;
- Installation of groundwater monitoring wells at five locations identified as BHA1M, BHA7M, BHD4M, BHG1M and BHH7M;
- Completion of a groundwater monitoring event (GME), which included measurement of standing water levels (SWLs) and sampling at the installed wells; and
- Laboratory analysis of selected soil and groundwater samples for the contaminants of potential concern (COPCs), as determined from the conceptual site model (CSM) and field observations.

Data Analysis and Reporting

This report documents the desk study findings, the CSM, data quality objectives, sampling methodologies and laboratory analytical results. It also provides a record of observations made during the site walkover inspections, test bore and monitoring well construction logs and a discussion of the results in regards to potential risks to human health and the environment. It concludes with a statement concerning the suitability of the site for the proposed (mixed use) development.

1.5. Regulatory Framework

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

- *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 1979);
- *State Environmental Planning Policy (Resilience and Hazards) 2021*;
- *Penrith Local Environmental Plan 2010;*
- NSW EPA (2017) *Guidelines for the NSW Site Auditor Scheme;*
- NSW EPA (2020) *Consultants Reporting on Contaminated Land: Contaminated Land Guidelines*;
- NSW EPA (2022a) *Sampling Design Part 1 - Application*; and
- NEPC (2013) *National Environmental Protection (Assessment of Site Contamination) Amendment Measure 1999.*

2. SITE DESCRIPTION

2.1. Property Identification, Location and Physical Setting

The western portion of the site (68 O'Connell Street) currently comprises an approved commercial shopping centre development and associated carpark, commonly known as 'Caddens Corner'. It is zoned E1 Local Centre pursuant to the Penrith Local Environmental Plan 2010 (PLEP 2010). This portion of the site is subject to a Concept Development Application (DA) (DA17/0995). A portion of 68 O'Connell Street that is currently used for at-grade car parking is subject to this SSDA.

The eastern portion of the site (80 O'Connell Street) is a cleared vacant lot, historically occupied by rural residential land uses. It is zoned R4 High Density Residential pursuant to the PLEP 2010. This site itself is not identified as a heritage item; however, it is located to the east of the 'Teacher's residence (former)' (Item 670), a local heritage item which is identified under Schedule 5 of the PLEP 2010.

High biodiversity value land is present in the north-eastern corner of the site, pursuant to the *Biodiversity Conservation Act 2016*.

The site is located approximately 5.5km east of Penrith City Centre, 30km west from Parramatta central business district, and within the Caddens Release Area within the *Penrith Development Control Plan* (PDCP 2014), and under the Caddens Release Area Structure Plan, is strategically identified as the precinct centre with adjoining residential areas.

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

Table 2-1 Site Identification Details

Attribute	Description
Street Address	68 - 80 O'Connell Street, Caddens NSW
Location and Description	45km north-west of Sydney CBD, bound by O'Connell Street (south), commercial properties (west) and vacant land (north and east). Rectangular shaped block of land, containing an on-grade car parking area (western portion) and grassy vacant land (eastern portion). The site is approximately 2.2 kilometres (km) from Werrington Station and 1.8km from Kingswood Station. It is also well serviced by local buses with stops in proximity to the site along O'Connell Street in both directions.
Geographical Coordinates	Northern-eastern corner of site (GDA2020-MGA56): Easting: 290535.307 Northing: 6261150.198 (Source: http://maps.six.nsw.gov.au)
Site Area	Approximately 5.5 ha (**Figure 2**, **Appendix A**)
Lot and DP	Part of Lot 1 in DP 1268507 and Lot 2 in DP 1268507
State Survey Marks	Three permanent marks and three state survey marks are situated within close proximity to the site: ▪ PM41935: on O'Connell Street (approximately 18 m south); ▪ SS210305: on O'Connell Street (approximately 17m south); ▪ PM41936: on O'Connell Street (approximately 8m southeast); ▪ SS210306: on O'Connell Street (approximately 19m southeast);

Attribute	Description
	▪ PM20621: on O'Connell Street (approximately 28m southeast); and ▪ SS210311: on O'Connell Street (approximately 81m southeast); (Source: http://maps.six.nsw.gov.au)
LGA	Penrith City Council
Current Zoning	E1: Local Centre R4: High Density Residential (*Penrith Local Environmental Plan 2010*)

2.2. Local Land Use

The site is surrounded by established and newly developed low density residential areas of Caddens, Claremont Meadows, Werrington and Kingsford, as envisioned by the Caddens Release Area Plan within the PDCP 2014.

A staged residential subdivision for 119 residential lots is located immediately to the north of the site at 46-66 O'Connell Street. The area is interspersed with a variety of uses, including Western Sydney University (WSU), TAFE NSW and sporting Street.

The local sensitive receptors within close proximity (<250m) to the site are identified in **Table 2-2.**

Table 2-2 Local Sensitive Receptors

Direction	Land Use Description	Sensitive Receptor (and distance from site)
North	Western Sydney University	Campus users (approximately 250m north-east)
South	Residential properties	Residence (approximately 30m south)
East	Vacant land	-
West	Commercial properties Prepare Early Education Centre Werrington Creek	Building occupants (immediately adjacent) Childcare centre users (approximately 140m west) Werrington Creek (approximately 160m west)

2.3. Regional Setting

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

Table 2-3 Regional Setting Information

Attribute	Description
Topography	The site slopes to the north-west, with elevations ranging from approximately 66.2 mAHD (south-eastern corner of the site) to approximately 48.5 mAHD (north-western corner of the site), refer to **Appendix C**.
Drainage	Likely to be consistent with the general slope of the site. Surface runoff is expected to be collected in stormwater pits and piped to the municipal drain system.
Geology	The Department of Mineral Resources *Penrith 1:100,000 Geological Series Sheet 9030* (DMR, 1991) indicates the site is underlain by Bringelly Shale (Rwb), which consists of shale, carbonaceous claystone, laminite, fine to medium-grained lithic sandstone, rare coal and tuff.
Soil Landscape	The Soil Conservation Service of NSW *Soil Landscapes of the Penrith 1:100,000 Sheet* (Bannerman and Hazelton, 1990) indicates that the site overlies a Luddenham (lu) erosional landscape. This landscape is characterised by undulating to rolling low hills on Wianamatta Group shales, often associated with Minchinbury Sandstone.

Attribute	Description
Acid Sulfate Soil (ASS) Risk	The site is not mapped as containing ASS on the *Penrith Local Environmental Plan 2010* Acid Sulfate Soil Maps. There are no Acid Sulfate Soil Risk Maps for the subject site provided by the Department of Land and Water Conservation. Based on the environmental risk and planning report (Lotsearch, 2022), the probability of occurrence of ASS is extremely low. Therefore, the potential for ASS presence on-site was considered to be low and further assessment or management is not required.
Nearest Surface Water Features	Unnamed creek, located within the site. Werrington Creek located approximately 170 m north west of the site
Groundwater Flow Direction	Groundwater flow direction in the area was inferred to be north-westerly, towards Werrington Creek.

2.4. Groundwater Bore Records and Local Groundwater Use

An online search for groundwater bores registered with WaterNSW was conducted by EI on 18 November 2022 (Ref. https://realtimedata.waternsw.com.au/water.stm). The search revealed no registered bores within a 500m radius of the site (**Appendix D**), indicating the local groundwater resource was not being (heavily) utilised.

2.5. Site Walkover Inspections

Observations were recorded during a walkover inspection of the site, conducted on 9 November 2022. These observations are summarised below and photographs taken during the inspection are presented in **Appendix E**.

- The site was located in an area of a local retail centre with ground level car parking and high density residential uses.
- The site was a rectangular shaped block of land. The western portion of the site was occupied by an on-grade parking area, with a car wash workshop to the south (**Photograph 1-2**). The eastern portion of the site is grassy vacant land (**Photograph 3-4**). The western car park was operational at the time of the investigation.
- An unnamed creek was located within the site.
- The asphalt paving of the western car parking area was in good condition. Minor surface (oil-like) staining was observed (**Photograph 5**).
- A single fragment of fibre cement sheeting (potential asbestos containing material (ACM)) was observed on the exposed ground surface in the southern portion of the site (near to O'Connell Street).
- Vegetation was present on the site and within the areas adjacent to it, including small to large (mature) trees, grasses and weeds. The vegetation did not appear to be distressed, indicating that phytotoxicity was not an issue for local soils.
- No visual evidence of infrastructure associated with an underground storage tank (UST) was observed on the site. No above-ground storage tank (AST) was present.
- Vehicle wash down was conducted on the car wash workshop to the south of the car park and water discharge was not observed to fall to the surface.
- No olfactory indicator of contamination (i.e. suspicious odour) was detected during the inspection.

- There was no NSW Fire and Rescue Station (or Training College) in the vicinity (<100m) of the site.

3. Site History and Searches

3.1. Lotsearch Report

An environmental risk and planning report (Lotsearch, 2022) was reviewed as part of this DSI, which included historical business directories (covering the period 1950 to 1991), as well as searches of various environmental resources and plans archived by statutory authorities (**Appendix F**). A summary of the relevant (historical) information follows.

Historical Business Directories

Based on the registered business directory records, business directory records identified on the site included a drive –in theatre and a distiller before that in the period from1950 to 1991.

No registered business directory records were identified on the surrounding lands within close proximity (≤150m) in the period of 1950 to 1991.

Other Findings

Additional findings from searches of other environmental resources and plans (Lotsearch, 2022) were as follows:

- No former gasworks, waste management or liquid fuel facilities were present within a 1km radius of the site.
- No properties that were part of the Department of Defence or NSW EPA PFAS investigation / management programs were present within a 2km radius of the site.
- No properties were part of the Defence 3 Year Regional Contamination Investigation Program within a 2km radius of the site.
- There were no records regarding dry cleaners, motor garages and service stations identified within 500m radius of the site.
- There were no major AST areas or points within a 1km radius of the site.
- The site and its surroundings were not recorded as having a “naturally occurring asbestos potential”.
- With respect to ASS, the site was classified as having “extremely low probability of occurrence” (consistent with the information in **Section 2**, **Table 2-3**).
- The site is situated within an area of moderate salinity potential. Dryland salinity assessment data was recorded for the site, which indicated a high hazard or risk.
- No mining subsidence districts were present within the surveyed area.
- No state significant precincts were found within a 1km radius of the site.
- Two natural (e.g. bush fire) hazard classifications were applied to the site, identified as Vegetation Category 2 and Vegetation Buffer. One natural (e.g. bush fire) hazard classification was applied to the surrounding land (157m north-west), identified as Vegetation Category 1.
- Ecological (native vegetation, wetland, groundwater, inflow, bio-conservation) shale plain woodland constraint applied to the site.
- No ecological constraints (wetland, bio-conservation) were applied to the site, with the exception of remnant vegetation (shale plains woodland), groundwater dependent ecosystems (High potential GDE), and inflow dependent ecosystems (undulating to low hilly country mainly on shale) applied to the northern portion of the site

3.2. Historical Aerial Photography Review

The historical aerial photographs reviewed as part of this DSI were derived from on-line resources and included:

- **1943, 1955,1960, 1970, 1977,1990 and 2001:** available through Spatial Service NSW (https://portal.spatial.nsw.gov.au/portal/apps/webappviewer/index.html);
- **2006 to 2021:** provided by Google Earth.

A summary of the findings is given in **Table 3-1**.

Table 3-1 Summary of Aerial Photograph Observations

Year	Description of Site and Surroundings	Land Use
1943	The site appeared to be a vacant, grassed land. Surrounding areas consisted of vacant land and rural residential properties.	Vacant land
1955	The site was largely unchanged from the 1943 image. Surrounding areas were largely unchanged.	Vacant land
1960	The site was largely unchanged from the 1955 image. Surrounding areas were largely unchanged.	Vacant land
1970	The western portion of the site was occupied by drive-in theatre structures, and the eastern portion appeared to be a vacant land. More residential properties were present to the west of the site.	Commercial / Vacant land
1977	The site was largely unchanged from the 1970 image. Surrounding areas were largely unchanged.	Commercial / Vacant land
1990	The site was largely unchanged from the 1977 image. More building structures were appeared to the north-west of the site, largely consistent with the current structures. More residential properties were present to the east of the site.	Commercial / Vacant land
2001	The site was largely unchanged from the 1990 image. Surrounding areas were largely unchanged, with an exception that a tennis court was appeared to the west of the site.	Commercial / Vacant land
2006-2018	The site was largely unchanged from the 2001 image, with an exception that the theatre structures were demolished. Surrounding areas were largely unchanged.	Vacant land
2021	The western portion of the site was used as an on-grade parking area. More commercial properties were appeared to the west of the site and more residential properties were noted to the south of the site.	Commercial / Vacant land

3.3. Council Information

An application to access records held by Penrith City Council was initiated on 12 October 2022. No relevant information corresponding to the site relating to former land use, or an environmental (potential contaminating) incident, was provided by council.

3.4. SafeWork NSW Dangerous Goods Register Records

A search of the *Stored Chemical Information Database* maintained by SafeWork NSW was requested by EI on 12 October 2022. This database contains information relating to the storage of dangerous goods, in particular the presence of (licensed) underground and above-ground storage tanks. Correspondence dated 21 October 2022 confirmed that SafeWork NSW did not hold any records relating to any part of the site (**Appendix G**).

3.5. NSW EPA Online Records

Searches of public registers maintained by the EPA for statutory notices and licensing agreements issued under the *Contaminated Land Management Act 1997* (CLM Act 1997) and *Protection of the Environment Operations Act 1997* (POEO Act 1997) were conducted by EI for this DSI.

Record of Notices Under Section 58 of CLM Act 1997

An on-line search of the contaminated land public record was conducted on 18 November 2022. The contaminated land public record is a searchable database of:

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

The search confirmed that neither the site, nor the surrounding lands within close proximity (≤250m), were subject to any regulatory notices relevant to the above legislations.

List of NSW Contaminated Sites Notified to EPA

A search through the *List of NSW Contaminated Sites Notified to the EPA* under Section 60 of the CLM Act 1997 was conducted on 18 November 2022. This list is maintained by the EPA and includes properties on which contamination has been identified, but not deemed to be impacted significantly enough to warrant regulation.

The search confirmed that neither the site, nor the surrounding lands within close proximity (≤250m) were notified as contaminated to the NSW EPA (i.e. they were not included in the list).

POEO Public Register

A search of the *Protection of the Environment Operations Act 1997* public register was conducted on 18 November 2022. This public register contains records related to environmental protection licences, applications, notices, audits, pollution studies and reduction programs.

The search confirmed that neither the site, nor the surrounding lands within close proximity (≤250m), were subject to any licensing agreements / notices / programs relevant to this legislation.

4. CONCEPTUAL SITE MODEL

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

4.1. Summary of Site History

Based on the available historical information (**Section 3**), as well as the observations made during the walkover inspection (**Section 2.5**), the site was a vacant land since at least 1940s. Between 1970 and 2006, the western portion of the site was used as a drive-in theatre which was demolished between 2006 and 2018. After 2021, the western portion of the site was used as an on-grade parking area.

The local surroundings consisted of vacant land and rural residential properties since 1940s.

4.2. Subsurface Conditions

The sub-surface conditions were described as a layer of variable (clay, sand and gravel) filling, overlying natural (residual) silty clay / sandy clay / sand soils and (weathered) siltstone / sandstone / shale (**Section 7.1**). The potential for ASS to be present on the site was very low.

A shallow (<3m BGL) groundwater table was unlikely. The local groundwater flow direction was inferred to be north-westerly, towards Werrington Creek.

4.3. Potential Contamination Sources

The potential contamination sources were as follows:

- Imported fill materials of unknown origin and quality, used to grade and level the site;
- Hazardous building materials within former site structures (including asbestos-containing material (ACM), lead-based paints and metallic objects), as a result of historical demolitions and/or weathering;
- Application of pesticides around building (footing) perimeters;
- Leaks from vehicles in the parking area; and
- Off-site migration from neighbouring properties.

4.4. Contaminants of Potential Concern

PFAS and Emergent Chemicals

PFAS Assessment

EPA (2017) requires that PFAS are considered when investigating land contamination. An assessment of the probability for PFAS occurrence is provided in **Table 4-1.** This was based on considerations outlined in the *PFAS National Environmental Management Plan* (HEPA, 2020) and the EnRisk (2016) decision tree. In this instance, the potential for PFAS to be present on-site was low and thus PFAS sampling / analysis of soil and water was unwarranted.

Table 4-1 Potential for PFAS Contamination

Preliminary Screening	Probability of Occurrence[1]
Is the past or present site activity listed in HEPA (2020)[2] as being an activity associated with PFAS contamination? If so, list activity.	L
Is the past or present off-site activity up-gradient or adjacent to the site listed in HEPA (2020)[2] as being an activity associated with PFAS contamination? If so, list activity.	L
Did fire training involving the use of suppressants occur on-site between 1970 and 2010?	L
Did fire training occur up-gradient of or adjacent to the site between 1970 and 2010?[3]	L
Have "fuel" fires ever occurred on-site 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 material from a site with activity listed in HEPA (2020)?	L
Could PFAS-contaminated groundwater or run-off have migrated on to the site?	L
Is the site or adjacent sites listed in the NSW EPA PFAS Investigation Program?[5]	L
If the probability is medium or high in any of the rows, does the site analytical suite need to be optimised to include sampling and testing for PFAS in soil (including ASLP testing) and waters?	No

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

Emerging Chemicals

The EPA uses Chemical Control Orders (CCOs) as a primary legislative tool under the *Environmentally Hazardous Chemicals Act 1985* to manage chemicals of concern and limit their potential impact on the environment. 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 deemed low, with the exceptions of pesticides (in near-surface fill).

Table 4-2 Potential for Contamination by an Emerging or Controlled Chemical

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]	Possibility for pesticides to have been applied to building footings and/or present in imported fill
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 Potential pesticides usage.

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).

Potential Contaminants

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

- Priority Metals (PM) - arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc;
- Total Recoverable Hydrocarbons (TRHs);
- The monocyclic aromatic hydrocarbons benzene, toluene, ethylbenzene, xylenes (BTEX);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Organochlorine and Organophosphorus Pesticides (OCPs / OPPs);
- Polychlorinated Biphenyls (PCBs); and
- Asbestos.

4.5. Qualitative Risk Assessment

An assessment of the potential contamination risks for the site is outlined in **Table 4-3**.

Table 4-3 Assessment of Potential Contamination Risk

Potential Source	Impacted Medium	COPC	Risk of Contamination
Importation of fill of unknown origin and quality	Soil	PM, TRH, BTEX, PAH, OCP, OPP, PCB, asbestos	**Low** Shallow filling was expected on the site. No gross contamination was noted during the site visit.
Hazardous building materials	Building fabrics Near surface soil	PM (lead in particular), PCB, asbestos	**Low to Moderate** Given the age of construction of the drive-in theatre, hazardous building materials may be present within the former site structures, and use and subsequent demolition may have resulted in fallout of remnant material to the ground surface.
Application of pesticides	Near surface soil (building footing areas)	PM (arsenic and copper), OCP, OPP	**Low** If present, pesticides are expected to be limited to shallow, building footprint soils.
Leakage from vehicles	Near surface soil	PM, TRH, BTEX, PAH	**Low** Minor surface (oil-like) staining was observed in the parking area. Contamination, if any, is expected to be localised and restricted to shallow soils.
Migration from off-site sources	Soil Groundwater	PM, TRH, BTEX, PAH	**Low** Current local activities included wholesales and mixed businesses. Heavy industries were not present.

4.6. Identified Receptors

The following potential receptors of site contamination were identified:

- Current site users / occupiers;
- On-site demolition / construction workers (during future redevelopment);
- Users of the adjacent land during future demolition / construction works;
- Future site users; and
- Unnamed creek within the site, local groundwater and (ultimately) Werrington Creek.

Given the qualitative risk assessment summarised in **Section 0**, the risk to these receptors were considered to be low to moderate. Refer to **Table 4-4** for an overview of the preliminary CSM, identifying the potential contamination sources, exposure pathways and human and environmental receptors.

4.7. Data Gaps

Additional intrusive (soil and groundwater) sampling and analysis were required, to better assess the contamination risks. The gaps, or decisions, requiring closure were:

- Are there contaminants present within the site at levels which pose unacceptable risk(s) to the local sensitive receptors and site users during and following proposed redevelopment?
- Are soil and/or groundwater conditions at the site suitable for the proposed use?

Where soils and/or groundwater were found to be unsuitable, recommendations shall be made regarding a remediation strategy for the site.

Table 4-4 Preliminary Conceptual Site Model

Potential Source	Impacted Medium	CCPCs	Transport Mechanism	Exposure Pathway	Potential Receptor
Imported fill of unknown origin and quality Hazardous building materials Application of pesticides Leakage from vehicles Off-site migration	Soil	PM, TRH, BTEX, PAH, OCP, OPP and asbestos	Disturbance of surface and subsurface soils during site redevelopment, future site maintenance and future use of the site post redevelopment	Ingestion Dermal contact Inhalation of particulates	Current and future site occupier Demolition / construction workers Adjacent site users Future intrusive workers
			Atmospheric dispersion from soil to outdoor and indoor air spaces		
			Volatilisation of contamination from soil and diffusion to indoor air spaces.	Inhalation of vapours	
	Groundwater	Dissolved PM, TRH, BTEX and PAH	Volatilisation of contamination from groundwater to indoor or outdoor air spaces (onsite and offsite)	Inhalation of vapours Ingestion Dermal contact	Current and future site occupier Demolition / construction workers Adjacent site users Future intrusive workers
			Migration of dissolved phase impacts in groundwater via diffusion and advection	Biota uptake	Unnamed creek within the site Werrington Creek, approx. 160m west.

5. METHODOLOGY

5.1. Sampling, Analytical and Quality Plan

The sampling, analytical and quality plan (SAQP) ensures that the data collected during environmental works are representative and provided a robust basis for assessment decisions. The SAQP for this investigation included the following:

- Data quality objectives (DQOs), including a summary of the objectives of this investigation;
- Investigation methodology, including the media to be sampled, details of analytes and parameters to be monitored and a description of the rationale for 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*, DQOs were developed by the EI investigation team, following the NEPM- / NSW 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 designated for redevelopment, involving the demolition of existing structures, followed by the construction of: ▪ 4 × 4 – 6 storey shop top housing buildings at 68 O'Connell Street, Caddens, comprising: ‣ 177 residential dwellings; ‣ ground floor commercial, retail and medical uses; ▪ construction of a single storey commercial premises (shop) located at the south western corner of 68 O'Connell Street; ▪ construction of basement carparking to service the shop top housing, ground floor commercial and commercial premises at the southwestern corner; ▪ construction of 11 × 4 – 7 storey residential flat buildings at 80 O'Connell Street, including: ‣ 305 residential dwellings; and ‣ Basement carparking; ▪ Internal roads; ▪ Associated infrastructure and services; ▪ Landscaping and communal open spaces including a 'public square'. The proposed development is equivalent to generic NEPC (2013) land use of residential with minimal opportunities for soil access. The threatened ecological community (TEC) area at the northern part of the site was considered equivalent to an NEPC (2013) area of ecological significance. The site history review (**Section 3**) and CSM considered there was potential for contamination. The site thus required detailed investigation of the nature and degree of any soil and groundwater contamination, in support of the development application to Penrith City Council and enable the developer to meet its obligations under State Environmental Planning Policy 2021 and the Co*ntaminated Land Management Act 1997*.
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 1.3**, the decisions for this DSI concerned the following questions: ▪ Has the nature, extent and source of any soil and/or groundwater impacts onsite been defined? ▪ What impact do the local (hydro)geological conditions have on the fate and transport of any contaminants that may be present? ▪ Does the level of impact coupled with the fate and transport of potential contaminants represent an unacceptable risk to identified human and/or environmental receptors on- or off- site? ▪ Does the collected data provide sufficient information to allow the selection and design of an appropriate remedial strategy, if necessary? ▪ If the data does not provide sufficient information, what data gaps require closure to enable the suitability of the site to be determined, or selection and design of an appropriate remedial strategy?

DQO Step	Details
3. Identify Information Inputs (Identify inputs to decision) Identify the information needed to support any decision and specify which inputs require new environmental measurements.	Inputs to the decision making process included: ▪ The proposed development plans and land use; ▪ National and EPA guidelines endorsed under the *NSW Contaminated Land Management Act 1997*; ▪ Observations obtained from an intrusive investigation in locations and to depths deemed appropriate for assessment purposes; and ▪ Laboratory analysis of selected samples for the COPCs. At the end of the DSI, a decision had to be made regarding whether the environmental conditions were suitable for the proposed redevelopment, or if additional assessment / remedial works were 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 investigation was conducted within the cadastral boundaries of the site. **Vertical** – From the ground surface, down to the deepest depth of borehole drilling (14.70 mBGL). **Temporal** – Results were valid on the day of data / sample collection and remain valid as long as no changes occur on site or contamination (if present) does not migrate on site or on to the site from off-site sources.
5. Develop the Analytic Approach (Develop a decision rule) To define the parameter of interest, specify the action level, and integrate previous DQO outputs into a single statement that describes a logical basis for choosing from alternative actions.	The decision rules for the investigation 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 average concentration of contaminants of concern exceed relevant commercial/industrial soil land use criteria across the site. ▪ Acceptance of site suitability was based on the probability that: ‣ The 95% UCL of the average concentration of the data set 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 data set was less than 50% of the relevant criteria; and ‣ No single result exceeded the criteria 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). ▪ If contaminant concentrations exceeded the adopted criteria, further investigation was considered prudent. If no contamination was detected, no further action was required.

DQO Step	Details
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 55 locations using a generally systematic grid pattern across accessible parts of the site, in accordance with the minimum number points recommended under the NSW EPA (2022a) *Sampling Design Part 1 – Application*. ▪ 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. ▪ Five 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. During the DSI, written instructions were issued to guide field personnel in the required fieldwork activities. All field works were performed in accordance with EPA guidelines and EI standard operating procedures (SOPs).

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 L**.

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). Precision was deemed acceptable if RPDs were found dominantly 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 / method blanks, analysed for the analytes targeted in the primary samples; ▪ Matrix spike 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 RPDs 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 were considered complete upon confirmation that: ▪ SOPs for sampling protocols were adhered to; and ▪ All chain of custody (COC) documentation was properly completed. It could then be determined whether the generated data were sufficient for the purposes of the land use assessment.
Comparability The confidence that data are equivalent for each sampling event	Given that several data sets from separate sampling episodes were required, 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 describe in **Section 4** and DQOs, the soil / groundwater sampling and analytical plans were in accordance with the following rationale:

- Multiple level (fill and natural) soil sampling at 55 boreholes, located across accessible parts of the site in order to characterise *in situ* materials;
    - Soil sampling locations within the western car park area, which was operational at the time of investigation, were adjusted to account for infrastructure, services and parked vehicles. The location distribution was adequate to achieve the aims of the investigation.

- Completion of a GME, utilising five newly installed monitoring wells (BHA1M, BHA7M, BHD4M, BHG1M and BHH7M), to characterise local groundwater conditions; and
- Laboratory analysis of representative soil and groundwater samples for the COPCs.

5.5. Assessment Criteria

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

For the purposes of this DSI, the adopted soil assessment criteria are referred to as the *Soil Investigation Levels* (SILs) and the adopted groundwater assessment criteria are referred to as *Groundwater Investigation Levels* (GILs).

Table 5-3 Adopted Investigation Levels for Soil and Groundwater

Medium	Guidelines	Rationale
Soil	NEPC (2013) HILs, HSLs, EILs, ESLs and Management Limits	**Soil Health-based Investigation Levels (HILs)** NEPC (2013) *HIL-B* thresholds for residential settings with minimal opportunities for soil access. The proposed deep soil zone (TEC area) is assessed against NEPC (2013) *HIL-C* thresholds for public open space land use settings. **Soil Health-based Screening Levels (HSLs)** NEPC (2013) *HSL-D* thresholds for vapour intrusion in commercial and industrial settings (to assess potential human health impacts from residual vapours resulting from petroleum, BTEX and naphthalene). NEPC (2013) *HSL-A&B* thresholds for vapour intrusion at low to high density residential sites were applied to assess soil conditions outside of proposed basement footprints. **Asbestos Health Based Screening Levels:** For asbestos in soil, the following criteria are applicable: ▪ No visible asbestos on soil surface in all areas of the site; ▪ Bonded ACM *HSL-B* in all areas of the site; ▪ Friable Asbestos: 0.001% w/w in all areas of the site. **Ecological Investigation Levels (EILs) / Ecological Screening Levels (ESLs)** NEPC (2013) EILs/ESLs for area of ecological significance land use scenarios were adopted to the threatened ecological community (TEC) area at the northern part of the site and NEPC (2013) EILs/ESLs for urban residential and public open space land use scenarios were adopted to northern portion of the site, classified as *Threatened Ecological Community* in the supplied plans (**Appendix C**), to assess the potential impact to proposed landscaping areas, where plants could be exposed to soils and where precipitation may result in subsurface infiltration and resulting leaching of soil impacts to groundwater. EILs were derived from Ecological Investigation Level Calculation Spreadsheet developed by CSIRO for the National Environment Protection Council for a high traffic NSW suburb and NEPC (2013) Schedule B1 Guideline on Investigation Levels for Soil by the addition of site specific Added Contaminant Limit (ACL) and the Ambient Background Concentration (ABC) for a high traffic NSW suburb. The adopted ESL criteria were based on fine grained criteria. **Management Limits for Petroleum Hydrocarbons**

Medium	Guidelines	Rationale
		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.
	CRC CARE (2017) high reliability ecological criteria	**High reliability ecological criterion for Benzo(α)pyrene** The CRC Care (2017) high reliability ecological guideline for benzo(α)pyrene in urban residential and public open space settings are not endorsed by NSW EPA. However, the criteria will be adopted as appropriate to assess for protection of terrestrial ecosystems. .
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 analytes. **Health-based Screening Levels (HSLs)** The NEPC (2013) groundwater *HSL-A & B* thresholds for vapour intrusion in low - high density residential settings were applied to assess potential human health impacts from residual vapours resulting from petroleum, BTEX and naphthalene impacts.
	NHMRC (2022) Recreational Criteria	**Recreational Criteria** NHMRC (2022) Recreational Criteria were adopted; where no criteria were available, the lowest NHMRC (2022) Drinking Water threshold was assumed (multiplied by a factor of 10).

5.6. Soil Sampling Methodology

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

Table 5-4 Summary of Soil Sampling Methodology

Activity/Item	Details
Fieldwork	Conducted from 9 to 21 November 2022, comprising 55 borehole locations across accessible parts of the site. Prior to drilling, locations were surveyed by a contracted services locator, with assistance from *Dial-Before-You-Dig* plans.
Drilling Method	Test bores BHB1, BHC2, BHC4, BHC7, BHD1, BHD2, BHE1, BHE2, BHE3, BHE5, BHF1, BHF2, BHG2 and BHH2 were advanced by hand auger. The remaining bores were drilled using a mechanical drilling rig, fitted with solid flight augers. The maximum drilling depth was 14.7 mBGL. Borehole logs are presented in **Appendix H**.
Soil Logging	Drilled / examined soils were logged in the field in accordance with Australian Standard AS1726-2017. Soil was evaluated on a qualitative basis for visual and olfactory signs of contamination. Soil descriptions are included in the borehole logs (**Appendix H**).
Soil Sampling	Soil samples were collected by dry grab method from the auger flights / bucket (the sampler wearing dedicated nitrile gloves) and placed into laboratory-supplied, acid-washed, solvent-rinsed glass jars and zip-lock, plastic bags (the latter for asbestos samples). Blind and split field duplicates for QA assessment were prepared by collecting a bulk amount of soil and dividing (post mixing) into three separate glass jars.
Decontamination	Nitrile sampling gloves were replaced between each sampling location. The augers were cleaned of all residual soil between each borehole location by washing with a mixture of Alconox and potable water (1/20) until free of all residual materials, then rinsed with water.
Management of Soil Cuttings	Soil cuttings were used to backfill the completed boreholes.

Activity/Item	Details
Sample Preservation and Transport	Sealed sample containers were stored in an insulated chilled chest (with frozen ice packs), whilst on-site and in transit to the contracted laboratories. Chilled sample chests were transported to the primary laboratory (SGS Australia Pty Ltd (SGS)) using chain-of-custody (COC) procedures. Signed COC certificates and sample receipt advice (SRA) were provided by SGS for confirmation purposes (**Appendix J**). Split (inter-laboratory) soil field duplicates were submitted to Envirolab Services Pty Ltd (Envirolab; the secondary laboratory) under strict COC conditions. Signed COC certificates and SRA were provided by Envirolab for confirmation purposes (**Appendix J**).
Laboratory Analysis and Quality Control	Soil samples were analysed by SGS and Envirolab for the COPCs. All samples were analysed within the required holding period, as documented in the corresponding laboratory reports (**Appendix K** and **Appendix M**). In addition to the split (inter-laboratory) field duplicates (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.

5.7. Groundwater Sampling

The groundwater sampling works are described in **Table 5-5**. The monitoring well location is illustrated in **Figure 2**, **Appendix A**.

Table 5-5 Summary of Groundwater Sampling Methodology

Activity/Item	Details
Fieldwork	Five groundwater monitoring wells (BHA1M, BHA7M, BHD4M, BHG1M and BHH7M) were installed from 10 to 17 November 2022. A single GME, involving water level gauging, well purging, field testing and groundwater sampling, was completed on 21 November 2022.
Well Construction	Well construction was in general accordance with the standards described in NUDLC (2012) and involved the following: ▪ 50mm, 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 300 mm above top of screen interval; ▪ Granular bentonite was applied above annular filter to seal the screened interval; ▪ Cuttings backfilled to just below ground level; and ▪ Surface completion comprised of a stick-up section of pipe, a plastic J-cap closing the well and a gatic cover at ground level. Top of casing elevations at each monitoring well were extrapolated using spot elevations on survey plans provided by the client. Note: Due to the site topography, size and location of monitoring wells, use of previously surveyed spot levels was sufficient to estimate well TOC elevations and the groundwater potentiometric slope. Well construction details are provided in **Table 7-4**.
Well Development	Well development was conducted immediately after installation. The development process involved the removal of water and accumulated sediment within the full length of the water column using a dedicated, high density polyethylene (HDPE), disposable bailer. Bailing was continued until no further reduction in suspended sediment was observed (i.e. after removal of several well volumes of water).
Well Gauging	Monitoring wells were gauged to determine SWL prior to groundwater purging and sampling. Gauging was conducted with a water/oil interface probe.
Well Purging, Field Testing and Sampling	Groundwater was purged and sampled by a low-flow / minimal draw-down method, using a peristaltic pump with dedicated tubing. During the purging process, water was continuously measured for field parameters (temperature (T), electrical conductivity (EC), reduction-oxidation potential (Redox), dissolved oxygen (DO) and pH) using a *Hanna Multi Parameter 9829* positioned within an open flow-through cell. Once water quality parameters stabilised (i.e. within ± 10% for DO, ± 3% for EC, ± 0.05 for pH, ± 0.2° for temperature and ± 20mV for redox), groundwater sampling was

Activity/Item	Details
	undertaken, by diverting the outlet of the bladder pump (immediately before the flow cell) to the sampling vials and bottles. Refer to **Appendix I** for all field data sheets.
Decontamination Procedure	Sampling equipment (interface probe and water quality kit probes) were decontaminated between uses by washing in a solution of potable water and PFAS-free detergent, then rinsed with potable water. Decontamination was not required for the sampling pump, as dedicated disposal bladders and tubing were used for sampling at each individual well. Dedicated gloves were used for the collection of each sample.
Sample Containers and 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 SGS 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 J**. A split (inter-laboratory) field duplicate was submitted to Envirolab under strict COC procedures. Signed COC certificates and sample receipt documentation were provided by Envirolab for contamination purposes (**Appendix J**).
Laboratory Analysis and Quality Control	Groundwater samples were analysed by SGS and Envirolab for the COPCs. All samples were analysed within the required holding period, as documented in the corresponding laboratory reports (**Appendix K**). 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 SGS.

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 DSI, 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 L**.

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

Table 6-1 Quality Assurance Process

Stage	Control	Conformance [Yes, Part, No]	Report Section(s)
Preliminaries	DQOs and DQIs established	Yes	See **Sections 5.2** and **5.3**
Field Work	Suitable documentation of fieldwork observations including borehole logs and field notes.	Yes	See **Appendix H** and **I**
Sampling Plan	Use of relevant and appropriate sampling plan (density, type, and location)	Yes	See **Section 5.4**
	All media sampled and duplicates collected	Yes	See **Appendix J**
	Use of approved and appropriate sampling methods	Yes	See **Sections 5.6** and **5.7**
	Selection of soil samples according to field PID readings (where VOCs are present)	No	N/A
	Preservation and storage of samples upon collection and during transport to laboratory	Yes	See **Sections 5.6** and **5.7**
	Appropriate field rinsate and trip blanks taken	Yes	See **Appendix J**
	Completed field and analytical laboratory sample COC procedures and documentation	Yes	See **Appendix J**
Laboratory	Sample holding times within acceptable limits	Yes	See **Appendices K, L, M**
	Use of appropriate analytical procedures and NATA-accredited laboratories	Yes	See **Appendices K, L, M**
	LOR low enough to meet adopted criteria	Yes	See **Appendices K, L, M**
	Laboratory blanks	Yes	See **Appendices K, L, M**
	Laboratory duplicates	Yes	See **Appendices K, L, M**
	Matrix spikes	Yes	See **Appendices K, L, M**
	Surrogates	Yes	See **Appendices K, L, M**
	Analytical results for replicated samples, including field and laboratory duplicates, expressed as RPD	Yes	See **Appendices K, L, M**
	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 **Appendices B, H, I**
Reporting	Report reviewed by senior staff to assess project meets NSW EPA guidelines and objectives	Yes	See **Document Control**

7. RESULTS

7.1. Soil

Sub-Surface Conditions

Based on the borehole logs (and excluding any hardstand), the sub-surface conditions of the site were generalised as a layer of clay, sand and gravel filling (0-3.3m thickness), overlying natural (residual) silty clay / sandy clay / sand, with (weathered) siltstone / sandstone / shale bedrock occurring from 0.1-14.7 mBGL onwards. The potential for ASS to be present on the site was very low.

More details encountered during the soil investigation by EI are provided in **Table 7-1** and borehole logs are presented in **Appendix H**.

Table 7-1 Generalised Sub-Surface Profile

Layer	Description	Minimum - Maximum Depth (m BGL)
Hardstand	Asphalt (western part only)	0.0-0.2
Fill	Sandy CLAY; low / medium plasticity, dark grey / brown / yellow brown / grey, with fine to medium grained sand, with trace rootlets, with fine grained sub-rounded / sub-angular gravels.	0.0-2.3
	Silty CLAY; low / low to medium plasticity, brown / dark brown / grey mottled yellow / dark grey / yellow brown mottled dark grey / grey / yellow brown, with trace medium grained sand, with weathered shale, with fine / medium grained sub-angular / sub-rounded to rounded gravels, with rootlets.	0.0-2.6
	SAND; fine grained, brown / yellow / grey, with heavily weathered shale, with silty clay.	0.4-3.0
	Sandy GRAVEL; fine to coarse grained, sub-angular to sub-rounded, pale grey / brown, with fine to coarse grained sand.	0.05-0.6
	Gravelly SAND; fine to medium / medium to coarse grained, brown / pale grey, with fine to coarse grained sub-angular to rounded gravels.	0.05-0.6
	Silty SAND; fine / fine to medium / medium grained, pale brown / yellow / brown / yellow brown, with fine to medium grained sub-angular gravels, with clay, with weathered shale.	0.0-1.3
	Clayey SAND; fine to medium / medium grained, brown / grey / pale brown, with medium plasticity clay, with fine / medium grained sub-angular gravels, with rootlets, with weathered sandstone.	0.0-1.6
	Gravelly Silty CLAY; low plasticity, dark brown / brown, with fine to medium grained sub-angular to sub-rounded gravels.	0.0-3.3
	Gravelly Sandy CLAY; low plasticity, brown / pale brown / grey / dark brown / yellow brown / dark grey, with fine to medium grained sub-angular to angular / sub-angular to sub-rounded gravels, with fine to medium grained sand, with rootlets.	0.0-1.6
	Gravelly CLAY; low plasticity, brown, with fine to coarse grained sub-angular to sub-rounded gravels,	0.0-0.1

Layer	Description	Minimum - Maximum Depth (m BGL)
Natural	Silty CLAY; low to medium / medium plasticity, brown / dark brown / grey mottled yellow brown / yellow / brown mottled grey / brown mottled pale grey / brown mottled red / grey / pale brown / yellow brown mottled orange brown / orange / orange brown, with trace medium grained sand, with siltstone, with sandstone.	0.1-9.3
	Sandy CLAY; medium to high plasticity, yellow / red / brown / pale grey, with fine to medium grained sand, with trace fine to medium grained sub-angular ironstone.	0.3-3.8
	SAND; fine grained, brown / yellow / grey.	0.4-2.5
Bedrock	SILTSTONE; brown/ dark grey / dark brown / grey.	0.6-12.0
	SANDSTONE; fine / fine to medium grained, pale grey / light brown / brown / pale yellow / pale grey mottled brown.	0.1-13.5
	SHALE; dark grey / pale brown / yellow / brown.	0.6-14.7

Field Observations and PID Results

Soil samples were collected from the test bores at various depths to describe lithology summarised in **Table 7-1**. All examined soils were evaluated on a qualitative basis for odour and visual signs of contamination (e.g. hydrocarbon odours, oil staining, petrochemical filming, asbestos fragments, ash, and charcoal) and the following observations were noted:

- No suspicious odours were detected in any of the examined soils.
- No soil staining was observed in any of the examined soils.
- One fragment of potential ACM was observed on the exposed ground surface at location BHD7 (near the driveway).
- No ash, slag fibre cement sheeting or other foreign materials were observed in examined soil samples.
- No evidence of actual or potential ASSs was encountered in any of the examined soils.
- Groundwater seepage (first water) was encountered in BHB2 (at 3.7 mBGL), BHC1 (at 5.6 mBGL), BHD4M (at 3.2 mBGL) and BHG1M (at 3.0 mBGL).

Laboratory Analytical Results

A summary of the laboratory analytical results for the tested (representative) soil samples is presented in **Table 7-2**. More detailed tabulation is presented in **Table T-1**, **Appendix B**.

All results were found to comply with the adopted SILs applicable to the proposed land use settings. A fragment of asbestos was found on the ground surface at location BHD7.

Table 7-2 Summary of Soil Analytical Results

Number of Primary Samples	Analyte	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Samples Exceeding SILs
Priority Metals (total)				
76	Arsenic	<1	19	None
76	Cadmium	<0.3	0.3	None
76	Chromium	<0.5	31	None
76	Copper	<0.5	69	None
76	Lead	<1	48	None
76	Mercury	<0.05	0.37	None
76	Nickel	<0.5	74	None
76	Zinc	<2	140	None
PAHs				
76	Naphthalene	<0.1	<0.1	None
76	Benzo(α)pyrene	<0.1	1.2	None
76	Carcinogenic PAHs (as B(α)P TEQ)	<0.3	1.9	None
76	Total PAHs	<0.8	13	None
BTEX and TRHs				
76	Benzene	<0.1	<0.1	None
76	Toluene	<0.1	<0.1	None
76	Ethyl benzene	<0.1	<0.1	None
76	Total Xylenes	<0.3	<0.3	None
76	F1 – TRHs	<25	<25	None
76	F2 – TRHs	<25	<25	None
76	F3 – TRHs	<90	520	None
76	F4 – TRHs	<120	660	None
Pesticides				
49	Total OCPs	<1	<1	None
49	Total OPPs	<1.7	<1.7	None
PCB				
49	Total PCBs	<1	<1	None
Asbestos				
50	Asbestos	Not detected	Detected	BHD7_0.0-0.1 (bonded)

A summary of the laboratory analytical results for the tested (representative) soil samples in TEC area is presented in **Table 7-3**. Detailed tabulation is presented in **Table T-3**, **Appendix B**.

All results were found to comply with the adopted SILs applicable to the proposed land use settings, except for benzo(α)pyrene in the fill soils at location BHF2.

Table 7-3 Summary of Soil Analytical Results (Designated Ecological Area)

Number of Primary Samples	Analyte	Minimum Concentration (mg/kg)	Maximum Concentration (mg/kg)	Samples Exceeding SILs
Priority Metals (total)				
13	Arsenic	3	9	None
13	Cadmium	<0.3	<0.3	None
13	Chromium	12	23	None
13	Copper	3.2	28	None
13	Lead	8	18	None
13	Mercury	<0.05	0.37	None
13	Nickel	3.7	23	None
13	Zinc	12	50	None
PAHs				
13	Naphthalene	<0.1	<0.1	None
13	Benzo(α)pyrene	<0.1	1.2	EIL (0.7 mg/kg) BHF2_0.1-0.2 (1.2 mg/kg) *Note: 95% UCL 0.569 mg/kg*
13	Carcinogenic PAHs	<0.3	1.9	None
13	Total PAHs	<0.8	13	None
BTEX and TRHs				
13	Benzene	<0.1	<0.1	None
13	Toluene	<0.1	<0.1	None
13	Ethyl benzene	<0.1	<0.1	None
13	Total Xylenes	<0.3	<0.3	None
13	F1 – TRHs	<25	<25	None
13	F2 – TRHs	<25	<25	None
13	F3 – TRHs	<90	130	None
13	F4 – TRHs	<120	<120	None
Pesticides				
7	Total OCPs	<1	<1	None
7	Total OPPs	<1.7	<1.7	None
PCB				
7	Total PCBs	<1	<1	None
Asbestos				
7	Asbestos	Not detected	Not detected	None

7.2. Groundwater

Monitoring Well Construction

Construction details for the groundwater monitoring wells are summarised in **Table 7-4**.

Table 7-4 Monitoring Well Construction Details

Well	Well Depth (mBGL)	RL[1] (mAHD)	Well Stick-up / down[2] (m)	Screen Interval (mBGL)	Lithology Screened
BHA1M	8.0	48.72	+1.0	5.0-8.0	shale
BHA7M	9.0	54.50	-0.2	6.0-9.0	shale
BHD4M	8.8	53.63	+0.2	5.8-8.8	siltstone & shale
BHG1M	4.0	55.01	+1.0	1.0-4.0	silty clay & siltstone
BHH7M	8.5	63.52	+0.5	2.5-8.5	sandstone

Footnote:
1 The relative level (RL; mAHD) corresponds to the ground surface at the well location, extrapolated from the supplied plans (**Appendix C**)
2 Well stick-up / down, + above ground, - below ground

Field Observations

Field data from the GMW are presented in **Table 7-5**. Field data sheets are attached in **Appendix I**. Samples were evaluated on the basis of odour and visual signs of contamination, with the following observations noted:

- Groundwater was found to be brown / grey / transparent, with low turbidity;
- No suspicious odour was detected in any of the groundwater wells; and
- No sheen was observed on the sampled groundwater.

The field data (**Table 7-5**) indicated that the groundwater was slightly alkaline (pH: 7.26-7.79), brackish to saline (EC 1,691-10,648 µS/cm), and oxidising (Redox 394 mV) but oxygen depleted (anoxic; DO: 0.15-0.35 mg/L).

An elevated redox reading in groundwater recovered from well BHA7M (894 mV) may reflect adjacent car washing workshop activities, though no release of water to ground surface was observed during site inspection.

The SWL data was extrapolated to relative levels in mAHD, which enabled groundwater level contour analysis using the Surfer contouring package, which was manually optimised to produce the groundwater contours shown in **Figure 3, Appendix A**. The analysis indicated groundwater flow was inferred to be north-west, towards Werrington Creek, consistent with the surface topography (**Table 2-3**).

Table 7-5 Groundwater Field Data

Well	SWL (mBTOC[1])	SWL (mBGL)	SWL[2] (estimated mAHD)	DO (mg/L)	pH	EC (µS/cm)	T (°C)	Redox[3] (mV)
BHA1M	4.4	3.4	45.32	0.25	7.26	7479	20.14	394
BHA7M	3.1	3.3	51.2	0.15	7.65	10648	23.24	894
BHD4M	3.8	3.6	50.03	0.35	7.53	9185	20.31	391
BHG1M	2.8	1.8	53.21	0.21	7.63	1802	18.05	395
BHH7M	4.6	4.1	59.42	0.17	7.79	1691	19.11	393.7

Footnotes:
1 mBTOC denotes meters below top of well casing
2 SWL (in mAHD) calculated by subtracting the SWL in mBGL from the RL of the ground surface at the well location, SWL (in mAHD) = RL (in mAHD) – SWL (in mBGL)
3 Redox readings were adjusted to the Standard Hydrogen Electrode by adding 205mV to the field electrode potential

Laboratory Analytical Results

A summary of the laboratory analytical results for the groundwater samples is presented in **Table 7-6**. More detailed tabulation is presented in **Table T2**, **Appendix B**.

All results were found to comply with the adopted GILs, except for dissolved cadmium, chromium, copper, zinc and TRH-F2. Heavy metals in groundwater are common in urbanised areas of Sydney, including the suburb of Kingswood. It was assumed that these metal levels do not pose an immediate threat to human health or the environment, being representative of urban background groundwater conditions.

Table 7-6 Summary of Groundwater Analytical Results

Number of Primary Samples	Analyte	Minimum Concentration (µg/L)	Maximum Concentration (µg/L)	Sample(s) Exceeding GILs
Priority Metals (total dissolved)				
5	Arsenic	<1	5	None
5	Cadmium	<0.1	0.3	ANZG (2018) 0.2 µg/L GW-BHA1M (0.3 µg/L)
5	Chromium	<1	11	ANZG (2018) 1 µg/L GW-BHA1M (11 µg/L)
5	Copper	1	2	ANZG (2018) 1.4 µg/L GW-BHD4M (2 µg/L), GW-BHG1M (2 µg/L), and GW-BHA7M (2 µg/L)
5	Lead	<1	1	None
5	Mercury	<0.1	<0.1	None
5	Nickel	<1	7	None
5	Zinc	<5	12	ANZG (2018) 8 µg/L GW-BHA1M (12 µg/L)
PAHs				
5	Naphthalene	<0.1	<0.1	None
5	Benzo(α)pyrene	<0.1	<0.1	None
5	Total PAHs	<1	<1	None
BTEX and TRHs				
5	Benzene	<0.5	<0.5	None
5	Toluene	<0.5	<0.5	None
5	Ethyl benzene	<0.5	<0.5	None
5	o-Xylene	<0.5	<0.5	None
5	m + p-Xylenes	<1	<1	None
5	F1 – TRHs	<50	<50	None
5	F2 – TRHs	<60	91	PQL (60 µg/L) GW-BHA7M (91 µg/L)
5	F3 – TRHs	<500	<500	None

Number of Primary Samples	Analyte	Minimum Concentration (µg/L)	Maximum Concentration (µg/L)	Sample(s) Exceeding GILs
5	F4 – TRHs	<500	<500	None
VOC				
5	Total VOC	<10	66	None
Phenols				
5	Total Phenols	<50	<50	None

8. SITE CHARACTERISATION

8.1. Subsurface Conditions

Based on the borehole logs (and excluding any hardstand; **Appendix H**), the sub-surface conditions of the site were generalised as a layer of variable filling (0-3.3m thickness), overlying natural silty clay / sandy clay / sand, with (weathered) siltstone / sandstone / shale bedrock occurring from 0.1-14.7 mBGL onwards. The potential for ASS to be present on the site was very low.

8.2. Soil Impacts

Laboratory analytical results for the representative fill and natural soil samples were compared to adopted soil investigation levels.

Human Health

Results were found to comply with the adopted health-based SILs applicable for the proposed land use settings.

Asbestos

No asbestos or other foreign materials were observed or reported in fill at any sample location at the site.

A fragment of bonded ACM was collected from the soil surface at location BHD7. No other fragments were observed on the ground surface at this location or elsewhere on site. No asbestos was reported in the deeper sample BD7_0.6-0.7 sample.

Location BHD7 is close to O'Connell Street, and the fragment of ACM observed on the ground surface was likely to be an isolated and incidental occurrence. The risk from asbestos at the site is low and acceptable. Asbestos is not an issue for site management.

Ecological

Laboratory results for locations within the main redevelopment area were found to comply with the adopted ecological SILs applicable for the proposed land use settings.

Soil results were found to comply with the adopted sensitive ecological criteria with the exception of the following:

- Benzo(α)pyrene exceeded adopted criterion at location BHF2. Statistical analysis found that the 95% UCL of the average concentration (0.569 mg/kg) was below the adopted criterion.
- Priority metals (zinc and/or nickel) exceeded adopted criteria at locations BHE3 and BHC7. However, these locations are not within the threatened ecological community area and the impact is not considered to pose widespread risks to the local ecology at the site.

Site inspection did not identify any evidence of stressed vegetation at the site including the designated ecological area. Also, a review of site mapping (Lotsearch, **Appendix F**) indicated that the area within the site has limited cover (<10%) and is a fragmented remnant of original woodland. The concentrations of metals, benzo(a)pyrene and other potential contaminants in other soil samples are low. The risks to the designated deep soil areas are likely low and acceptable, therefore, no further investigation or management required.

8.3. Groundwater Impacts

From the GME of 21 November 2022, the depth to groundwater was 1.8-4.1 mBGL (45.32 – 59.42 mAHD), and an inferred hydraulic gradient (potentiometric slope) was north-west towards Werrington Creek. Local groundwater conditions were slightly alkaline, brackish and oxidising.

Reported concentrations of potential contaminants were low. Exceedance of adopted groundwater investigation levels was reported for some priority metals and petroleum hydrocarbons (GW-BHA7M).

Chloroform was reported in groundwater at three monitoring wells, however the adopted criterion (trihalomethanes in drinking water, 250 ug/L) was not exceeded. The detection of chloroform in groundwater is not uncommon and is likely due to surface inflow of drinking water from the municipal reticulation system.

Priority Metals

Analysis of representative samples identified priority metals (cadmium (0.3µg/L), chromium (11µg/L), copper (2µg/L) and zinc (12µg/L)) at concentrations that marginally exceeded adopted groundwater investigation levels. The reported concentrations of metals in soil at the site were low, and it was unlikely that site soil was contributing to the reported concentration of metals in groundwater. The metals reported in groundwater at the site represented background conditions typical of an urban environment, and the risk to identified receptors (**Section 4.6**) was low and acceptable.

TRHs

Petroleum hydrocarbons (as TRH-F2, 91µg/L) were detected in groundwater at GW-BHA7M above the laboratory limit of reporting (LOR, 60 ug/L). Petroleum hydrocarbons were not detected in groundwater at any other monitoring well. The risk to identified receptors (**Section 4.6**) was low and acceptable.

8.4. Review of Conceptual Site Model

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. A revised CSM, considering the DSI findings, is presented in **Table 8-1**. This model remains valid for the proposed development.

Table 8-1 Revised Conceptual Site Model

Potential Source	Impacted Medium	COPC	Transport Mechanism	Exposure Pathway	Potential Receptor	Source-Pathway-Receptor (SPR) Linkage
Imported fill of unknown origin and quality Hazardous building materials Application of pesticides	Soil	Asbestos	Disturbance of surface and subsurface soils during redevelopment, future site maintenance and use post redevelopment	Ingestion Inhalation of particulates	Current and future site occupiers Demolition / construction workers Adjacent site users Future intrusive workers	**Low** One asbestos fragment observed on the ground surface at one location. The fragment was removed for laboratory testing. Asbestos was not observed on the ground surface anywhere else on site or in subsurface fill.
Leakage from vehicles Off-site migration	Groundwater	Dissolved PM (cadmium, chromium, copper and zinc) and TRH (F2)	Release during redevelopment, future site maintenance and use post redevelopment	Ingestion	Current and future site occupiers Demolition / construction workers Adjacent site users Future intrusive workers	**Low** Low concentrations of cadmium, chromium, copper and zinc consistent with natural (background) levels for urban areas.
			Migration of dissolved phase impacts via diffusion and advection	Biota uptake	Unnamed creek, located within the site; and Werrington Creek	

Footnote: The use of personal protective equipment is mandatory for construction and excavation workers, reduces the corresponding SPR linkage.

9. CONCLUSION

The property identified as 68 - 80 O'Connell Street, Caddens NSW was the subject of a detailed site investigation, conducted in order to assess the nature and degree of on-site contamination. The key findings of this DSI were as follows:

- The site is surrounded by established and newly developed low density residential areas of Caddens, Claremont Meadows, Werrington and Kingswood, as envisioned by the Caddens Release Area plan within the PDCP 2014.
- No visual evidence of infrastructure associated with an underground storage tank (UST) was observed on the site. No above-ground storage tank (AST) was present.
- No olfactory indicator of contamination was detected during the inspection.
- The asphalt paving of the western car parking area was in good condition. Minor surface (oil-like) staining was observed.
- One fragment of bonded asbestos containing material was observed on the exposed ground surface in the southern portion of the site (near to O'Connell Street). The fragment was removed for laboratory testing.
- A review of historical information suggested that the site was vacant land since at least 1940s. Between 1970 and 2006, the western portion of the site was used as a drive-in theatre which was demolished circa 2006. After 2021, the western portion of the site was used as an on-grade parking area. The local surroundings consisted of vacant land and rural residential properties since 1940s.
- The site and surrounding lands within close proximity (≤250m radius) were free of statutory notices and licensing agreements issued under the *Contaminated Land Management Act 1997* and *Protection of the Environment Operations Act 1997*. The site and surrounding lands were not included on the *List of NSW Contaminated Sites Notified to the EPA*.
- Excluding any hardstand, the sub-surface of the site was generalised as a layer of variable filling (0-3.3m thickness), overlying natural silty clay/sandy clay/sand, with (weathered) siltstone/sandstone/shale bedrock occurring from 0.1-14.7 mBGL onwards. The potential for ASS to be present on the site was very low.
- Contaminant concentrations in soil samples did not exceed adopted health-based criteria.
- Contaminant concentrations in the majority of the soil samples did not exceed adopted ecological criteria, except for soil samples were mentioned in **Section 8.2**. However, site inspection did not identify any evidence of stressed vegetation at the site including the designated ecological area. Also, a review of site mapping (Lotsearch, **Appendix F**) indicated that the area within the site has limited cover (<10%) and is a fragmented remnant of original woodland. The concentrations of metals, benzo(a)pyrene and other potential contaminants in other soil samples are low. The risks to the designated deep soil areas are likely low and acceptable, therefore, no further investigation or management required.
- The depth to groundwater was 1.8-4.1 mBGL (45.32-59.42 mAHD) and the inferred hydraulic gradient (potentiometric slope) was north-west towards Werrington Creek. Local groundwater conditions were slightly alkaline, brackish to saline and oxidising.
- The concentration of potential contaminants in groundwater was low. The concentration of some priority metals (cadmium, chromium, copper and zinc) marginally exceeded adopted groundwater investigation levels, however the concentrations were considered typical of urban environments and indicative of background conditions.
- The CSM was considered to appropriately identify contamination sources, migration mechanisms and exposure pathways, as well as potential on-site and off-site receptors. The risk from potential contaminants in soil and groundwater was low and acceptable.

Based on the findings of this DSI, and with consideration of EI's *Statement of Limitations* (**Section 11**), EI concludes that the site is suitable for the proposed development. Recommendations for the construction phase of the development are provided in **Section 10**.

10. RECOMMENDATIONS

EI provides the following recommendations in relation to the proposed redevelopment:

- Under the proposed development (**Section 1.2** and **Appendix C**), bulk excavation of site soils will be conducted, in order to construct the basements. Surplus soil that is designated for off-site disposal, including any VENM, must be classified in accordance the EPA (2014) *Waste Classification Guidelines*. The *in-situ* data generated by this DSI can be utilised for this purpose.
- Following pavement demolition and removal of associated wastes, an inspection of the exposed soil surface should be performed by a suitably qualified environmental consultant.
- Once appropriately classified, all waste materials are to be transported to EPA-licensed waste facilities by the appointed waste contractors. All tipping dockets supplied by the landfill companies are to be retained, to confirm the appropriate (lawful) disposal of wastes.
- Any material being imported to the site should be pre-validated as suitable for the intended use, in accordance with EPA guidelines. In particular, imported filling / landscaping material must be certified as meeting the VENM classification, prior to importation.

EI emphasise that these recommendations can be managed through the development application process, in accordance with *State Environmental Planning Policy (Resilience and Hazards) 2021*.

11. STATEMENT OF LIMITATIONS

This report has been prepared for the exclusive use of Caddens Estate 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 Caddens Estate 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 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 Caddens Estate 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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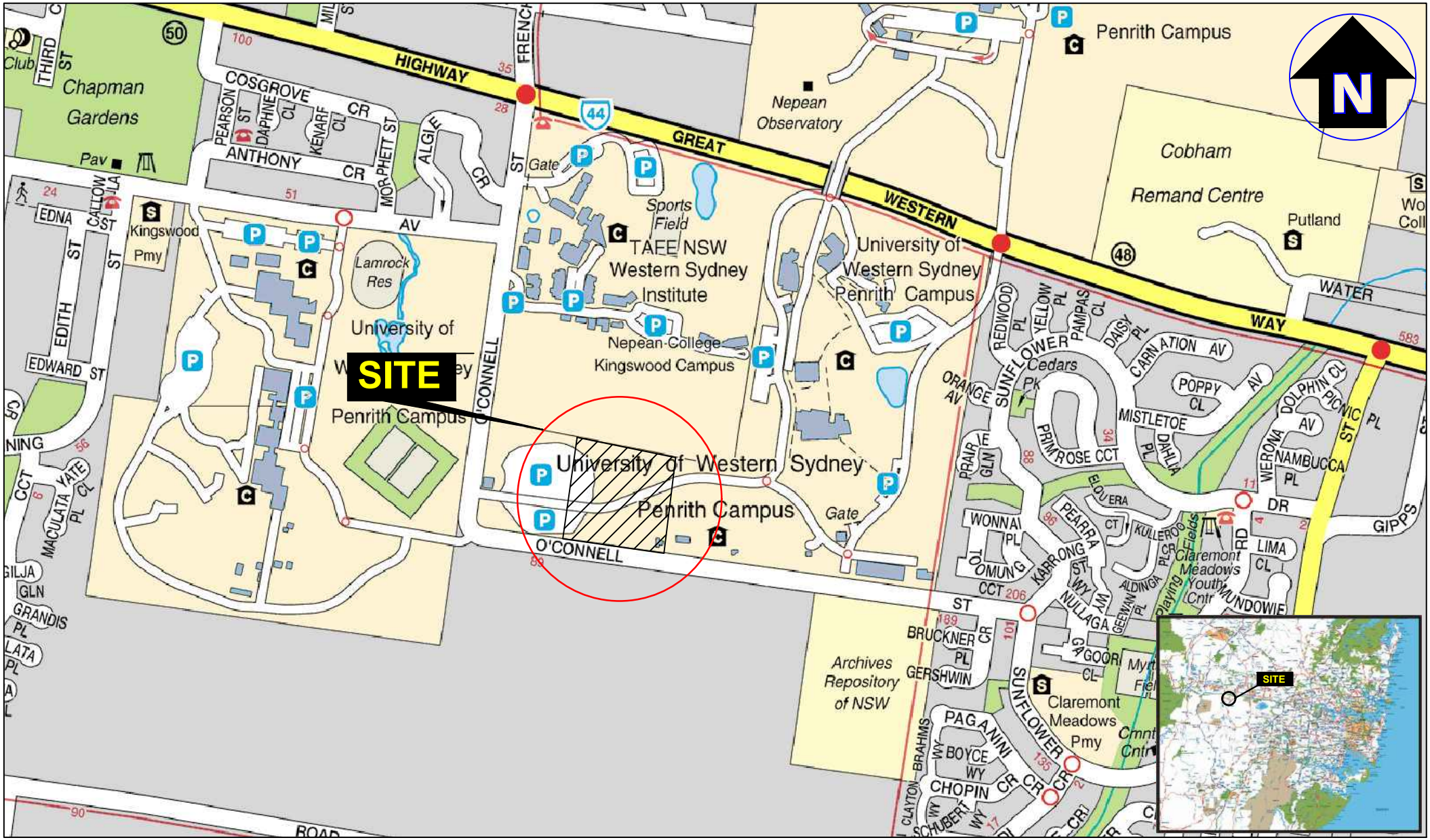
Abbreviations

ABC	Ambient Background Concentration
ACL	Added Contaminant Limit
ACM	Asbestos-Containing Materials
ASS	Acid Sulfate Soils
AST	Above-ground Storage Tanks
B(α)P	Benzo(α)Pyrene (a PAH compound)
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
CBD	Central Business District
CCO	Chemical Control Order
CLM	Contaminated Land Management
COC	Chain of Custody
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
CVOC	Chlorinated Volatile Organic Compounds (a sub-set of the VOC analysis suite)
DA	Development Application
DO	Dissolved Oxygen
DP	Deposited Plan
DQI	Data Quality Indicators
DQO	Data Quality Objectives
DSI	Detailed Site Investigation
EC	Electrical Conductivity
EI	EI Australia
EIL	Ecological Investigation Level
Envirolab	Envirolab Services Pty Ltd
EPA	Environment Protection Authority (of New South Wales)
ESL	Ecological Screening Level
F1	C_6-C_{10} TRH (less the sum of BTEX concentrations)
F2	>C_{10}-C_{16} TRH (less the concentration of naphthalene)
F3	>C_{16}-C_{34} TRH
F4	>C_{34}-C_{40} TRH
FCS	Fibre Cement Sheeting
FFL	Finished Floor Level
GIL	Groundwater Investigation Level
GME	Groundwater Monitoring Event
HDPE	High Density Polyethylene
HIL	Health-based Investigation Level
HSL	Health-based Screening Level
km	Kilometres
L	Litres
LGA	Local Government Area
LOR	Limit of Reporting (limit of reporting for respective laboratory method)
m	Metres
mAHD	meters Australian Height Datum
mBGL	meters Below Ground Level
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
PFAS	Per- and Poly-Fluoroalkyl Substances
pH	Potential Hydrogen (a measure of the acidity or basicity of an aqueous solution)
PID	Photo-Ionisation Detector
PM	Priority Metals
POEO	Protection of the Environment Operations
PQL	Practical Quantitation Limit (limit of detection for respective laboratory method)
PSH	Phase-Separated Hydrocarbons
QA/QC	Quality Assurance / Quality Control
Redox	Reduction-Oxidation Potential
RPD	Relative Percentage Difference
SAQP	Sampling, Analytical and Quality Plan
SEPP	State Environmental Planning Policy
SGS	SGS Australia Pty Ltd
SIL	Soil Investigation Level
SOP	Standard Operating Procedure
SRA	Sample Receipt Advice (document confirming laboratory receipt of samples)
SWL	Standing Water Level
TEC	Threatened Ecological Communities
TEQ	Toxicity Equivalent Quotient
TRH	Total Recoverable Hydrocarbons (non-specific analysis of organic compounds)
TV	Trigger Value
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



eiaustralia Practical Solutions for Built Environments Suite 6.01, 55 Miller Street, PYRMONT 2009 Ph (02) 9516 0722 Fax (02) 9518 5088	Drawn:	F.Z.	**Caddens Estate Pty Ltd** Detailed Site Investigation 68 - 80 O'Connell St, Caddens NSW Site Locality Plan
	Approved:	-	
	Date:	07-11-22	
	Scale:	Not To Scale	

Figure: 1

Project: E25834.E02

A B C D E F G H

1 2 3 4 5 6 7

BHA1M BHB1 BHC1 BHD1 BHE1 BHF1 BHG1M

BHA2 BHB2 BHC2 BHD2 BHE2 BHF2 BHG2 BHH2

BHA3 BHB3 BHC3 BHD3 BHE3 BHF3 BHG3 BHH3

BHA4 BHB4 BHC4 BHD4M BHE4 BHF4 BHG4 BHH4

BHA5 BHB5 BHC5 BHD5 BHE5 BHF5 BHG5 BHH5

BHA6 BHB6 BHC6 BHD6 BHE6 BHF6 BHG6 BHH6

BHA7M BHB7 BHC7 BHD7 BHE7 BHF7 BHG7 BHH7M

O'Connell Street

0 30 60 90 m

Map Source: Metromap, accessed 04/06/2025

LEGEND

- Site boundary
- Proposed Basement Boundary
- Borehole location
- Deep Soil Zone
- Groungwater monitoring wells

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Date:	23/07/2025

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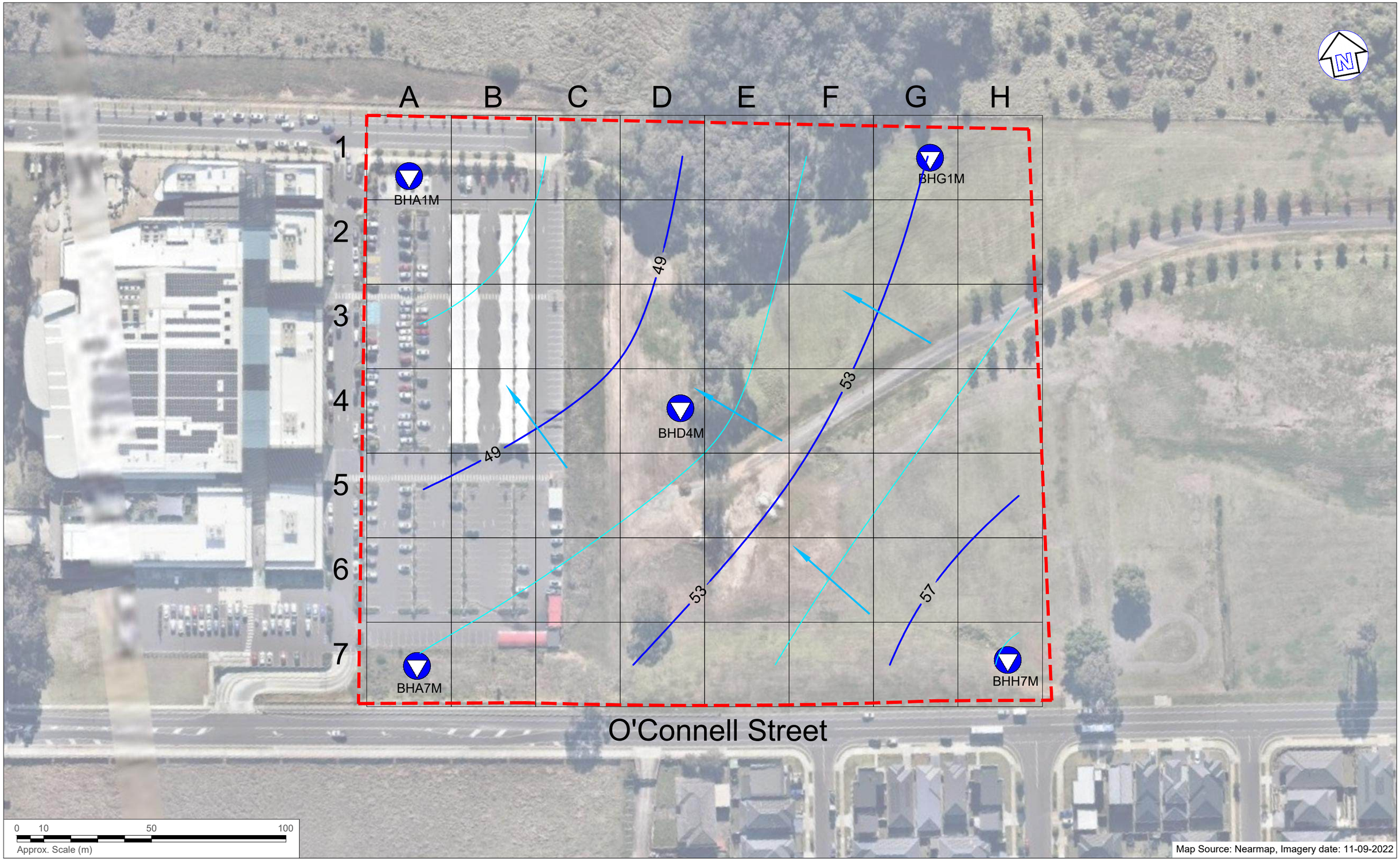
Detailed Site Investigation

68 - 80 O'Connell Street, Caddens NSW

Sampling Plan

Figure: 2

Project: E25834.E02_Rev2



LEGEND (All locations are approximate)

- Site boundary
- Monitoring well / borehole location
- Inferred groundwater flow direction

Note:Groundwater RL in mAHD

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Detailed Site Investigation
68 - 80 O'Connell St, Caddens NSW

Groundwater Contour

Figure: 3

Project: E25834 E02

Appendix B – Tables

Table T1 – Summary of Soil Test Results

Sample ID	Sampling Date	Priority Metals								PAHs				BTEX				TRHs				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	OCPs	OPPs		Presence / absence
Fill																									
BHA1M_0.1-0.2	11/11/2022	8	0.3	14	69	33	0.37	8.1	140	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	400	<120	<1	<1.7	<1	No
BHA2_0.3-0.4	18/11/2022	<1	<0.3	4.9	3.4	5	<0.05	3.4	13	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHA3_0.2-0.3	10/11/2022	1	<0.3	6.2	4.2	8	<0.05	4.1	16	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHA4_0.2-0.3	11/11/2022	1	<0.3	6.2	2	6	<0.05	3.8	12	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHA5_0.3-0.4	10/11/2022	2	<0.3	6.6	30	10	<0.05	6.5	27	0.4	0.2	3.1	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	250	280	<1	<1.7	<1	No
BHA6_0.7-0.8	10/11/2022	2	<0.3	12	38	20	0.05	23	90	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHA7M_0.2-0.3	10/11/2022	2	<0.3	6.8	5.9	8	<0.05	5.5	22	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHB2_0.4-0.5	10/11/2022	1	<0.3	6.4	5.9	8	<0.05	5	16	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHB3_0.4-0.5	10/11/2022	2	<0.3	10	15	9	<0.05	6.2	20	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHB4_0.3-0.4	10/11/2022	<1	<0.3	<0.5	<0.5	<1	<0.05	<0.5	<2	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHB5_0.3-0.4	10/11/2022	3	<0.3	11	42	11	<0.05	7.9	34	0.6	0.4	5	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	520	660	<1	<1.7	<1	No
BHB6_0.3-0.4	10/11/2022	2	<0.3	9.2	22	9	<0.05	6.9	30	0.5	0.3	3.5	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	300	300	<1	<1.7	<1	No
BHB7_0.5-0.6	10/11/2022	2	<0.3	10	56	9	<0.05	7.8	31	<0.3	0.1	1.5	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	210	230	<1	<1.7	<1	No
BHC1_0.1-0.2	14/11/2022	5	<0.3	12	9.3	9	<0.05	6.6	16	0.5	0.3	2.5	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHC1_0.7-0.8	14/11/2022	5	<0.3	17	15	10	<0.05	15	23	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHC2_0.2-0.3	10/11/2022	7	<0.3	15	35	19	<0.05	20	53	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHC3_0.2-0.3	10/11/2022	11	<0.3	21	38	16	<0.05	29	81	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHC4_0.1-0.2	15/11/2022	3	<0.3	16	2.4	6	<0.05	2.4	7.7	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHC5_0.1-0.2	10/11/2022	9	<0.3	20	22	11	<0.05	18	44	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHC6_0.6-0.7	10/11/2022	5	<0.3	11	32	15	<0.05	16	59	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHD1_0.1-0.2	15/11/2022	5	<0.3	14	13	15	<0.05	13	42	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHD2_0.1-0.2	15/11/2022	3	<0.3	22	3.2	9	<0.05	3.7	12	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHD3_0.3-0.4	10/11/2022	19	<0.3	22	39	14	<0.05	28	83	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHD4_0.4-0.5	10/11/2022	8	<0.3	22	31	13	<0.05	23	64	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHD4_1.8-1.9	10/11/2022	12	<0.3	16	26	16	<0.05	18	39	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHD5_0.1-0.2	10/11/2022	7	<0.3	11	21	13	<0.05	16	49	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHD6_0.1-0.2	10/11/2022	5	<0.3	18	24	14	<0.05	25	66	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHD7_0.0-0.1	10/11/2022	6	<0.3	17	32	14	<0.05	20	48	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	Yes
BHD7_0.6-0.7	10/11/2022	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	No
BHE1_0.1-0.2	15/11/2022	6	<0.3	16	15	17	<0.05	9.3	28	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHE2_0.1-0.2	15/11/2022	9	<0.3	13	21	15	<0.05	16	33	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHE3_0.1-0.1	15/11/2022	6	<0.3	31	42	48	<0.05	36	140	<0.3	<0.1	1	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	130	<120	<1	<1.7	<1	No
BHE4_0.3-0.4	10/11/2022	9	<0.3	22	27	24	<0.05	24	52	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHE5_0.1-0.2	15/11/2022	3	<0.3	10	13	10	<0.05	6.5	30	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHE6_0.0-0.1	10/11/2022	6	<0.3	20	22	17	<0.05	20	47	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHE7_0.0-0.1	10/11/2022	5	<0.3	13	25	13	<0.05	14	45	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHF1_0.1-0.2	15/11/2022	3	<0.3	20	22	15	<0.05	23	44	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHF2_0.1-0.2	15/11/2022	6	<0.3	13	23	15	<0.05	13	42	1.9	1.2	13	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	130	<120	<1	<1.7	<1	No
BHF2_0.6-0.7	15/11/2022	7	<0.3	12	21	10	<0.05	13	33	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHF5_1.4-1.5	18/11/2022	9	<0.3	19	21	16	<0.05	15	36	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHF6_0.0-0.1	10/11/2022	5	<0.3	17	26	16	<0.05	19	46	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHF7_0.2-0.3	10/11/2022	4	<0.3	14	22	12	<0.05	15	47	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHG1M_0.1-0.2	15/11/2022	6	<0.3	15	16	10	<0.05	12	31	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHG2_0.1-0.2	15/11/2022	7	<0.3	16	18	15	<0.05	15	38	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHG3_0.3-0.4	10/11/2022	11	<0.3	23	35	14	<0.05	20	71	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHG4_0.3-0.4	10/11/2022	10	<0.3	20	43	16	<0.05	32	88	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHG5_0.3-0.4	10/11/2022	3	<0.3	10	23	15	<0.05	12	43	0.4	0.2	1.9	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	130	170	<1	<1.7	<1	No
BHG6_0.1-0.2	10/11/2022	10	<0.3	24	29	19	<0.05	19	43	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHG7_0.4-0.5	10/11/2022	5	<0.3	14	25	14	<0.05	17	55	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHH2_0.1-0.2	15/11/2022	6	<0.3	15	24	17	<0.05	16	43	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHH3_0.2-0.3	10/11/2022	7	<0.3	17	30	16	<0.05	18	45	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHH5_0.3-0.4	10/11/2022	2	<0.3	11	40	7	<0.05	74	46	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHH6_0.5-0.6	10/11/2022	4	<0.3	17	33	12	<0.05	25	61	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
Statistical Analysis																									
Maximum concentration		19	0.3	31	69	48	0.37	74	140	1.9	1.2	13	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	520	660	<1	<1.7	<1	Yes
Natural																									
BHA1M_0.6-0.8	11/11/2022	4	<0.3	18	18	14	<0.05	18	30	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHA2_3.0-3.1	10/11/2022	7	<0.3	20	19	14	<0.05	14	35	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHA4_0.7-0.8	11/11/2022	7	<0.3	19	16	13	<0.05	13	29	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHA7M_0.7-0.8	10/11/2022	2	<0.3	3.4	34	14	<0.05	6.1	23	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHB1_0.8-0.9	10/11/2022	7	<0.3	20	22	12	<0.05	20	31	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHB3_1.1-1.0	11/11/2022	6	<0.3	14	30	14	<0.05	16	53	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHB5_1.0-1.1	11/11/2022	2	<0.3	12	29	13	<0.05	25	76	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHB7_1.5-1.6	11/11/2022	2	<0.3	14	44	16	<0.05	23	86	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHC5_0.9-1.0	10/11/2022	11	<0.3	19	25	12	<0.05	19	40	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHC7_0.3-0.4	15/11/2022	11	<0.3	21	30	11	<0.05	26	75	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHD1_0.6-0.7	15/11/2022	6	<0.3	21	25	8	<0.05	18	31	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHD3_1.5-1.6	10/11/2022	12	<0.3	17	34	15	<0.05	25	73	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHE1_0.5-0.6	15/11/2022	4	<0.3	16	23	10	<0.05	18	28	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHE3_0.4-0.5	15/11/2022	6	<0.3	16	23	12	<0.05	17	37	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHE5_0.5-0.6	15/11/2022	7	<0.3	22	27	12	<0.05	21	59	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHE6_0.5-0.6	10/11/2022	12	<0.3	22	26	19	<0.05	18	45	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHF4_0.6-0.7	10/11/2022	8	<0.3	18	14	11	<0.05	15	30	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHF6_0.5-0.6	10/11/2022	10	<0.3	20	26	15	<0.05	18	39	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHG1M_0.6-0.7	15/11/2022	7	<0.3	16	20	8	<0.05	16	29	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHG3_0.9-1.0	10/11/2022	15	<0.3	22	35	14	<0.05	27	78	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHG5_1.6-1.7	10/11/2022	7	<0.3	23	31	14	<0.05	23	64	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHH2_0.4-0.5	15/11/2022	9	<0.3	23	28	12	<0.05	17	45	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHH4_0.2-0.3	15/11/2022	6	<0.3	23	33	13	<0.05	26	90	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHH7_0.2-0.3	15/11/2022	8	<0.3	15	33	17	<0.05	14	37	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
Statistical Analysis																									
Maximum concentration		15	<0.3	23	44	19	<0.05	27	90	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NC	NC	NC	NC
NEPM (2013) Criteria																									
HIL B - *Residential with minimal soil access*		500	150	500 Cr(VI)	30,000	1,200	120	1,200	60,000	4		400										600		1	
HIL C - *Open space*		300	90	300 Cr(VI)	17,000	600	80	1,200	30,000	3		300										400		1	
HSL A & B - Low to high density residential Soil texture classification – Clay		Source depths (0 m to <1 m. BGL)												5	0.7	480	NL	110	50	280					0.04 / 0.001
		Source depths (1 m to <2 m. BGL)												NL	1	NL	NL	310	90	NL					
		Source depths (2 m to <4 m. BGL)												NL	2	NL	NL	NL	150	NL					
		Source depths (4 m + BGL)												NL	3	NL	NL	NL	290	NL					
HSL D - *Commercial / Industrial* Soil texture classification – Clay		Source depths (0 m to <1 m. BGL)												NL	4	NL	NL	NL	310	NL					0.05 / 0.001
		Source depths (1 m to <2 m. BGL)												NL	6	NL	NL	NL	480	NL					
		Source depths (2 m to <4 m. BGL)												NL	9	NL	NL	NL	NL	NL					
		Source depths (4 m + BGL)												NL	20	NL	NL	NL	NL	NL					
EILs / ESLs - *Urban residential and public open space* [1] [2]		100		410	170	1,100		90	440		33 [3]			170	65	105	125	45	180	120	1,300	5,600	180		
Management Limits – *Residential, parkland and public open space* [1]																			800	1,000	3,500	10,000			

Notes:

Highlighted values exceed HIL / HSL

Concentration exceeds highlighted criteria

Results are recorded in mg/kg

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.
HIL C	NEPC 1999 Amendment 2013 'HIL C' - Health based public open space such as parks, playgrounds, playing fields, secondary schools and footpaths.
HSL A & B	NEPC 1999 Amendment 2013 'HSL A & B' Health Based Screening Levels applicable for vapour intrusion values applicable for low-high density residential settings.
HSL D	NEPC 1999 Amendment 2013 'HSL D' Health Based Screening Levels applicable for vapour intrusion values applicable for commercial / industrial settings.
EIL	Ecological Investigation Level for urban residential and public open space land use.
ESL	Ecology Screening Level for urban residential and public open space land use.
#	Thresholds are for Chromium VI.
NA	Not Analysed
NC	Not calculated
1	As soils are predominantly clay, fine grained soil assessment criteria values were applied.
2	EIL criteria is derived from a site specific Added Contaminant Limit (ACL) with the Ambient Background Concentration (ABC) for a high traffic NSW suburb.
3	The ecological criteria for benzo(a)pyrene was sourced from CRC Care (2017) Technical Report No. 39 Risk-based management and remediation guidance for benzo(a)pyrene.
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)

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Table T2 - Summary of Groundwater Analytical Results

Sample ID	Sampling Date	Metals								PAHs			BTEX					TRHs				Total VOC	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		
GW-BHA1M	21/11/2022	<1	0.3	11	1	1	<0.1	1	12	<1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<1	<50	<60	<500	<500	<10	<50
GW-BHD4M		<1	0.1	<1	2	<1	<0.1	4	7	<1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<1	<50	<60	<500	<500	66	<50
GW-BHG1M		<1	<0.1	<1	2	<1	<0.1	1	<5	<1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<1	<50	<60	<500	<500	11	<50
GW-BHA7M		5	<0.1	<1	2	<1	<0.1	7	8	<1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<1	<50	91	<500	<500	<10	<50
GW-BHH7M		<1	<0.1	<1	1	<1	<0.1	<1	<5	<1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<1	<50	<60	<500	<500	16	<50
Statistical Analysis																							
Maximum Concentration		<1	0.3	11	2	<1	<0.1	7	12	<1	<0.1	<0.1	<5	<5	<5	<5	<10	<500	91	<500	<500	66	<50
GILs																							
HSL A & B - *Low to high density residential* Soil texture classification – Sand	2m to <4m											NL	800	NL	NL	NL	NL	1,000	1,000				
	4m to <8m											NL	800	NL	NL	NL	NL	1,000	1,000				
	8m+											NL	900	NL	NL	NL	NL	1,000	1,000				
GILs	Fresh Waters [1]	24 (AsIII) 13 (AsV)	0.2	1 [3] (Cr VI)	1.4	3.4	0.06 [2]	11	8 [3]			16	950	180 [4]	80 [4]	350	275 [4]	50 [5]	60 [5]	500 [5]	500 [5]		320
	Recreational Water [6]	100	20		1,000 *	100	10	200	3,000*				10	25*	3*	20 *	20 *						
NJDEP - Screening Levels [7]												300											
PFAS - Freshwater [8]																							

Notes:

Highlighted indicates criteria exceeded

Highlighted indicates criteria not met

All values are µg/L unless stated otherwise

HSL A & B	NEPC 1999 Amendment 2013 'HSL A & B' Health Based Screening Levels for vapour intrusion applicable for low-high density residential 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 *
7	Value dervied from the NJDEP vapour intrusion groundwater screening levels (GWSL)
8	Value dervied from the National Environmental Management Plan for PFAS - 95% species protection for slightly to moderately disturbed systems.

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Table T3 – Summary of Soil Test Results for Deep Soil Zones

E25834 - Caddens

Sample ID	Sampling Date	Priority Metals								PAHs				BTEX				TRHs				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	OCPs	OPPs		Presence / absence
Fill																									
BHC1_0.1-0.2	14/11/2022	5	<0.3	12	9.3	9	<0.05	6.6	16	0.5	0.3	2.5	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHC1_0.7-0.8	14/11/2022	5	<0.3	17	15	10	<0.05	15	23	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHC6_0.6-0.7	10/11/2022	5	<0.3	11	32	15	<0.05	16	59	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHD1_0.1-0.2	15/11/2022	5	<0.3	14	13	15	<0.05	13	42	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHD2_0.1-0.2	15/11/2022	3	<0.3	22	3.2	9	<0.05	3.7	12	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHE1_0.1-0.2	15/11/2022	6	<0.3	16	15	17	<0.05	9.3	28	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHE2_0.1-0.2	15/11/2022	9	<0.3	13	21	15	<0.05	16	33	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHE3_0.1-0.2	15/11/2022	6	<0.3	31	42	48	<0.05	36	140	<0.3	<0.1	1	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	130	<120	<1	<1.7	<1	No
BHE4_0.3-0.4	10/11/2022	9	<0.3	22	27	24	<0.05	24	52	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHF1_0.1-0.2	15/11/2022	3	<0.3	20	22	15	<0.05	23	44	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BHF2_0.1-0.2	15/11/2022	6	<0.3	13	23	15	<0.05	13	42	1.9	1.2	13	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	130	<120	<1	<1.7	<1	No
BHF2_0.6-0.7	15/11/2022	7	<0.3	12	21	10	<0.05	13	33	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
Statistical Analysis																									
Maximum concentration		9	<0.3	31	42	48	<0.05	36	140	1.9	1.2	13	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	130	<120	<1	<1.7	<1	No
Natural																									
BHC7_0.3-0.4	15/11/2022	11	<0.3	21	30	11	<0.05	26	75	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHD1_0.6-0.7	15/11/2022	6	<0.3	21	25	8	<0.05	18	31	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHE1_0.5-0.6	15/11/2022	4	<0.3	16	23	10	<0.05	18	28	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHG1M_0.6-0.7	15/11/2022	7	<0.3	16	20	8	<0.05	16	29	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BHH2_0.4-0.5	15/11/2022	9	<0.3	23	28	12	<0.05	17	45	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
Statistical Analysis																									
Maximum concentration		9	<0.3	23	28	12	<0.05	18	45	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.3	<25	<25	<90	<120	NC	NC	NC	NC
Statistical Summary																									
95% UCL		NC	NC	NC	NC	NC	NC	NC	NC	NC	0.569	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
NEPM (2013) Criteria																									
EILs / ESLs - *Areas of ecological significance* [1]		20 [2]		130 [2]	50 [2]	110 [2]		30 [2]	60 [2]		0.7 [3]		10 [2]	10 [3]	65 [3]	40 [3]	1.6 [3]	125 [3]	25 [3]			3 [2]			

Notes:

Highlighted values exceed EIL / ESL

Concentration exceeds highlighted criteria

Results are recorded in mg/kg

EIL	Ecological Investigation Level for areas of ecological significance.
ESL	Ecology Screening Level for Areas of ecological significance.
#	Thresholds are for Chromium VI.
NA	Not Analysed
NC	Not calculated
1	As soils are predominantly clay, fine grained soil assessment criteria values were applied.
2	EIL criteria is derived from Ecological Investigation Level Calculation Spreadsheet developed by CSIRO for the National Environment Protection Council for a high traffic NSW suburb.
3	EIL criteria is derived from NEPC (2013) Schedule B1 Guideline on Investigation Levels for Soil.
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)

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Appendix C – Proposed Development

68-80 O'CONNELL ST, CADDENS
SSDA ARCHITECTURAL DOCUMENTATION

DEVELOPMENT SUMMARY:

RESIDENTIAL DEVELOPMENT																
	APARTMENTS				GFA (m^2)			ADG						DDA	
	1 BED	2 BED	3 BED	TOTAL	COMMUNAL INTERNAL AREA	RESIDENTIAL	AFFORDABLE HOUSING	SOLAR	0-hrs SUN	% SOLAR	%0-hrs SUN	C-VENT	% C-VENT	ADAPTABLE	LHA
BUILDING B	8	19	4	31	0.0	2912.6		27	2	87.1%	6.5%	21	67.7%	3	12
BUILDING C	4	10	8	22	0.0	2365.0		16	0	72.7%	0.0%	18	81.8%	1	4
BUILDING E	1	16	6	23	0.0	2641.7		22	1	95.7%	4.3%	18	78.3%	2	6
BUILDING F	5	20	3	28	0.0	2627.7		25	0	89.3%	0.0%	19	67.9%	3	4
BUILDING G	5	15	0	20	49.5	1955.8		18	0	90.0%	0.0%	19	95.0%	4	5
BUILDING H	2	10	7	19	0.0	2062.8		14	0	73.7%	0.0%	19	100.0%	0	4
BUILDING J	11	23	1	35	0.0	3387.4	3387.4	28	4	80.0%	11.4%	21	60.0%	5	13
BUILDING K	3	14	6	23	0.0	2572.7		21	1	91.3%	4.3%	15	65.2%	4	5
BUILDING L	3	20	9	32	0.0	3709.5		30	1	93.8%	3.1%	22	68.8%	3	5
BUILDING M	7	25	6	38	0.0	4045.3	4045.3	34	1	89.5%	2.6%	26	68.4%	4	7
BUILDING N	9	16	9	34	0.0	3313.6		28	1	82.4%	2.9%	21	61.8%	4	7
BUILDING P+R1+R2	9	58	4	71	452.5	6610.6		59	1	83.1%	1.4%	43	60.6%	4	24
BUILDING S	4	24	6	34	0.0	3662.9		24	0	70.6%	0.0%	26	76.5%	8	12
BUILDING T	14	24	10	48	0.0	4790.2		34	4	70.8%	8.3%	31	64.6%	0	0
BUILDING U	1	23	0	24	0.0	2426.6		18	0	75.0%	0.0%	16	66.7%	3	3
BOH P-U						416.7									
TOTAL	86	317	79	482	502.0	49500.9	7432.7	398	16	82.6%	3.3%	335	69.5%	48	111
%	17.8	65.8	16.4				15.0%							10%	23%

PROPOSED RETAIL (m^2)	3461

TOTAL PROPOSED GFA (m^2)	**53463.9**

LOCATION PLAN

68-80 O'CONNELL ST, CADDENS - SSDA DRAWING LIST		
SHEET NUMBER	SHEET NAME	CURRENT REVISION
0000 - 1199 SITE PLANS		
SSDA 0000	COVER SHEET	A
SSDA 1000	ZONING	A
SSDA 1100	EXISTING PLAN	A
SSDA 1200	DEMOLITION PLAN	A
SSDA 1300	SITE PLAN	A
SSDA 1400	STAGING DIAGRAMS	A
2000 - 2199 - FLOOR PLANS		
SSDA 2000	GA PLAN OVERALL - RL 40.10	A
SSDA 2001	GA PLAN OVERALL - RL 43.30	A
SSDA 2002	GA PLAN OVERALL - RL 46.50	A
SSDA 2003	GA PLAN OVERALL - RL 50.70	A
SSDA 2004	GA PLAN OVERALL - RL 54.70	A
SSDA 2005	GA PLAN OVERALL - RL 57.20	A
SSDA 2006	GA PLAN OVERALL - RL 60.20	A
SSDA 2007	GA PLAN OVERALL - RL 63.40	A
SSDA 2008	GA PLAN OVERALL - RL 66.60	A
SSDA 2009	GA PLAN OVERALL - RL 69.80	A
SSDA 2010	GA PLAN OVERALL - RL 73.00	A
SSDA 2011	GA PLAN OVERALL - RL 76.20	A
SSDA 2012	GA PLAN OVERALL - ROOF	A
SSDA 2050	B - J BASEMENT - 02	A
SSDA 2051	B - J BASEMENT - 01	A
SSDA 2060	K - N BASEMENT - 03	A
SSDA 2061	K - N BASEMENT - 02	A
SSDA 2062	K - N BASEMENT - 01	A
SSDA 2070	P - U BASEMENT - 03	A
SSDA 2071	P - U BASEMENT - 02	A
SSDA 2072	P - U BASEMENT - 01	A
SSDA 2073	P - U BASEMENT - RETAIL LEVEL	A
SSDA 2100	BUILDING PLANS - BUILDING B	A
SSDA 2101	BUILDING PLANS - BUILDING C	A
SSDA 2102	BUILDING PLANS - BUILDING E	A
SSDA 2103	BUILDING PLANS - BUILDING F	A
SSDA 2104	BUILDING PLANS - BUILDING G	A
SSDA 2105	BUILDING PLANS - BUILDING H	A
SSDA 2106	BUILDING PLANS - BUILDING J	A
SSDA 2107	BUILDING PLANS - BUILDING K	A
SSDA 2109	BUILDING PLANS - BUILDING L_SHEET 1	A
SSDA 2110	BUILDING PLANS - BUILDING L_SHEET 2	A
SSDA 2111	BUILDING PLANS - BUILDING M_SHEET 1	A
SSDA 2112	BUILDING PLANS - BUILDING M_SHEET 2	A
SSDA 2113	BUILDING PLANS - BUILDING N_SHEET 1	A
SSDA 2114	BUILDING PLANS - BUILDING N_SHEET 2	A
SSDA 2115	BUILDING PLANS - BUILDING P_SHEET 1	A
SSDA 2116	BUILDING PLANS - BUILDING P_SHEET 2	A
SSDA 2117	BUILDING PLANS - BUILDING R	A

68-80 O'CONNELL ST, CADDENS - SSDA DRAWING LIST		
SHEET NUMBER	SHEET NAME	CURRENT REVISION
SSDA 2118	BUILDING PLANS - BUILDING S_SHEET 1	A
SSDA 2119	BUILDING PLANS - BUILDING S_SHEET 2	A
SSDA 2120	BUILDING PLANS - BUILDING T_SHEET 1	A
SSDA 2121	BUILDING PLANS - BUILDING T_SHEET 2	A
SSDA 2122	BUILDING PLANS - BUILDING U	A
3000 - 3099 - ELEVATIONS		
SSDA 3000	OVERALL ELEVATIONS	A
SSDA 3001	OVERALL ELEVATIONS	A
SSDA 3010	BUILDING ELEVATIONS - BUILDING B	A
SSDA 3011	BUILDING ELEVATIONS - BUILDING C	A
SSDA 3012	BUILDING ELEVATIONS - BUILDING E	A
SSDA 3013	BUILDING ELEVATIONS - BUILDING F	A
SSDA 3014	BUILDING ELEVATIONS - BUILDING G	A
SSDA 3015	BUILDING ELEVATIONS - BUILDING H	A
SSDA 3016	BUILDING ELEVATIONS - BUILDING J	A
SSDA 3017	BUILDING ELEVATIONS - BUILDING K	A
SSDA 3018	BUILDING ELEVATIONS - BUILDING L	A
SSDA 3019	BUILDING ELEVATIONS - BUILDING M	A
SSDA 3020	BUILDING ELEVATIONS - BUILDING N	A
SSDA 3021	BUILDING ELEVATIONS - BUILDING P	A
SSDA 3022	BUILDING ELEVATIONS - BUILDING R	A
SSDA 3023	BUILDING ELEVATIONS - BUILDING S	A
SSDA 3024	BUILDING ELEVATIONS - BUILDING T	A
SSDA 3025	BUILDING ELEVATIONS - BUILDING U	A
SSDA 3026	RETAIL BOX ELEVATIONS	A
3100 - 3199 - SECTIONS		
SSDA 3101	SITE SECTIONS - SHEET 1	A
SSDA 3102	SITE SECTIONS - SHEET 2	A
4000 - 4099 - FACADE SECTIONS		
SSDA 4000	FACADE SECTIONS - SHEET 1	P1
SSDA 4001	FACADE SECTIONS - SHEET 2	P1
SSDA 4002	FACADE SECTIONS - SHEET 3	P1
5100 - 5199 - RENDERS AND MATERIALS & FINISHES		
SSDA 5100	RENDER 01 - VILLAGE QUARTER	P1
SSDA 5101	RENDER 02 - COMMUNITY FOREST	P1
SSDA 5102	RENDER 03 - O'CONNELL STREET	P1
SSDA 5103	RENDER 04 - RETAIL BOX	P1
SSDA 5104	RENDER 05 - AVENUE ROAD	P1
SSDA 5200	MATERIALS AND FINISHES	P1
9100 - 9199 - COMPLIANCE		
SSDA 9100	GFA DIAGRAMS - 01	P1
SSDA 9101	GFA DIAGRAMS - 02	P1
SSDA 9102	GFA DIAGRAMS - 03	P1
SSDA 9110	DEEP SOIL	P1
SSDA 9120	COMMUNAL OPEN SPACE	P1
SSDA 9121	PROPOSED COS - SOLAR ANALYSIS (21ST JUNE)	P1
SSDA 9130	CROSS VENTILATION COMPLIANCE - 01	P1

68-80 O'CONNELL ST, CADDENS - SSDA DRAWING LIST		
SHEET NUMBER	SHEET NAME	CURRENT REVISION
SSDA 9131	CROSS VENTILATION COMPLIANCE - 02	P1
SSDA 9140	SUN EYE VIEWS - 3D VIEWS - SHEET 1	P1
SSDA 9141	SUN EYE VIEWS - 3D VIEWS - SHEET 2	P1
SSDA 9142	SOLAR COMPLIANCE DIAGRAM - 01	P1
SSDA 9143	SOLAR COMPLIANCE DIAGRAM - 02	P1
SSDA 9150	BUILDING SEPARATION DIAGRAMS	P1
SSDA 9160	STORAGE SCHEDULE	P1
SSDA 9162	STORAGE DIAGRAM - 01	P1
SSDA 9163	STORAGE DIAGRAM - 02	P1
SSDA 9164	STORAGE DIAGRAM - 03	P1
SSDA 9165	STORAGE DIAGRAM - 04	P1
SSDA 9166	STORAGE DIAGRAM - 05	P1
SSDA 9170	HEIGHT PLANE COMPLIANCE - 01	P1
SSDA 9171	HEIGHT PLANE COMPLIANCE - 02	P1
SSDA 9200	P - U RAMP DETAIL_RAMP 1, RAMP 2, RAMP 4	P1
SSDA 9201	P - U RAMP DETAIL_RAMP 3	P1
SSDA 9202	B - J RAMP DETAIL_RAMP 1, RAMP 2	P1
SSDA 9203	K - N RAMP DETAIL_RAMP 1, RAMP 2	P1
SSDA 9300	TYPE B.LG.01 ADAPTABLE APARTMENT	P1
SSDA 9301	TYPE B.LG.03 ADAPTABLE APARTMENT	P1
SSDA 9302	TYPE B.G.04 ADAPTABLE APARTMENT	P1
SSDA 9303	TYPE C.LG.01 ADAPTABLE APARTMENT	P1
SSDA 9304	TYPE E.G.03 ADAPTABLE APARTMENT	P1
SSDA 9305	TYPE E.G.05 ADAPTABLE APARTMENT	P1
SSDA 9306	TYPE F.1.05 ADAPTABLE APARTMENT	P1
SSDA 9307	TYPE G.G.01 ADAPTABLE APARTMENT	P1
SSDA 9308	TYPE G.1.01 ADAPTABLE APARTMENT	P1
SSDA 9309	TYPE J.LG.03 ADAPTABLE APARTMENT	P1
SSDA 9310	TYPE J.G.05 ADAPTABLE APARTMENT	P1
SSDA 9311	TYPE K.G.01 ADAPTABLE APARTMENT	P1
SSDA 9312	TYPE L.1.01 ADAPTABLE APARTMENT	P1
SSDA 9313	TYPE M.1.02 ADAPTABLE APARTMENT	P1
SSDA 9314	TYPE N.LG.01 ADAPTABLE APARTMENT	P1
SSDA 9315	TYPE N.LG.03 ADAPTABLE APARTMENT	P1
SSDA 9316	TYPE N.G.04 ADAPTABLE APARTMENT	P1
SSDA 9317	TYPE R2.1.01 ADAPTABLE APARTMENT	P1
SSDA 9318	TYPE S.1.02 ADAPTABLE APARTMENT	P1
SSDA 9319	TYPE S.1.07 ADAPTABLE APARTMENT	P1
SSDA 9320	TYPE U.2.04 ADAPTABLE APARTMENT	P1
SSDA 9500	PROPOSED SHADOW DIAGRAMS - AE (20TH MAR)	P1
SSDA 9501	PROPOSED SHADOW DIAGRAMS - AE (20TH MAR)	P1
SSDA 9502	PROPOSED SHADOW DIAGRAMS - WS (21ST JUNE)	P1
SSDA 9503	PROPOSED SHADOW DIAGRAMS - WS (21ST JUNE)	P1
SSDA 9504	PROPOSED SHADOW DIAGRAMS - SE (22ND SEPT)	P1
SSDA 9505	PROPOSED SHADOW DIAGRAMS - SE (22ND SEPT)	P1

SSDA SUBMISSION

10/08/2025 9:17:45 AM

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION - 95%	04.07.2025
P2	FOR SSDA COORDINATION	22.07.2025
P3	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

TRAFFIC
TTPA
LACHLAN ELLSON

WASTE
ELEPHANTS FOOT
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architecture interior design urban design landscape
nom architect Lisa-Maree Carrigan 7568

Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
COVER SHEET

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Plotted and checked by	GroupGSA		
Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			

Scale	Project No	Drawing No	Issue
1 : 1 @ A1	A252106	SSDA 0000	A

BUILDINGS P-U PARKING (RESI):

REQUIRED - 243 SPACES

APARTMENTS:	202
VISITORS:	36
SERVICE:	5

PROPOSED - 361 SPACES

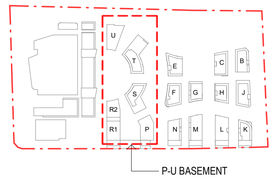
APARTMENTS:	202
VISITORS:	36
SERVICE:	TBC
MOTORBIKES:	19
BICYCLES:	5
EXTRA:	99

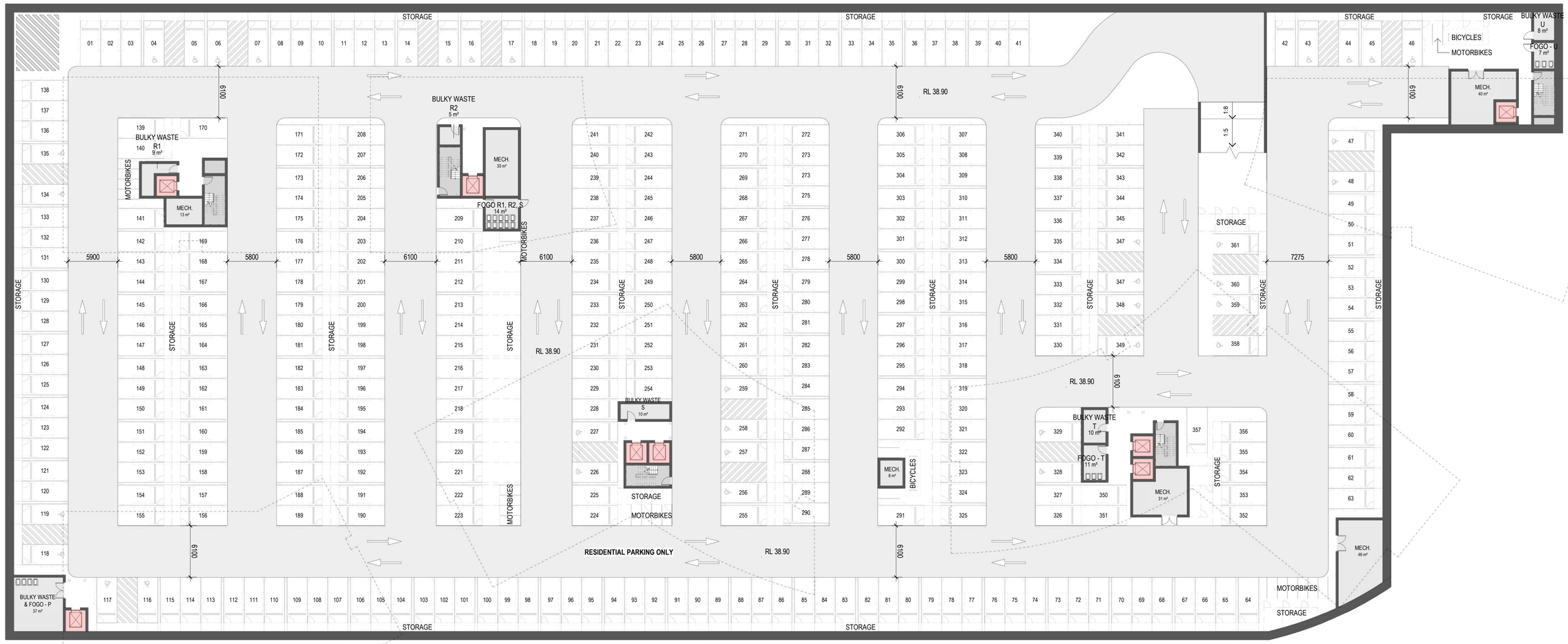
BUILDINGS P-U PARKING (RETAIL):

REQUIRED - 697 SPACES (TBC)

PROPOSED - 727 SPACES

RETAIL:	701 (INCL. ACC.)
ACCESSIBLE:	85
ALLOCATED:	26
MOTORBIKES:	82
BICYCLES:	25





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SSDA SUBMISSION

7/31/2025 7:19:33 PM

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION	23.05.2025
P2	ISSUED FOR COORDINATION	26.05.2025
P3	WIP ISSUED TO CLIENT	30.05.2025
P4	ISSUED FOR COORDINATION - 95%	04.07.2025
P5	FOR SSDA COORDINATION	22.07.2025
P6	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

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Project Title
68-80 O'CONNELL ST, CADDENS

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P - U BASEMENT - 03

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Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			
Scale	Project No	Drawing No	Issue
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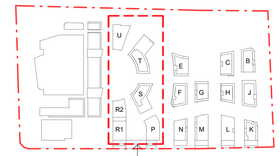

Amendments		
Issue	Description	Date
P1	ISSUED FOR COORDINATION	23.05.2025
P2	ISSUED FOR COORDINATION	26.05.2025
P3	WIP ISSUED TO CLIENT	30.05.2025
P4	ISSUED FOR COORDINATION - 95%	04.07.2025
P5	FOR SSDA COORDINATION	22.07.2025
P6	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

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Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
P - U BASEMENT - 02

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0m 2.5m 5m 10m 12.5m

SSDA SUBMISSION

7/31/2025 7:20:03 PM

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Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			
Scale	Project No	Drawing No	Issue
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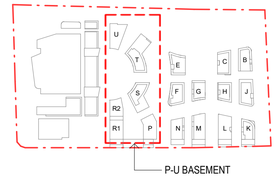

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION	23.05.2025
P2	ISSUED FOR COORDINATION	26.05.2025
P3	WIP ISSUED TO CLIENT	30.05.2025
P4	ISSUED FOR COORDINATION - 95%	04.07.2025
P5	FOR SSDA COORDINATION	22.07.2025
P6	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

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Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
P - U BASEMENT - 01

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0m 2.5m 5m 10m 12.5m

SSDA SUBMISSION

Plotted and checked by	GroupGSA		
Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			

Scale	Project No	Drawing No	Issue
1 : 250 @ A1	A252106	SSDA 2072	A

7/31/2025 7:20:14 PM

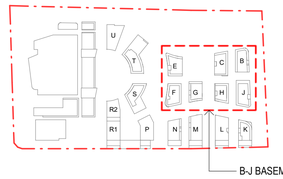
BUILDINGS B-J PARKING:

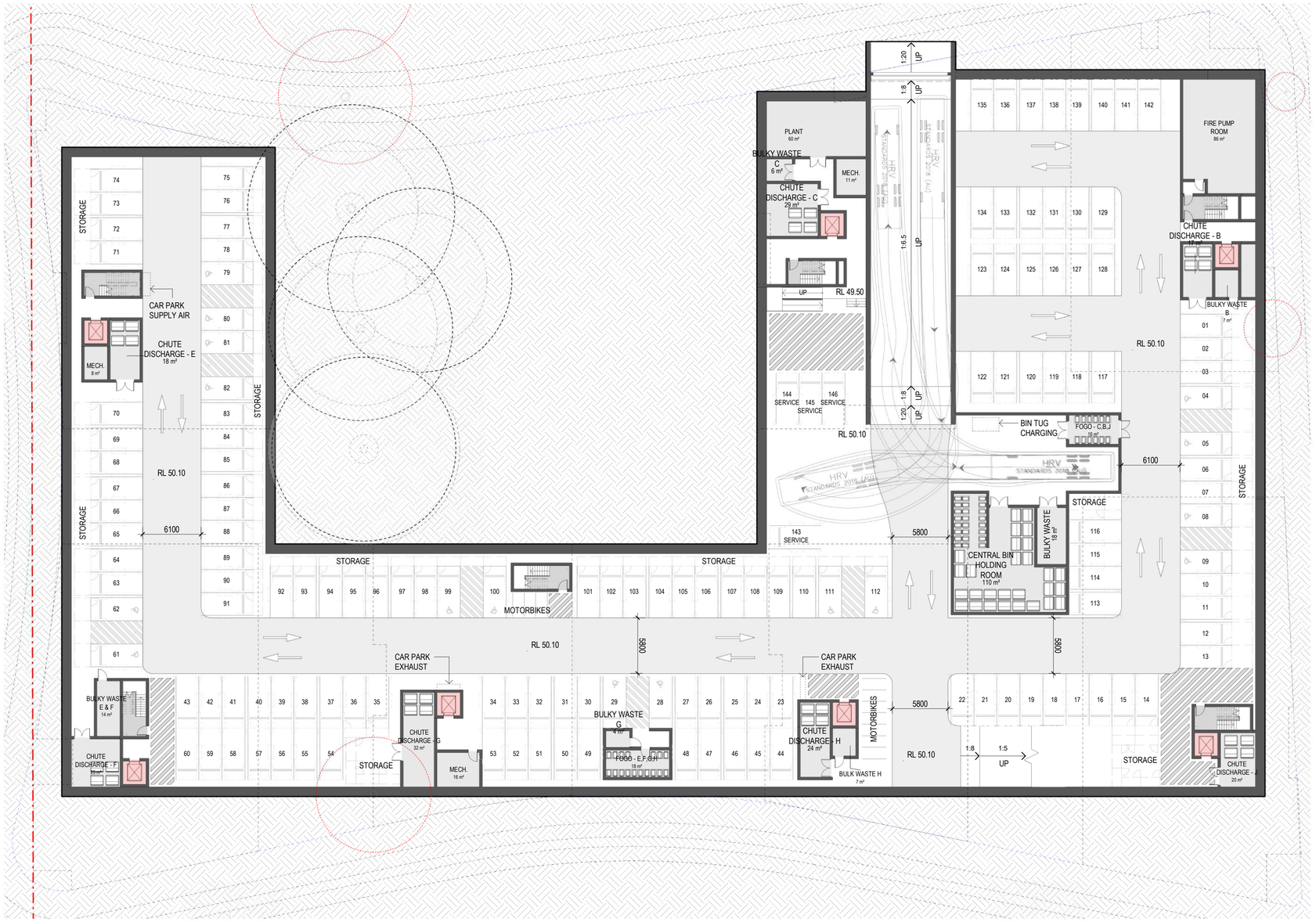
REQUIRED - 248 SPACES

APARTMENTS:	207
VISITORS:	36
SERVICE:	5

PROPOSED - SPACES

APARTMENTS:	207
VISITORS:	46
SERVICE:	4
MOTORBIKES:	20
BICYCLES:	5





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SSDA SUBMISSION

7/31/2025 7:18:59 PM

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION	23.05.2025
P2	ISSUED FOR COORDINATION	26.05.2025
P3	WIP ISSUED TO CLIENT	30.05.2025
P4	ISSUED FOR COORDINATION - 95%	04.07.2025
P5	FOR SSDA COORDINATION	22.07.2025
P6	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

TRAFFIC
TTPA
LACHLAN ELLSON

WASTE
ELEPHANTS FOOT
EMMA MCNEILLY

PLANNING
KEYLAN CONSULTING
LAUREN DONOHOE

Client
HOLDMARK PROPERTY GROUP
ELIYAH EL KHOURY

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Australia 2011
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architecture interior design urban design landscape
nom architect Lisa-Maree Carrigan 7568

Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
B - J BASEMENT - 02

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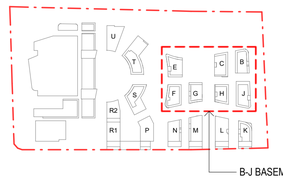
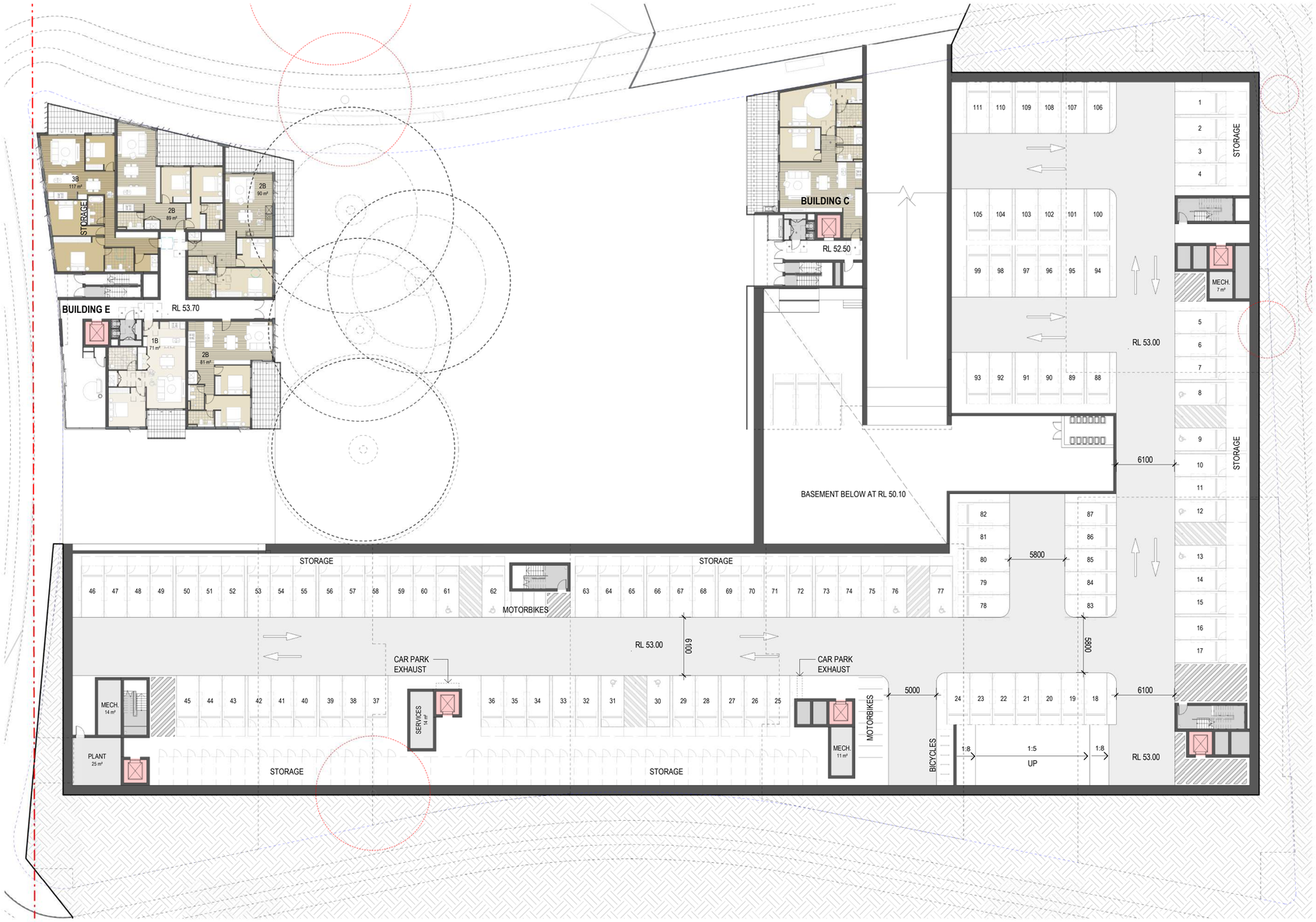
Plotted and checked by	GroupGSA		
Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			
Scale	Project No	Drawing No	Issue
1 : 250 @ A1	A252106	SSDA 2050	A





0m 2.5m 5m 10m 12.5m

SSDA SUBMISSION

7/31/2025 7:19:12 PM

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION	23.05.2025
P2	ISSUED FOR COORDINATION	26.05.2025
P3	WIP ISSUED TO CLIENT	30.05.2025
P4	ISSUED FOR COORDINATION - 95%	04.07.2025
P5	FOR SSDA COORDINATION	22.07.2025
P6	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

TRAFFIC
TTPA
LACHLAN ELLSON

WASTE
ELEPHANTS FOOT
EMMA MCNEILLY

PLANNING
KEYLAN CONSULTING
LAUREN DONOHOE

Client
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architecture interior design urban design landscape
nom architect Lisa-Maree Carrigan 7568

Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
B - J BASEMENT - 01

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Plotted and checked by	GroupGSA		
Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			
Scale	Project No	Drawing No	Issue
1 : 250 @ A1	A252106	SSDA 2051	A

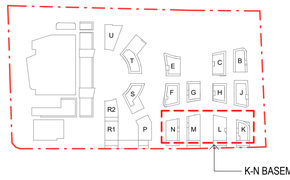
BUILDINGS K-N PARKING:

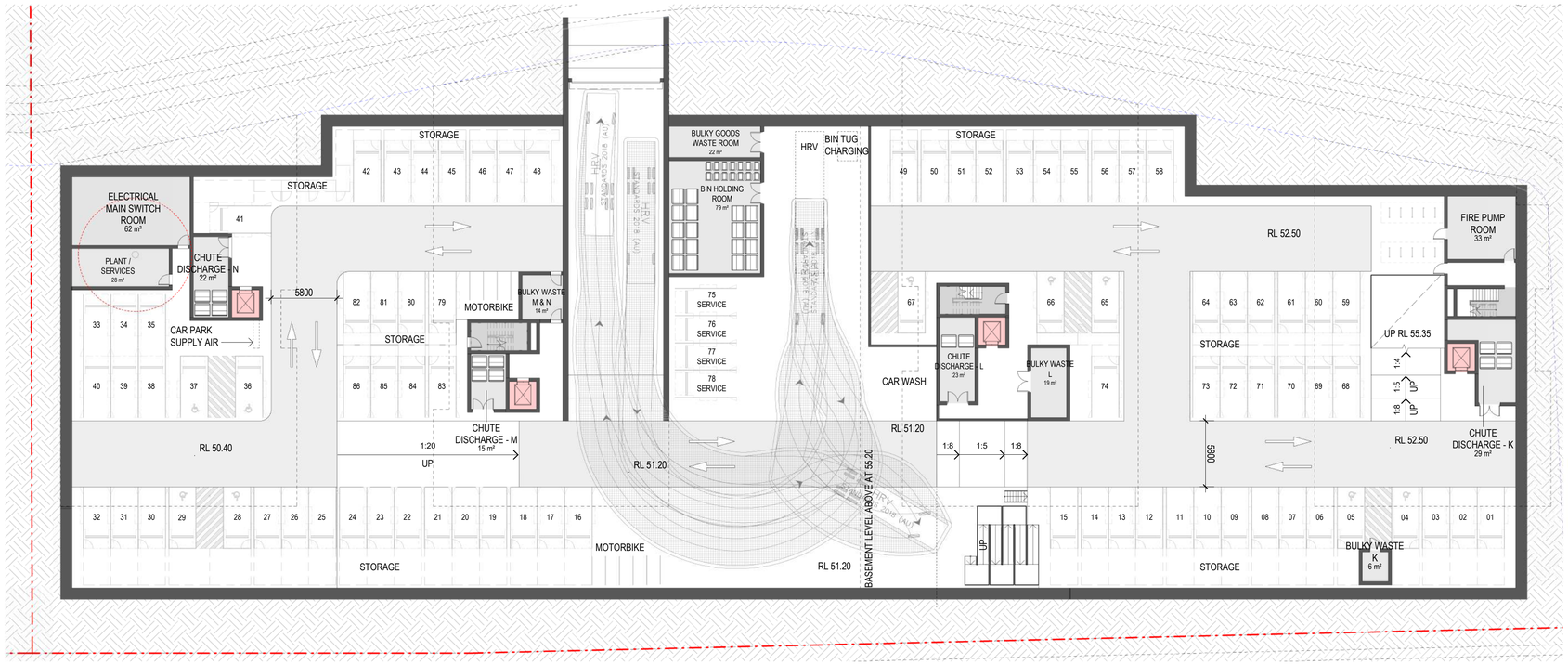
REQUIRED - 179 SPACES

APARTMENTS:	152
VISITORS:	24
SERVICE:	3

PROPOSED - SPACES

APARTMENTS:	152
VISITORS:	22
SERVICE:	4
MOTORBIKES:	12
BICYCLES:	5





0m 2.5m 5m 10m 12.5m

SSDA SUBMISSION

7/31/2025 7:19:21 PM

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION - 95%	04.07.2025
P2	FOR SSDA COORDINATION	22.07.2025
P3	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

TRAFFIC
TTPA
LACHLAN ELLSON

WASTE
ELEPHANTS FOOT
EMMA MCNEILLY

PLANNING
KEYLAN CONSULTING
LAUREN DONOHOE

Client
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nom architect Lisa-Maree Carrigan 7568

Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
K - N BASEMENT - 03

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Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			

Scale	Project No	Drawing No	Issue
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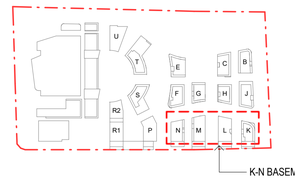

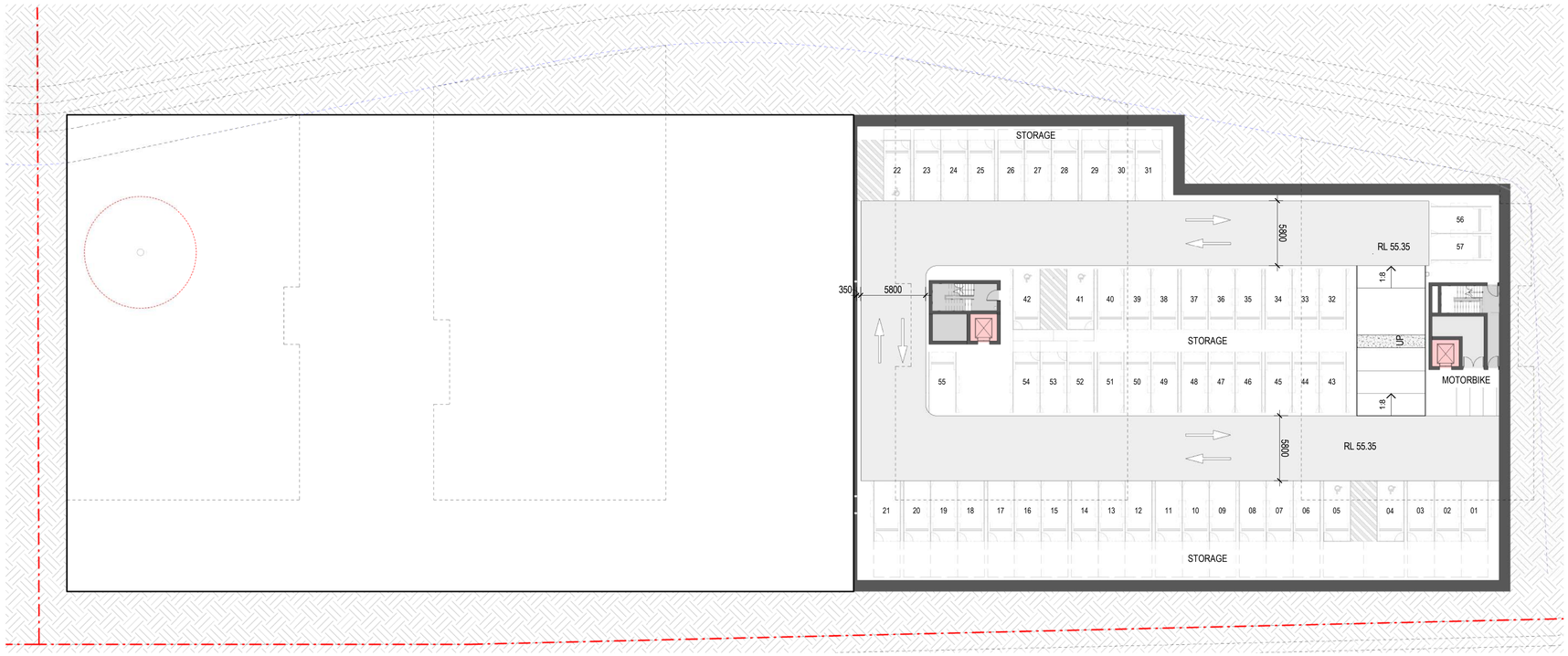

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SSDA SUBMISSION

7/31/2025 7:19:32 PM

Amendments

Issue	Description	Date
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P2	ISSUED FOR COORDINATION	26.05.2025
P3	WIP ISSUED TO CLIENT	30.05.2025
P4	ISSUED FOR COORDINATION - 95%	04.07.2025
P5	FOR SSDA COORDINATION	22.07.2025
P6	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

TRAFFIC
TTPA
LACHLAN ELLSON

WASTE
ELEPHANTS FOOT
EMMA MCNEILLY

PLANNING
KEYLAN CONSULTING
LAUREN DONOHOE

Client
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architecture interior design urban design landscape
nom architect Lisa-Maree Carrigan 7568

Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
K - N BASEMENT - 02

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Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			

Scale	Project No	Drawing No	Issue
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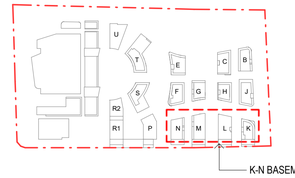

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION	23.05.2025
P2	ISSUED FOR COORDINATION	26.05.2025
P3	WIP ISSUED TO CLIENT	30.05.2025
P4	ISSUED FOR COORDINATION - 95%	04.07.2025
P5	FOR SSDA COORDINATION	22.07.2025
P6	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

TRAFFIC
TTPA
LACHLAN ELLSON

WASTE
ELEPHANTS FOOT
EMMA MCNEILLY

PLANNING
KEYLAN CONSULTING
LAUREN DONOHOE

Client
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nom architect Lisa-Maree Carrigan 7568

Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
K - N BASEMENT - 01

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0m 2.5m 5m 10m 12.5m

SSDA SUBMISSION

7/31/2025 7:19:43 PM

Plotted and checked by	GroupGSA		
Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			

Scale	Project No	Drawing No	Issue
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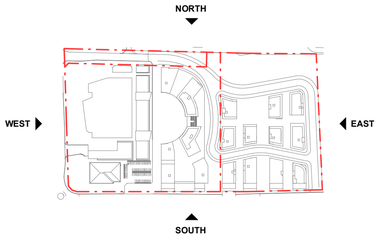
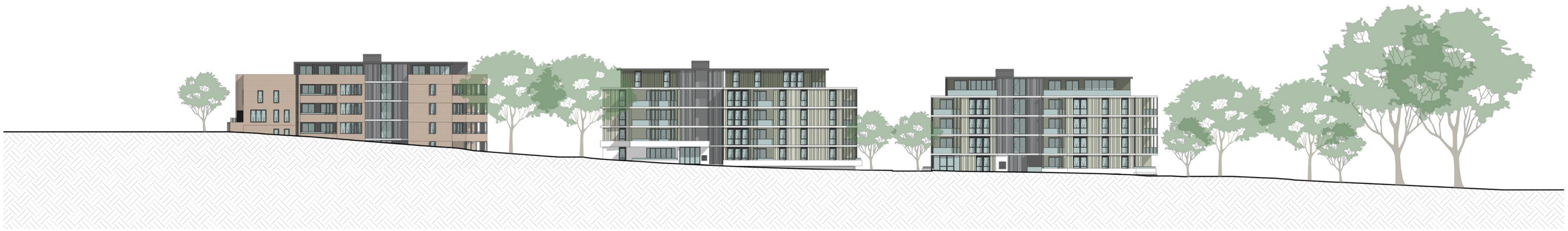


1 SOUTH ELEVATION
1 : 350



2 EAST ELEVATION
1 : 350

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION - 95%	04.07.2025
P2	FOR SSDA COORDINATION	22.07.2025
P3	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

TRAFFIC
TTPA
LACHLAN ELLSON

WASTE
ELEPHANTS FOOT
EMMA MCNEILLY

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architecture interior design urban design landscape
nom architect Lisa-Maree Carrigan 7568

Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
OVERALL ELEVATIONS

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0m 5m 10m 20m 30m

SSDA SUBMISSION

7/31/2025 7:26:58 PM

Plotted and checked by	GroupGSA		
Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			

Scale	Project No	Drawing No	Issue
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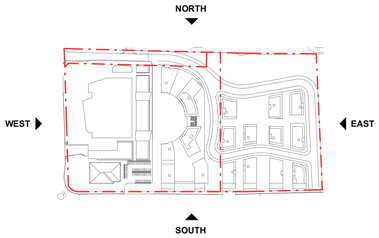

1 NORTH ELEVATION
1 : 350

2 WEST ELEVATION
1 : 350

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION - 95%	04.07.2025
P2	FOR SSDA COORDINATION	22.07.2025
P3	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

TRAFFIC
TTPA
LACHLAN ELLSON

WASTE
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architecture interior design urban design landscape
nom architect Lisa-Maree Carrigan 7568

Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
OVERALL ELEVATIONS

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0m 5m 10m 20m 30m

SSDA SUBMISSION

Plotted and checked by	GroupGSA		
Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			
Scale	Project No	Drawing No	Issue
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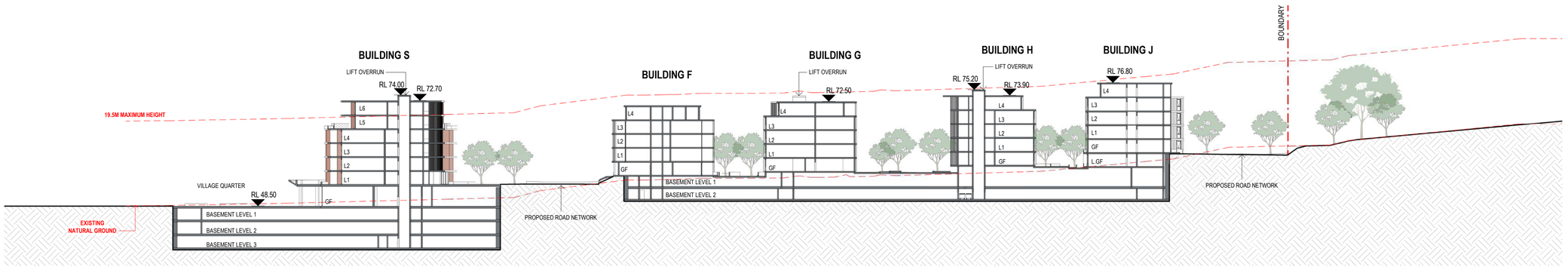
7/31/2025 1:27:56 PM

1 SSDA_SECTION 4
1 : 500



2 SSDA_SECTION 5
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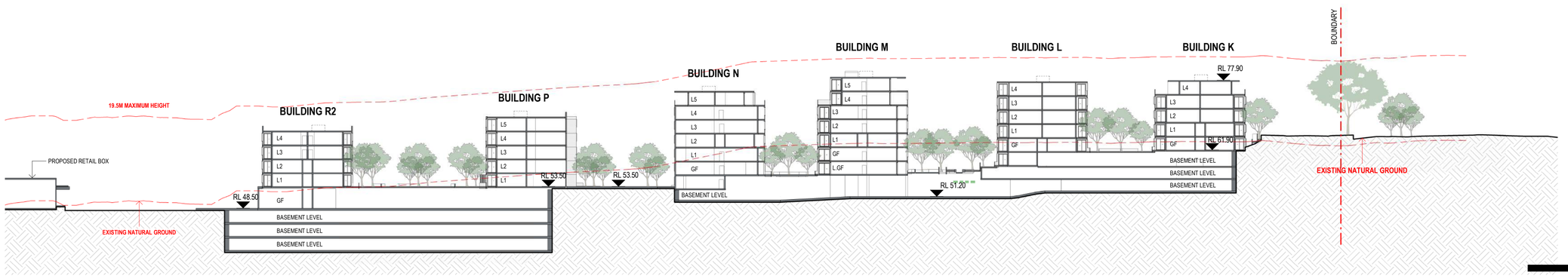

3 SSDA_SECTION 6
1 : 500

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION - 95%	04.07.2025
P2	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

TRAFFIC
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nom architect Lisa-Maree Carrigan 7568

Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
SITE SECTIONS - SHEET 1

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SSDA SUBMISSION

Plotted and checked by	GroupGSA		
Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			
Scale	Project No	Drawing No	Issue
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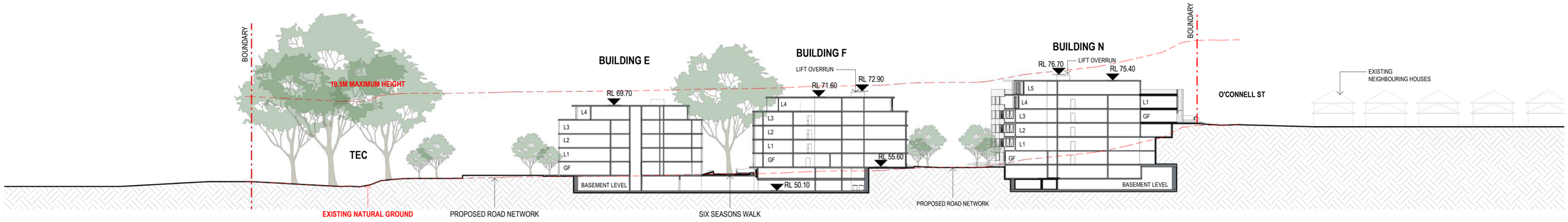
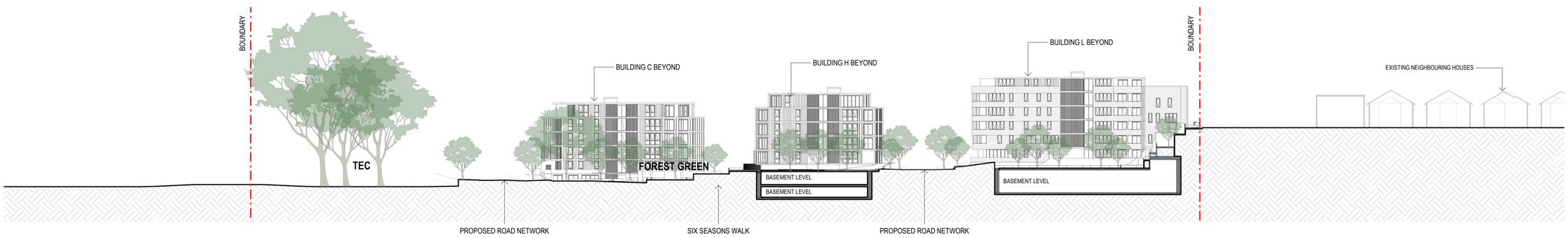
7/31/2025 7:31:52 PM

1 SSDA_SECTION 7
1 : 500



2 _SSDA_SECTION 8_1
1 : 500



3 SSDA_SECTION 8
1 : 500

Amendments

Issue	Description	Date
P1	ISSUED FOR COORDINATION - 95%	04.07.2025
P2	DRAFT SSDA PACK	25.07.2025
A	ISSUED FOR SSDA	01.08.2025

LEGEND AND NOTES

TRAFFIC
TTPA
LACHLAN ELLSON

WASTE
ELEPHANTS FOOT
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KEYLAN CONSULTING
LAUREN DONOHOE

Client
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architecture interior design urban design landscape
nom architect Lisa-Maree Carrigan 7568

Project Title
68-80 O'CONNELL ST, CADDENS

Drawing Title
SITE SECTIONS - SHEET 2

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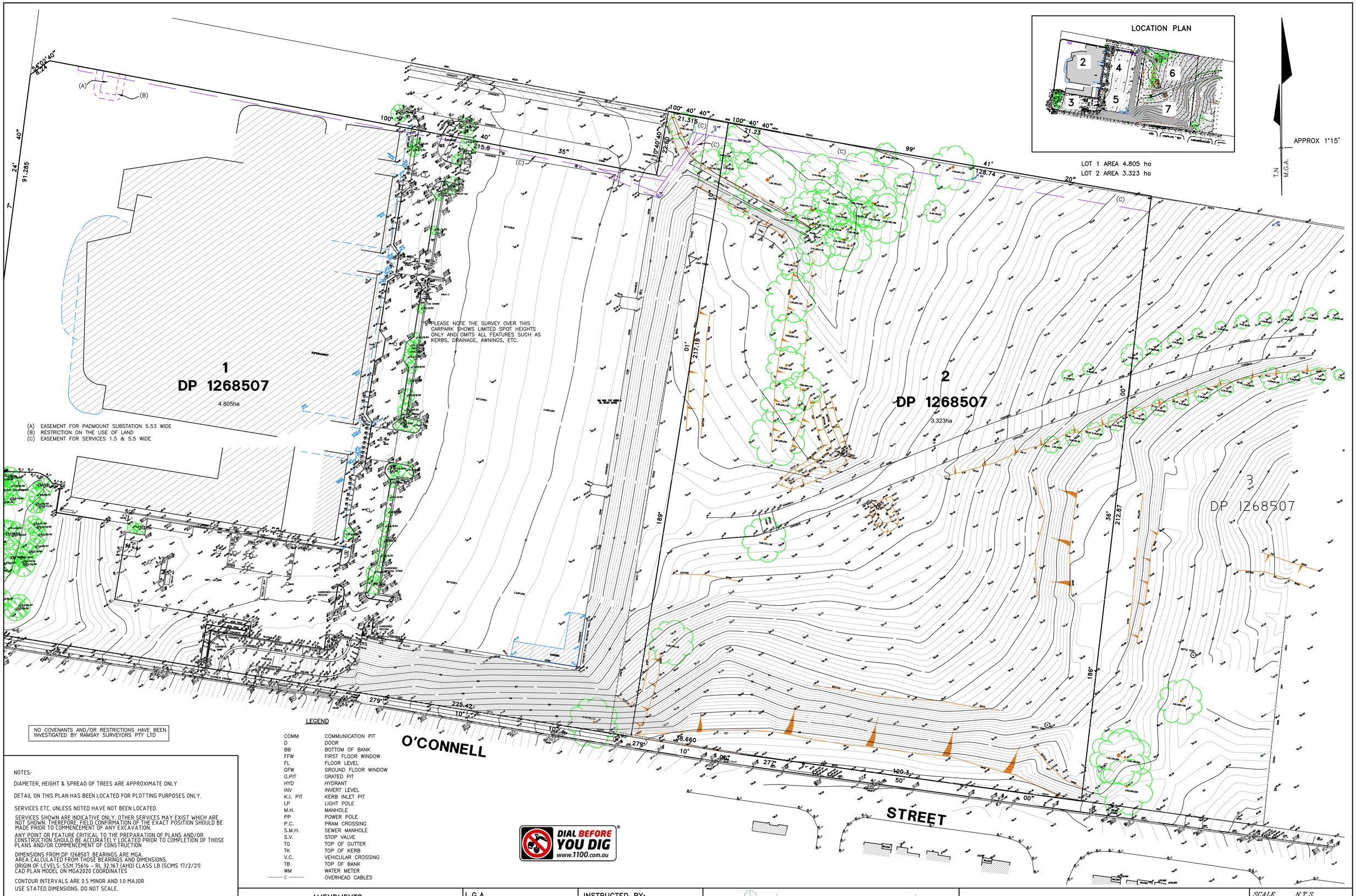
SSDA SUBMISSION

Plotted and checked by	GroupGSA		
Verified	RS	Approved	LMC
Drawing Created (date)		Drawing Created (by)	RS
01.08.2025			
Scale	Project No	Drawing No	Issue
1 : 500 @ A1	A252106	SSDA 3102	A

7/31/2025 7:32:01 PM



NOTES:

DIAMETER, HEIGHT & SPREAD OF TREES ARE APPROXIMATE ONLY

DETAIL ON THIS PLAN HAS BEEN LOCATED FOR PLOTTING PURPOSES ONLY.

SERVICES ETC. UNLESS NOTED HAVE NOT BEEN LOCATED.

SERVICES SHOWN ARE INDICATIVE ONLY. OTHER SERVICES MAY EXIST WHICH ARE NOT SHOWN. THEREFORE, FIELD CONFIRMATION OF THE EXACT POSITION SHOULD BE MADE PRIOR TO COMMENCEMENT OF ANY EXCAVATION.

ANY POINT OR FEATURE CRITICAL TO THE PREPARATION OF PLANS AND/OR CONSTRUCTION SHOULD BE ACCURATELY LOCATED PRIOR TO COMPLETION OF THOSE PLANS AND/OR COMMENCEMENT OF CONSTRUCTION

DIMENSIONS FROM DP 1268507. BEARINGS ARE MGA.
AREA CALCULATED FROM THOSE BEARINGS AND DIMENSIONS.
ORIGIN OF LEVELS: SSM 75614 – RL 32.167 (AHD) CLASS LB (SCIMS 17/2/21)
CAD PLAN MODEL ON MGA2020 COORDINATES

CONTOUR INTERVALS ARE 0.5 MINOR AND 1.0 MAJOR

USE STATED DIMENSIONS. DO NOT SCALE.

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AMENDMENTS

DATE	DESCRIPTION
31/03/21	INFORMATION ADDED AROUND RAMP
15/10/21	BOUNDARIES UPDATED
05/08/22	NOTE ADDED REGARDING MGA 2020
19/03/25	TREES AND BUILDINGS REMOVED IN
10/04/25	INFORMATION ADDED

L.G.A
PENRITH

LOCALITY:
CADDENS

INSTRUCTED BY:
SUJITH KAVALI

RE:
HOLDMARK PTY LTD

H RAMSAY & CO. SURVEYORS EST.1962
Ramsay Surveyors Pty Limited ACN 607 389 748
"CARLINGFORD CENTRAL" SUITE 15, 241–245 PENNANT HILLS RD, CARLINGFORD NSW 2118
P.O. BOX 2244 CARLINGFORD NSW 2118 PH: (02) 9635 5840
EMAIL: surveyor@hramsay.com.au www.hramsay.com.au

PLAN SHOWING DETAIL AND LEVELS OVER PART LOT 1 & LOT 2 IN DP 1268507 O'CONNELL STREET, CADDENS

SCALE	N.T.S.
DATUM	AHD
SURVEY	MH
DRAWN	CSM
DATE	25/2/21
OUR REF	8966
SHEET 1 OF 7 SHEETS	

SHEET 4 ADJOINS

APPROX 1°15'

T.N M.G.A.

LEGEND

COMM	COMMUNICATION PIT
D	DOOR
BB	BOTTOM OF BANK
FFW	FIRST FLOOR WINDOW
FL	FLOOR LEVEL
GFW	GROUND FLOOR WINDOW
G.PIT	GRATED PIT
HYD	HYDRANT
INV	INVERT LEVEL
K.I. PIT	KERB INLET PIT
L.POLE	LIGHT POLE
M.H.	MANHOLE
P.POLE	POWER POLE
P.C.	PRAM CROSSING
S.M.H.	SEWER MANHOLE
S.V.	STOP VALVE
TG	TOP OF GUTTER
T/S	TOP SIDE
TK	TOP OF KERB
U/S	UNDERSIDE
V.C.	VEHICULAR CROSSING
TB	TOP OF BANK
WM	WATER METER
——E——	OVERHEAD CABLES

(A) EASEMENT FOR PADMOUNT SUBSTATION 5.53 WIDE
(B) RESTRICTION ON THE USE OF LAND
(C) EASEMENT FOR SERVICES 1.5 & 5.5 WIDE

1

DP 1268507

CONCRETE

SUPERMARKET

BITUMEN

CONCRETE

ADJOINS

SHEET 5

SHEET 3 ADJOINS

NO COVENANTS AND/OR RESTRICTIONS HAVE BEEN INVESTIGATED BY RAMSAY SURVEYORS PTY LTD

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NOTES:

DIAMETER, HEIGHT & SPREAD OF TREES ARE APPROXIMATE ONLY

DETAIL ON THIS PLAN HAS BEEN LOCATED FOR PLOTTING PURPOSES ONLY.

ADJOINING FLOOR, WINDOW HEIGHTS AND ROOF HEIGHTS ARE APPROXIMATE ONLY.

SERVICES ETC. UNLESS NOTED HAVE NOT BEEN LOCATED.

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DIMENSIONS FROM DP 1268507. BEARINGS ARE MGA.
AREA CALCULATED FROM THOSE BEARINGS AND DIMENSIONS.
ORIGIN OF LEVELS: SSM 75614 – RL 32.167 (AHD) CLASS LB (SCIMS 17/2/21)
CAD PLAN MODEL ON MGA2020 COORDINATES

CONTOUR INTERVALS ARE 0.5 MINOR AND 1.0 MAJOR

USE STATED DIMENSIONS. DO NOT SCALE.

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AMENDMENTS

DATE	DESCRIPTION
31/03/21	INFORMATION ADDED AROUND RAMP
15/10/21	BOUNDARIES UPDATED
05/08/22	NOTE ADDED REGARDING MGA 2020
10/04/25	INFORMATION ADDED

L.G.A PENRITH

LOCALITY: CADDENS

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PLAN SHOWING DETAIL AND LEVELS OVER PART LOT 1 & LOT 2 IN DP 1268507 O'CONNELL STREET, CADDENS

SCALE	1:300@A1
DATUM	AHD
SURVEY	MH
DRAWN	CSM
DATE	25/2/21
OUR REF	8966
SHEET	2 OF 7 SHEETS

SHEET 2 ADJOINS

ADJOINS 1 DP 1268507

SHEET 2 DP 1268507 5

PLEASE NOTE THE SURVEY OVER THIS CARPARK SHOWS LIMITED SPOT HEIGHTS ONLY AND OMITS ALL FEATURES SUCH AS KERBS, DRAINAGE, AWNINGS, ETC.

BM NAIL TOP KERB ▲ RL 50.58 (AHD)

O'CONNELL STREET

APPROX 1°15'

T.N M.G.A.

DIAL BEFORE YOU DIG www.1100.com.au

NO COVENANTS AND/OR RESTRICTIONS HAVE BEEN INVESTIGATED BY RAMSAY SURVEYORS PTY LTD

LEGEND

COMM	COMMUNICATION PIT
D	DOOR
BB	BOTTOM OF BANK
FFW	FIRST FLOOR WINDOW
FL	FLOOR LEVEL
GFW	GROUND FLOOR WINDOW
G.PIT	GRATED PIT
HYD	HYDRANT
INV	INVERT LEVEL
K.I. PIT	KERB INLET PIT
L.POLE	LIGHT POLE
M.H.	MANHOLE
P.POLE	POWER POLE
P.C.	PRAM CROSSING
S.M.H.	SEWER MANHOLE
S.V.	STOP VALVE
TG	TOP OF GUTTER
T/S	TOP SIDE
TK	TOP OF KERB
U/S	UNDERSIDE
V.C.	VEHICULAR CROSSING
TB	TOP OF BANK
WM	WATER METER
——E——	OVERHEAD CABLES

(A) EASEMENT FOR PADMOUNT SUBSTATION 5.53 WIDE
(B) RESTRICTION ON THE USE OF LAND
(C) EASEMENT FOR SERVICES 1.5 & 5.5 WIDE

NOTES:

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CAD PLAN MODEL ON MGA2020 COORDINATES

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AMENDMENTS

DATE	DESCRIPTION
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15/10/21	BOUNDARIES UPDATED
05/08/22	NOTE ADDED REGARDING MGA 2020
10/04/25	INFORMATION ADDED

L.G.A
PENRITH

LOCALITY:
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PLAN SHOWING DETAIL AND LEVELS OVER PART LOT 1 & LOT 2 IN DP 1268507 O'CONNELL STREET, CADDENS

SCALE	1:300@A1
DATUM	AHD
SURVEY	MH
DRAWN	CSM
DATE	25/2/21
OUR REF	8966
SHEET	3 OF 7 SHEETS

LEGEND

COMM	COMMUNICATION PIT
D	DOOR
BB	BOTTOM OF BANK
FFW	FIRST FLOOR WINDOW
FL	FLOOR LEVEL
GFW	GROUND FLOOR WINDOW
G.PIT	GRATED PIT
HYD	HYDRANT
INV	INVERT LEVEL
K.I. PIT	KERB INLET PIT
LP	LIGHT POLE
M.H.	MANHOLE
PP	POWER POLE
P.C.	PRAM CROSSING
S.M.H.	SEWER MANHOLE
S.V.	STOP VALVE
TG	TOP OF GUTTER
TK	TOP OF KERB
V.C.	VEHICULAR CROSSING
TB	TOP OF BANK
WM	WATER METER
——E——	OVERHEAD CABLES

(A) EASEMENT FOR PADMOUNT SUBSTATION 5.53 WIDE
(B) RESTRICTION ON THE USE OF LAND (No.2)
(C) EASEMENT FOR SERVICES 1.5 & 5.5 WIDE

DIAL BEFORE YOU DIG www.1100.com.au

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1
DP 1268507

BM NAIL TOP KERB ▲ RL 50.59 (AHD)

APPROX 1°15'
T.N
M.G.A.

SHEET 3 ADJOINS

2
DP 1268507

ADJOINS SHEET 4

AMENDMENTS	
DATE	DESCRIPTION
31/03/21	INFORMATION ADDED AROUND RAMP
15/10/21	BOUNDARIES UPDATED
05/08/22	NOTE ADDED REGARDING MGA 2020
10/04/25	INFORMATION ADDED

L.G.A	PENRITH
LOCALITY:	CADDENS
INSTRUCTED BY:	SUJITH KAVALI
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PLAN SHOWING DETAIL AND LEVELS OVER PART LOT 1 & LOT 2 IN DP 1268507 O'CONNELL STREET, CADDENS

SCALE	1:300@A1
DATUM	AHD
SURVEY	MH
DRAWN	CSM
DATE	25/2/21
OUR REF	8966
SHEET	4 OF 7 SHEETS

SHEET 4 ADJOINS

1

DP 1268507

APPROX 1°15'

T.N

M.G.A.

(A) EASEMENT FOR PADMOUNT SUBSTATION 5.53 WIDE
(B) RESTRICTION ON THE USE OF LAND
(C) EASEMENT FOR SERVICES 1.5 & 5.5 WIDE

LEGEND

COMM	COMMUNICATION PIT
D	DOOR
BB	BOTTOM OF BANK
FFW	FIRST FLOOR WINDOW
FL	FLOOR LEVEL
GFW	GROUND FLOOR WINDOW
G.PIT	GRATED PIT
HYD	HYDRANT
INV	INVERT LEVEL
K.I. PIT	KERB INLET PIT
L.POLE	LIGHT POLE
M.H.	MANHOLE
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P.C.	PRAM CROSSING
S.M.H.	SEWER MANHOLE
S.V.	STOP VALVE
TG	TOP OF GUTTER
T/S	TOP SIDE
TK	TOP OF KERB
U/S	UNDERSIDE
V.C.	VEHICULAR CROSSING
TB	TOP OF BANK
WM	WATER METER
E	OVERHEAD CABLES

O'CONNELL STREET

ADJOINS 6

SHEET

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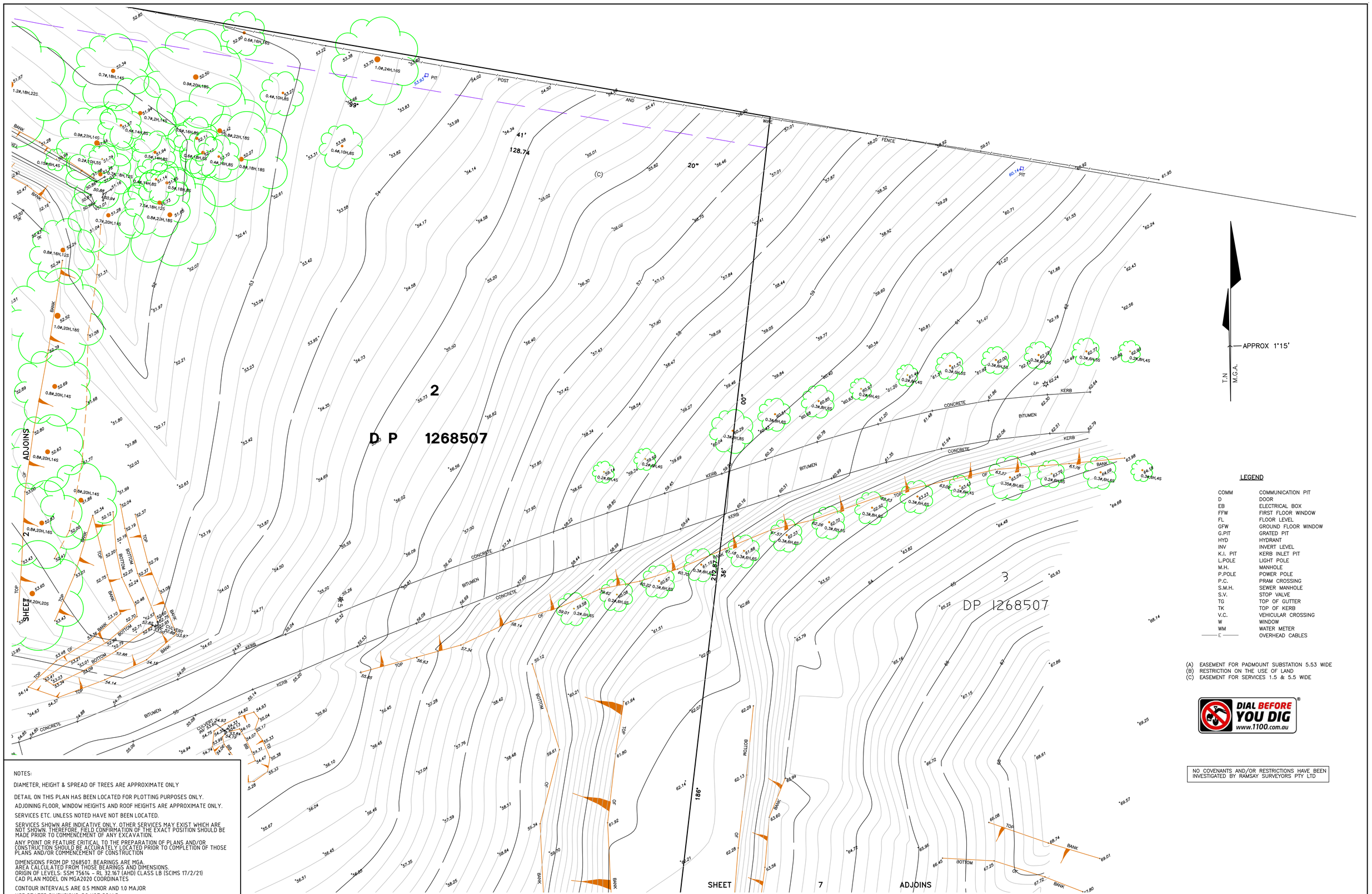
PLAN SHOWING DETAIL AND LEVELS OVER PART LOT 1 & LOT 2 IN DP 1268507 O'CONNELL STREET, CADDENS

SCALE	1:300@A1
DATUM	AHD
SURVEY	MH
DRAWN	CSM
DATE	25/2/21
OUR REF	8966
SHEET	5 OF 7 SHEETS



LEGEND

COMM	COMMUNICATION PIT
D	DOOR
EB	ELECTRICAL BOX
FFW	FIRST FLOOR WINDOW
FL	FLOOR LEVEL
GFW	GROUND FLOOR WINDOW
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(A) EASEMENT FOR PADMOUNT SUBSTATION 5.53 WIDE
(B) RESTRICTION ON THE USE OF LAND
(C) EASEMENT FOR SERVICES 1.5 & 5.5 WIDE

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15/10/21	BOUNDARIES UPDATED
05/08/22	NOTE ADDED REGARDING MGA 2020
10/04/25	INFORMATION ADDED

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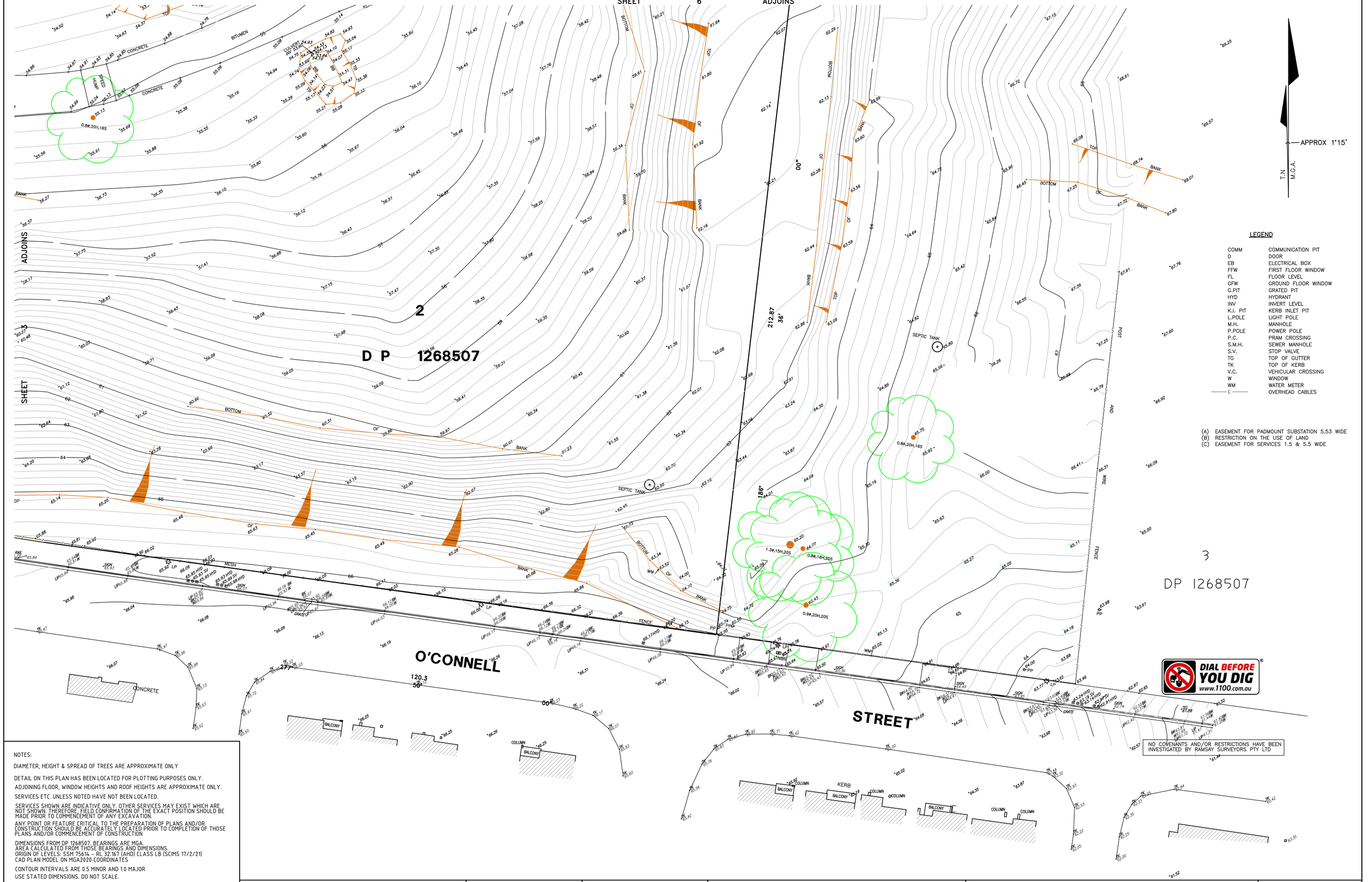
PLAN SHOWING DETAIL AND LEVELS OVER PART LOT 1 & LOT 2 IN DP 1268507 O'CONNELL STREET, CADDENS

SCALE	1:300@A1
DATUM	AHD
SURVEY	MH
DRAWN	CSM
DATE	25/2/21
OUR REF	8966
SHEET 6 OF 7 SHEETS	



LEGEND

COMM	COMMUNICATION PIT
D	DOOR
EB	ELECTRICAL BOX
FFW	FIRST FLOOR WINDOW
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W	WINDOW
WM	WATER METER
——— E ———	OVERHEAD CABLES

(A) EASEMENT FOR PADMOUNT SUBSTATION 5.53 WIDE
(B) RESTRICTION ON THE USE OF LAND
(C) EASEMENT FOR SERVICES 1.5 & 5.5 WIDE

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DATE	DESCRIPTION
31/03/21	INFORMATION ADDED AROUND RAMP
15/10/21	BOUNDARIES UPDATED
05/08/22	NOTE ADDED REGARDING MGA 2020
19/03/25	TREES AND BUILDINGS REMOVED IN
10/04/25	INFORMATION ADDED

L.G.A
PENRITH

LOCALITY:
CADDENS

INSTRUCTED BY:
SUJITH KAVALI

RE:
HOLDMARK PTY LTD

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PLAN SHOWING DETAIL AND LEVELS OVER PART LOT 1 & LOT 2 IN DP 1268507 O'CONNELL STREET, CADDENS

SCALE	1:300@A1
DATUM	AHD
SURVEY	MH
DRAWN	CSM
DATE	25/2/21
OUR REF	8966
SHEET 7 OF 7 SHEETS	

Appendix D – Groundwater Bore Search

WaterNSW

Groundwater (Telemetered data)

favourites | search

download sites | find a site

⊞ Real Time Data - Bores

All Groundwater Site details

search | download sites

find a site | search by licence

⊞ All Groundwater Map

Meteorology

favourites | search

download sites | find a site

⊞ Real Time Data - Weather St...

Hunter Integrated Telemetry System

Hunter Integrated Telemetry ...

glossary and metadata

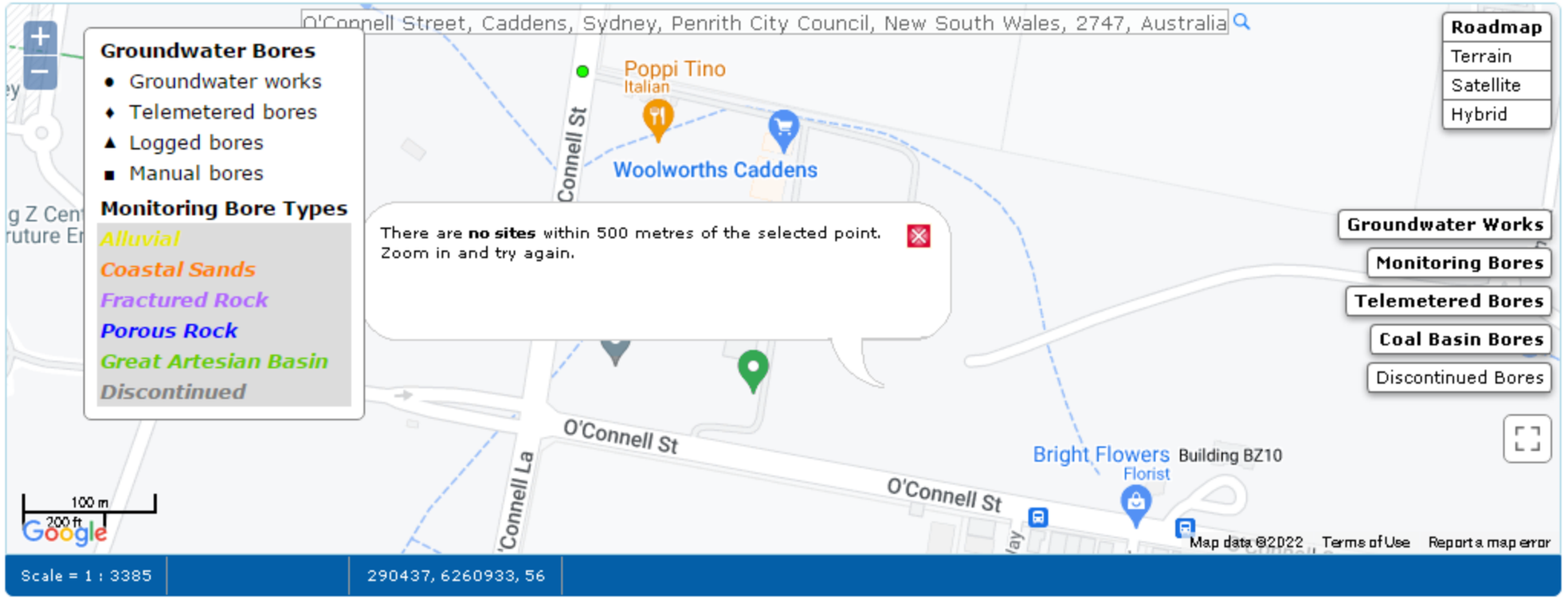
All Groundwater Site Details

ALL GROUNDWATER MAP

bookmark this page

All data times are Eastern Standard Time

Map | Info



Appendix E – Site Photographs

Photograph 1: Western portion of the site.

Photograph 2: Car wash workshop.

Photograph 3: Eastern portion of the site.

Photograph 4: Eastern portion of the site.

Photograph 5: Minor surface (oil-like) staining observed in car parking area.

Appendix F – Lotsearch Report

LOTSEARCH

LOTSEARCH ENVIRO LITE

Date: 19 Oct 2022 13:39:34

Reference: LS037222 EL

Address: Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Disclaimer:
The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features.
You should obtain independent advice before you make any decision based on the information within the report.
The detailed terms applicable to use of this report are set out at the end of this report.

Dataset Listing

Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Customer Service - Spatial Services	05/10/2022	05/10/2022	Quarterly	-	-	-	-
Topographic Data	NSW Department of Customer Service - Spatial Services	22/08/2022	22/08/2022	Annually	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	04/10/2022	12/09/2022	Monthly	1000m	0	0	0
Contaminated Land Records of Notice	Environment Protection Authority	29/09/2022	29/09/2022	Monthly	1000m	0	0	0
Former Gasworks	Environment Protection Authority	02/09/2022	14/07/2021	Quarterly	1000m	0	0	0
National Waste Management Facilities Database	Geoscience Australia	26/05/2022	07/03/2017	Annually	1000m	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	23/08/2022	13/07/2012	Annually	1000m	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	04/10/2022	23/09/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	06/10/2022	06/10/2022	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	06/10/2022	06/10/2022	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	06/10/2022	06/10/2022	Monthly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	02/09/2022	02/09/2022	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	16/02/2022	13/12/2018	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	29/09/2022	29/09/2022	Monthly	1000m	0	0	0
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	29/09/2022	29/09/2022	Monthly	1000m	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	29/09/2022	29/09/2022	Monthly	1000m	3	3	3
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	0	0	0
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	3	3
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	0	0
Points of Interest	NSW Department of Customer Service - Spatial Services	19/10/2022	19/10/2022	Quarterly	1000m	0	0	33
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	19/10/2022	19/10/2022	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	19/10/2022	19/10/2022	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Customer Service - Spatial Services	29/08/2022	29/08/2022	Quarterly	1000m	0	0	0
State Forest	Forestry Corporation of NSW	16/08/2022	14/08/2022	Annually	1000m	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	10/02/2022	31/12/2021	Annually	1000m	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	29/08/2022	19/08/2019	Annually	1000m	1	1	1
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	28/03/2022	23/02/2018	Annually	1000m	0	0	0
National Groundwater Information System (NGIS) Boreholes	Bureau of Meteorology; Water NSW	24/01/2022	24/01/2022	Annually	2000m	0	0	8

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
NSW Seamless Geology Single Layer: Rock Units	Department of Regional NSW	17/02/2022	01/05/2021	Annually	1000m	1	1	2
NSW Seamless Geology – Single Layer: Trendlines	Department of Regional NSW	17/02/2022	01/05/2021	Annually	1000m	0	0	1
NSW Seamless Geology – Single Layer: Geological Boundaries and Faults	Department of Regional NSW	17/02/2022	01/05/2021	Annually	1000m	0	0	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	As required	1000m	1	1	2
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	18/08/2022	27/07/2020	Annually	1000m	1	1	2
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	11/10/2022	02/09/2022	Monthly	500m	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000m	1	1	1
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000m	1	1	2
Dryland Salinity Potential of Western Sydney	NSW Department of Planning, Industry and Environment	12/05/2017	01/01/2002	None planned	1000m	1	2	4
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	19/08/2021	05/08/2021	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Industry	06/10/2022	06/10/2022	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Industry	06/10/2022	06/10/2022	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	06/10/2022	06/10/2022	Monthly	1000m	8	8	8
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	15/11/2021	07/12/2018	Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	15/11/2021	05/11/2021	Monthly	1000m	2	6	40
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	03/06/2022	13/04/2022	Annually	1000m	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	03/06/2022	13/04/2022	Annually	1000m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	18/10/2022	01/07/2022	Quarterly	1000m	0	0	0
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	11/10/2022	30/09/2022	Monthly	1000m	0	0	5
Bush Fire Prone Land	NSW Rural Fire Service	17/10/2022	08/08/2022	Weekly	1000m	2	2	3
Remnant Vegetation of the Cumberland Plain	NSW Office of Environment & Heritage	07/10/2014	04/08/2011	Unknown	1000m	1	2	6
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	28/03/2022	19/03/2020	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Annually	1000m	1	1	3
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000m	1	1	5
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	17/10/2022	17/10/2022	Weekly	10000m	-	-	-

Site Diagram

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 54614m²

Total Perimeter: 937m

Scale: 0 25 50 Meters

Data Source Aerial Imagery: © Aerometrex Pty Ltd

Coordinate System: GDA 1994 MGA Zone 56

Date: 19 October 2022

Disclaimers:

Measurements are approximate only and may have been simplified or smaller lengths removed for readability.

Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Contaminated Land

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
N/A	No records in buffer								

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Contaminated Land

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
N/A	No records in buffer							

Contaminated Land Records of Notice Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority
Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm

Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
N/A	No records in buffer					

Former Gasworks Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Waste Management & Liquid Fuel Facilities

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

National Waste Management Site Database

Sites on the National Waste Management Site Database within the dataset buffer:

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist	Direction
N/A	No records in buffer											

Waste Management Facilities Data Source: Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

National Liquid Fuel Facilities

National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
N/A	No records in buffer										

National Liquid Fuel Facilities Data Source: Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

PFAS Investigation & Management Programs

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Map ID	Site	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

EPA PFAS Investigation Program: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Defence PFAS Investigation Program

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Investigation Program Data Custodian: Department of Defence, Australian Government

Defence PFAS Management Program

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Management Program Data Custodian: Department of Defence, Australian Government

Airservices Australia National PFAS Management Program

Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

Map ID	Site Name	Impacts	Loc Conf	Dist	Dir
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Defence 3 Year Regional Contamination Investigation Program

Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

Property ID	Base Name	Address	Known Contamination	Loc Conf	Dist	Dir
N/A	No records in buffer					

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

EPA Other Sites with Contamination Issues

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill
- Pasminco Lead Abatement Strategy Area

Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

EPA Other Sites with Contamination Issues: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

EPA Activities

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Licensed Activities under the POEO Act 1997

Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

POEO Licence Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

EPA Activities

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

Delicensed Activities Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

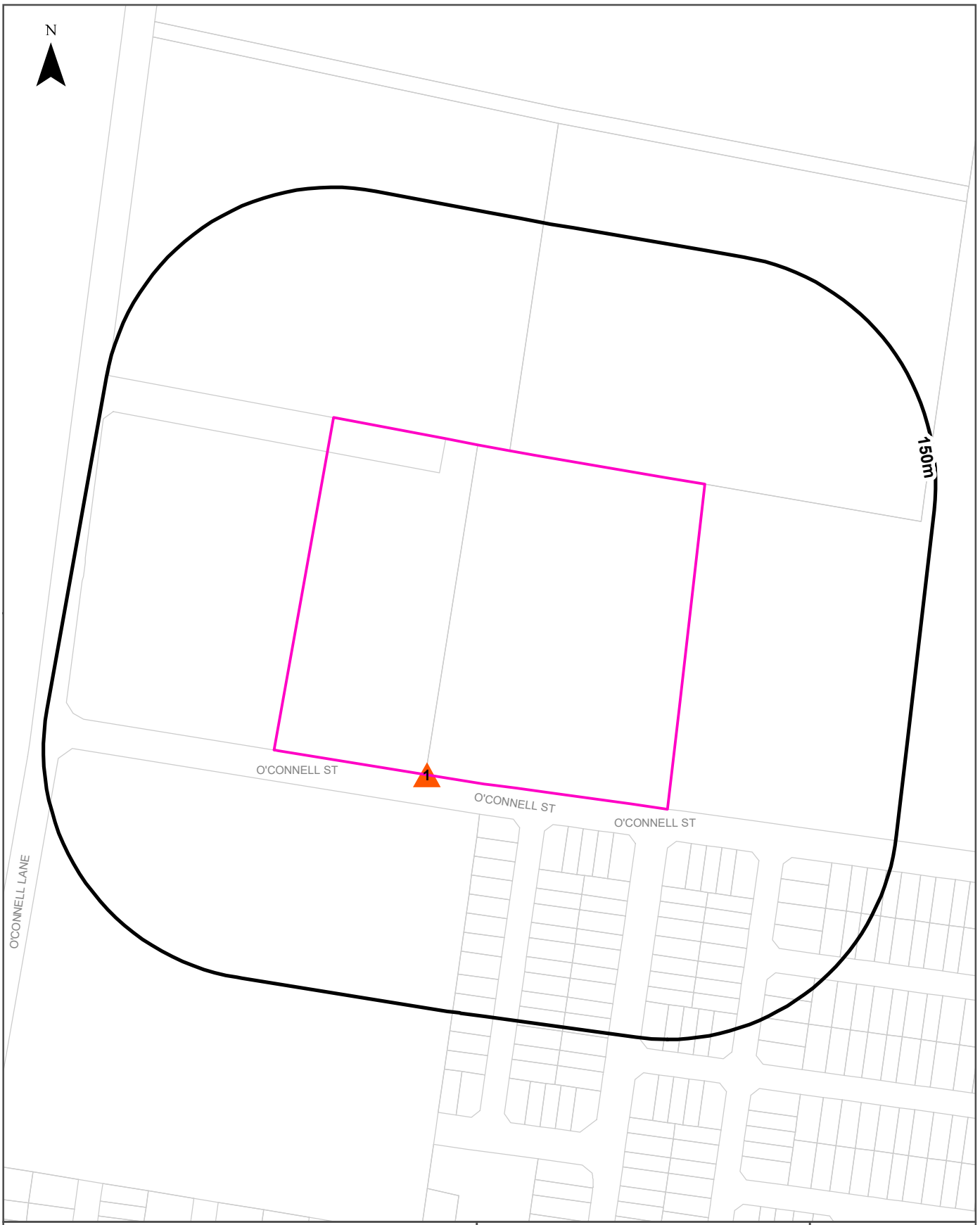
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site

Former Licensed Activities Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Historical Business Directories

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Legend

- Site Boundary
- Buffer 150m
- Property Boundary
- Business directory records mapped to a specific premise
- Business directory records mapped to a road intersection
- Business directory records mapped to a road corridor
- Business directory records mapped to a general area

Scale: 0 40 80 120 160 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 19 October 2022

Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

Historical Business Directories

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Business Directory Records 1950-1991
Premise or Road Intersection Matches

Universal Business Directory records from years 1991, 1986, 1982, 1970, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

Business Directory Records 1950-1991
Road or Area Matches

Universal Business Directory records from years 1991, 1986, 1982, 1970, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	THEATRES - DRIVE-IN. (T3600)	Penrith Skyline Drive-In (Hoyts), O'Connell St., Kingswood. 2750.	79890	1982	Road Match	0m
	PICTURE THEATRES	Penrith Drive-In Theatre, O'Connell St. Kingswood 2750	535564	1970	Road Match	0m
	DISTILLERS	Kingswood Distillery Pty. Ltd. (Whisky, Rum and Gin), O'Connell St., Kingswood	33142	1950	Road Match	0m

Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

Historical Business Directories

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Dry Cleaners, Motor Garages & Service Stations 1948-1993 Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a premise or road intersection, within the dataset buffer.

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

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Dry Cleaners, Motor Garages & Service Stations 1948-1993 Road or Area Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer					

Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

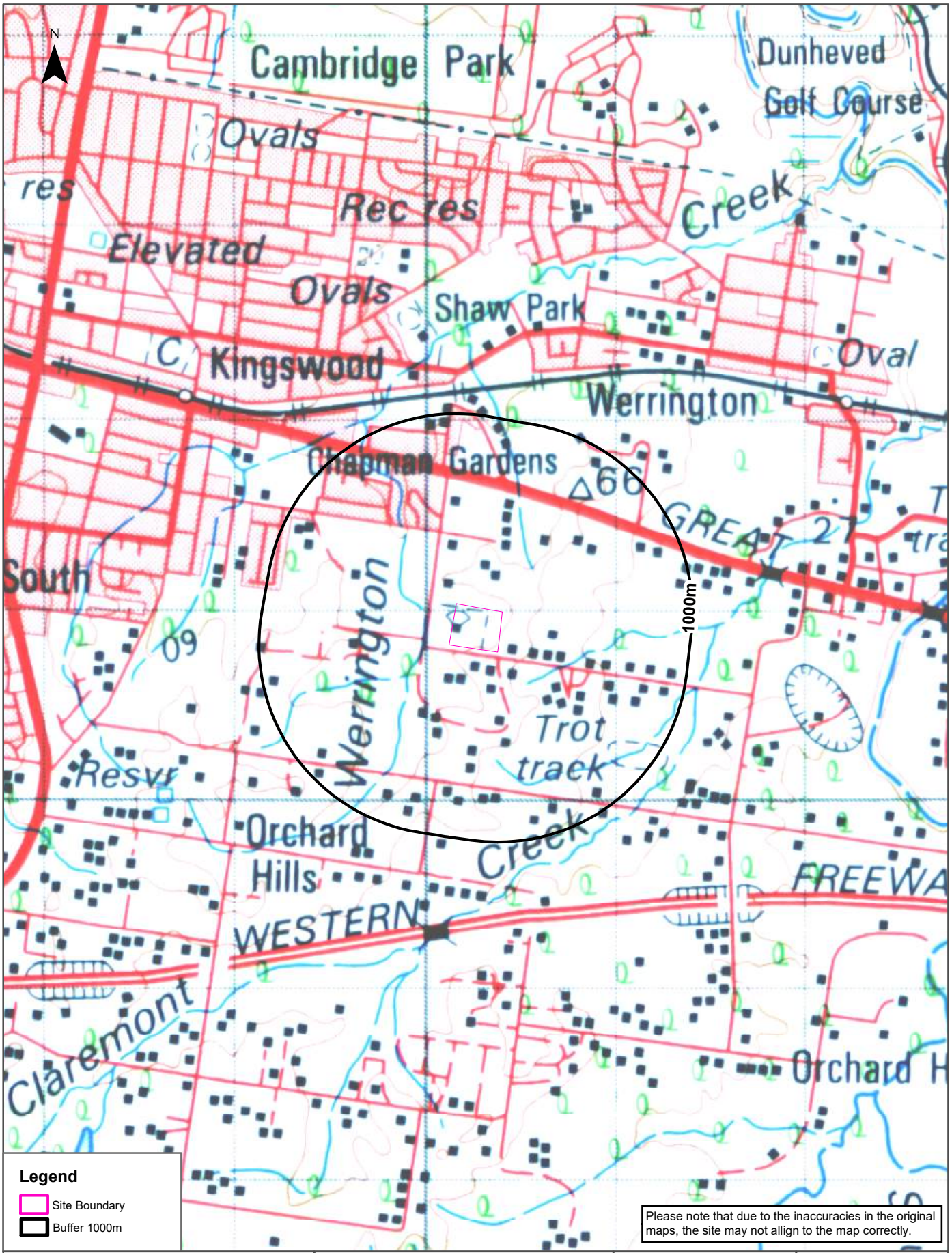
Topographic Map 2015

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Scale: 0 160 320 Meters 480 640	Data Sources: Topographic Map Data © NSW Land and Property Information	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 October 2022

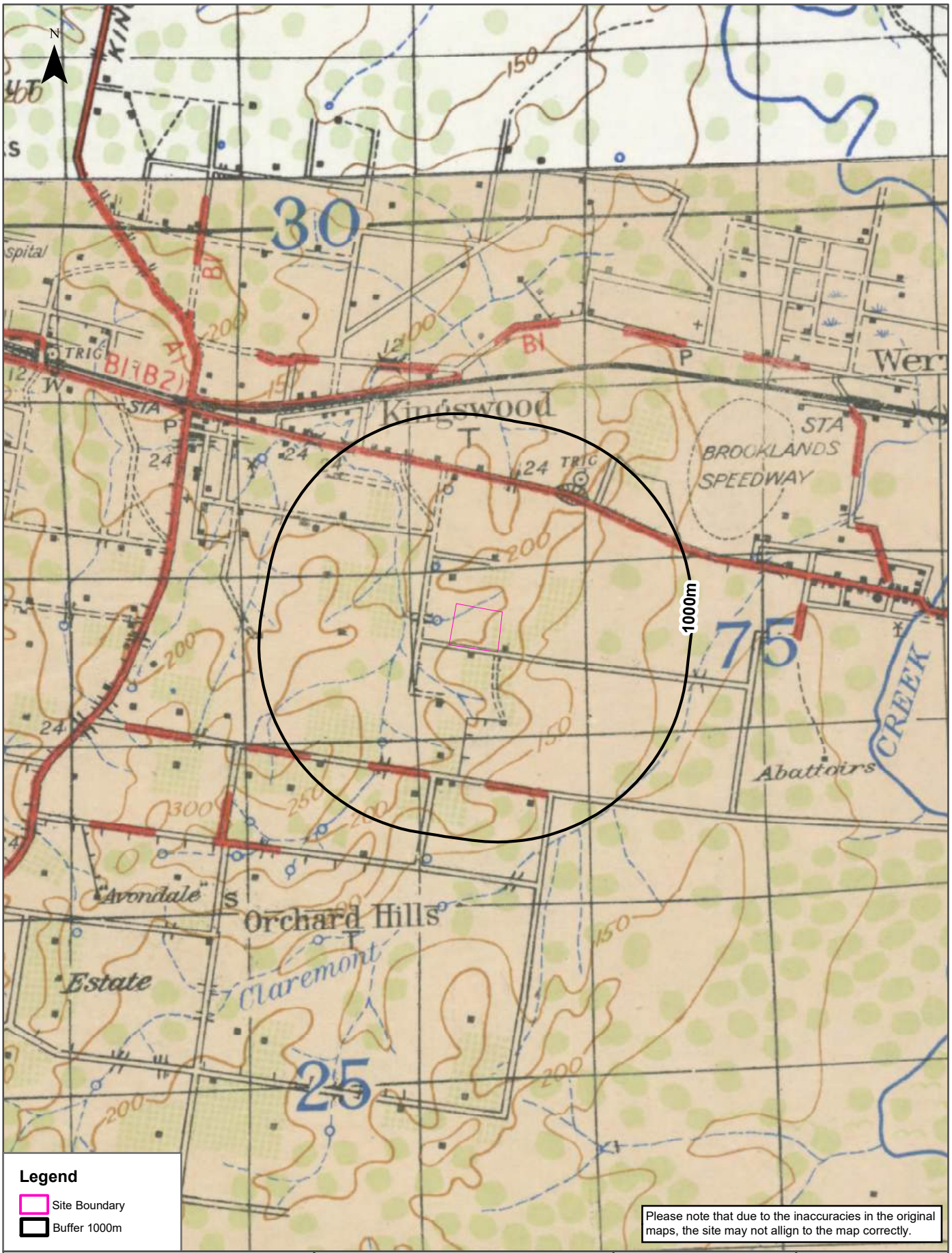
Historical Map 1975

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Historical Map c.1942

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

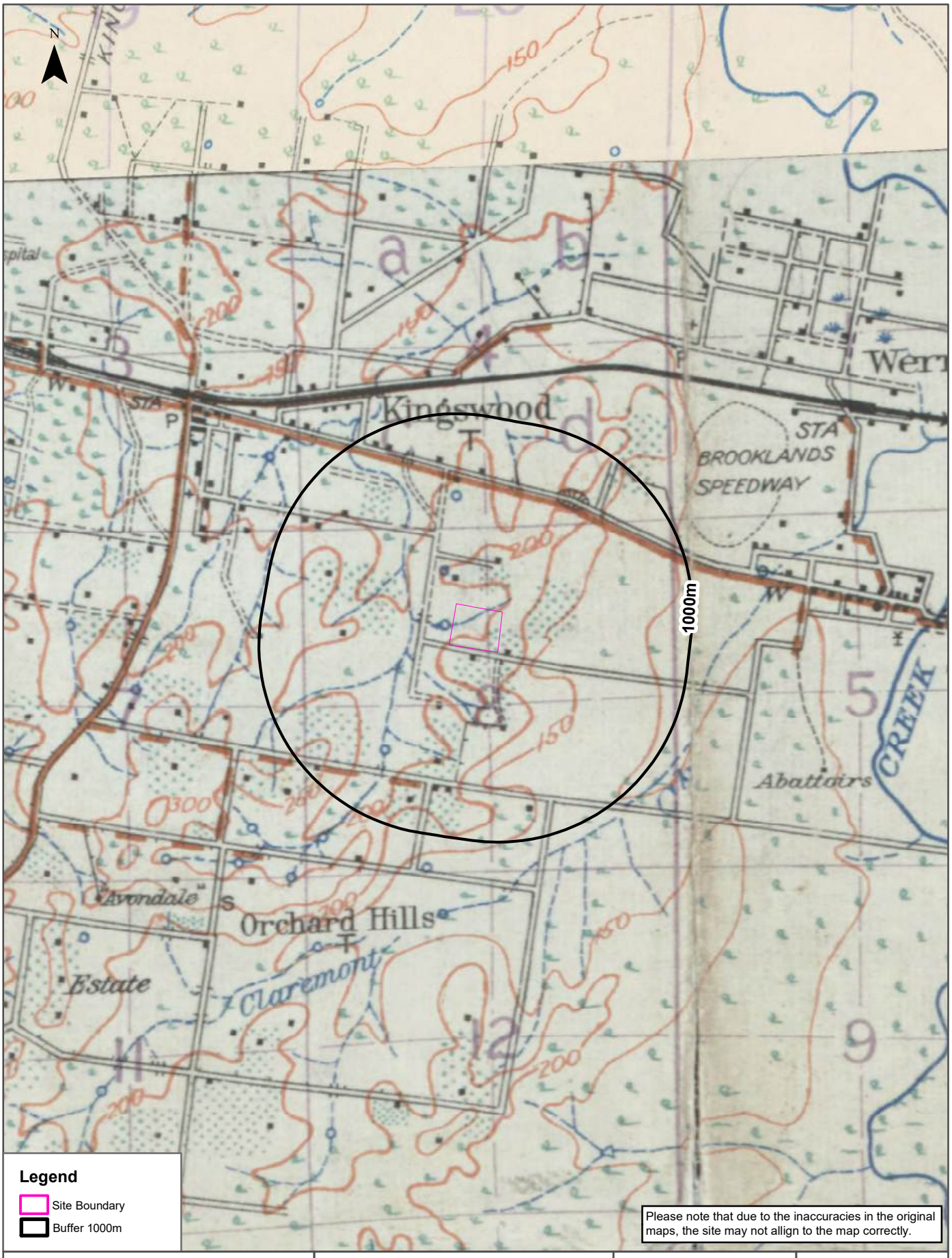


Scale:	Data Sources: Australia 1:63360 Produced by Australian Section Imperial General Staff	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 October 2022

0 320 640 960 1,280 Meters

Historical Map c.1929

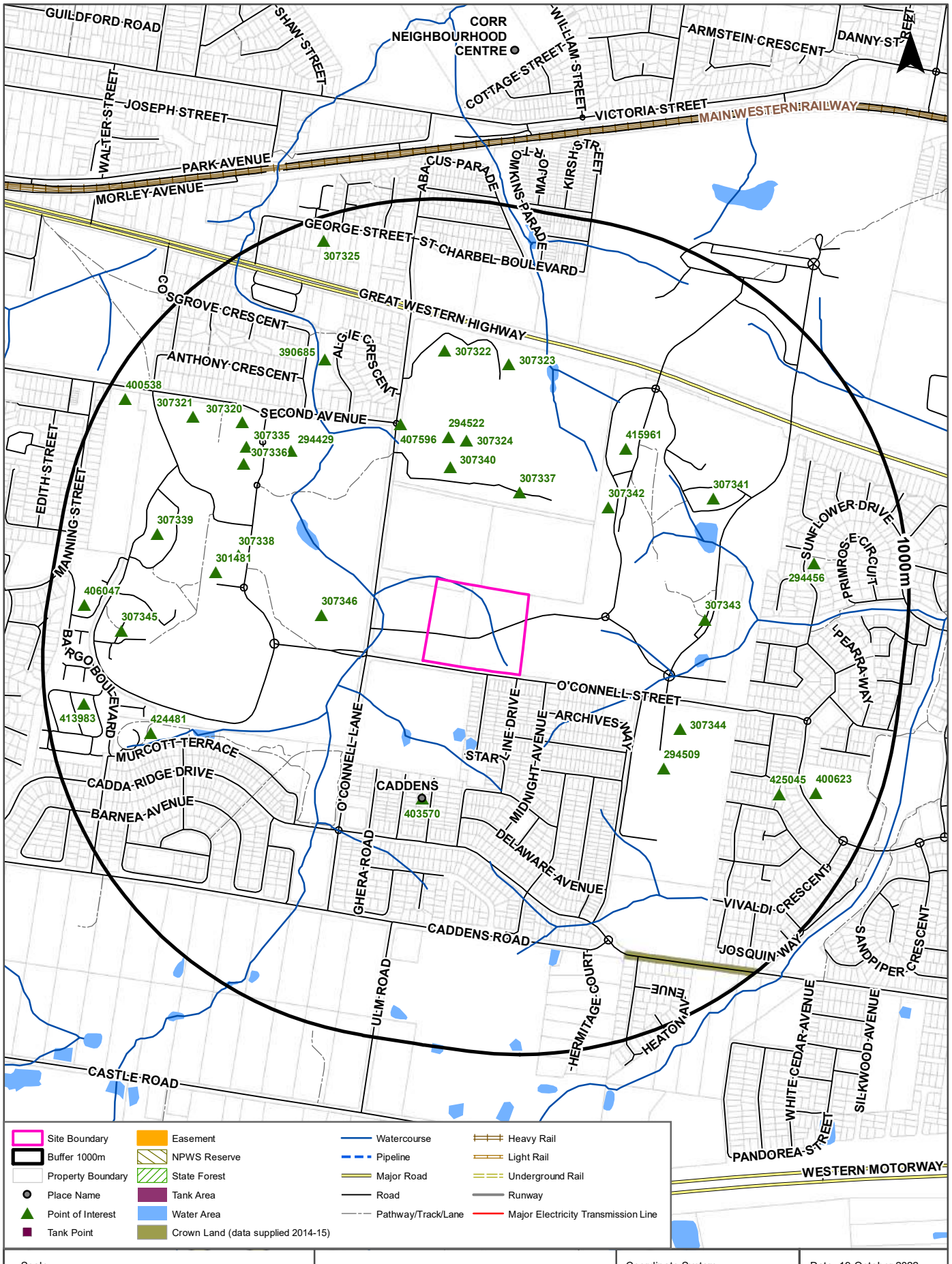
Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Scale: 0 320 640 960 1,280 Meters	Data Sources: Australia 1:63360 Produced by Australian Section Imperial General Staff	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 October 2022

Topographic Features

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Scale: 0 100 200 400 600 Meters	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2022	Coordinate System: GDA 1994 MGA Zone 56	Date: 19 October 2022

Topographic Features

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
307337	Parking Area	Parking Area	263m	North
307346	Sports Field	SOCCER FIELDS	283m	West
307340	Parking Area	Parking Area	294m	North
307342	Parking Area	Parking Area	311m	North East
403570	Suburb	CADDENS	359m	South
307324	Parking Area	Parking Area	372m	North
294522	TAFE College	NEPEAN TAFE COLLEGE KINGSWOOD CAMPUS	373m	North
407596	Bus Interchange	UWS BUS INTERCHANGE	418m	North
307344	Parking Area	Parking Area	445m	South East
294509	Community Facility	NSW GOVERNMENT ARCHIVES	452m	South East
415961	University	UNIVERSITY OF WESTERN SYDNEY WERRINGTON STH CAMPUS	462m	North East
307343	Parking Area	Parking Area	467m	East
294429	Sports Field	PLAYING FIELD	512m	North West
307338	Parking Area	Parking Area	526m	West
307341	Parking Area	Parking Area	547m	North East
301481	University	UNIVERSITY OF WESTERN SYDNEY PENRITH CAMPUS	577m	West
307323	Parking Area	Parking Area	590m	North
307336	Sports Court	TENNIS COURTS	593m	North West
307322	Parking Area	Parking Area	600m	North
307335	Sports Court	TENNIS COURTS	611m	North West
390685	Park	SAMUEL FOSTER RESERVE	649m	North West
307320	Parking Area	Parking Area	657m	North West
424481	Park	GANDELL RESERVE	741m	West
307339	Parking Area	Parking Area	746m	West
425045	Park	Park	752m	South East
294456	Park	CEDARS PARK	755m	East
307321	Parking Area	Parking Area	772m	North West
307345	Parking Area	Parking Area	797m	West
400623	Primary School	CLAREMONT MEADOWS PUBLIC SCHOOL	839m	South East
413983	Retirement Village	ANGLICARE CADDENS	900m	West
406047	Nursing Home	NEWMARCH HOUSE	903m	West

Map Id	Feature Type	Label	Distance	Direction
307325	Child Care Centre	KINGSWOOD PRE-SCHOOL	939m	North
400538	Primary School	KINGSWOOD PUBLIC SCHOOL	947m	North West

Topographic Data Source: © Land and Property Information (2015)
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Topographic Features

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks (Points)

What are the Tank Points located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks Data Source: © Land and Property Information (2015)
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Major Easements

What Major Easements exist within the dataset buffer?
Note. Easements provided by LPI are not at the detail of local governments. They are limited to major easements such as Right of Carriageway, Electrical Lines (66kVa etc.), Easement to drain water & Significant subterranean pipelines (gas, water etc.).

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
N/A	No records in buffer				

Easements Data Source: © Land and Property Information (2015)
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Topographic Features

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

State Forest

What State Forest exist within the dataset buffer?

State Forest Number	State Forest Name	Distance	Direction
N/A	No records in buffer		

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)
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National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N/A	No records in buffer				

NPWS Data Source: © NSW Department of Finance, Services & Innovation (2018)
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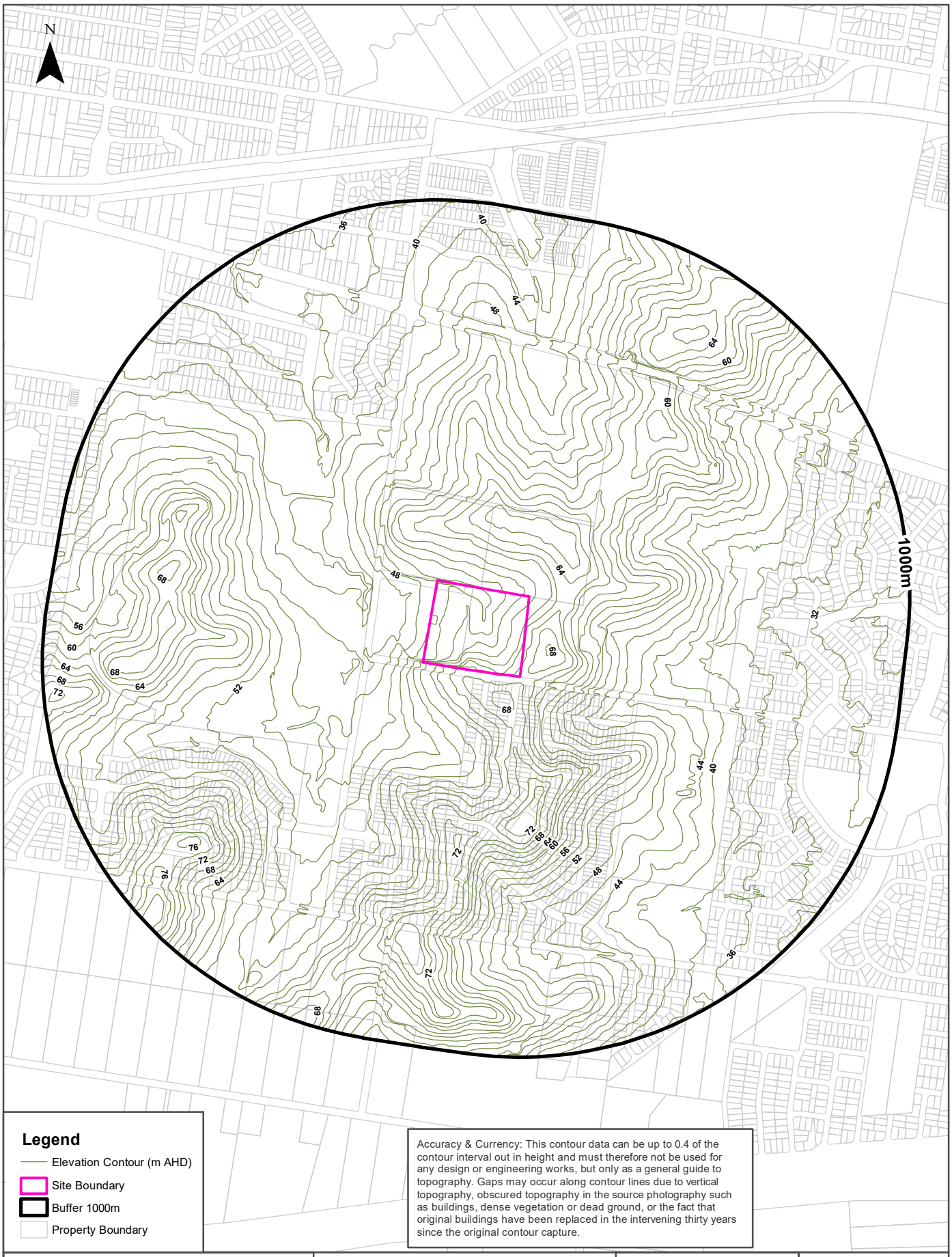
Elevation Contours (m AHD)

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Hydrogeology & Groundwater

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive aquifers of low to moderate productivity	0m	On-site

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
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Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

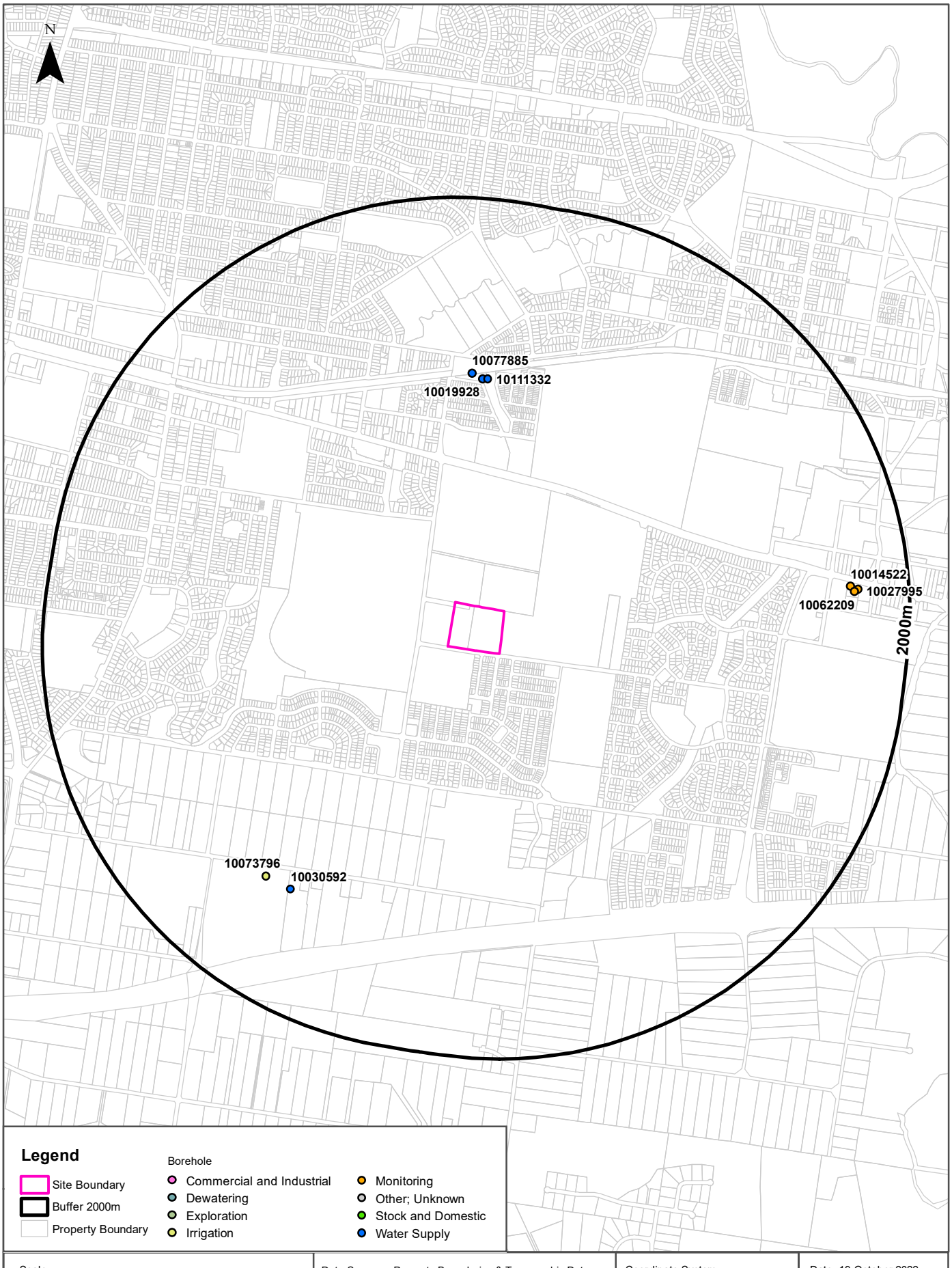
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

Prohibition Area No.	Prohibition	Distance	Direction
N/A	No records in buffer		

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018 Data Source : NSW Department of Primary Industries

Groundwater Boreholes

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Hydrogeology & Groundwater

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Groundwater Boreholes

Boreholes within the dataset buffer:

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10019928	GW019680	Water Supply	Proposed	01/04/1962	53.30		AHD	Salty			1110m	North
10111332	GW020069	Water Supply	Unknown	01/06/1962	75.50		AHD				1114m	North
10077885	GW020547	Water Supply	Unknown	01/06/1963	91.40		AHD				1134m	North
10030592	GW060794	Water Supply	Unknown	01/02/1985	78.10		AHD				1428m	South West
10073796	GW103764	Irrigation	Unknown	06/10/1995	231.60		AHD				1447m	South West
10014522	GW112643	Monitoring	Functional	28/08/2009	6.00		AHD				1712m	East
10062209	GW112644	Monitoring	Functional	28/08/2009	6.00		AHD				1732m	East
10027995	GW112645	Monitoring	Functional	28/08/2009	6.00		AHD				1748m	East

Borehole Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Hydrogeology & Groundwater

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Driller's Logs

Drill log data relevant to the boreholes within the dataset buffer:

NGIS Bore ID	Drillers Log	Distance	Direction
10019928	0.00m-11.27m Clay Water Supply 11.27m-16.15m Clay Shale 16.15m-44.19m Shale Hard 44.19m-44.80m Shale Water Supply 44.80m-50.29m Shale Dark 50.29m-52.42m Shale Clay Seams 52.42m-53.34m Shale Water Supply	1110m	North
10111332	0.00m-2.13m Clay 2.13m-4.57m Clay Coloured 4.57m-7.31m Clay Shale 7.31m-8.83m Clay Sticky Water Supply 8.83m-51.20m Shale Light Coloured 51.20m-59.43m Shale Dark Water Supply 51.20m-59.43m Clay Seams 59.43m-60.65m Shale Dark 60.65m-63.70m Shale 60.65m-63.70m Sandstone Yellow Streaks 63.70m-72.54m Shale Light Orange 72.54m-74.67m Shale Dark Orange Water Supply 72.54m-74.67m Clay Seams 74.67m-75.59m Shale Dark Orange	1114m	North
10077885	0.00m-0.91m Topsoil 0.91m-9.14m Clay Yellow 0.91m-9.14m Pebbles 9.14m-13.71m Shale Grey 13.71m-91.44m Shale Black Water Supply	1134m	North
10030592	0.00m-6.20m Clay 6.20m-78.10m Slate Or Shale	1428m	South West
10073796	0.00m-0.60m TOPSOIL 0.60m-6.40m CLAY 6.40m-11.20m SHALE 11.20m-123.40m SHALE 123.40m-216.40m SANDSTONE 216.40m-217.30m SHALE 217.30m-231.60m SANDSTONE	1447m	South West
10014522	0.00m-1.00m FILL 1.00m-3.00m SAND, MINOR CLAY 3.00m-6.00m CLAY AND GRAVEL	1712m	East
10062209	0.00m-1.00m FILL 1.00m-3.00m SAND ,MINOR CLAY 3.00m-6.00m CLAY ,MINOR GRAVEL	1732m	East
10027995	0.00m-1.00m FILL 1.00m-3.00m SAND. MNOR CLAY 3.00m-6.00m CLAY , MINOR GRAVEL	1748m	East

Drill Log Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Geology

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Geology

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Geological Units

What are the Geological Units within the dataset buffer?

Unit Code	Unit Name	Description	Unit Stratigraphy	Age	Dominant Lithology	Distance
Twib	Bringelly Shale	Shale, carbonaceous claystone, laminite, lithic sandstone, rare coal.	/Wianamatta Group//Bringelly Shale//	Middle Triassic (base) to Middle Triassic (top)	Shale	0m
Q_af	Alluvial floodplain deposits	Silt, very fine- to medium-grained lithic to quartz-rich sand, clay.	/Alluvium//Alluvial floodplain deposits//	Quaternary (base) to Now (top)	Clastic sediment	158m

Linear Geological Structures

What are the Dyke, Sill, Fracture, Lineament and Vein trendlines within the dataset buffer?

Map ID	Feature Description	Map Sheet Name	Distance
227496	Dyke or vein	Penrith 1:100,000 Geological Sheet	613m

What are the Faults, Shear zones or Schist zones, Intrusive boundaries & Marker beds within the dataset buffer?

Map ID	Boundary Type	Description	Map Sheet Name	Distance
No Features				

Geological Data Source: Statewide Seamless Geology v2.1, Department of Regional NSW
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Naturally Occurring Asbestos Potential

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Naturally Occurring Asbestos Potential

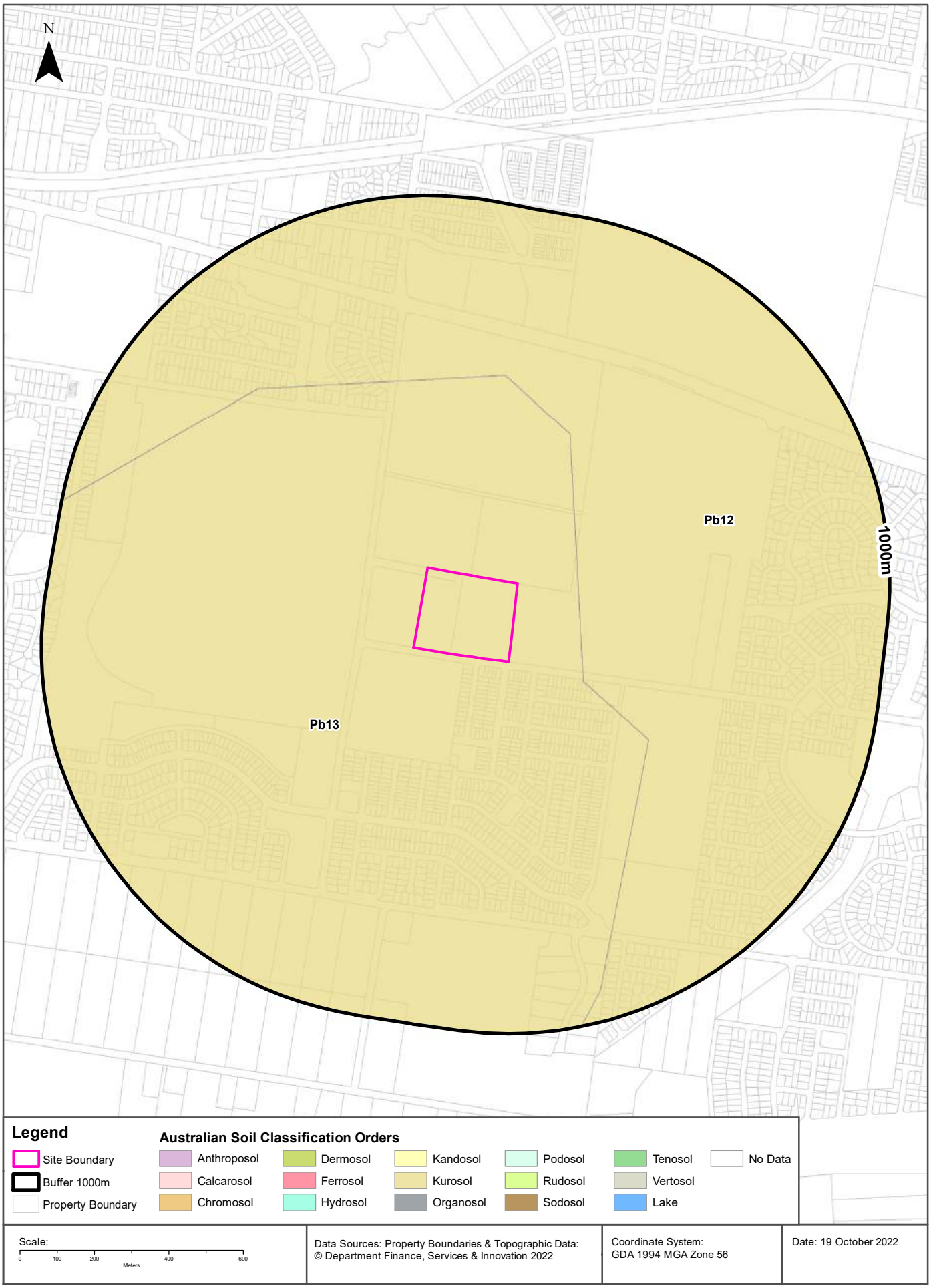
Naturally Occurring Asbestos Potential within the dataset buffer:

Potential	Sym	Strat Name	Group	Formation	Scale	Min Age	Max Age	Rock Type	Dom Lith	Description	Dist	Dir
No records in buffer												

Naturally Occurring Asbestos Potential Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

Atlas of Australian Soils

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Soils

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Atlas of Australian Soils

Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Pb13	Kurosol	Ridge and valley country of gently undulating ridge tops and steep side slopes often with slumping, also rounded hilly to steep hilly areas and relatively narrow valleys: chief soils are hard acidic red soils (Dr2.21) with hard acidic yellow mottled soils (Dy3.41); in places some ironstone gravels occur in both these soils. Associated are hard neutral and alkaline red soils (Dr2.22 and Dr2.23) in saddles and some mid-slope positions; (Dy3.42 and Dy3.43) soils, usually in depressions; and small areas of undescribed soils in wet soaks and valley areas. Small areas of other soils are likely throughout.	0m	On-site
Pb12	Kurosol	Gently rolling to rounded hilly country with some steep slopes and broad valleys: chief soils are hard acidic red soils (Dr2.21) with hard neutral and acidic yellow mottled soils (Dy3.42 and Dy3.41) on lower slopes and in valleys. Associated are small areas of various soils including (Gn3.54) on some ridges, (Dr3.31) on some slopes; (Dr2.23) in saddles and some mid-slope positions, and some low- lying swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Small areas of other soils such as (Db1.2) are likely throughout.	160m	North East

Atlas of Australian Soils Data Source: CSIRO
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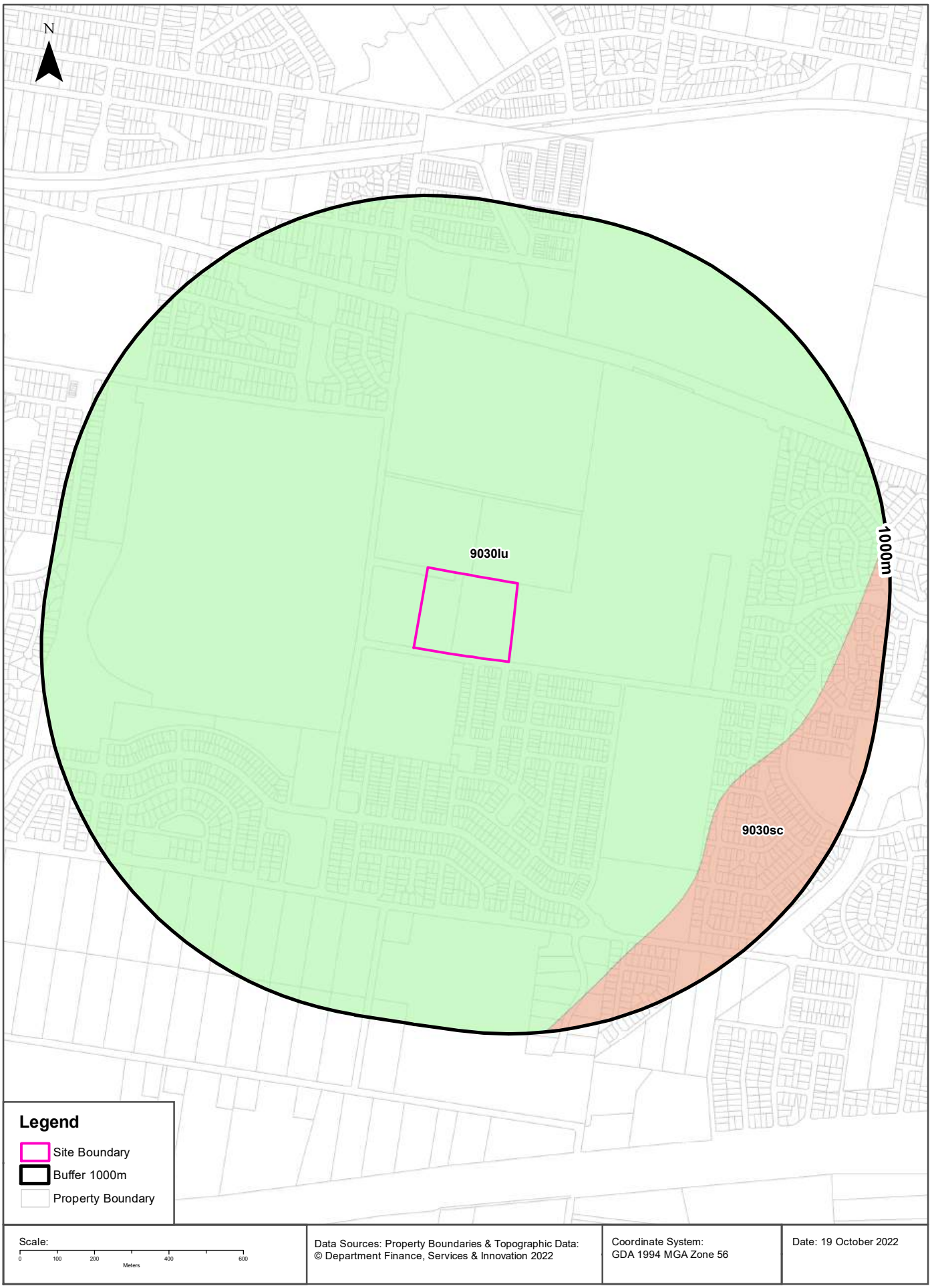
Soil Landscapes of Central and Eastern NSW

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Soils

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Soil Landscapes of Central and Eastern NSW

Soil Landscapes of Central and Eastern NSW within the dataset buffer:

Soil Code	Name	Distance	Direction
9030lu	Luddenham	0m	On-site
9030sc	South Creek	676m	South East

Soil Landscapes of Central and Eastern NSW: NSW Department of Planning, Industry and Environment
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Acid Sulfate Soils

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Environmental Planning Instrument - Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description	EPI Name
N/A		

If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	EPI Name	Distance	Direction
N/A				

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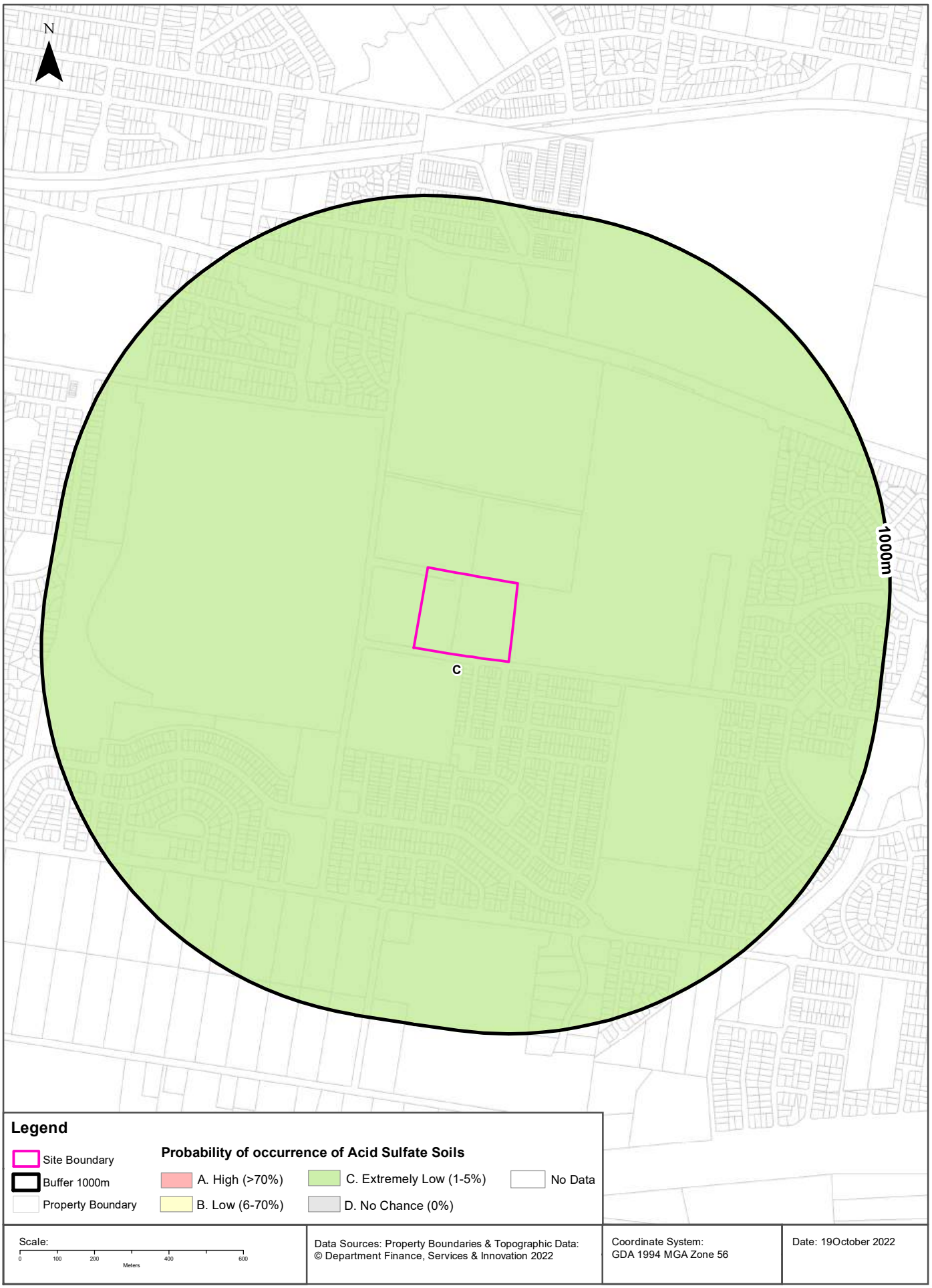
Atlas of Australian Acid Sulfate Soils

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Acid Sulfate Soils

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance	Direction
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m	On-site

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO
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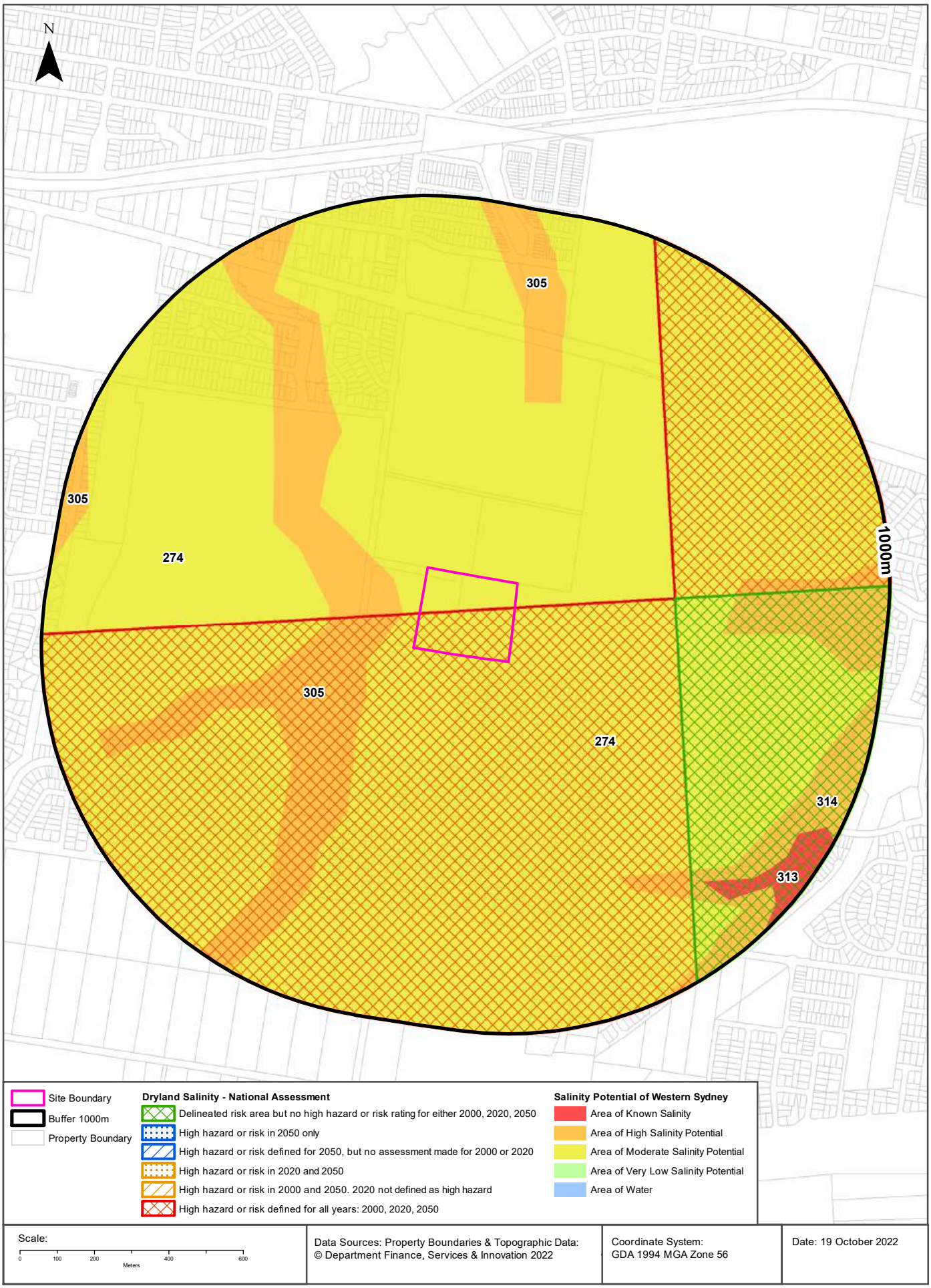
Dryland Salinity

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Dryland Salinity

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

Yes

Is there Dryland Salinity - National Assessment data within the dataset buffer?

Yes

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
High hazard or risk	High hazard or risk	High hazard or risk	0m	On-site
Delineated risk area but no high hazard or risk rating	Delineated risk area but no high hazard or risk rating	Delineated risk area but no high hazard or risk rating	423m	South East

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
274	MODERATE	Area of Moderate Salinity Potential	0m	On-site
305	HIGH	Area of High Salinity Potential	44m	West
314	HIGH	Area of High Salinity Potential	562m	East
313	SALT	Area of Known Salinity	788m	South East

Dryland Salinity Potential of Western Sydney Data Source : NSW Office of Environment and Heritage
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Mining

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

Mining Subsidence District Data Source: © Land and Property Information (2016)
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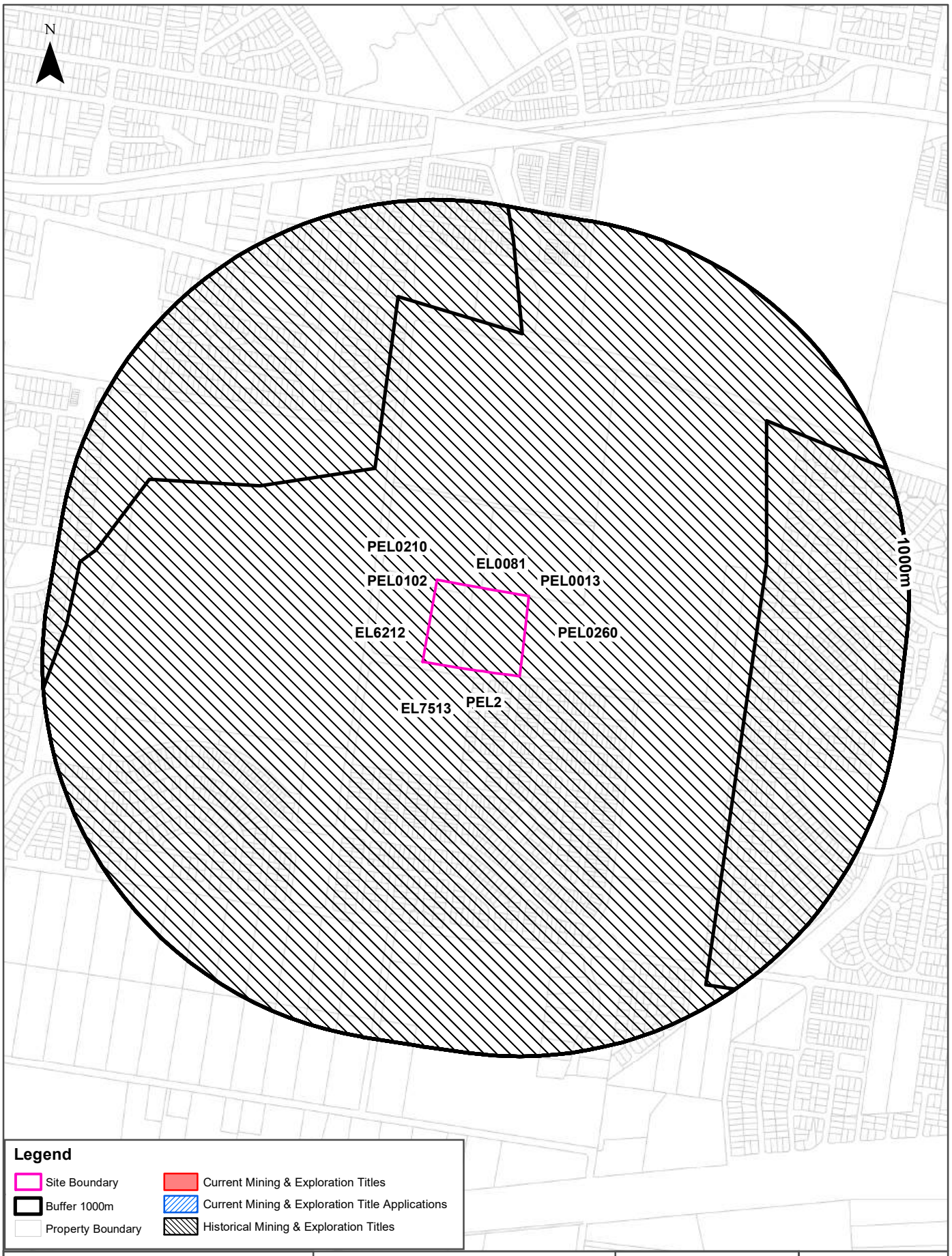
Mining & Exploration Titles

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Data Sources: Property Boundaries & Topographic Data:
© Department Finance, Services & Innovation 2022

Coordinate System:
GDA 1994 MGA Zone 56

Date: 19 October 2022

Mining

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Grant Date	Expiry Date	Last Renewed	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer								

Current Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

Application Ref	Applicant	Application Date	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer						

Current Mining & Exploration Title Applications Data Source: © State of New South Wales through NSW Department of Industry

Mining

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
EL0081	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	19670201	19680201	MINERALS		0m	On-site
PEL0013	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
EL7513	GRADIENT ENERGY LIMITED	20100407	20110415	MINERALS	Geothermal	0m	On-site
PEL2	AGL UPSTREAM INVESTMENTS PTY LIMITED			MINERALS		0m	On-site
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	On-site
EL6212	HOT ROCK ENERGY PTY LTD,LONGREACH OIL LIMITED	20040304	20130303	MINERALS	Geothermal	0m	On-site
PEL0260	NORTH BULLI COLLIERIES PTY LTD, AGL PETROLEUM OPERATIONS PTY LTD, THE AUSTRALIAN GAS LIGHT CO.	19810909	19930803	PETROLEUM	Petroleum	0m	On-site

Historical Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

State Environmental Planning Policy

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

State Significant Precincts

What SEPP State Significant Precincts exist within the dataset buffer?

Map Id	Precinct	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
N/A	No records in buffer							

State Environment Planning Policy Data Source: NSW Crown Copyright - Planning & Environment
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EPI Planning Zones

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Environmental Planning Instrument

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R4	High Density Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	0m	On-site
B2	Local Centre		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	0m	On-site
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	0m	East
B7	Business Park		Penrith Local Environmental Plan 2010	11/08/2017	11/08/2017	31/03/2021	Amendment No 12	0m	North East
R1	General Residential		Penrith Local Environmental Plan 2010	27/09/2019	27/09/2019	31/03/2021	Amendment No 22	0m	South
R3	Medium Density Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	0m	North
E2	Environmental Conservation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	158m	West
SP2	Infrastructure	Educational Establishment	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	195m	West
SP2	Infrastructure	Educational Establishment	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	223m	North
SP2	Infrastructure	Public Administration Building	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	317m	South East
R2	Low Density Residential		Penrith Local Environmental Plan 2010	31/03/2021	31/03/2021	31/03/2021	Amendment No 31	326m	East
RE1	Public Recreation		Penrith Local Environmental Plan 2010	27/09/2019	27/09/2019	31/03/2021	Amendment No 22	356m	South
R3	Medium Density Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	411m	North West
R1	General Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	414m	South West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	448m	East
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	571m	North West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	578m	South East
SP2	Infrastructure	Classified Road	Penrith Local Environmental Plan 2010	11/09/2020	01/10/2020	31/03/2021	State Environmental Planning Policy (Western Sydney Aerotropolis) 2020	633m	North
B7	Business Park		Penrith Local Environmental Plan 2010	27/09/2019	27/09/2019	31/03/2021	Amendment No 22	673m	North East
E2	Environmental Conservation		Penrith Local Environmental Plan 2010	14/10/2016	14/10/2016	31/03/2021	Amendment No 11	680m	North
R3	Medium Density Residential		Penrith Local Environmental Plan 2010	27/09/2019	27/09/2019	31/03/2021	Amendment No 22	682m	North
RU4	Primary Production Small Lots		Penrith Local Environmental Plan 2010	14/10/2016	14/10/2016	31/03/2021	Amendment No 11	683m	South
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	685m	North East
SP2	Infrastructure	Stormwater Management	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	702m	South East
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	724m	South East
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	735m	East

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	738m	South West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	754m	East
R1	General Residential		Penrith Local Environmental Plan 2010	27/09/2019	27/09/2019	31/03/2021	Amendment No 22	843m	North
R1	General Residential		Penrith Local Environmental Plan 2010	27/09/2019	27/09/2019	31/03/2021	Amendment No 22	849m	North
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	876m	East
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	910m	North West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	913m	North East
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	947m	East
R2	Low Density Residential		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	955m	West
SP2	Infrastructure	Correctional Centre	Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	958m	North East
IN2	Light Industrial		Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	31/03/2021		975m	North West
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	975m	West
E2	Environmental Conservation		Penrith Local Environmental Plan 2010	27/09/2019	27/09/2019	31/03/2021	Amendment No 22	992m	South East
RE1	Public Recreation		Penrith Local Environmental Plan 2010	25/02/2015	25/02/2015	31/03/2021	Amendment No 4	999m	East

Environmental Planning Instrument Data Source: NSW Crown Copyright - Planning & Environment
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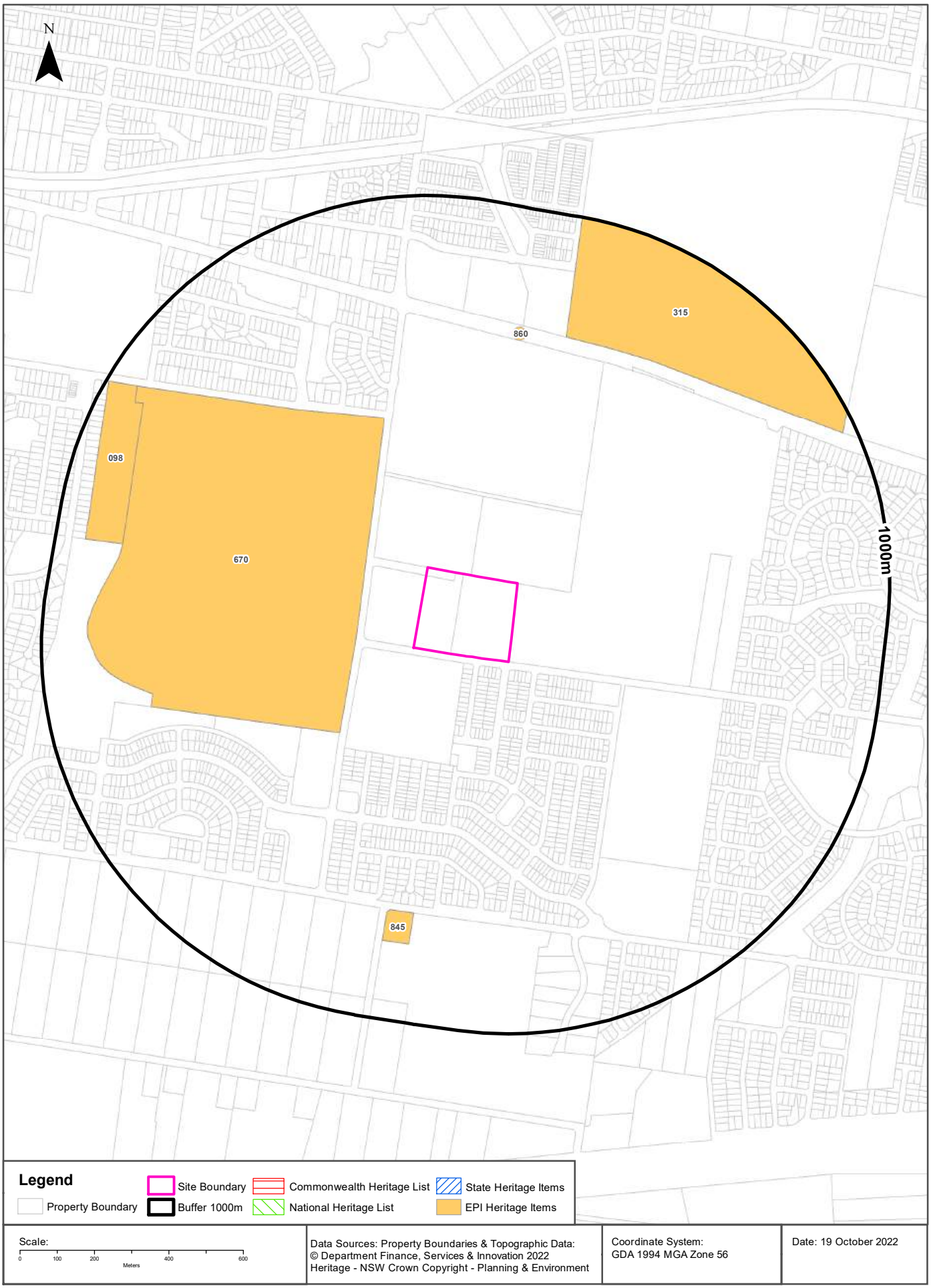
Heritage Items

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Heritage

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Commonwealth Heritage List

What are the Commonwealth Heritage List Items located within the dataset buffer?

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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National Heritage List

What are the National Heritage List Items located within the dataset buffer?
Note. Please click on Place Id to activate a hyperlink to online website.

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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State Heritage Register - Curtilages

What are the State Heritage Register Items located within the dataset buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: NSW Crown Copyright - Office of Environment & Heritage
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Environmental Planning Instrument - Heritage

What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
670	Former teachers residence	Item - General	Local	Penrith Local Environmental Plan 2010	28/01/2015	25/02/2015	31/03/2021	158m	West
860	Milestone	Item - General	Local	Penrith Local Environmental Plan 2010	31/03/2021	31/03/2021	31/03/2021	644m	North
315	Werrington Park, garden & poplar avenue	Item - General	Local	Penrith Local Environmental Plan 2010	11/08/2017	11/08/2017	31/03/2021	673m	North East

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
845	Lindfield	Item - General	Local	Penrith Local Environmental Plan 2010	22/09/2010	22/09/2010	31/03/2021	704m	South
098	Kingswood Public School	Item - General	Local	Penrith Local Environmental Plan 2010	28/01/2015	25/02/2015	31/03/2021	820m	North West

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Natural Hazards - Bush Fire Prone Land

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Data Sources: Bush Fire Prone Land: © NSW Rural Fire Service 2022. Property Boundaries: © Department Finance, Services & Innovation 2022

Coordinate System: GDA 1994 MGA Zone 56

Date: 19 October 2022

Natural Hazards

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Bush Fire Prone Land

What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Category 2	0m	On-site
Vegetation Buffer	0m	On-site
Vegetation Category 1	157m	North West

NSW Bush Fire Prone Land - © NSW Rural Fire Service under Creative Commons 4.0 International Licence

Ecological Constraints - Vegetation & Ramsar Wetlands

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Ecological Constraints

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Remnant Vegetation of the Cumberland Plain

What remnant vegetation of the Cumberland Plain exists within the dataset buffer?

Description	Crown Cover	Distance	Direction
10 - Shale Plains Woodland	Crown cover greater than 10%	0m	On-site
11 - Alluvial Woodland	Crown cover less than 10%	93m	South West
10 - Shale Plains Woodland	Crown cover less than 10%	115m	South East
11 - Alluvial Woodland	Crown cover greater than 10%	160m	North West
10 - Shale Plains Woodland	Crown cover less than 10% (urban areas)	436m	North
11 - Alluvial Woodland	Crown cover less than 10% (urban areas)	509m	North West

Remnant Vegetation of the Cumberland Plain : NSW Office of Environment and Heritage
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Ramsar Wetlands

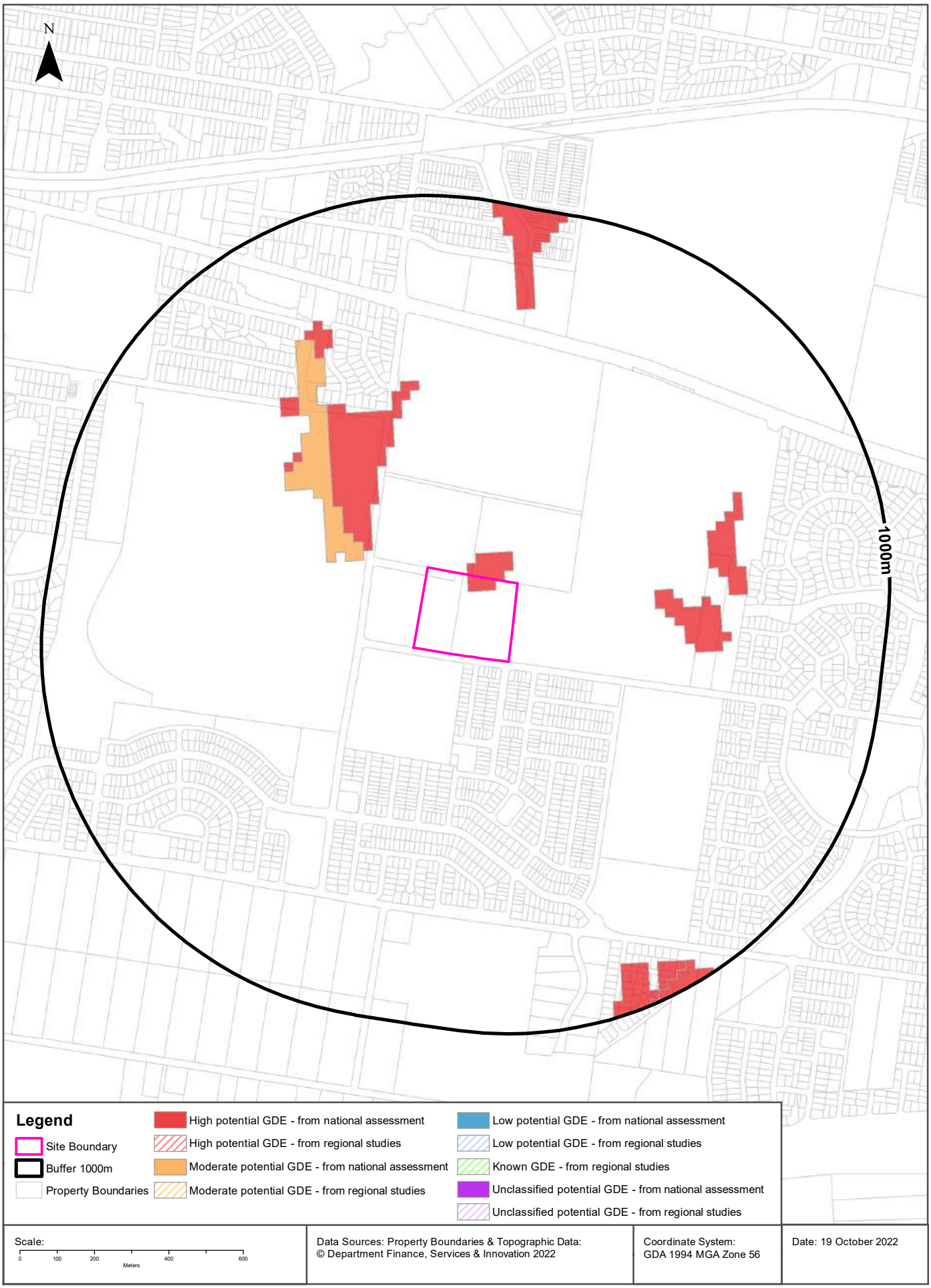
What Ramsar Wetland areas exist within the dataset buffer?

Map Id	Ramsar Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

Ramsar Wetlands Data Source: © Commonwealth of Australia - Department of Agriculture, Water and the Environment

Ecological Constraints - Groundwater Dependent Ecosystems Atlas

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Ecological Constraints

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	High potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	0m	On-site
Terrestrial	Moderate potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	174m	North West
Terrestrial	High potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	865m	South East

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology
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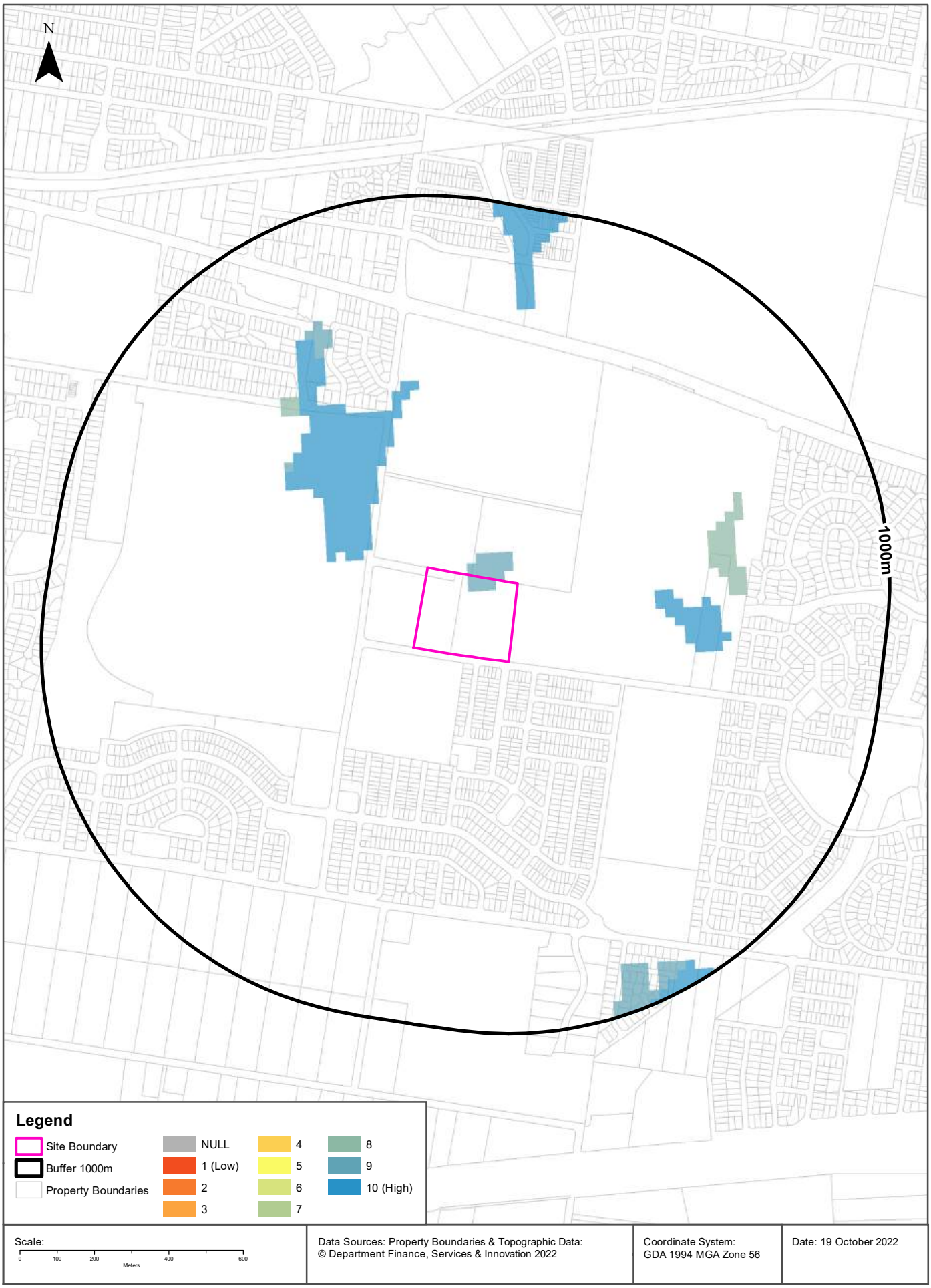
Ecological Constraints - Inflow Dependent Ecosystems Likelihood

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747



Ecological Constraints

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	9	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	0m	On-site
Terrestrial	10	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	156m	North West
Terrestrial	8	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	514m	East
Terrestrial	9	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	865m	South East
Terrestrial	10	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	931m	South East

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology
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Ecological Constraints

Caddens Corner, 80 O'Connell Street, Kingswood, NSW 2747

NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Amaurornis moluccana	Pale-vented Bush-hen	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Endangered	
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Calyptorhynchus lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Certhionyx variegatus	Pied Honeyeater	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Grantiella picta	Painted Honeyeater	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pezoporus wallicus wallicus	Eastern Ground Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Sterna hirundo	Common Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Thinornis cucullatus cucullatus	Eastern Hooded Dotterel	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Tringa glareola	Wood Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto longimembris	Eastern Grass Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Gastropoda	Meridolum corneovirens	Cumberland Plain Land Snail	Endangered	Not Sensitive	Not Listed	
Animalia	Gastropoda	Pommerhelix duralensis	Dural Land Snail	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petauroides volans	Greater Glider	Not Listed	Not Sensitive	Endangered	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Aspidites ramsayi	Woma	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Eulamprus leuraensis	Blue Mountains Water Skink	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Suta flagellum	Little Whip Snake	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Tiliqua occipitalis	Western Blue-tongued Lizard	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia pubescens	Downy Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Allocasuarina glareicola		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Dichanthium setosum	Bluegrass	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Dillwynia tenuifolia		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus benthamii	Camden White Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Grevillea juniperina subsp. juniperina	Juniper-leaved Grevillea	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Grevillea parviflora subsp. parviflora	Small-flower Grevillea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Hibbertia procumbens	Spreading Guinea Flower	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Hibbertia puberula		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Isotoma fluviatilis subsp. fluviatilis		Not Listed	Not Sensitive	Extinct	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia tetraphylla	Rough-shelled Bush Nut	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Marsdenia viridiflora subsp. viridiflora	Native Pear	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Micromyrtus minutiflora		Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia nutans	Nodding Geebung	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pimelea spicata	Spiked Rice-flower	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pterostylis saxicola	Sydney Plains Greenhood	Endangered	Category 2	Endangered	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Pultenaea parviflora		Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Senna acclinis	Rainforest Cassia	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	

Data does not include NSW category 1 sensitive species.
NSW BioNet: © State of NSW and Office of Environment and Heritage

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Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a code is given under the field heading “LC” or “LocConf”. These codes lookup to the following location confidences:

LC Code	Location Confidence
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced to an approximate or general area
Road Match	Georeferenced to a road or rail corridor
Road Intersection	Georeferenced to a road intersection
Buffered Point	A point feature buffered to x metres
Adjacent Match	Land adjacent to a georeferenced feature
Network of Features	Georeferenced to a network of features
Suburb Match	Georeferenced to a suburb boundary
As Supplied	Spatial data supplied by provider

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Appendix G – SafeWork NSW Records

From: Licensing
To: Geisiane Torres - EIAustralia
Subject: SafeWork NSW: 00761773 –Site Search application – Result not found [ref:_00D281hl6J._5004a9e1PK:ref]
Date: Friday, 21 October 2022 2:09:35 PM

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Security Classification: Sensitive Personal
Please do not amend the subject line of this email

Dear Geisiane

Re: Site Search for Schedule 11 Hazardous Chemicals on premises Application – Result not found

I refer to your application for a Site Search for Schedule 11 Hazardous Chemicals on premises, received by SafeWork NSW on 13/10/2022 for the following site: 80 O' CONNELL STREET, KINGSWOOD, NSW 2747

A search of the records held by SafeWork NSW has not located any records pertaining to the above-mentioned premises.

If you have any further information or if you have any questions, please use one of the following options, quoting the SafeWork NSW enquiry reference number: 00761773

- Email: licensing@safework.nsw.gov.au
- Phone: 13 10 50

Kind regards

Danielle Wilson-Thomas
Licensing Representative
SafeWork NSW | Better Regulation Division
Department of Customer Service
p- 13 10 50
e- licensing@safework.nsw.gov.au | www.customerservice.nsw.gov.au
Level 3, 32 Mann Street, Gosford, NSW 2250

<!--[if !vml]-->

We are always looking for ways that we can improve our services. You may be contacted by email in the next few weeks to complete a short survey and provide us with your feedback on what we did well and where we can improve. If you do not wish to participate in our surveys, please email us at: licensingQA@customerservice.nsw.gov.au and we will ensure that you are not contacted.

ref:_00D281hl6J._5004a9e1PK:ref

Appendix H – Borehole Logs

TEST: BHA1M

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2			Date Completed	11/11/22
Job No.	E25834.E02	Contractor	Geosense Drilling Pty Ltd	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig 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	PIEZOMETER DETAILS
AD/T	-	GWNE	0	0.30	BHA1M_0.1-0.2			-	FILL: Sandy CLAY; low plasticity, dark grey, with trace rootlets, no odour.			ID Static Water Level BHA1M
					BHA1M_0.6-0.8			CIS	Silty CLAY; low to medium plasticity, dark brown, no odour.			Steel Monument
			1	1.60					From 1.60m, colour change to grey, mottled yellow brown.			
			2	2.30				CIS	SILTSTONE; brown, no odour.			Cuttings
												uPVC 50 mm Casing
			3									
			4	4.70				CIS	SHALE; dark grey, no odour.			Bentonite
			5							M	-	
			6									Sand uPVC 50 mm Screen
			7									
			8									
			9									
			10	10.10					Hole Terminated at 10.10 mBGL; Target Depth Reached.			

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:07 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHA2

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	ASPHALT: 200 mm thickness.			ASPHALT HARDSTAND
				0.20				-	FILL: Silty CLAY; medium plasticity, brown to dark brown, with trace medium grained sand, no odour.	D		FILL
			0.5		BHA2_0.3-0.4							
				0.60				-	FILL: SAND; fine grained, brown / yellow / grey, no odour.		-	
			1.0		BHA2_1.0-1.1							
			1.5		BHA2_1.6-1.7							
			2.0	2.00					From 2.0m, colour change to grey / yellow.	D - M		
					BHA2_2.2-2.3							
				2.50				CIS	Silty CLAY; medium plasticity, brown / dark brown, with trace medium grained sand, no odour.			NATURAL
			3.0		BHA2_3.0-3.1 3.00-3.10 m							
				3.50					Hole Terminated at 3.50 mBGL; Target Depth Reached.			
			4.0									

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

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BOREHOLE: BHA3

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig 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
			0.0					-	ASPHALT: 200 mm thickness.			ASPHALT HARDSTAND
				0.20								
					BHA3_0.2-0.3 QD2/QT2			-	FILL: Silty CLAY; medium plasticity, brown to dark brown, with trace medium grained sand, no odour.			FILL
			0.5							D		
AD/T	-	GWNE		1.00				-	FILL: SAND; fine grained, brown / yellow / grey, no odour.		-	
			1.0									
			1.5		BHA3_1.5-1.6					M		
				2.00								
			2.0						Hole Terminated at 2.00 mBGL; Target Depth Reached.			
			2.5									

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

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BOREHOLE: BHA4

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2			Date Completed	11/11/22
Job No.	E25834.E02	Contractor	Geosense Drilling Pty Ltd	Logged MJ	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig 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					-	ASPHALT: 50 mm thickness.			ASPHALT HARDSTAND
					BHA4_0.2-0.3			-	FILL: Sandy GRAVEL; fine to coarse grained, sub-angular to sub-rounded, pale grey / brown, with fine to coarse grained sand, no odour.	D		FILL
				0.60								
					BHA4_0.7-0.8			CIS	Sandy CLAY; medium plasticity, yellow / red / brown, with fine to medium grained sand, with trace fine to medium grained sub-angular ironstone, no odour.			RESIDUAL SOIL
			1									
				2.00								
			2		BHA4_2.0-2.1				From 2.0m, colour change to pale grey / brown.			
			3									
				3.80				CIS	SILTSTONE; brown / dark grey, no odour.			BEDROCK
			4									
			5							M	-	
			6									
			7									
			8									
			9									
			10									
				10.48					Hole Terminated at 10.48 mBGL; Target Depth Reached.			

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

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BOREHOLE: BHA5

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0	0.15				-	ASPHALT: 150 mm thickness.			ASPHALT HARDSTAND
				0.40				-	FILL: Gravelly SAND; medium to coarse grained, pale grey, no odour.			FILL
			0.5		BHA5_0.4-0.5			-	FILL: SAND; fine grained, brown / yellow / grey, no odour.			
			1.0		BHA5_0.9-1.0							
			1.5							D	-	
			2.0		BHA5_1.9-2.0							
			2.5									
			3.0	3.00	BHA5_2.9-3.0				Hole Terminated at 3.00 mBGL; Refusal on Cobbles/Boulders.			
			3.5									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:07 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHA6

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	ASPHALT: 200 mm thickness.	D	-	ASPHALT HARDSTAND
				0.20				-	FILL: Silty SAND; fine to medium grained, pale brown / yellow, with fine to medium grained sub-angular gravels and clay, no odour.			FILL
			0.5									
					BHA6_0.7-0.8							
			1.0									
				1.30				-	FILL: SAND; fine grained, brown / yellow / grey, with heavily weathered shale, no odour.			
			1.5		BHA6_1.5-1.6							
				1.70					Hole Terminated at 1.70 mBGL; Refusal on Cobbles/Boulders.			
			2.0									

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

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TEST: BHA7M

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2			Date Completed	10/11/22
Job No.	E25834.E02	Contractor	Geosense Drilling Pty Ltd	Logged MJ	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig 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	PIEZOMETER DETAILS ID / Static Water Level
AD/T	-	GWNE	0		BHA7M_0.2-0.3			-	ASPHALT: 50 mm thickness.	D	-	BHA7M
				0.60				-	FILL: Gravelly SAND; medium to coarse grained, brown / pale grey, with fine to coarse grained sub-angular to rounded gravels, no odour.			
			1		BHA7M_0.7-0.8			CIS	SILTSTONE; dark grey, no odour.			
			2									
			3									
			4	4.25				CIS	SHALE; dark grey, no odour.			
			5									
			6									
			7									
			8									
			9									
			10	10.85								
			11						Hole Terminated at 10.85 mBGL; Target Depth Reached.			

Gatic Cover
Cuttings
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.

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BOREHOLE: BHB1

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	14/11/22
Position	Refer to Figure 2			Date Completed	14/11/22
Job No.	E25834.E02	Contractor	-	Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	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
HA	-	GWNE	0.0					-	FILL: Clayey SAND; medium grained, brown / grey, with medium plasticity clay, with rootlets, no odour.	D - M	-	FILL
					BHB1_0.2-0.3							
				0.30				CIS	Sandy CLAY; medium to high plasticity, yellow, with fine to medium grained sand, no odour.	M		NATURAL
			0.5									
					BHB1_0.8-0.9							
				0.90					Hole Terminated at 0.90 mBGL; Target Depth Reached.			
			1.0									

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

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BOREHOLE: BHB2

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	▽	0.0	0.20				-	ASPHALT: 200 mm thickness.			ASPHALT HARDSTAND
					BHB2_0.4-0.5			-	FILL: Silty CLAY; medium plasticity, brown to dark brown, with trace medium grained sand, no odour.	D		FILL
			0.5	0.80				-	FILL: SAND; fine grained, brown / yellow /grey, no odour.			
			1.0		BHB2_1.3-1.4							
			1.5							D - M	-	
			2.0		BHB2_2.3-2.4							
			2.5	3.00								
			3.0					CIS	Silty CLAY; medium plasticity, brown / dark brown, with trace medium grained sand, no odour.			NATURAL
			3.5		BHB2_3.5-3.6					M		
				3.70						W		
			4.0	4.00					Hole Terminated at 4.00 mBGL; Target Depth Reached.			
			4.5									

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

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BOREHOLE: BHB3

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	ASPHALT: 200 mm thickness.	D	-	CONCRETE HARDSTAND
				0.20				-	FILL: Silty CLAY; medium plasticity, brown to dark brown, with trace medium grained sand, no odour.			FILL
			0.5		BHB3_0.3-0.4							
				0.60				-	SAND; fine grained, brown / yellow /grey, no odour.			NATURAL
			1.0		BHB3_1.1-1.2							
			1.5									
			2.0	2.00					Hole Terminated at 2.00 mBGL; Refusal on Cobbles/Boulders.			
			2.5									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 01/12/2022 17:43 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHB4

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	ASPHALT: 200 mm thickness.	D	-	ASPHALT HARDSTAND
				0.20				-	FILL: Silty CLAY; medium plasticity, brown to dark brown, with trace medium grained sand, no odour.			FILL
			0.5		BHB4_0.3-0.4							
				0.60				-	SAND; fine grained, brown / yellow / grey, no odour.			NATURAL
			1.0		BHB4_1.1-1.2							
			1.5									
				2.00					Hole Terminated at 2.00 mBGL; Refusal on Cobbles/Boulders.			
			2.0									
			2.5									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:07 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHB5

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	ASPHALT: 200 mm thickness.	D	-	ASPHALT HARDSTAND
				0.20				-	FILL: Silty CLAY; medium plasticity, brown to dark brown, with trace medium grained sand, no odour.			FILL
					BHB5_0.3-0.4							
			0.5	*0.50*				-	SAND; fine grained, brown / yellow / grey, no odour.			NATURAL
			1.0		BHB5_1.1-1.2							
				1.30					Hole Terminated at 1.30 mBGL; Refusal on Cobbles/Boulders.			
			1.5									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:07 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHB6

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	ASPHALT: 200 mm thickness.	D	-	ASPHALT HARDSTAND
				0.20				-	FILL: Silty CLAY; medium plasticity, brown to dark brown, with trace medium grained sand, no odour.			FILL
					BHB6_0.3-0.4							
				0.40				-	SAND; fine grained, brown / yellow / grey, with silty clay, no odour.			NATURAL
			0.5									
				0.90				CIS	SHALE; extremely weathered shale, no odour.			BEDROCK
					BHB6_0.9-1.0							
			1.0									
				1.30					Hole Terminated at 1.30 mBGL; Target Depth Reached.			
			1.5									
			2.0									

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

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BOREHOLE: BHB7

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	ASPHALT: 200 mm thickness.	D	-	ASPHALT HARDSTAND
				0.20				-	FILL: Silty CLAY; medium plasticity, brown to dark brown, with trace medium grained sand, no odour.			FILL
			0.5		BHB7_0.5-0.6							
			1.0	1.00				-	SAND; fine grained, brown / yellow / grey, no odour.			NATURAL
			1.5		BHB7_1.5-1.6							
			2.0									
			2.5	2.50					Hole Terminated at 2.50 mBGL; Refusal on Cobbles/Boulders.			
			3.0									

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

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BOREHOLE: BHC1

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	14/11/22
Position	Refer to Figure 2			Date Completed	14/11/22
Job No.	E25834.E02	Contractor	Geosense Drilling Pty Ltd	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig 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	-	▽	0		BHC1_0.1-0.2			-	FILL: Gravelly Silty CLAY; low plasticity, dark brown / brown, with fine to medium grained sub-angular to sub-rounded gravels, no odour.			FILL
					BHC1_0.7-0.8							
			2									
				3.30				CIS	Silty CLAY; medium plasticity, yellow / brown, mottled grey, no odour.			RESIDUAL SOIL
					BHC1_3.5-3.6							
			4									
				5.60								
			6									
				7.50					From 7.5m, colour change to brown mottled pale grey, with siltstone.	M	-	
			8									
				9.30				CIS	SILTSTONE; brown / dark grey, no odour.			BEDROCK
			10									
				12.00				CIS	SANDSTONE; fine grained, pale grey / light brown, no odour.			
			12									
				13.50				CIS	SHALE; dark grey, no odour.			
			14									
				14.70					Hole Terminated at 14.70 mBGL; Target Depth Reached.			

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

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BOREHOLE: BHC2

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	14/11/22
Position	Refer to Figure 2			Date Completed	14/11/22
Job No.	E25834.E02	Contractor	-	Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	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
HA	-	GWNE	0.0		BHC2_0.2-0.3			-	FILL: Silty CLAY; low to medium plasticity, brown to dark brown, with rootlets, no odour.	D - M	-	FILL
				0.30				-	FILL: Silty CLAY; low plasticity, grey mottled yellow, with weathered shale and medium grained sub-angular gravels, no odour.	D		
			0.5		BHC2_0.5-0.6							
				0.60					Hole Terminated at 0.60 mBGL; Refusal on Cobbles/Boulders.			
			1.0									

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

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BOREHOLE: BHC3

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0		BHC3_0.2-0.3			-	FILL: Silty SAND; fine to medium grained, pale brown / yellow, with fine to medium grained sub-angular gravels and clay, no odour.	D	-	FILL
			0.5									
				0.60				CIS	SHALE; pale brown / yellow, no odour.			BEDROCK
				0.90					Hole Terminated at 0.90 mBGL; Refusal on Cobbles/Boulders.			
			1.0									

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

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BOREHOLE: BHC4

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	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
HA	-	GWNE	0.0		BHC4_0.1-0.2			-	FILL: Gravelly Sandy CLAY; low plasticity, brown, with fine to medium grained sub-angular to angular gravels, with fine to medium grained sand, no odour.	M	-	FILL
			0.5		BHC4_0.6-0.7							
			1.0	*1.00*					Hole Terminated at 1.00 mBGL; Refusal on Cobbles/Boulders.			
			1.5									

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

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BOREHOLE: BHC5

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	FILL: Sandy CLAY; medium plasticity, brown, with fine grained sub-rounded gravels, no odour.	D - M		FILL
AD/T	-	GWNE			BHC5_0.1-0.2 0.10-0.20 m							
			0.5	*0.50*				CIS	Silty CLAY; medium plasticity, brown, no odour.	M	-	NATURAL
					BHC5_0.9-1.0 0.90-1.00 m							
			1.0	*1.00*					Hole Terminated at 1.00 m Target Depth Reached.			
			1.5									

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

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BOREHOLE: BHC6

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Silty SAND; fine grained, brown, no odour.	D	-	TOPSOIL
				0.10				-	FILL: Clayey SAND; fine to medium grained, pale brown, with clay and fine grained sub-angular gravels, no odour.			FILL
			0.5		BHC6_0.6-0.7							
				0.80				-	FILL: Silty SAND; fine to medium grained, pale brown / yellow, with fine to medium grained sub-angular gravels and clay, with weathered shale, no odour.			
			1.0		BHC6_1.2-1.3							
				1.30					Hole Terminated at 1.30 mBGL; Refusal on Cobbles/Boulders.			
			1.5									

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

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BOREHOLE: BHC7

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	FILL: Gravelly CLAY; low plasticity, brown, with fine to coarse grained sub-angular to sub-rounded gravels, no odour.			FILL
				0.10								
HA	-	GWNE			BHC7_0.3-0.4			CIS	SANDSTONE; fine to medium grained, brown, no odour.	M	-	BEDROCK
				0.40								
			0.5						Hole Terminated at 0.i0 mBGL; Refusal on Cobbles/Boulders.			

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

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BOREHOLE: BHD1

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	FILL: Sandy CLAY; low plasticity, dark brown, with fine grained sub-angular gravels, with rootlets, no odour.			FILL
					BHD1_0.1-0.2							
				0.40								
HA	-	GWNE	0.5					CIS	Silty CLAY; medium plasticity, yellow / brown mottled red, no odour.	M	-	RESIDUAL SOIL
					BHD1_0.6-0.7							
				1.00								
			1.0						Hole Terminated at 1.00 mBGL; Target Depth Reached.			
			1.5									

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BOREHOLE: BHD2

Project	Detailed Site Investigation		
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW		
Position	Refer to Figure 2		
Job No.	E25834.E02	Contractor	-
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger
		Inclination	-90°

Sheet	1 OF 1
Date Started	15/11/22
Date Completed	15/11/22
Logged MW	Date:
Checked	Date:

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
HA	-	GWNE	0.0		BHD2_0.1-0.2			-	FILL: Gravelly Sandy CLAY; low plasticity, pale brown / grey, with fine to medium grained sub-angular to angular gravels, with fine to medium grained sand, with rootlets, no odour.	M	-	FILL
			0.5	*0.50*					Hole Terminated at 0.50 mBGL; Refusal on Cobbles/Boulders.			
			1.0									

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

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BOREHOLE: BHD3

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Silty SAND; fine to medium grained, pale brown / yellow, with fine to medium grained sub-angular gravels and clay, no odour.	D	-	FILL
					BHD3_0.3-0.4							
			0.5									
			1.0	1.00				CIS	SHALE; pale brown / yellow, no odour.			BEDROCK
			1.5		BHD3_1.5-1.6							
				1.60					Hole Terminated at 1.60 mBGL; Refusal on Cobbles/Boulders.			
			2.0									

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

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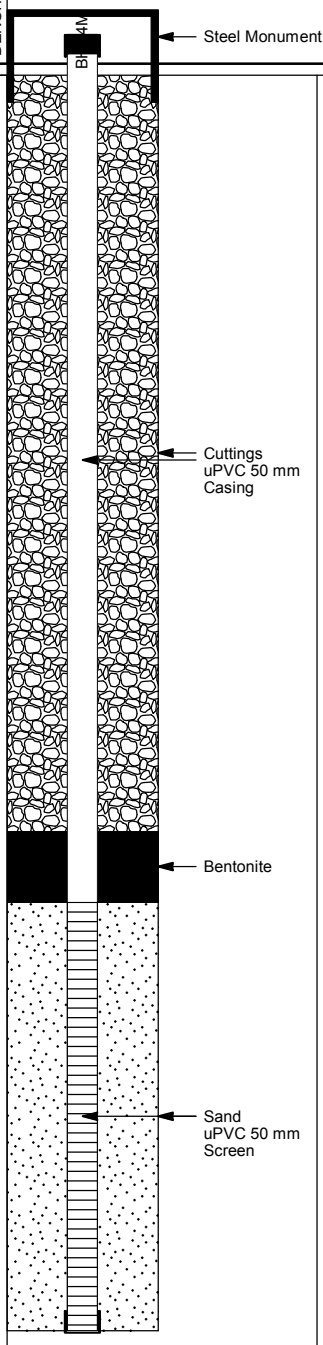
TEST: BHD4M

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	17/11/22
Position	Refer to Figure 2			Date Completed	17/11/22
Job No.	E25834.E02	Contractor	Geosense Drilling Pty Ltd	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig 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	PIEZOMETER DETAILS
AD/T	-	GWNE	0					-	FILL: Gravelly Sandy CLAY; low plasticity, dark brown, with fine to medium grained sub-angular to angular gravels, with fine to medium grained sand, no odour.			ID Static Water Level BHD4M
					BHD4_0.4-0.5 QD1/QT1							
			1	1.60				-	FILL: Silty CLAY; low plasticity, dark grey, with fine grained sub-rounded to rounded gravels, no odour.			
			2	2.60	BHD4_1.8-1.9			CIS	Silty CLAY; medium plasticity, grey / brown, no odour.			
			3	3.20								
			4	4.50				CIS	SILTSTONE; dark brown, no odour.	M	-	
			5									
			6									
			7									
			8	8.60				CIS	SHALE; dark grey / brown, no odour.			
			9									
			10	10.10					Hole Terminated at 10.10 mBGL; Target Depth Reached.			



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

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BOREHOLE: BHD5

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Clayey SAND; fine to medium grained, pale brown, with clay and fine grained sub-angular gravels, no odour.			FILL
					BHD5_0.1-0.2							
				0.30				-	FILL: Sandy CLAY; medium plasticity, brown, with fine grained sub-rounded gravels, no odour.	D	-	
			0.5	0.50	BHD5_0.5-0.6							
				0.60					Hole Terminated at 0.60 mBGL; Refusal on Cobbles/Boulders.			
			1.0									

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

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BOREHOLE: BHD6

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0		BHD6_0.1-0.2			-	FILL: Silty SAND; fine to medium grained, pale brown, with sub-angular gravels, no odour.	D	-	FILL
			0.5	*0.50*	BHD6_0.5-0.6			-	FILL: Silty SAND; fine to medium grained, pale brown, with sandstone, no odour.			REWORKED NATURAL
			1.0	*0.70*					Hole Terminated at 0.70 mBGL; Refusal on Cobbles/Boulders.			

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

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BOREHOLE: BHD7

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0		BHD7_0.0-0.1			-	FILL: Sandy CLAY; medium plasticity, brown, with fine grained sub-rounded gravels, with ACM fragment, no odour.	D	-	FILL
			0.5		BHD7_0.6-0.7							
			1.0									
				1.10				-	FILL: Clayey SAND; fine to medium grained, pale brown, with clay and fine grained sub-angular gravels, no odour.			
			1.5		BHD7_1.5-1.6							
				1.60					Hole Terminated at 1.60 mBGL; Refusal on Cobbles/Boulders.			
			2.0									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHE1

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	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
HA	-	GWNE	0.0		BHE1_0.1-0.2			-	FILL: Gravelly Sandy CLAY; low plasticity, yellow brown, with fine grained sub-angular to sub-rounded gravels, with fine to medium grained sand, no odour.	M	-	FILL
				0.40				CIS	Silty CLAY; medium plasticity, pale brown, no odour.			RESIDUAL SOIL
			0.5		BHE1_0.5-0.6							
				0.60					Hole Terminated at 0.60 mBGL; Target Depth Reached.			
			1.0									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHE2

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	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
HA	-	GWNE	0.0					-	FILL: Silty CLAY; low plasticity, dark grey / brown, with fine to medium grained sub-angular gravels, with rootlets, no odour.			FILL
					BHE2_0.1-0.2							
			0.5							M	-	
				0.60	BHE2_0.6-0.7				From 0.6m, colour change to yellow brown mottled dark grey.			
			1.0	*1.00*					Hole Terminated at 1.00 mBGL; Refusal on Cobbles/Boulders.			
			1.5									

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

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BOREHOLE: BHE3

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	FILL: Silty SAND; fine grained, brown, no odour.			TOPSOIL
HA	-	GWNE			BHE3_0.1-0.2							
				0.30				CIS	Silty CLAY; medium plasticity, yellow brown mottled orange brown, no odour.	M	-	RESIDUAL SOIL
			0.5		BHE3_0.4-0.5							
				0.60					Hole Terminated at 0.60 mBGL; Target Depth Reached.			
			1.0									

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

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BOREHOLE: BHE4

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Sandy CLAY; medium plasticity, brown, with fine grained sub-rounded gravels, no odour.	M	-	FILL
					BHE4_0.3-0.4							
			0.5									
			1.0									
			1.5	1.50				CIS	Silty CLAY; medium plasticity, brown / grey, no odour.			NATURAL
			2.0		BHE4_2.0-2.1							
			2.5	2.50					Hole Terminated at 2.50 mBGL; Target Depth Reached.			
			3.0									

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

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BOREHOLE: BHE5

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	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
HA	-	GWNE	0.0		BHE5_0.1-0.2			-	FILL: Gravelly SAND; fine to medium grained, yellow brown, with fine to medium grained angular to sub-angular gravels, no odour.	D	-	FILL
				0.30								
			0.5		BHE5_0.5-0.6			CIS	Silty CLAY; medium plasticity, dark brown, no odour.	M		RESIDUAL SOIL
				0.80								
			1.0						Hole Terminated at 0.80 mBGL; Target Depth Reached.			

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

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BOREHOLE: BHE6

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0		BHE6_0.0-0.1			-	FILL: Sandy CLAY; medium plasticity, brown, with fine grained sub-rounded gravels, no odour.	D		FILL
				0.10				CIS	Silty CLAY; medium plasticity, brown / grey, no odour.	M	-	NATURAL
			0.5		BHE6_0.5-0.6							
				0.60					Hole Terminated at 0.60 mBGL; Target Depth Reached.			
			1.0									

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

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BOREHOLE: BHE7

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0		BHE7_0.0-0.1			-	FILL: Clayey SAND; medium grained, brown / grey, with medium plasticity clay, with rootlets, no odour.	D		FILL
				0.20				-	FILL: Sandy CLAY; medium plasticity, brown, with fine grained sub-rounded gravels, no odour.			
			0.5		BHE7_0.4-0.5					M	-	
			1.0									
			1.5	1.50				CIS	SANDSTONE; pale yellow, no odour.	D		BEDROCK
				1.60					Hole Terminated at 1.60 mBGL; Refusal on Cobbles/Boulders.			
			2.0									

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

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BOREHOLE: BHF1

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	FILL: Sandy CLAY; low plasticity, yellow brown, with fine to medium sand, with fine grained sub-rounded gravels, no odour.			FILL
					BHF1_0.1-0.2							
HA	-	GWNE	0.5	0.50					From 0.5m, colour change to yellow brown / grey.	M	-	
					BHF1_0.6-0.7							
			1.0	1.00					Hole Terminated at 1.00 mBGL; Refusal on Cobbles/Boulders.			
			1.5									

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

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BOREHOLE: BHF2

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	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
HA	-	GWNE	0.0		BHF2_0.1-0.2			-	FILL: Gravelly Sandy CLAY; low plasticity, dark grey / dark brown, with fine grained sub-angular to angular gravels, with fine to medium grained sand, no odour.	M	-	FILL
			0.5		BHF2_0.6-0.7							
			1.0	*1.00*				-	FILL: Silty CLAY; low plasticity, grey / brown, with fine grained sub-angular gravels, no odour.			
				1.20					Hole Terminated at 1.20 mBGL; Refusal on Cobbles/Boulders.			
			1.5									

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

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BOREHOLE: BHF3

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Silty SAND; fine grained, brown, no odour.	M	-	TOPSOIL
				0.10				CIS	Silty CLAY; medium plasticity, brown / grey, no odour.			NATURAL
			0.5		BHF3_0.6-0.7							
				0.70					Hole Terminated at 0.70 mBGL; Target Depth Reached.			
			1.0									

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

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BOREHOLE: BHF4

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	FILL: Silty SAND; fine grained, brown, no odour.	D		TOPSOIL
				0.10				CIS	Silty CLAY; medium plasticity, brown / dark brown, with trace medium grained sand, no odour.			NATURAL
AD/T	-	GWNE	0.5		BHF4_0.6-0.7					M	-	
			1.0	1.00					Hole Terminated at 1.00 mBGL; Target Depth Reached.			
			1.5									

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

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BOREHOLE: BHF5

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Silty CLAY; medium plasticity, brown to dark brown, with trace medium grained sand, no odour.	M	-	FILL
					BHF5_0.2-0.3							
			0.5									
			1.0									
					BHF5_1.4-1.5							
			1.5	1.50				CIS	Silty CLAY; medium plasticity, pale brown, no odour.			NATURAL
			2.0		BHF5_2.0-2.1							
			2.5	2.50					Hole Terminated at 2.50 mBGL; Target Depth Reached.			
			3.0									

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

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BOREHOLE: BHF6

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0		BHF6_0.0-0.1			-	FILL: Silty SAND; fine grained, brown, no odour.	D		TOPSOIL
				0.10				CIS	Silty CLAY; medium plasticity, pale brown, no odour.	M	-	NATURAL
			0.5		BHF6_0.5-0.6							
				0.60					Hole Terminated at 0.60 mBGL; Target Depth Reached.			
			1.0									

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

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BOREHOLE: BHF7

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Clayey SAND; medium grained, brown, with medium grained sub-angular gravels, no odour.	D	-	FILL
					BHF7_0.2-0.3							
			0.5									
			1.0									
				1.20					From 1.2m, with weathered sandstone.			
			1.5	1.50					Hole Terminated at 1.50 mBGL; Refusal on Cobbles/Boulders.			
			2.0									

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

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TEST: BHG1M

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	16/11/22
Position	Refer to Figure 2			Date Completed	16/11/22
Job No.	E25834.E02	Contractor	Geosense Drilling Pty Ltd	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig 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	PIEZOMETER DETAILS
AD/T	-	▽	0		BHG1M_0.1-0.2			-	FILL: Silty CLAY; low to medium plasticity, dark grey, with trace fine grained sub-angular gravels, no odour.			ID Static Water Level BHG1M
				0.40								Steel Monument
			1		BHG1M_0.6-0.7			CIS	Silty CLAY; medium plasticity, brown / pale grey, no odour.			Cuttings uPVC 50 mm Casing
			2									Bentonite
			3	3.00								Sand uPVC 50 mm Screen
				3.30				CIS	SILTSTONE; brown / grey, no odour.	M	-	
			4									
			5									
			6									
			7									
			8									
			9									
				9.75								
			10						Hole Terminated at 9.75 mBGL; Target Depth Reached.			

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHG2

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	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
HA	-	GWNE	0.0		BHG2_0.1-0.2			-	FILL: Silty CLAY; low plasticity, dark brown, with rootlets, with trace fine grained sub-angular gravels, no odour.			FILL
				0.30					From 0.3m, colour change to yellow brown.			
			0.5							M	-	
			1.0	1.00					Hole Terminated at 1.00 mBGL; Refusal on Cobbles/Boulders.			
			1.5									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHG3

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	FILL: Sandy CLAY; medium plasticity, brown, with fine grained sub-rounded gravels, no odour.	D		FILL
AD/T	-	GWNE			BHG3_0.3-0.4							
			0.5	*0.50*				CIS	Silty CLAY; medium plasticity, brown / dark brown, with trace medium grained sand, no odour.	D - M	-	NATURAL
					BHG3_0.9-1.0							
			1.0	*1.00*					Hole Terminated at 1.00 mBGL; Target Depth Reached.			
			1.5									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHG4

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	11/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	11/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0		BHG4_0.3-0.4			-	FILL: Clayey SAND; fine to medium grained, pale brown, with clay and fine grained sub-angular gravels, no odour.			FILL
			0.5	*0.60*				CIS	SHALE; extremely weathered shale, no odour.	D	-	BEDROCK
			1.0		BHG4_1.2-1.3							
				1.30					Hole Terminated at 1.30 mBGL; Refusal on Cobbles/Boulders.			
			1.5									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHG5

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Clayey SAND; medium grained, brown, with medium grained sub-angular gravels, no odour.			FILL
					BHG5_0.3-0.4					D		
			0.5									
				0.70								
					BHG5_0.7-0.8			-	FILL: Sandy CLAY; medium plasticity, brown, with medium grained sub-rounded gravels, no odour.		-	
			1.0									
				1.20				CIS	Silty CLAY; medium plasticity, orange, no odour.	M		NATURAL
			1.5		BHG5_1.6-1.7							
				1.70					Hole Terminated at 1.70 mBGL; Target Depth Reached.			
			2.0									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHG6

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Sandy CLAY; medium plasticity, brown, with medium grained sub-rounded gravels, no odour.	M	-	FILL
					BHG6_0.1-0.2							
				0.20				CIS	Silty CLAY; medium plasticity, orange, no odour.			NATURAL
			0.5									
					BHG6_0.7-0.8							
				0.80					Hole Terminated at 0.80 mBGL; Target Depth Reached.			
			1.0									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHG7

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Clayey SAND; medium grained, brown, with medium grained sub-angular gravels, no odour.	D	-	FILL
			0.5		BHG7_0.4-0.5							
			1.0	1.20								
					BHG7_1.2-1.3			-	FILL: Sandy CLAY; medium plasticity, brown, with medium grained sub-rounded gravels, no odour.	M		
			1.5									
			2.0		BHG7_2.2-2.3							
				2.30					Hole Terminated at 2.30 mBGL; Refusal on Cobbles/Boulders.			
			2.5									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHH2

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	15/11/22
Position	Refer to Figure 2			Date Completed	15/11/22
Job No.	E25834.E02	Contractor	-	Logged MW	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Hand Auger	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description				
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	FILL: Sandy CLAY; low plasticity, brown, with fine to medium grained sand, with trace fine grained sub-angular gravels, with rootlets, no odour.			FILL
					BHH2_0.1-0.2							
				0.30				CIS	Silty CLAY; medium plasticity, orange brown, no odour.			RESIDUAL SOIL
HA	-	GWNE	0.5		BHH2_0.4-0.5					M	-	
			1.0	1.00					Hole Terminated at 1.00 mBGL; Refusal on Cobbles/Boulders.			
			1.5									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHH3

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Silty SAND; fine to medium grained, pale brown, with sub-angular gravels, no odour.	D		FILL
					BHH3_0.2-0.3							
				0.40				CIS	Silty CLAY; medium plasticity, brown / dark brown, with trace medium grained sand, no odour.	D - M	-	NATURAL
			0.5									
			1.0		BHH3_1.2-1.3							
				1.30				CIS	SANDSTONE; pale yellow, no odour.	D		BEDROCK
			1.5	*1.50*					Hole Terminated at 1.50 mBGL; Refusal on Cobbles/Boulders.			
			2.0									

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

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BOREHOLE: BHH4

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	17/11/22
Position	Refer to Figure 2			Date Completed	17/11/22
Job No.	E25834.E02	Contractor	Geosense Drilling Pty Ltd	Logged MC	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig 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	0.10				-	FILL: Silty CLAY; low plasticity, dark brown, with rootlets, no odour.			TOPSOIL
					BHH4_0.2-0.3			CIS	Silty CLAY; medium plasticity, yellow brown mottled grey, with sandstone, no odour.			RESIDUAL SOIL
					BHH4_0.5-0.6							
			1	1.00				CIS	SANDSTONE; brown, no odour.			BEDROCK
			2									
			3									
			4							M	-	
			5									
			6									
				6.30				CIS	SHALE; dark grey, no odour.			
			7									
				7.80					Hole Terminated at 7.80 m BGL; Target Depth Reached.			
			8									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHH5

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Clayey SAND; medium grained, brown, with medium grained sub-angular gravels, no odour.	D	-	FILL
			0.5		BHH5_0.3-0.4							
			1.0									
				1.20				CIS	Silty CLAY; medium plasticity, dark brown, with trace medium grained sand, no odour.			NATURAL
			1.5		BHH5_1.5-1.6							
				1.60				CIS	Silty CLAY; medium plasticity, pale brown, no odour.	M		
					BHH5_1.9-2.0							
			2.0	2.00					Hole Terminated at 2.00 mBGL; Target Depth Reached.			
			2.5									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

BOREHOLE: BHH6

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	10/11/22
Position	Refer to Figure 2	Contractor	STS Drilling Pty Ltd	Date Completed	10/11/22
Job No.	E25834.E02			Logged LH	Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig	Checked	Date:
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD/T	-	GWNE	0.0					-	FILL: Clayey SAND; medium grained, brown, with medium grained sub-angular gravels, no odour.	M	-	FILL
			0.5		BHH6_0.5-0.6							
			1.0		BHH6_1.0-1.1							
			1.5	*1.50*				CIS	SANDSTONE; pale yellow, no odour.	D		BEDROCK
				1.60					Hole Terminated at 1.60 mBGL; Refusal on Cobbles/Boulders.			
			2.0									

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

TEST: BHH7M

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	Caddens Corner, 80 O'Connell Street, Kingswood NSW			Date Started	16/11/22
Position	Refer to Figure 2			Date Completed	16/11/22
Job No.	E25834.E02	Contractor	Geosense Drilling Pty Ltd	Logged	MW Date:
Client	Caddens Estate Development Pty Ltd	Drill Rig	Drill Rig 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	PIEZOMETER DETAILS
AD/T	-	GWNE	0	0.10	BHH7M_0.2-0.3			-	FILL: Silty CLAY; low plasticity, dark grey, with trace rootlets, no odour.			ID: BHH7M; Static Water Level
								CIS	Silty CLAY; medium plasticity, brown, no odour.			Steel Monument
				0.90				CIS	SANDSTONE; fine to medium grained, brown, no odour.			Cuttings
			1									uPVC 50 mm Casing
			2									Bentonite
			3									
			4									
				4.40					From 4.40m, colour change to pale grey mottled brown.	M	-	
			5									Sand uPVC 50 mm Screen
			6									
			7									
			8									
			9									
			10	10.22					Hole Terminated at 10.22 mBGL; Target Depth Reached.			

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

EIA LIB 1.03.GLB Log IS AU BOREHOLE 3 EIA 1.03.GPJ <<DrawingFile>> 22/11/2022 18:08 10.0.000 Datgel Lab and In Situ Tool - DGD | Lib: EIA 1.03 2014-07-05 Prj: EIA 1.03 2014-07-05

Appendix I – Field Data Sheets

WATER SAMPLING FIELD SHEET

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Site Address: 80 O'Connell St, Kingswood	Job Number: E25834
Client:	Date: 21/11/2022
Field Staff: FZ	Sampling Location ID: BHA1M
Well Location:	Round No: 1
MEDIUM ☒Groundwater ☐Surface Water	☐Stormwater ☐Other:
SAMPLING POINT INFO	
Well Installation Date: 11/11/2022	Stick up / down (m): +1.0m (+ above ground - below ground)
Initial Well Depth (mBTOC): 8 mBGL	Screen Interval (mBTOC):
Previous Sampling Date:	Previous SWL (mBTOC):
PID READINGS	
PID Headspace (ppm):	PID Background (ppm):
PID Breathing Space (ppm):	
PRE PURGE	
Total Well Depth (mBTOC): 9 mBTOC	Well Head Condition: Good
SWL (mBTOC) 4.6 mBTOC	Water Column (m): 3.6
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): 6.2	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer:
Weather Conditions:	Cycle:
Pump on time:	Pump off time:
WATER QUALITY PARAMETERS	
Probe Make and Model:	Bump Test Date and Time:

Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
			20.01	3977	345	1.08	7.02	
			20.14	8509	201	0.87	7.11	brown / low turbidity
			20.10	7542	200	0.34	7.25	
			20.16	7481	189	0.25	7.38	NO odour
			20.16	7693	189	0.25	7.26	NO sheen
Stabilisation range: 3 consecutive readings			±0.2°C	±3%	±20mV	±10%	±0.2	

OTHER COMMENTS/OBSERVATIONS:

GW-QD1 / QT1

SIGNATURE:

WATER SAMPLING FIELD SHEET

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Site Address: 80 O'Connell St, Kingswood	Job Number: E25834
Client:	Date: 21/11/2022
Field Staff: FZ	Sampling Location ID BH A7M
Well Location:	Round No: 1
MEDIUM ☒Groundwater ☐Surface Water	☐Stormwater ☐Other:
SAMPLING POINT INFO	
Well Installation Date: 10/11/2022	Stick up / down (m): -0.2 (+ above ground - below ground)
Initial Well Depth (mBTOC): 9mBGL	Screen Interval (mBTOC):
Previous Sampling Date:	Previous SWL (mBTOC):
PID READINGS	
PID Headspace (ppm):	PID Background (ppm):
PID Breathing Space (ppm):	
PRE PURGE	
Total Well Depth (mBTOC): 9 mBGL	Well Head Condition:
SWL (~~mBTOC~~): 3.3 mBGL	Water Column (m):
PHASE SEPARATED HYDROCARBONS (PSH)	
Depth to PSH (mBTOC):	PSH Visually Confirmed (Bailer):
PSH Thickness (mm):	
Field Filtered	
Yes (0.45 µm) ☐	No ☐ (Request lab 0.45 µm filter the sample)
PURGE AND SAMPLE	
Sampling Method ☐Bladder ☒Peristaltic ☐Submersible ☐Other:	
Depth of Pump Inlet (mBTOC):	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer:
Weather Conditions:	Cycle:
Pump on time:	Pump off time:
WATER QUALITY PARAMETERS	
Probe Make and Model:	Bump Test Date and Time:

Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
			22.81	7323	571	0.91	5.21	Grey
			23.01	9659	603	0.77	6.01	Low turbidity
			23.01	10413	686	0.20	7.01	
			23.04	10610	684	0.15	7.22	No odour
			23.26	10648	689	0.15	7.65	No sheen
Stabilisation range: 3 consecutive readings			±0.2°C	±3%	±20mV	±10%	±0.2	

OTHER COMMENTS/OBSERVATIONS:

SIGNATURE:

WATER SAMPLING FIELD SHEET

eiaustralia

Site Address: 80 O'Connell St, Kingswood	Job Number: E25834
Client:	Date: 21/11/2022
Field Staff: FZ	Sampling Location ID BH104M
Well Location:	Round No: 1
MEDIUM ☒Groundwater ☐Surface Water	☐Stormwater ☐Other:
SAMPLING POINT INFO	
Well Installation Date: 17/11/2022	Stick up / down (m): +0.2M (+ above ground - below ground)
Initial Well Depth (mBTOC): 8.8 mBGL	Screen Interval (mBTOC):
Previous Sampling Date:	Previous SWL (mBTOC):
PID READINGS	
PID Headspace (ppm):	PID Background (ppm):
PID Breathing Space (ppm):	
PRE PURGE	
Total Well Depth (mBTOC): 9m	Well Head Condition: Good
SWL (mBTOC): 3.8 mTOC	Water Column (m): 5m
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): 6.3	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer:
Weather Conditions:	Cycle:
Pump on time:	Pump off time:
WATER QUALITY PARAMETERS	
Probe Make and Model:	Bump Test Date and Time:

Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
			21.00	8321	312.0	0.55	7.41	Transparent
			20.37	7231	213.4	0.41	7.32	Low turbidity
			20.36	9239	186.0	0.30	7.50	NO odour
			20.31	9185	186.3	0.35	7.53	NO sheen
Stabilisation range: 3 consecutive readings			±0.2°C	±3%	±20mV	±10%	±0.2	

OTHER COMMENTS/OBSERVATIONS:

SIGNATURE:

WATER SAMPLING FIELD SHEET

eiaustralia

Site Address: 80 O'Connell St, Kingswood	Job Number: E25834
Client:	Date: 21/11/2022
Field Staff: FZ	Sampling Location ID BHG1M
Well Location:	Round No: 1
MEDIUM ☒Groundwater ☐Surface Water	☐Stormwater ☐Other:
SAMPLING POINT INFO	
Well Installation Date: 16/11/2022	Stick up / down (m): +1 (+ above ground - below ground)
Initial Well Depth (mBTOC): 4mBGL	Screen Interval (mBTOC):
Previous Sampling Date:	Previous SWL (mBTOC):
PID READINGS	
PID Headspace (ppm):	PID Background (ppm):
PID Breathing Space (ppm):	
PRE PURGE	
Total Well Depth (mBTOC): 5mBTOC	Well Head Condition: Good
SWL (mBTOC): 2.8 mBTOC	Water Column (m): 2.2
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): 3.9m	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer:
Weather Conditions:	Cycle:
Pump on time:	Pump off time:
WATER QUALITY PARAMETERS	
Probe Make and Model:	Bump Test Date and Time:

Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
			19.00	2103	218	0.45	6.78	brown
			19.01	1891	163	0.32	6.58	low turbidity
			19.05	1903	159	0.25	7.61	no odour
			18.05	1802	190	0.21	7.63	No Sheen
Stabilisation range: 3 consecutive readings			±0.2°C	±3%	±20mV	±10%	±0.2	

OTHER COMMENTS/OBSERVATIONS:

SIGNATURE:

WATER SAMPLING FIELD SHEET

eiaustralia

Site Address: 80 O'Connell St, Kingswood	Job Number: E25834
Client:	Date: 21/1/2022
Field Staff: FZ	Sampling Location ID: BH A7M
Well Location:	Round No: 1
MEDIUM ☒Groundwater ☐Surface Water	☐Stormwater ☐Other:
SAMPLING POINT INFO	
Well Installation Date:	Stick up / down (m): +0.5 (+ above ground - below ground)
Initial Well Depth (mBTOC): 8.5 MBGL	Screen Interval (mBTOC):
Previous Sampling Date:	Previous SWL (mBTOC):
PID READINGS	
PID Headspace (ppm):	PID Background (ppm):
PID Breathing Space (ppm):	
PRE PURGE	
Total Well Depth (mBTOC): 9.0 mBTOC	Well Head Condition:
SWL (mBTOC): 6.6 mBTOC	Water Column (m): 2.4m
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): 6.3	Fill Timer:
Pump Pressure Regulator (psi):	Discharge Timer:
Weather Conditions:	Cycle:
Pump on time:	Pump off time:
WATER QUALITY PARAMETERS	
Probe Make and Model:	Bump Test Date and Time:

Time	Volume (L)	SWL (mbtoc)	Temp (°C)	EC (µS/cm)	Redox (mV)	DO (mg/L)	pH (units)	Comments (colour, turbidity, odour, sheen etc.)
			18.60	3210	245.1	0.23	7.88	brown
			18.66	2200	211.2	0.21	7.97	low turbidity
			18.96	1677	188.7	0.15	7.67	No odour
			19.11	1691	188.7	0.17	7.79	No sheen
Stabilisation range: 3 consecutive readings			±0.2°C	±3%	±20mV	±10%	±0.2	

OTHER COMMENTS/OBSERVATIONS:

SIGNATURE:

Appendix J – Chain of Custody and Sample Receipt Documentation

source: Sydney.pdf page: 1 SDG Ref: SE239146_COC

Sheet 1 of 5

Site: 80 O'Connell Street, Kingswood

Project No: E25934

Laboratory: **SGS Australia**
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM ^ /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM ^ /TRH/BTEX/PAHs	HM ^ /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
BHF7_0.2-0.3	1	J-ZLB	10/11	AM/PM	X				X																		
BHE7_0.0-0.1	2								X																		
1_0.4-0.5																											
BHD7_0.0-0.1	3								X																		
1_0.6-0.7																											
1_1.5-1.6																											
BHG7_0.4-0.5	4								X																		
1_1.2-1.3																											
1_2.2-2.3																											
BHH6_0.5-0.6	5								X																		
1_1.0-1.1																											
BHG6_0.1-0.2	6								X																		

SGS EHS Sydney COC
SE239146

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

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

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PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

COC June 2021 FORM v.5 - SGS

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

Sampler's Name (EI): LH	Received by (SGS):
Print: Leo Ho	Print: [illegible]
Signature: [signature]	Signature: [signature]
Date: 15/11/22	Date: 15.11.22 2:15

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

Report with EI Waste Classification Table

Sampler's Comments:

Sheet 2 of 5

Site: 80 O'Connell Street, Kingswood

Project No: E25854

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	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
BHF6_00-0.1	7	J-ZLB	10/11	AM/PM	X				X																		
BHE6_00-0.1	8								X																		
BHD6_0.1-0.2	9								X																		
BHD5_0.1-0.2	10								X																		
1_0.5-0.6																											
BHG5_0.3-0.4	11								X																		
1_0.7-0.8																											
BHH5_0.3-0.4	12								X																		
BHD4_0.4-0.5	13								X																		
BHH3_0.2-0.3	14								X																		
BHG3_0.3-0.4	15								X																		
QD1	16	J									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
- [X] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [ ] 72 Hours
- [ ] Other____

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

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

Report with EI Waste Classification Table [X]

Sampler's Name (EI): LH	Received by (SGS):
Print: Leo Ho	Print: M Bassam
Signature: Leo	Signature:
Date: 15/11/22	Date: 15.11.22 2:10

Sampler's Comments:

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

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Ph: 9516 0722
lab@eiaustralia.com.au

Sheet 3 of 5

Site: 80 O'Connell Street, Kingswood

Project No: E25954

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM ^ /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM ^ /TRH/BTEX/PAHs	HM ^ /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride			TCLP HM [B] / PAH
QT1		J	10/11	AM/PM	X																						
TB1	17	Lab	1	1	1							X															
TSP1	18	1	1	1	1							X															
QRB	19	S.P.VC	11/11	1		X					X																
QR1	20	1	1	1		1					1																

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

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

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

Report with EI Waste Classification Table [X]

Sampler's Name (EI): LH	Received by (SGS):
Print: Leo Ho	Print: [illegible]
Signature: [signature]	Signature: [signature]
Date: 15/11/22	Date: 15.11.22 2:15

Sampler's Comments:

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

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lab@eiaustralia.com.au

Sheet 4 of 5

Site: 80 O'Connell Street, Kingswood

Project No: E25854

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	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
BHA6_0.7-0.8	21	J,ZLB	11/11	Am/pm	X				X																		
BHA5_0.3-0.4	22								X																		
1_0.9-1.0																											
BHB7_0.5-0.6	23								X																		
BHB6_0.3-0.4	24								X																		
BHB5_0.3-0.4	25								X																		
BHB4_0.3-0.4	26								X																		
BHB3_0.3-0.4	27								X																		
BHB2_0.4-0.5	28								X																		
BHA3_0.2-0.3	29								X																		
BHC3_0.2-0.3	30								X																		
BHC5_0.1-0.2	31								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): LH	Received by (SGS):
Print: Leo Ho	Print:
Signature:	Signature:
Date: 15/11/22	Date: 15.11.22 2:05

Sampler's Comments:

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

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PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

Sheet 5 of 5

Site: 80 O'Connell Street, Kingswood

Project No: E25834

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM ^ /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM ^ /TRH/BTEX/PAHs	HM ^ /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
BHC6_0.6-0.7	32	J-ZLB	11/11	AM/PM	X				X																		
BHE4_0.3-0.4	33	"	"	"	"				X																		
BHP3_0.3-0.4	34	"	"	"	"				X																		
BHG4_0.3-0.4	35	"	"	"	"				X																		
QD2	36	J	"	"	"						X																
QT2		"	"	"	"																						
TB2	37	Lab	"	"	"							X															
TSP2	38	"	"	"	"							X															
BHB1_0.2-03 (BHC2)	~~37~~ 39	J, ZLB	14/11	"	"				X																		
BHB2_0.2-03	~~38~~	"	"	"	"				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

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

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

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PYRMONT NSW 2009
Ph: 9516 0722
lab@eiaustralia.com.au

COC June 2021 FORM v.5 - SGS

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

Sampler's Name (EI): LH	Received by (SGS):
Print: Leo Ho	Print: [illegible]
Signature: [signature]	Signature: [signature]
Date: 15/11/22	Date: 15-11-22 2:15

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

Report with EI Waste Classification Table [X]

Sampler's Comments:

SAMPLE RECEIPT ADVICE

SE239146

CLIENT DETAILS

Contact	Leo Ho
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	leo.ho@eiaustralia.com.au
Project	**E25834 80 O'Connell Street, Kingswood**
Order Number	**E25834**
Samples	39

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Tue 15/11/2022
Report Due	Tue 22/11/2022
SGS Reference	**SE239146**

SUBMISSION DETAILS

This is to confirm that 39 samples were received on Tuesday 15/11/2022. Results are expected to be ready by COB Tuesday 22/11/2022.
Please quote SGS reference SE239146 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	37 Soil, 2 Water
Date documentation received	15/11/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.6C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

COMMENTS

9 soil samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

SAMPLE RECEIPT ADVICE

SE239146

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell Street, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BHF7_0.2-0.3	30	14	26	11	7	10	11	9
002	BHE7_0.0-0.1	30	14	26	11	7	10	11	9
003	BHD7_0.0-0.1	30	14	26	11	7	10	11	9
004	BHG7_0.4-0.5	30	14	26	11	7	10	11	9
005	BHH6_0.5-0.6	30	14	26	11	7	10	11	9
006	BHG6_0.1-0.2	30	14	26	11	7	10	11	9
007	BHF6_0.0-0.1	30	14	26	11	7	10	11	9
008	BHE6_0.0-0.1	30	14	26	11	7	10	11	9
009	BHD6_0.1-0.2	30	14	26	11	7	10	11	9
010	BHD5_0.1-0.2	30	14	26	11	7	10	11	9
011	BHG5_0.3-0.4	30	14	26	11	7	10	11	9
012	BHH5_0.3-0.4	30	14	26	11	7	10	11	9
013	BHD4_0.4-0.5	30	14	26	11	7	10	11	9
014	BHH3_0.2-0.3	30	14	26	11	7	10	11	9
015	BHG3_0.3-0.4	30	14	26	11	7	10	11	9
016	QD1	-	-	-	-	7	10	11	9
017	TB1	-	-	-	-	-	-	11	-
018	TSP1	-	-	-	-	-	-	11	-
021	BHA6_0.7-0.8	30	14	26	11	7	10	11	9
022	BHA5_0.3-0.4	30	14	26	11	7	10	11	9
023	BHB7_0.5-0.6	30	14	26	11	7	10	11	9
024	BHB6_0.3-0.4	30	14	26	11	7	10	11	9

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239146

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell Street, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	BHB5_0.3-0.4	30	14	26	11	7	10	11	9
026	BHB4_0.3-0.4	30	14	26	11	7	10	11	9
027	BHB3_0.4-0.5	30	14	26	11	7	10	11	9
028	BHB2_0.4-0.5	30	14	26	11	7	10	11	9
029	BHA3_0.2-0.3	30	14	26	11	7	10	11	9
030	BHC3_0.2-0.3	30	14	26	11	7	10	11	9
031	BHC5_0.1-0.2	30	14	26	11	7	10	11	9
032	BHC6_0.6-0.7	30	14	26	11	7	10	11	9
033	BHE4_0.3-0.4	30	14	26	11	7	10	11	9
034	BHD3_0.3-0.4	30	14	26	11	7	10	11	9
035	BHG4_0.3-0.4	30	14	26	11	7	10	11	9
036	QD2	-	-	-	-	7	10	11	9
037	TB2	-	-	-	-	-	-	11	-
038	TSP2	-	-	-	-	-	-	11	-
039	BHC2_0.2-0.3	30	14	26	11	7	10	11	9

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239146

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell Street, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content	VOCs in Water
001	BHF7_0.2-0.3	2	1	1	-
002	BHE7_0.0-0.1	2	1	1	-
003	BHD7_0.0-0.1	2	1	1	-
004	BHG7_0.4-0.5	2	1	1	-
005	BHH6_0.5-0.6	2	1	1	-
006	BHG6_0.1-0.2	2	1	1	-
007	BHF6_0.0-0.1	2	1	1	-
008	BHE6_0.0-0.1	2	1	1	-
009	BHD6_0.1-0.2	2	1	1	-
010	BHD5_0.1-0.2	2	1	1	-
011	BHG5_0.3-0.4	2	1	1	-
012	BHH5_0.3-0.4	2	1	1	-
013	BHD4_0.4-0.5	2	1	1	-
014	BHH3_0.2-0.3	2	1	1	-
015	BHG3_0.3-0.4	2	1	1	-
016	QD1	-	1	1	-
017	TB1	-	-	1	-
019	QRB	-	-	-	11
020	QR1	-	-	-	11
021	BHA6_0.7-0.8	2	1	1	-
022	BHA5_0.3-0.4	2	1	1	-
023	BHB7_0.5-0.6	2	1	1	-
024	BHB6_0.3-0.4	2	1	1	-

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239146

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell Street, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
025	BHB5_0.3-0.4	2	1	1
026	BHB4_0.3-0.4	2	1	1
027	BHB3_0.4-0.5	2	1	1
028	BHB2_0.4-0.5	2	1	1
029	BHA3_0.2-0.3	2	1	1
030	BHC3_0.2-0.3	2	1	1
031	BHC5_0.1-0.2	2	1	1
032	BHC6_0.6-0.7	2	1	1
033	BHE4_0.3-0.4	2	1	1
034	BHD3_0.3-0.4	2	1	1
035	BHG4_0.3-0.4	2	1	1
036	QD2	-	1	1
037	TB2	-	-	1
039	BHC2_0.2-0.3	2	1	1

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239146

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell Street, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	Volatile Petroleum Hydrocarbons in Water
019	QRB	1	7	9	7
020	QR1	1	7	9	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
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Testing as per this table shall commence immediately unless the client intervenes with a correction .

source: SE_Autoscan.pdf page: 5 SGS Ref: SE239146A_COC

Yin, Emily (Sydney)

From: AU.Environmental.Sydney, AU (Sydney)
Sent: Friday, 25 November 2022 1:18 PM
To: Fiona Zhang - EIAustralia
Cc: Leo Ho - EIAustralia; Li Wei - EIAustralia; AU.SampleReceipt.Sydney, AU (Sydney); AU.Environmental.Sydney, AU (Sydney)
Subject: RE: [EXTERNAL] RE: Report Job SE239146, your reference E25834 80 O'Connell Street, Kingswood, order number E25834

Hi Fiona.

So sorry about this. Looks like these two samples were accidentally missed, so we'll get them booked in for you now, and the results out to you ASAP.

Matthew Tyler
Environment, Health & Safety
Client Services

SGS Australia Pty Ltd
Unit 16, 33 Maddox Street
Alexandria NSW 2015

SGS EHS Alexandria Laboratory
SE239146A COC
Received: 25 – Nov – 2022

From: Fiona Zhang - EIAustralia <fiona.zhang@eiaustralia.com.au>
Sent: Friday, 25 November 2022 9:17 AM
To: AU.SampleReceipt.Sydney, AU (Sydney) <AU.SampleReceipt.Sydney@sgs.com>; AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@sgs.com>
Cc: Leo Ho - EIAustralia <leo.ho@eiaustralia.com.au>; Li Wei - EIAustralia <li.wei@eiaustralia.com.au>
Subject: [EXTERNAL] RE: Report Job SE239146, your reference E25834 80 O'Connell Street, Kingswood, order number E25834

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

Hi SGS,

Please update the report with TB2 and TSP2 results, which are included in COC and receipt but not shown in analytical results.

Thank you.

Kind regards,
Fiona Zhang
BEng (Env), MEng (Env)
Environmental Engineer

T 02 9516 0722 **M** 0405 380 237
E fiona.zhang@eiaustralia.com.au

Suite 6.01, 55 Miller Street
Pyrmont, NSW 2009

www.eiaustralia.com.au

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SAMPLE RECEIPT ADVICE

SE239146A

CLIENT DETAILS

Contact	Leo Ho
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	leo.ho@eiaustralia.com.au
Project	**E25834 80 O'Connell Street, Kingswood**
Order Number	**E25834**
Samples	39

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Fri 25/11/2022
Report Due	Mon 28/11/2022
SGS Reference	**SE239146A**

SUBMISSION DETAILS

This is to confirm that 39 samples were received on Friday 25/ 11/2022. Results are expected to be ready by COB Monday 28/ 11/2022. Please quote SGS reference SE239146A when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	2 Soil
Date documentation received	25/11/2022@9:17am	Type of documentation received	Email
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.6C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

COMMENTS

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SAMPLE RECEIPT ADVICE

SE239146A

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell Street, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Moisture Content	VOC's in Soil
037	TB2	1	11
038	TSP2	-	11

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

FYA – Please log in and activate job below " B" job. 1 day TAT. Thanks

Kind Regards

Elsa Miguel Barritt
Industries and Environment
Key Account Manager
Asbestos Sampler : CPCC8C5014A

SGS Australia Pty Ltd
Unit 16, 33 Maddox Street
Alexandria, NSW, 2015

Phone: +61 (0)2 8594 0400
Direct: +61 (0)2 8594 0455
Mobile : (0)4 0797 2867
E-mail: Elsa.MiguelBarritt@sgs.com
General E-mail : au.environmental.sydney@sgs.com
Web: www.au.sgs.com
Note: Working Hours : Office Tuesday – Friday (9am to 4pm)
Working Remotely Monday (9am to 5pm)

From: Fiona Zhang - EIAustralia <fiona.zhang@eiaustralia.com.au>
Sent: Tuesday, 6 December 2022 11:24 AM
To: AU.SampleReceipt.Sydney, AU (Sydney) <AU.SampleReceipt.Sydney@sgs.com>; AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@sgs.com>
Cc: Li Wei - EIAustralia <li.wei@eiaustralia.com.au>
Subject: [EXTERNAL] FW: Report Job SE239146, your reference E25834 80 O'Connell Street, Kingswood, order number E25834

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

Hi SGS,

Just want to confirm if you have booked the following job requested on 2 December (see previous email below) because we didn't receive the COC/SRA:

- **asbestos** for sample **BHD7_0.6-0.7**

Kind regards,
Fiona Zhang
BEng (Env), MEng (Env)
Environmental Engineer

T 02 9516 0722 **M** 0405 380 237
E fiona.zhang@eiaustralia.com.au

Suite 6.01, 55 Miller Street
Pyrmont, NSW 2009

www.eiaustralia.com.au

Environmental | Geotechnical | Structural | Civil | Hazardous Materials

EI Australia is a proud member of the Australian Contaminated Land Consultants Association and the Australian Geomechanics Society.

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Please consider the environment before printing this email.

From: Fiona Zhang - EIAustralia
Sent: Friday, 2 December 2022 9:29 AM
To: 'AU.Samplereceipt.Sydney@SGS.com'; 'AU.Environmental.Sydney@SGS.com'
Cc: Leo Ho - EIAustralia; Li Wei - EIAustralia
Subject: RE: Report Job SE239146, your reference E25834 80 O'Connell Street, Kingswood, order number E25834

Hi SGS,

Can you test **asbestos** for sample **BHD7_0.6-0.7**, 3 days TAT please?

Many thanks

Kind regards,
Fiona Zhang
BEng (Env), MEng (Env)
Environmental Engineer

T 02 9516 0722 **M** 0405 380 237
E fiona.zhang@eiaustralia.com.au

Suite 6.01, 55 Miller Street
Pyrmont, NSW 2009

www.eiaustralia.com.au

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From: AU.Samplereceipt.Sydney@SGS.com [mailto:AU.Samplereceipt.Sydney@SGS.com]
Sent: Tuesday, 22 November 2022 6:29 PM
To: Laboratory Results - EIAustralia; Leo Ho - EIAustralia
Subject: Report Job SE239146, your reference E25834 80 O'Connell Street, Kingswood, order number E25834

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Dear Valued Customer,

Please find attached the report for SGS job SE239146, your reference E25834 80 O'Connell Street, Kingswood, order number E25834.

If you have any questions or concerns, please don't hesitate to contact your SGS Client Services representative.

Please provide any feedback you have on our service via this link
https://sgs.surveymonkey.com/r/F92B32Q

Best Regards,
SGS Alexandria Customer Service Team
SGS Australia Pty Ltd
Phone: +61 (0)2 8594 0400

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SAMPLE RECEIPT ADVICE

SE239146B

CLIENT DETAILS

Contact	Leo Ho
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	leo.ho@eiaustralia.com.au
Project	**E25834 80 O'Connell Street, Kingswood**
Order Number	**E25834**
Samples	40

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Tue 6/12/2022
Report Due	Wed 7/12/2022
SGS Reference	**SE239146B**

SUBMISSION DETAILS

This is to confirm that 40 samples were received on Tuesday 6/12/2022. Results are expected to be ready by COB Wednesday 7/12/2022.
Please quote SGS reference SE239146B when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	1 Soil	Type of documentation received	Email
Date documentation received	6/12/2022@11:24am	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	11.6C
Sample container provider	SGS	Turnaround time requested	Next Day
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

COMMENTS

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SAMPLE RECEIPT ADVICE

SE239146B

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell Street, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil
040	BHD7_0.6-0.7	2

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

source Sydney.pdf page: 3 SGS Ref: SE239307_COC

Sheet 1 of 2

Site: 80 O'Connell St, Kingswood

Project No: E25834

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM [A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
BHGIM_0.1-0.2	1	J, ZU3	15/11/2022	am	X				X																			
BHE1_0.1-0.2	2	↓	↓	↓	↓				X																			
BHC4_0.1-0.2	3								X																			
BHC4_0.6-0.7	4																											
BHE2_0.1-0.2	4								X																			
BHE3_0.1-0.2	5								↓																			
BHD1_0.1-0.2	6																											
BHE5_0.1-0.2	7																											
BHE7_0.1-0.2	8																											
BHH2_0.1-0.2	9																											
BHF2_0.1-0.2	10																											
BHG2_0.1-0.2	11	↓	↓	↓	↓				↓																			

Comments

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

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

SGS EHS Sydney COC
SE239307

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 BB = Bulk Bag

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

COC June 2021 FORM v.5 - SGS

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

Sampler's Name (EI):	Received by (SGS):
Print: Fiona Zhang	Print: Caroline
Signature:	Signature:
Date: 18/11/22	Date: 18/11/22 2:15

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

Report with EI Waste Classification Table ☒

Sampler's Comments:

p/s CC (;

Sheet 2 of 2

Site: 80 O'Connell St, Kingswood

Project No: E25834

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM [A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
BH02-0.1-0.2	12	J,ZLB	15/11/22	am	X				X																		
BH01-0.1-0.2	13	↓	↓		↓				X																		

Comments

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

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

LABORATORY TURNAROUND

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

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

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

Report with EI Waste Classification Table [x]

Sampler's Name (EI):	Received by (SGS):
Print: Fiona Zhang	Print: Caroline
Signature:	Signature:
Date: 18/11/22	Date: 18/11/22 2:11

Sampler's Comments:

P/S CC Li

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

SAMPLE RECEIPT ADVICE

SE239307

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	13

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Fri 18/11/2022
Report Due	Wed 23/11/2022
SGS Reference	**SE239307**

SUBMISSION DETAILS

This is to confirm that 13 samples were received on Friday 18/ 11/2022. Results are expected to be ready by COB Wednesday 23/11/2022.
Please quote SGS reference SE239307 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	13 Soil
Date documentation received	18/11/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	9.8C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days		

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

COMMENTS

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

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SAMPLE RECEIPT ADVICE

SE239307

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BHG1M_0.1-0.2	30	14	26	11	7	10	11	9
002	BHE1_0.1-0.2	30	14	26	11	7	10	11	9
003	BHC4_0.1-0.2	30	14	26	11	7	10	11	9
004	BHE2_0.1-0.2	30	14	26	11	7	10	11	9
005	BHE3_0.1-0.1	30	14	26	11	7	10	11	9
006	BHD1_0.1-0.2	30	14	26	11	7	10	11	9
007	BHE5_0.1-0.2	30	14	26	11	7	10	11	9
008	BHE7_0.1-0.2	30	14	26	11	7	10	11	9
009	BHH2_0.1-0.2	30	14	26	11	7	10	11	9
010	BHF2_0.1-0.2	30	14	26	11	7	10	11	9
011	BHG2_0.1-0.2	30	14	26	11	7	10	11	9
012	BHD2_0.1-0.2	30	14	26	11	7	10	11	9
013	BHF1_0.1-0.2	30	14	26	11	7	10	11	9

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239307

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
001	BHG1M_0.1-0.2	2	1	1
002	BHE1_0.1-0.2	2	1	1
003	BHC4_0.1-0.2	2	1	1
004	BHE2_0.1-0.2	2	1	1
005	BHE3_0.1-0.1	2	1	1
006	BHD1_0.1-0.2	2	1	1
007	BHE5_0.1-0.2	2	1	1
008	BHE7_0.1-0.2	2	1	1
009	BHH2_0.1-0.2	2	1	1
010	BHF2_0.1-0.2	2	1	1
011	BHG2_0.1-0.2	2	1	1
012	BHD2_0.1-0.2	2	1	1
013	BHF1_0.1-0.2	2	1	1

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

E-MAILED
18/11@11am

Sheet 1 of 1

Site: 80 O'Connell St, Kingswood	Project No: E25834

Laboratory:	SGS Australia Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015 P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM[A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM[A] /TRH/BTEX/PAHs	HM[A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM[A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM[B] / PAH
BHAIM-0.1-0.2	1	J, ZVB	11/11/22	pm	X				X																		
BHAY-0.2-0.3	2		18/11/22						X																		
BHA7M-0.2-0.3	3		10/11/22						X																		
BHC1-0.1-0.2	4		16/11/22						X																		
BHE2-0.1-0.2									X																		
BHD2-0.1-0.2									X																		
BHF1-0.1-0.2									X																		
BHE1-0.1-0.2									X																		

Comments

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

HM[B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

SGS EHS Sydney COC
SE239469

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 BB = Bulk Bag

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

COC June 2021 FORM v.5 - SGS

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

Sampler's Name (EI):	Received by (SGS):
Print: Fiona Zhang	Print:
Signature:	Signature:
Date: 18/11/22	Date: 18.11.22 11:00

Report with EI Waste Classification Table ☒

Sampler's Comments:

p/s CC li

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

SE_Alexcan.pdf page 1 555 Ref SE239469_COC

SAMPLE RECEIPT ADVICE

SE239469

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	4

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Fri 18/11/2022
Report Due	Wed 23/11/2022
SGS Reference	**SE239469**

SUBMISSION DETAILS

This is to confirm that 4 samples were received on Friday 18/ 11/2022. Results are expected to be ready by COB Wednesday 23/11/2022.
Please quote SGS reference SE239469 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	4 Soil
Date documentation received	18/11/2022 @11am	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	15.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days		

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

COMMENTS

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SAMPLE RECEIPT ADVICE

SE239469

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BHA1M_0.1-0.2	30	14	26	11	7	10	11	9
002	BHA4_0.2-0.3	30	14	26	11	7	10	11	9
003	BHA7M_0.2-0.3	30	14	26	11	7	10	11	9
004	BHC1_0.1-0.2	30	14	26	11	7	10	11	9

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239469

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
001	BHA1M_0.1-0.2	2	1	1
002	BHA4_0.2-0.3	2	1	1
003	BHA7M_0.2-0.3	2	1	1
004	BHC1_0.1-0.2	2	1	1

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

E-MAILED
18/11/22 3.12pm

Sheet 1 of

Site: 80 O'Connell St, Kingswood	Project No: E25834
Laboratory: SGS Australia Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015 P: 02 8594 0400 F: 02 8594 0499	

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	SOIL	WATER	0.45 µm field filtered	OTHER	HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM [A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
BHA2-0.3-0.4	1	J.ZLB	11/11	pm	X				X																		
BHB1-0.2-0.3			14/11																								
BHC2-0.2-0.3			14/11																								
BHF5-0.2-0.3			10/11																								

SGS EHS Sydney COC
SE239584

Comments

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

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

LABORATORY TURNAROUND

- ☐ Standard
- ☐ 24 Hours
- ☐ 48 Hours
- ☒ 72 Hours 25/11
- ☐ 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, Teflon Septum
ZLB = Zip-Lock Bag BB = Bulk Bag

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

Report with EI Waste Classification Table ☒

Sampler's Name (EI):	Received by (SGS):	Sampler's Comments:
Print: Fiona Zhang	Print:	p/s CC Ci
Signature:	Signature:	
Date: 18/11/2022	Date: 18/11/22 @ 11.2	

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

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

source SE_Anocan.pdf page 1 555 Ref: SE239584_COC

AB

~~A2 - 0.3 - 0.4~~

A2 - 1.0 - 1.1

A2 - 1.6 - 1.7

A2 - 2.2 - 2.3

A3 - 1.6 - 1.7

A5 - 1.9 - 2.0

A5 - 2.9 - 3.0

A6 - 1.5 - 1.6

B.

B2 - 1.3 - 1.4

B2 - 2.3 - 2.4

B3 - 0.2 - 0.3

~~B3 - 1.1 - 1.2~~

B4 - 1.1 - 1.2

~~B5 - 1.0 - 1.1~~

B6 - 0.9 - 1.0

~~B7 - 1.5 - 1.6~~

C

C6 - 1.2 - 1.3

D

D6 - 0.3. 04

E

E7 - 0.3 - 0.4

E7 - 0.3 - 0.4

F

F5 - 1.4 - 1.5

F5 - 2.0 - 2.1

H.

H5 - 1.9 - 2.0

SAMPLE RECEIPT ADVICE

SE239584

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	1

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Fri 18/11/2022
Report Due	Fri 25/11/2022
SGS Reference	**SE239584**

SUBMISSION DETAILS

This is to confirm that 1 sample was received on Friday 18/ 11/2022. Results are expected to be ready by COB Friday 25/ 11/2022. Please quote SGS reference SE239584 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	1 Soil
Date documentation received	18/11/2022@3:12pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	15.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

COMMENTS

Samples with red dots not received.
Extra samples on Page 2 of COC have been placed on hold as no tests have been assigned for it. These samples will not be processed.

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SAMPLE RECEIPT ADVICE

SE239584

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BHA2_0.3-0.4	30	14	26	11	7	10	11	7

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239584

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
001	BHA2_0.3-0.4	2	1	1

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
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source: SE_Autoscan.pdf page: 1 SGS Ref: SE239584A_COC

Yin, Emily (Sydney)

From: Fiona Zhang - EIAustralia <fiona.zhang@eiaustralia.com.au>
Sent: Thursday, 24 November 2022 5:18 PM
To: Yin, Emily (Sydney); AU.SampleReceipt.Sydney, AU (Sydney); AU.Environmental.Sydney, AU (Sydney)
Cc: Li Wei - EIAustralia
Subject: [EXTERNAL] RE: E25834

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

Thank you Emily,

Can you please test HM/TRH/BTEX/PAHs/OCP/OPP/PCB/Asbestos for the following samples:

- BHF5_1.4-1.5

3days TAT please

Kind regards,
Fiona Zhang
BEng (Env), MEng (Env)
Environmental Engineer
T 02 9516 0722 M 0405 380 237
E fiona.zhang@eiaustralia.com.au
Suite 6.01, 55 Miller Street
Pyrmont, NSW 2009
www.eiaustralia.com.au

SGS EHS Alexandria Laboratory
SE239584A COC
Received: 24 – Nov – 2022

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Please consider the environment before printing this email.

From: Yin, Emily (Sydney) [mailto:Emily.Yin@sgs.com]
Sent: Thursday, 24 November 2022 11:34 AM
To: Fiona Zhang - EIAustralia; Li Wei - EIAustralia
Subject: E25834

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Dear All,

Only BHA2_0.3-0.4 received.
The other three samples not received,

SAMPLE RECEIPT ADVICE

SE239584A

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood-Add**
Order Number	**E25834**
Samples	2

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Thu 24/11/2022
Report Due	Tue 29/11/2022
SGS Reference	**SE239584A**

SUBMISSION DETAILS

This is to confirm that 2 samples were received on Thursday 24/11/2022. Results are expected to be ready by COB Tuesday 29/11/2022. Please quote SGS reference SE239584A when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	1 Soil
Date documentation received	24/11/2022@5:18PM	Type of documentation received	Email
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	15.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days		

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

COMMENTS

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SAMPLE RECEIPT ADVICE

SE239584A

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood-Add

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
002	BHF5_1.4-1.5	30	14	26	11	7	10	11	7

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239584A

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood-Add

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
002	BHF5_1.4-1.5	2	1	1

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

Sheet 1 of 2

Site: 80 O'Connell Street, Kingswood

Project No: E25934

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM ^ /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM ^ /TRH/BTEX/PAHs	HM ^ /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
BHG6_0.7-0.8	1	J ZLB	10/11	AM/PM	X					X																	
BH F6_0.5-0.6	2																										
BHE6_0.5-0.6	3																										
BHF5_0.2-0.3	4																										
BHG5_1.6-1.7	5																										
BHH5_1.5-1.6	6																										
BHD4_1.8-1.9	7																										
BHF4_0.6-0.7	8																										
BHH3_1.2-1.3	9																										
BHG3_0.9-1.0	10																										
BHB2_3.5-3.6	11		11/11																								
BHA2_3.0-3.1	12																										

SGS EHS Sydney COC
SE239147

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

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

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

COC June 2021 FORM v.5 - SGS

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

Report with EI Waste Classification Table [x]

Sampler's Name (EI): LH	Received by (SGS):
Print: Leo Ho	Print: Madison
Signature: Leo	Signature:
Date: 15/11/22	Date: 15-11-22 2:15

Sampler's Comments:

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

source SE_Arkocan.pdf page 1 555 Ref SE239147_COC

Sheet 2 of 2

Site:	Project No:
80 O'Connell Street, Kingswood	E25934

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	SOIL	WATER	0.45 µm field filtered	OTHER	HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	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
BHCS_0.9-1.0	73	J-ZLB	11/11	AM/PM	X					X																	
BHE4_2.0-2.1	74																										
BHD3_1.5-1.6	75																										
BHF3_0.6-0.7	76																										
BHG4_1.2-1.3	77																										
BHB1_0.8-0.9	78		14/11																								
BHB2_0.5-0.6	79																										

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

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

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

COC June 2021 FORM v.5 - SGS

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

Sampler's Name (EI): LH	Received by (SGS):
Print: Leo Ho	Print:
Signature:	Signature:
Date: 15/11/22	Date: 15-11-22 2:15

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

Report with EI Waste Classification Table [x]

Sampler's Comments:

Yin, Emily (Sydney)

From: Fiona Zhang - ElAustralia <fiona.zhang@eiaustralia.com.au>
Sent: Friday, 18 November 2022 3:19 PM
To: AU.SampleReceipt.Sydney, AU (Sydney); AU.Environmental.Sydney, AU (Sydney)
Cc: Li Wei - ElAustralia; Leo Ho - ElAustralia
Subject: [EXTERNAL] RE: SGS Sample Receipt Advice (Ref: E25834 80 O' Connell Street, Kingswood, Lab Ref: SE239147)

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

Hi SGS,

Please don't test the following samples, and on hold please:

11 • BHB2 - 3.5-3.6
14 • BHE4 - 2.0-2.1
16 • BHF3 - 0.6-0.7
4 • BHF5 - 0.2-0.3
17 • BHG4 - 1.2-1.3
1 • BHG6 - 0.7-0.8
9 ~~10~~ • BHH3 - 1.2-1.3
6 • BHH5 - 1.5-1.6
19 • BHB2 - 0.5-0.6

Kind regards,
Fiona Zhang
BEng (Env), MEng (Env)
Environmental Engineer

T 02 9516 0722 M 0405 380 237
E fiona.zhang@eiaustralia.com.au

Suite 6.01, 55 Miller Street
Pyrmont, NSW 2009

www.eiaustralia.com.au

Environmental | Geotechnical | Structural | Civil | Hazardous Materials

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From: AU.Samplereceipt.Sydney@SGS.com [mailto:AU.Samplereceipt.Sydney@SGS.com]
Sent: Wednesday, 16 November 2022 9:11 PM
To: Leo Ho - ElAustralia; Laboratory Results - ElAustralia
Subject: SGS Sample Receipt Advice (Ref: E25834 80 O' Connell Street, Kingswood, Lab Ref: SE239147)

SAMPLE RECEIPT ADVICE

SE239147

CLIENT DETAILS

Contact	Leo Ho
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	leo.ho@eiaustralia.com.au
Project	**E25834 80 O' Connell Street, Kingswood**
Order Number	**E25834**
Samples	19

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Tue 15/11/2022
Report Due	Tue 22/11/2022
SGS Reference	**SE239147**

SUBMISSION DETAILS

This is to confirm that 19 samples were received on Tuesday 15/11/2022. Results are expected to be ready by COB Tuesday 22/11/2022.
Please quote SGS reference SE239147 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	10 Soil
Date documentation received	15/11/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.6°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

COMMENTS

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SAMPLE RECEIPT ADVICE

SE239147

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O' Connell Street, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BHG6 - 0.7-0.8	1	-	-	-	-	-
002	BHF6 - 0.5-0.6	1	26	7	10	11	9
003	BHE6 - 0.5-0.6	1	26	7	10	11	9
004	BHF5 - 0.2-0.3	1	-	-	-	-	-
005	BHG5 - 1.6-1.7	1	26	7	10	11	9
006	BHH5 - 1.5-1.6	1	-	-	-	-	-
007	BHD4 - 1.8-1.9	1	26	7	10	11	9
008	BHF4 - 0.6-0.7	1	26	7	10	11	9
009	BHH3 - 1.2-1.3	1	-	-	-	-	-
010	BHG3 - 0.9-1.0	1	26	7	10	11	9
011	BHB2 - 3.5-3.6	1	-	-	-	-	-
012	BHA2 - 3.0-3.1	1	26	7	10	11	9
013	BHC5 - 0.9-1.0	1	26	7	10	11	9
014	BHE4 - 2.0-2.1	1	-	-	-	-	-
015	BHD3 - 1.5-1.6	1	26	7	10	11	9
016	BHF3 - 0.6-0.7	1	-	-	-	-	-
017	BHG4 - 1.2-1.3	1	-	-	-	-	-
018	BHB1 - 0.8-0.9	1	26	7	10	11	9
019	BHB2 - 0.5-0.6	1	-	-	-	-	-

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239147

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O' Connell Street, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Moisture Content
001	BHG6 - 0.7-0.8	1
002	BHF6 - 0.5-0.6	1
003	BHE6 - 0.5-0.6	1
004	BHF5 - 0.2-0.3	1
005	BHG5 - 1.6-1.7	1
006	BHH5 - 1.5-1.6	1
007	BHD4 - 1.8-1.9	1
008	BHF4 - 0.6-0.7	1
009	BHH3 - 1.2-1.3	1
010	BHG3 - 0.9-1.0	1
011	BHB2 - 3.5-3.6	1
012	BHA2 - 3.0-3.1	1
013	BHC5 - 0.9-1.0	1
014	BHE4 - 2.0-2.1	1
015	BHD3 - 1.5-1.6	1
016	BHF3 - 0.6-0.7	1
017	BHG4 - 1.2-1.3	1
018	BHB1 - 0.8-0.9	1
019	BHB2 - 0.5-0.6	1

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

Sheet 1 of 1

Site: 80 O'Connell St, Kingswood

Project No: E25834

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM[A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM[A] /TRH/BTEX/PAHs	HM[A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM[A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM[B] / PAH
BHGWM-0.6-0.7	1	J	15/11/22	am	X					X																	
BHE2-0.6-0.7	2																										
BHH4-0.2-0.7	3																										
BHE3-0.4-0.5	4																										
BHD1-0.6-0.7	5																										
BHF2-0.6-0.7	6																										
BHE5-0.5-0.6	7																										
BHH7-0.2-0.3	8																										
BHH2-0.4-0.5	9																										
BHE1-0.5-0.6	10																										
BHF1-0.6-0.7	11																										
BHK7-0.3-0.4	12																										

SGS EHS Sydney COC
SE239306

Comments

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

HM[B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

LABORATORY TURNAROUND

- [ ] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [x] 72 Hours
- [ ] Other

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

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

Report with EI Waste Classification Table [x]

Sampler's Name (EI):	Received by (SGS):	Sampler's Comments:
Print: Fiona Zhang	Print: Caroline	p/s CC (i
Signature:	Signature:	
Date: 18/11/22	Date: 18/11/22 2:15pm	

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

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

source SE_Anocan.pdf page 1 555 Ref SE239306_COC

Yin, Emily (Sydney)

From: Fiona Zhang - ElAustralia <fiona.zhang@eiaustralia.com.au>
Sent: Friday, 18 November 2022 11:10 PM
To: AU.SampleReceipt.Sydney, AU (Sydney); AU.Environmental.Sydney, AU (Sydney)
Cc: Li Wei - ElAustralia
Subject: [EXTERNAL] Re: SGS Sample Receipt Advice (Ref: E25834 80 O'Connell St, Kingswood, Lab Ref: SE239306)
Attachments: SE239306_Receipt.PDF; SE239306_COC.PDF

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

Hi SGS,

Please do not test the following samples:

2 BHE2_0.6-0.7
1\ BHF1_0.6-0.7

Please on hold those samples.

Many thanks.

Kind regards,
Fiona

Sent from my iPhone

On Nov 18, 2022, at 19:12, AU.Samplereceipt.Sydney@sgs.com wrote:

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Dear Li Wei,

Please be advised we have received samples for analysis as detailed in the attached documentation.

Please provide any feedback you have on our service via this link
https://sgs.surveymonkey.com/r/F92B32Q

Best regards,
SGS Alexandria Sample Administration Team
SGS Australia Pty Ltd
Phone: +61 (0)2 8594 0400
Fax: +61 (0)2 8594 0499

SAMPLE RECEIPT ADVICE

SE239306

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	12

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Fri 18/11/2022
Report Due	Wed 23/11/2022
SGS Reference	**SE239306**

SUBMISSION DETAILS

This is to confirm that 12 samples were received on Friday 18/ 11/2022. Results are expected to be ready by COB Wednesday 23/11/2022.
Please quote SGS reference SE239306 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	10 Soil
Date documentation received	18/11/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	9.8C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days		

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

COMMENTS

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SAMPLE RECEIPT ADVICE

SE239306

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BHG1M_0.6-0.7	1	26	7	10	11	9
003	BHH4_0.2-0.3	1	26	7	10	11	9
004	BHE3_0.4-0.5	1	26	7	10	11	9
005	BHD1_0.6-0.7	1	26	7	10	11	9
006	BHF2_0.6-0.7	1	26	7	10	11	9
007	BHE5_0.5-0.6	1	26	7	10	11	9
008	BHH7_0.2-0.3	1	26	7	10	11	9
009	BHH2_0.4-0.5	1	26	7	10	11	9
010	BHE1_0.5-0.6	1	26	7	10	11	9
012	BHC7_0.3-0.4	1	26	7	10	11	9

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239306

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Moisture Content
001	BHG1M_0.6-0.7	1
003	BHH4_0.2-0.3	1
004	BHE3_0.4-0.5	1
005	BHD1_0.6-0.7	1
006	BHF2_0.6-0.7	1
007	BHE5_0.5-0.6	1
008	BHH7_0.2-0.3	1
009	BHH2_0.4-0.5	1
010	BHE1_0.5-0.6	1
012	BHC7_0.3-0.4	1

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

E-MAILED
18/11 @ 11a

Sheet 1 of 1

Site: 80 O'Connell St, Kingswood	Project No: E25834

Laboratory:	SGS Australia Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015 P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	SOIL	WATER	0.45 µm field filtered	OTHER	HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM [A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
BHH7M-0.2-0.3			16/11/22	PM						X																	
BHAM-0.6-0.8	1		11/11/22							X																	
BHA4-0.7-0.8	2		11/11/22							X																	
BHA7M-0.7-0.8	3		10/11/22							X																	
BHC1-0.7-0.8	4		14/11/22							X																	
BHC1-3.5-3.6																											
BHE2-0.6-0.7										X																	
BHE1-0.6-0.7										X																	
BHE1-0.5-0.6										X																	

SGS EHS Sydney COC
SE239470

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

Comments

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

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

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

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

COC June 2021 FORM v.5 - SGS

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

Sampler's Name (EI):	Received by (SGS):
Print: Fiona Zhang	Print: Danny Lu
Signature:	Signature:
Date: 18/11/22	Date: 18/11 @ 11a

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

Report with EI Waste Classification Table ☒

Sampler's Comments:

p/s CC [2]

Yin, Emily (Sydney)

From: Fiona Zhang - EIAustralia <fiona.zhang@eiaustralia.com.au>
Sent: Friday, 18 November 2022 3:30 PM
To: AU.SampleReceipt.Sydney, AU (Sydney); AU.Environmental.Sydney, AU (Sydney)
Cc: Li Wei - EIAustralia; Leo Ho - EIAustralia
Subject: RE: [EXTERNAL] Re: COCSs E25834 Kingswood

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

Hi SGS,

Please do not test the following samples on COC:

- BHD2_0.1-0.2
- BHF1_0.1-0.2
- BHE1_0.1-0.2
- BHE2_0.6-0.7
- BHF10.6-0.7
- BHC1_3.5-3.6

Please on hold the samples.

Thank you

Kind regards,
Fiona Zhang
BEng (Env), MEng (Env)
Environmental Engineer

T 02 9516 0722 M 0405 380 237
E fiona.zhang@eiaustralia.com.au

Suite 6.01, 55 Miller Street
Pyrmont, NSW 2009

www.eiaustralia.com.au

Environmental | Geotechnical | Structural | Civil | Hazardous Materials

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Disclosure, copying, distribution or use of the contents of this email is strictly prohibited.

Please consider the environment before printing this email.

From: Fiona Zhang - EIAustralia
Sent: Friday, 18 November 2022 11:00 AM
To: 'AU.SampleReceipt.Sydney, AU (Sydney)'
Cc: Li Wei - EIAustralia; Leo Ho - EIAustralia
Subject: RE: [EXTERNAL] Re: COCSs E25834 Kingswood

Hi SGS,

Please find attached COC for the remaining samples.

SAMPLE RECEIPT ADVICE

SE239470

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	4

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Fri 18/11/2022
Report Due	Fri 25/11/2022
SGS Reference	**SE239470**

SUBMISSION DETAILS

This is to confirm that 4 samples were received on Friday 18/ 11/2022. Results are expected to be ready by COB Friday 25/ 11/2022. Please quote SGS reference SE239470 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	4 Soil
Date documentation received	18/11/2022 @11am	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	15.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

COMMENTS

1 soil sample has been placed on hold as no tests have been assigned for it. This sample will not be processed.
BHH7M_0.2-0.3 and BHF1_0.5-0.6 not received.

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SAMPLE RECEIPT ADVICE

SE239470

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BHA1M_0.6-0.8	1	26	7	10	11	7
002	BHA4_0.7-0.8	1	26	7	10	11	7
003	BHA7M_0.7-0.8	1	26	7	10	11	7
004	BHC1_0.7-0.8	1	26	7	10	11	7

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239470

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Moisture Content
001	BHA1M_0.6-0.8	1
002	BHA4_0.7-0.8	1
003	BHA7M_0.7-0.8	1
004	BHC1_0.7-0.8	1

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

E-MAILED
18/11 @ 3.1pm

Sheet 1 of 1

Site: 80 O'Connell St, Kingswood	Project No: E25834

Laboratory:	SGS Australia Unit 16, 33 Maddox Street, ALEXANDRIA NSW 2015 P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	SOIL	WATER	0.45 µm field filtered	OTHER	HM ^ /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM ^ /TRH/BTEX/PAHs	HM ^ /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM ^ /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
BH103_1.1-1.2	1	J,ZLB	11/11	pm	X					X																	
BH105_1.0-1.1	2	↓	↓	↓	↓					X																	
BH107_1.5-1.6	3	↓	↓	↓	↓					X																	

Comments

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

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

SGS EHS Sydney COC
SE239522

LABORATORY TURNAROUND
- ☐ Standard
- ☐ 24 Hours
- ☐ 48 Hours
- ☒ 72 Hours 25/11
- ☐ Other____

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

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

Report with EI Waste Classification Table ☒

Sampler's Name (EI):	Received by (SGS):	Sampler's Comments:
Print: Fiona Zhang	Print:	p/s CC Li
Signature:	Signature:	
Date: 18/11/22	Date: 18/11/22 @ 11—	

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

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

source SE_Anxxxan.pdf page 1 555 Ref SE239522_COC

SAMPLE RECEIPT ADVICE

SE239522

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	3

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Fri 18/11/2022
Report Due	Fri 25/11/2022
SGS Reference	**SE239522**

SUBMISSION DETAILS

This is to confirm that 3 samples were received on Friday 18/ 11/2022. Results are expected to be ready by COB Friday 25/ 11/2022. Please quote SGS reference SE239522 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	3 Soil
Date documentation received	18/11/2022@3:12pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	15.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

COMMENTS

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SAMPLE RECEIPT ADVICE

SE239522

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BHB3_1.1-1.0	1	26	7	10	11	7
002	BHB5_1.0-1.1	1	26	7	10	11	7
003	BHB7_1.5-1.6	1	26	7	10	11	7

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE239522

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O'Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Moisture Content
001	BHB3_1.1-1.0	1
002	BHB5_1.0-1.1	1
003	BHB7_1.5-1.6	1

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

source: Sydney.pdf page: 7 SDG Ref: SE239398_COC

Sheet 1 of 1

Site: 80 O'connell St, kingswood

Project No: E25834

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: SOIL	WATER	0.45 µm field filtered	OTHER	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Phenols	Asbestos Quantification	Excavated Natural Material (ENM) Suite	ENM Suite - Stockpile discrete (TRH/BTEX/PAHs)	ENM Suite - Stockpile composite (HM [A] /pH / EC / Foreign Materials)	Dewatering Suite	pH / pH peroxide	sPOCAS	Chromium Reducible Sulfur (CrS)	PFAS	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Sulphate / Chloride	Lead	TCLP HM [B] / PAH
GW-BHA1M	1	S,P,2VC	21/11	pm		X	X			X			X	X														
GW-BHD4M	2	↓	↓	↓		↓	↓			↓			↓	↓														
GW-BHG1M	3																											
GW-BHA7M	4																											
GW-BHH7M	5																											
GW-QD1	6						↓				X																	
GW-QTB1	7	bb provide										X																
GW-QTS1	8	↓										X																
GW-QR1	9	S,P,2VC					X				X																	
GW-QRB1		↓	↓	↓		↓	X																					

Comments

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

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

SGS EHS Sydney COC
SE239398

LABORATORY TURNAROUND
- [ ] Standard
- [ ] 24 Hours
- [ ] 48 Hours
- [x] 72 Hours
- [ ] Other ____

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

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

COC June 2021 FORM v.5 - SGS

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

Sampler's Name (EI):	Received by (SGS):
Print: Fiona	Print: [illegible]
Signature: [signature]	Signature: [signature]
Date: 21/11/2022	Date: 21.11.22 5:10PM

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

Report with EI Waste Classification Table [x]

Sampler's Comments:

p/s cc Li

p/s Send GW-QT1 to Envirolab

SAMPLE RECEIPT ADVICE

SE239398

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O`Connell St, Kingswood**
Order Number	**E25834**
Samples	9

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Mon 21/11/2022
Report Due	Thu 24/11/2022
SGS Reference	**SE239398**

SUBMISSION DETAILS

This is to confirm that 9 samples were received on Monday 21/ 11/2022. Results are expected to be ready by COB Thursday 24/11/2022. Please quote SGS reference SE239398 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	9 Water
Date documentation received	21/11/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	16.9°C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days		

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

COMMENTS

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

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SAMPLE RECEIPT ADVICE

SE239398

CLIENT DETAILS

Client EI AUSTRALIA

Project E25834 80 O`Connell St, Kingswood

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	PAH (Polynuclear Aromatic Hydrocarbons) in Water	Total Phenolics in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
001	GW-BHA1M	1	22	1	7	9	78	7
002	GW-BHD4M	1	22	1	7	9	78	7
003	GW-BHG1M	1	22	1	7	9	78	7
004	GW-BHA7M	1	22	1	7	9	78	7
005	GW-BHH7M	1	22	1	7	9	78	7
006	GW-QD1	1	-	-	7	9	11	7
007	GW-QTB1	-	-	-	-	-	11	-
008	GW-QTS1	-	-	-	-	-	11	-
009	GW-QR1	1	-	-	7	9	11	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
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Testing as per this table shall commence immediately unless the client intervenes with a correction .

Sheet 1 of 1

Site: 80 O'Connell St, Kingswood

Project No: E25834

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-BH1	1	S,P,ZLB	21/11	PM		X	X			X																	

ENVIROLAB

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

Job No: 31316

Date Received: 22-11-22

Time Received: 1700

Received By: TJ/HAN

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

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

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (Envirolab):
Print: Fiona	Print: TJ/HAN
Signature:	Signature:
Date: 21/11/2022	Date: 22-11-2022 1700

Sampler's Comments: P/S CC (1)

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

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, Sharon Li

Sample Login Details

Your reference	E25834, 80 O'Connell St Kingswood
Envirolab Reference	311316
Date Sample Received	22/11/2022
Date Instructions Received	22/11/2022
Date Results Expected to be Reported	25/11/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

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

Sample ID	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHsin Water	HM in water - dissolved
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.

Appendix K – Laboratory Analytical Reports

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Leo Ho
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	leo.ho@eiaustralia.com.au
Project	**E25834 80 O'Connell Street, Kingswood**
Order Number	**E25834**
Samples	39

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE239146 R0**
Date Received	15/11/2022
Date Reported	22/11/2022

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Sample #3: Chrysotile and Crocidolite asbestos found in approx 15x10x4mm cement sheet fragment.
Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Dong LIANG
Metals/Inorganics Team Leader

Huong CRAWFORD
Production Manager

Kamrul AHSAN
Senior Chemist

Ly Kim HA
Organic Section Head

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

VOC's in Soil [AN433] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	QD1 SOIL - 10/11/2022 SE239146.016	TB1 SOIL - 10/11/2022 SE239146.017	TSP1 SOIL - 10/11/2022 SE239146.018	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022
Benzene	mg/kg	0.1	<0.1	<0.1	[93%]	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	[94%]	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	[99%]	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	[100%]	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	[98%]	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	-	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	-	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1

VOC's in Soil [AN433] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035	QD2 SOIL - 11/11/2022 SE239146.036	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
TRH C6-C10 raw	µg/L	0.05	**7.8**	**9.3**	**3.0**	<0.050	<0.050
TRH C6-C9 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
TRH C6-C10 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
TRH C6-C9 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
TRH C6-C10 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
TRH C6-C9 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	QD1 SOIL - 10/11/2022 SE239146.016	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024
TRH C6-C10 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
TRH C6-C9 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029
TRH C6-C10 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.05
TRH C6-C9 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.05
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034
TRH C6-C10 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
TRH C6-C9 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035	QD2 SOIL - 11/11/2022 SE239146.036	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
TRH C6-C10 raw	µg/L	0.05	<0.050	<0.050	<0.05
TRH C6-C9 raw	µg/L	0.05	<0.050	<0.050	<0.05
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	**57**	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	**57**	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	**53**	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	**130**	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	**110**	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	**130**	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	**170**	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	**190**	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	**300**	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	QD1 SOIL - 10/11/2022 SE239146.016	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	**120**	**100**	**140**
TRH C29-C36	mg/kg	45	<45	<45	**240**	**200**	**280**
TRH C37-C40	mg/kg	100	<100	<100	**180**	**140**	**190**
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	**250**	**210**	**300**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	**280**	**230**	**300**
TRH C10-C36 Total	mg/kg	110	<110	<110	**360**	**300**	**420**
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	**540**	**440**	**600**

PARAMETER	UOM	LOR	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	**210**	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	**540**	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	**440**	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	**520**	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	**660**	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	**760**	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	**1200**	<210	<210	<210	<210

PARAMETER	UOM	LOR	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035	QD2 SOIL - 11/11/2022 SE239146.036	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	**67**	<45
TRH C29-C36	mg/kg	45	<45	**120**	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	**140**	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	**140**	<120
TRH C10-C36 Total	mg/kg	110	<110	**190**	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	**280**	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	**0.1**	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	**0.1**	**0.1**	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	**0.1**	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.2**	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	**0.3**	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	**0.2**	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	**0.2**	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	**0.2**	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	**0.3**	**0.1**	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	**0.3**	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	**0.4**	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	**0.3**	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	**1.9**	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	**1.9**	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	**0.4**	**0.1**	**0.4**	**0.6**
Anthracene	mg/kg	0.1	<0.1	**0.1**	<0.1	**0.1**	**0.2**
Fluoranthene	mg/kg	0.1	<0.1	**0.6**	**0.3**	**0.6**	**0.9**
Pyrene	mg/kg	0.1	<0.1	**0.5**	**0.3**	**0.6**	**0.8**
Benzo(a)anthracene	mg/kg	0.1	<0.1	**0.2**	**0.1**	**0.3**	**0.4**
Chrysene	mg/kg	0.1	<0.1	**0.2**	**0.1**	**0.3**	**0.4**
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	**0.3**	**0.2**	**0.3**	**0.5**
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	**0.1**	<0.1	**0.1**	**0.2**
Benzo(a)pyrene	mg/kg	0.1	<0.1	**0.2**	**0.1**	**0.3**	**0.4**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	**0.2**	<0.1	**0.2**	**0.3**
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	**0.2**	**0.2**	**0.3**	**0.4**
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	**0.3**	<0.2	**0.4**	**0.5**
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	**0.4**	<0.3	**0.5**	**0.6**
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	**0.4**	**0.2**	**0.4**	**0.6**
Total PAH (18)	mg/kg	0.8	<0.8	**3.1**	**1.5**	**3.5**	**5.0**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	**3.1**	**1.5**	**3.5**	**5.0**

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	**0.1**	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	**0.1**	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Pyrene	mg/kg	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2
Endrin	mg/kg	0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1
Total OC VIC EPA	mg/kg	1	<1

OP Pesticides in Soil [AN420] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

OP Pesticides in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

OP Pesticides in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
Dichlorvos	mg/kg	0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2
Malathion	mg/kg	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2
Methidathion	mg/kg	0.5	<0.5
Ethion	mg/kg	0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7

PCBs in Soil [AN420] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PCBs in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PCBs in Soil [AN420] Tested: 18/11/2022 (continued)

PARAMETER	UOM	LOR	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
Arochlor 1016	mg/kg	0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
Arsenic, As	mg/kg	1	4	5	6	5	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	13	17	14	17
Copper, Cu	mg/kg	0.5	22	25	32	25	33
Lead, Pb	mg/kg	1	12	13	14	14	12
Nickel, Ni	mg/kg	0.5	15	14	20	17	25
Zinc, Zn	mg/kg	2	47	45	48	55	61

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
Arsenic, As	mg/kg	1	10	5	6	5	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	24	17	20	18	11
Copper, Cu	mg/kg	0.5	29	26	22	24	21
Lead, Pb	mg/kg	1	19	16	17	14	13
Nickel, Ni	mg/kg	0.5	19	19	20	25	16
Zinc, Zn	mg/kg	2	43	46	47	66	49

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
Arsenic, As	mg/kg	1	3	2	8	7	11
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	11	22	17	23
Copper, Cu	mg/kg	0.5	23	40	31	30	35
Lead, Pb	mg/kg	1	15	7	13	16	14
Nickel, Ni	mg/kg	0.5	12	74	23	18	20
Zinc, Zn	mg/kg	2	43	46	64	45	71

PARAMETER	UOM	LOR	QD1 SOIL - 10/11/2022 SE239146.016	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024
Arsenic, As	mg/kg	1	7	2	2	2	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	20	12	6.6	10	9.2
Copper, Cu	mg/kg	0.5	31	38	30	56	22
Lead, Pb	mg/kg	1	12	20	10	9	9
Nickel, Ni	mg/kg	0.5	24	23	6.5	7.8	6.9
Zinc, Zn	mg/kg	2	69	90	27	31	30

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 18/11/2022

(continued)

PARAMETER	UOM	LOR	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029
Arsenic, As	mg/kg	1	3	<1	2	1	1
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	11	<0.5	10	6.4	6.2
Copper, Cu	mg/kg	0.5	42	<0.5	15	5.9	4.2
Lead, Pb	mg/kg	1	11	<1	9	8	8
Nickel, Ni	mg/kg	0.5	7.9	<0.5	6.2	5.0	4.1
Zinc, Zn	mg/kg	2	34	<2.0	20	16	16

PARAMETER	UOM	LOR	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034
Arsenic, As	mg/kg	1	11	9	5	9	19
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	21	20	11	22	22
Copper, Cu	mg/kg	0.5	38	22	32	27	39
Lead, Pb	mg/kg	1	16	11	15	24	14
Nickel, Ni	mg/kg	0.5	29	18	16	24	28
Zinc, Zn	mg/kg	2	81	44	59	52	83

PARAMETER	UOM	LOR	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035	QD2 SOIL - 11/11/2022 SE239146.036	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
Arsenic, As	mg/kg	1	10	1	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	20	6.4	15
Copper, Cu	mg/kg	0.5	43	5.5	35
Lead, Pb	mg/kg	1	16	9	19
Nickel, Ni	mg/kg	0.5	32	4.4	20
Zinc, Zn	mg/kg	2	88	19	53

Mercury in Soil [AN312] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	QD1 SOIL - 10/11/2022 SE239146.016	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024
Mercury	mg/kg	0.05	<0.05	0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035	QD2 SOIL - 11/11/2022 SE239146.036	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
% Moisture	%w/w	1	10.2	8.5	13.8	13.8	10.2

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
% Moisture	%w/w	1	17.7	9.8	5.3	10.0	10.6

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
% Moisture	%w/w	1	8.9	12.0	12.0	13.2	16.2

PARAMETER	UOM	LOR	QD1 SOIL - 10/11/2022 SE239146.016	TB1 SOIL - 10/11/2022 SE239146.017	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023
% Moisture	%w/w	1	12.3	<1.0	8.5	7.0	8.3

PARAMETER	UOM	LOR	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028
% Moisture	%w/w	1	7.1	7.7	6.1	4.3	5.6

PARAMETER	UOM	LOR	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033
% Moisture	%w/w	1	5.8	10.6	12.5	13.3	17.6

PARAMETER	UOM	LOR	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035	QD2 SOIL - 11/11/2022 SE239146.036	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
% Moisture	%w/w	1	10.5	12.3	6.5	15.0

Fibre Identification in soil [AN602] Tested: 18/11/2022

PARAMETER	UOM	LOR	BHF7_0.2-0.3 SOIL - 10/11/2022 SE239146.001	BHE7_0.0-0.1 SOIL - 10/11/2022 SE239146.002	BHD7_0.0-0.1 SOIL - 10/11/2022 SE239146.003	BHG7_0.4-0.5 SOIL - 10/11/2022 SE239146.004	BHH6_0.5-0.6 SOIL - 10/11/2022 SE239146.005
Asbestos Detected	No unit	-	No	No	Yes	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	**>0.01**	<0.01	<0.01

PARAMETER	UOM	LOR	BHG6_0.1-0.2 SOIL - 10/11/2022 SE239146.006	BHF6_0.0-0.1 SOIL - 10/11/2022 SE239146.007	BHE6_0.0-0.1 SOIL - 10/11/2022 SE239146.008	BHD6_0.1-0.2 SOIL - 10/11/2022 SE239146.009	BHD5_0.1-0.2 SOIL - 10/11/2022 SE239146.010
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BHG5_0.3-0.4 SOIL - 10/11/2022 SE239146.011	BHH5_0.3-0.4 SOIL - 10/11/2022 SE239146.012	BHD4_0.4-0.5 SOIL - 10/11/2022 SE239146.013	BHH3_0.2-0.3 SOIL - 10/11/2022 SE239146.014	BHG3_0.3-0.4 SOIL - 10/11/2022 SE239146.015
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BHA6_0.7-0.8 SOIL - 11/11/2022 SE239146.021	BHA5_0.3-0.4 SOIL - 11/11/2022 SE239146.022	BHB7_0.5-0.6 SOIL - 11/11/2022 SE239146.023	BHB6_0.3-0.4 SOIL - 11/11/2022 SE239146.024	BHB5_0.3-0.4 SOIL - 11/11/2022 SE239146.025
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BHB4_0.3-0.4 SOIL - 11/11/2022 SE239146.026	BHB3_0.4-0.5 SOIL - 11/11/2022 SE239146.027	BHB2_0.4-0.5 SOIL - 11/11/2022 SE239146.028	BHA3_0.2-0.3 SOIL - 11/11/2022 SE239146.029	BHC3_0.2-0.3 SOIL - 11/11/2022 SE239146.030
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BHC5_0.1-0.2 SOIL - 11/11/2022 SE239146.031	BHC6_0.6-0.7 SOIL - 11/11/2022 SE239146.032	BHE4_0.3-0.4 SOIL - 11/11/2022 SE239146.033	BHD3_0.3-0.4 SOIL - 11/11/2022 SE239146.034	BHG4_0.3-0.4 SOIL - 11/11/2022 SE239146.035
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BHC2_0.2-0.3 SOIL - 14/11/2022 SE239146.039
Asbestos Detected	No unit	-	No
Estimated Fibres*	%w/w	0.01	<0.01

VOCs in Water [AN433] Tested: 18/11/2022

PARAMETER	UOM	LOR	QRB WATER - 11/11/2022 SE239146.019	QR1 WATER - 11/11/2022 SE239146.020
Benzene	µg/L	0.5	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5
m/p-xylene	µg/L	1	<1	<1
o-xylene	µg/L	0.5	<0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5	<1.5
Total BTEX	µg/L	3	<3	<3
Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 18/11/2022

PARAMETER	UOM	LOR	QRB WATER - 11/11/2022 SE239146.019	QR1 WATER - 11/11/2022 SE239146.020
TRH C6-C9	µg/L	40	<40	<40
Benzene (F0)	µg/L	0.5	<0.5	<0.5
TRH C6-C10	µg/L	50	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 18/11/2022

PARAMETER	UOM	LOR	QRB WATER - 11/11/2022 SE239146.019	QR1 WATER - 11/11/2022 SE239146.020
TRH C10-C14	µg/L	50	<50	<50
TRH C15-C28	µg/L	200	<200	<200
TRH C29-C36	µg/L	200	<200	<200
TRH C37-C40	µg/L	200	<200	<200
TRH >C10-C16	µg/L	60	<60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60
TRH >C16-C34 (F3)	µg/L	500	<500	<500
TRH >C34-C40 (F4)	µg/L	500	<500	<500
TRH C10-C40	µg/L	320	<320	<320

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 17/11/2022

PARAMETER	UOM	LOR	QRB WATER - 11/11/2022 SE239146.019	QR1 WATER - 11/11/2022 SE239146.020
Arsenic	µg/L	1	<1	<1
Cadmium	µg/L	0.1	<0.1	<0.1
Chromium	µg/L	1	<1	<1
Copper	µg/L	1	<1	<1
Lead	µg/L	1	<1	<1
Nickel	µg/L	1	<1	<1
Zinc	µg/L	5	<5	<5

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 17/11/2022

PARAMETER	UOM	LOR	QRB WATER - 11/11/2022 SE239146.019	QR1 WATER - 11/11/2022 SE239146.020
Mercury	mg/L	0.0001	<0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS /ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."

AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

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SGS Reference	**SE239146 R0**
Date Received	15 Nov 2022
Date Reported	22 Nov 2022

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Sample #3: Chrysotile and Crocidolite asbestos found in approx 15x10x4mm cement sheet fragment.
Asbestos analysed by Approved Identifier Yusuf Kuthpudin.

SIGNATORIES

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE239146.001	BHF7_0.2-0.3	Soil	186g Clay, Sand, Rocks	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.002	BHE7_0.0-0.1	Soil	151g Clay, Sand, Rocks, Bitumen	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.003	BHD7_0.0-0.1	Soil	120g Clay, Sand, Rocks	10 Nov 2022	Chrysotile & Crocidolite Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	>0.01
SE239146.004	BHG7_0.4-0.5	Soil	148g Clay, Sand, Rocks	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.005	BHH6_0.5-0.6	Soil	117g Clay	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.006	BHG6_0.1-0.2	Soil	100g Clay, Sand, Soil, Rocks	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.007	BHF6_0.0-0.1	Soil	103g Clay, Sand, Soil, Rocks, Bitumen	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.008	BHE6_0.0-0.1	Soil	206g Clay, Sand, Rocks	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.009	BHD6_0.1-0.2	Soil	191g Clay, Sand, Rocks	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.010	BHD5_0.1-0.2	Soil	115g Clay, Sand, Rocks	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.011	BHG5_0.3-0.4	Soil	155g Clay, Sand, Rocks, Bitumen	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.012	BHH5_0.3-0.4	Soil	159g Sand, Soil, Rocks, Bitumen	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.013	BHD4_0.4-0.5	Soil	155g Clay, Sand, Soil, Rocks	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.014	BHH3_0.2-0.3	Soil	113g Clay, Sand, Rocks	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.015	BHG3_0.3-0.4	Soil	126g Clay, Sand, Rocks	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.021	BHA6_0.7-0.8	Soil	181g Clay, Sand	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.022	BHA5_0.3-0.4	Soil	176g Sand, Rocks, Bitumen, Cement Mixture	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.023	BHB7_0.5-0.6	Soil	174g Sand, Rocks, Cement Mixture, Bitumen	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.024	BHB6_0.3-0.4	Soil	161g Clay, Sand, Rocks, Bitumen	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.025	BHB5_0.3-0.4	Soil	166g Sand, Rocks, Bitumen, Cement Mixture	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.026	BHB4_0.3-0.4	Soil	143g Sand, Rocks, Cement Mixture	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.027	BHB3_0.4-0.5	Soil	173g Sand, Rocks, Cement Mixture	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE239146.028	BHB2_0.4-0.5	Soil	198g Sand, Rocks, Cement Mixture	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.029	BHA3_0.2-0.3	Soil	151g Sand, Rocks, Cement Mixture	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239146.030	BHC3_0.2-0.3	Soil	100g Clay, Sand, Rocks	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.031	BHC5_0.1-0.2	Soil	127g Clay, Sand, Rocks	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.032	BHC6_0.6-0.7	Soil	118g Clay, Sand, Rocks	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.033	BHE4_0.3-0.4	Soil	109g Clay, Sand, Soil, Rocks	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.034	BHD3_0.3-0.4	Soil	145g Clay, Sand, Rocks	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.035	BHG4_0.3-0.4	Soil	144g Clay, Sand, Rocks	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239146.039	BHC2_0.2-0.3	Soil	157g Clay, Sand, Soil, Rocks	14 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.
Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy , including dispersion staining.
Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety .

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

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Project	**E25834 80 O'Connell Street, Kingswood**
Order Number	**E25834**
Samples	1

LABORATORY DETAILS

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SGS Reference	**SE239146B R0**
Date Received	06 Dec 2022
Date Reported	07 Dec 2022

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

S. Ravee

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE239146B.040	BHD7_0.6-0.7	Soil	120g Clay		No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
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FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

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Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety .

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

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Order Number	**E25834**
Samples	13

LABORATORY DETAILS

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SGS Reference	**SE239307 R0**
Date Received	18/11/2022
Date Reported	23/11/2022

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

Akheeqar BENIAMEEN
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VOC's in Soil [AN433] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
TRH C6-C10 raw	µg/L	0.05	**0.16**	**0.40**	<0.050	<0.050	<0.050
TRH C6-C9 raw	µg/L	0.05	<0.050	**0.38**	<0.050	<0.050	<0.050
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
TRH C6-C10 raw	µg/L	0.05	**0.13**	<0.050	<0.050	<0.050	<0.050
TRH C6-C9 raw	µg/L	0.05	**0.13**	<0.050	<0.050	<0.050	<0.050
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
TRH C6-C10 raw	µg/L	0.05	<0.050	**0.29**	<0.050
TRH C6-C9 raw	µg/L	0.05	<0.050	**0.33**	<0.050
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	**53**
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	**91**
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	**130**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	**140**
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	**50**	<45	**76**
TRH C29-C36	mg/kg	45	<45	**77**	**50**	<45	**83**
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	**130**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	**160**
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.3**
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.1**
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.1**
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	**1.0**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	**1.0**

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.7**
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Fluoranthene	mg/kg	0.1	<0.1	**0.1**	<0.1	<0.1	**2.1**
Pyrene	mg/kg	0.1	<0.1	**0.1**	<0.1	<0.1	**1.9**
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.0**
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.9**
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.6**
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.5**
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.2**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.2**
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**0.2**
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	**1.3**
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	**1.9**
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	**1.9**
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	**1.9**
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	**13**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	**13**

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 21/11/2022 (continued)

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 21/11/2022 (continued)

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 21/11/2022 (continued)

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1

OP Pesticides in Soil [AN420] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7

PCBs in Soil [AN420] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 22/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
Arsenic, As	mg/kg	1	6	6	3	9	6
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	15	16	16	13	31
Copper, Cu	mg/kg	0.5	16	15	2.4	21	42
Lead, Pb	mg/kg	1	10	17	6	15	48
Nickel, Ni	mg/kg	0.5	12	9.3	2.4	16	36
Zinc, Zn	mg/kg	2	31	28	7.7	33	140

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
Arsenic, As	mg/kg	1	5	3	7	6	6
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	10	15	15	13
Copper, Cu	mg/kg	0.5	13	13	25	24	23
Lead, Pb	mg/kg	1	15	10	18	17	15
Nickel, Ni	mg/kg	0.5	13	6.5	15	16	13
Zinc, Zn	mg/kg	2	42	30	50	43	42

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
Arsenic, As	mg/kg	1	7	3	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	22	20
Copper, Cu	mg/kg	0.5	18	3.2	22
Lead, Pb	mg/kg	1	15	9	15
Nickel, Ni	mg/kg	0.5	15	3.7	23
Zinc, Zn	mg/kg	2	38	12	44

Mercury in Soil [AN312] Tested: 22/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
% Moisture	%w/w	1	17.3	9.9	6.6	19.9	36.4

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
% Moisture	%w/w	1	12.2	9.9	16.9	15.9	14.0

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
% Moisture	%w/w	1	17.2	6.6	14.6

Fibre Identification in soil [AN602] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.1-0.2 SOIL - 15/11/2022 SE239307.001	BHE1_0.1-0.2 SOIL - 15/11/2022 SE239307.002	BHC4_0.1-0.2 SOIL - 15/11/2022 SE239307.003	BHE2_0.1-0.2 SOIL - 15/11/2022 SE239307.004	BHE3_0.1-0.1 SOIL - 15/11/2022 SE239307.005
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BHD1_0.1-0.2 SOIL - 15/11/2022 SE239307.006	BHE5_0.1-0.2 SOIL - 15/11/2022 SE239307.007	BHE7_0.1-0.2 SOIL - 15/11/2022 SE239307.008	BHH2_0.1-0.2 SOIL - 15/11/2022 SE239307.009	BHF2_0.1-0.2 SOIL - 15/11/2022 SE239307.010
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BHG2_0.1-0.2 SOIL - 15/11/2022 SE239307.011	BHD2_0.1-0.2 SOIL - 15/11/2022 SE239307.012	BHF1_0.1-0.2 SOIL - 15/11/2022 SE239307.013
Asbestos Detected	No unit	-	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC /MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup /fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS /ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection /reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

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Order Number	**E25834**
Samples	13

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SGS Reference	**SE239307 R0**
Date Received	18 Nov 2022
Date Reported	23 Nov 2022

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

S. Ravee

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE239307.001	BHG1M_0.1-0.2	Soil	305g Clay, Sand, Soil, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239307.002	BHE1_0.1-0.2	Soil	172g Clay, Sand, Soil, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239307.003	BHC4_0.1-0.2	Soil	249g Clay, Sand, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239307.004	BHE2_0.1-0.2	Soil	191g Clay, Sand, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239307.005	BHE3_0.1-0.1	Soil	159g Clay, Sand, Soil, Plant Matter	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239307.006	BHD1_0.1-0.2	Soil	146g Sand, Soil, Rocks, Plant Matter	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239307.007	BHE5_0.1-0.2	Soil	213g Clay, Sand, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239307.008	BHE7_0.1-0.2	Soil	226g Clay, Sand, Soil, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239307.009	BHH2_0.1-0.2	Soil	178g Clay, Sand, Soil, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239307.010	BHF2_0.1-0.2	Soil	184g Clay, Sand, Soil, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239307.011	BHG2_0.1-0.2	Soil	136g Clay, Sand, Soil, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239307.012	BHD2_0.1-0.2	Soil	214g Clay, Sand, Soil, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239307.013	BHF1_0.1-0.2	Soil	163g Clay, Sand, Soil, Rocks	15 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01

METHOD SUMMARY

SE239307 R0

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.
Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy , including dispersion staining.
Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety .

This document is issued by the Company under its General Conditions of Service accessible at www.sgs.com/en/Terms-and-Conditions.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Li Wei
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Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	4

LABORATORY DETAILS

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Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
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SGS Reference	**SE239469 R0**
Date Received	18/11/2022
Date Reported	25/11/2022

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

Dong LIANG
Metals/Inorganics Team Leader

Huong CRAWFORD
Production Manager

Kamrul AHSAN
Senior Chemist

Ly Kim HA
Organic Section Head

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

Teresa NGUYEN
Organic Chemist

VOC's in Soil [AN433] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
TRH C6-C10 raw	µg/L	0.05	**5.6**	**1.4**	<0.050	<0.050
TRH C6-C9 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050
TRH C6-C9	mg/kg	20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
TRH C10-C14	mg/kg	20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	**200**	<45	<45	<45
TRH C29-C36	mg/kg	45	**350**	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	**400**	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	**550**	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	**400**	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.1**
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	**0.1**	<0.1	**0.1**
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.2**	**0.1**	<0.1	**0.2**
Pyrene	mg/kg	0.1	**0.2**	**0.1**	<0.1	**0.4**
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.3**
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.3**
Benzo(b&j)fluoranthene	mg/kg	0.1	**0.1**	<0.1	<0.1	**0.3**
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.3**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.2**
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.3**
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	**0.4**
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	**0.5**
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	**0.4**
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	**2.5**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	**2.5**

OC Pesticides in Soil [AN420] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1

OP Pesticides in Soil [AN420] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7

PCBs in Soil [AN420] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
Arsenic, As	mg/kg	1	8	1	2	5
Cadmium, Cd	mg/kg	0.3	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	6.2	6.8	12
Copper, Cu	mg/kg	0.5	69	2.0	5.9	9.3
Lead, Pb	mg/kg	1	33	6	8	9
Nickel, Ni	mg/kg	0.5	8.1	3.8	5.5	6.6
Zinc, Zn	mg/kg	2	140	12	22	16

Mercury in Soil [AN312] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
Mercury	mg/kg	0.05	**0.37**	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
% Moisture	%w/w	1	**39.4**	**4.3**	**6.6**	**15.3**

Fibre Identification in soil [AN602] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.1-0.2 SOIL - 11/11/2022 SE239469.001	BHA4_0.2-0.3 SOIL - 11/11/2022 SE239469.002	BHA7M_0.2-0.3 SOIL - 10/11/2022 SE239469.003	BHC1_0.1-0.2 SOIL - 14/11/2022 SE239469.004
Asbestos Detected	No unit	-	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken . This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup /fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS /ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
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FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
***	Indicates that both * and ** apply.	LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-qb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	4

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE239469 R0**
Date Received	18 Nov 2022
Date Reported	25 Nov 2022

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

S. Ravee Subra.

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE239469.001	BHA1M_0.1-0.2	Soil	187g Clay, Sand, Soil, Plant Matter	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239469.002	BHA4_0.2-0.3	Soil	466g Clay, Sand, Rocks	11 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE239469.003	BHA7M_0.2-0.3	Soil	284g Sand, Rocks	10 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE239469.004	BHC1_0.1-0.2	Soil	190g Clay, Sand, Rocks	14 Nov 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
			**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.
Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy , including dispersion staining.
Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining . Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety .

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Date Reported	25/11/2022

COMMENTS

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Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

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Ravee SIVASUBRAMANIAM
Hygiene Team Leader

Teresa NGUYEN
Organic Chemist

VOC's in Soil [AN433] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
Benzene	mg/kg	0.1	<0.1
Toluene	mg/kg	0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2
o-xylene	mg/kg	0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
TRH C6-C9	mg/kg	20	<20
Benzene (F0)	mg/kg	0.1	<0.1
TRH C6-C10	mg/kg	25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
TRH C10-C14	mg/kg	20	<20
TRH C15-C28	mg/kg	45	<45
TRH C29-C36	mg/kg	45	<45
TRH C37-C40	mg/kg	100	<100
TRH >C10-C16	mg/kg	25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120
TRH C10-C36 Total	mg/kg	110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Pyrene	mg/kg	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2
Endrin	mg/kg	0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1
Total OC VIC EPA	mg/kg	1	<1

OP Pesticides in Soil [AN420] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
Dichlorvos	mg/kg	0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2
Malathion	mg/kg	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2
Methidathion	mg/kg	0.5	<0.5
Ethion	mg/kg	0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7

PCBs in Soil [AN420] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
Arochlor 1016	mg/kg	0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
Arsenic, As	mg/kg	1	<1
Cadmium, Cd	mg/kg	0.3	<0.3
Chromium, Cr	mg/kg	0.5	**4.9**
Copper, Cu	mg/kg	0.5	**3.4**
Lead, Pb	mg/kg	1	**5**
Nickel, Ni	mg/kg	0.5	**3.4**
Zinc, Zn	mg/kg	2	**13**

Mercury in Soil [AN312] Tested: 25/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
Mercury	mg/kg	0.05	<0.05

Moisture Content [AN002] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
% Moisture	%w/w	1	**5.0**

Fibre Identification in soil [AN602] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA2_0.3-0.4 SOIL - 18/11/2022 SE239584.001
Asbestos Detected	No unit	-	No
Estimated Fibres*	%w/w	0.01	<0.01

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken . This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup /fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS /ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
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AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

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		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
***	Indicates that both * and ** apply.	LNR	Sample listed, but not received.		

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Solid samples expressed on a dry weight basis.

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Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
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Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

S. Ravee Subra.

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

ANALYTICAL REPORT

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE239584.001	BHA2_0.3-0.4	Soil	207g Sand, Rocks, Bitumen	18 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
			**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.
Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy , including dispersion staining.
Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining . Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety .

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

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Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood-Add**
Order Number	**E25834**
Samples	2

LABORATORY DETAILS

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Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE239584A R0**
Date Received	24/11/2022
Date Reported	29/11/2022

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

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Metals/Inorganics Team Leader

Ly Kim HA
Organic Section Head

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

Shane MCDERMOTT
Inorganic/Metals Chemist

Teresa NGUYEN
Organic Chemist

VOC's in Soil [AN433] Tested: 25/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
Benzene	mg/kg	0.1	<0.1
Toluene	mg/kg	0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2
o-xylene	mg/kg	0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 25/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
TRH C6-C9	mg/kg	20	<20
Benzene (F0)	mg/kg	0.1	<0.1
TRH C6-C10	mg/kg	25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 25/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
TRH C10-C14	mg/kg	20	<20
TRH C15-C28	mg/kg	45	<45
TRH C29-C36	mg/kg	45	<45
TRH C37-C40	mg/kg	100	<100
TRH >C10-C16	mg/kg	25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120
TRH C10-C36 Total	mg/kg	110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 25/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Pyrene	mg/kg	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 25/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2
Endrin	mg/kg	0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1
Total OC VIC EPA	mg/kg	1	<1

OP Pesticides in Soil [AN420] Tested: 25/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
Dichlorvos	mg/kg	0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2
Malathion	mg/kg	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2
Methidathion	mg/kg	0.5	<0.5
Ethion	mg/kg	0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7

PCBs in Soil [AN420] Tested: 25/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
Arochlor 1016	mg/kg	0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 28/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
Arsenic, As	mg/kg	1	**9**
Cadmium, Cd	mg/kg	0.3	<0.3
Chromium, Cr	mg/kg	0.5	**19**
Copper, Cu	mg/kg	0.5	**21**
Lead, Pb	mg/kg	1	**16**
Nickel, Ni	mg/kg	0.5	**15**
Zinc, Zn	mg/kg	2	**36**

Mercury in Soil [AN312] Tested: 28/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
Mercury	mg/kg	0.05	<0.05

Moisture Content [AN002] Tested: 25/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
% Moisture	%w/w	1	**16.4**

Fibre Identification in soil [AN602] Tested: 28/11/2022

PARAMETER	UOM	LOR	BHF5_1.4-1.5 SOIL - 18/11/2022 SE239584A.002
Asbestos Detected	No unit	-	No
Estimated Fibres*	%w/w	0.01	<0.01

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS /ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
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FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

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Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood-Add**
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Samples	1

LABORATORY DETAILS

Manager	Huong Crawford
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Date Received	24 Nov 2022
Date Reported	29 Nov 2022

COMMENTS

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Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

S. Ravee

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

ANALYTICAL REPORT

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE239584A.002	BHF5_1.4-1.5	Soil	160g Clay, Soil, Rocks	18 Nov 2022	No Asbestos Found at RL of 0.1g/kg	<0.01

METHOD SUMMARY

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FOOTNOTES

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Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service .
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

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ANALYTICAL REPORT

Accreditation No. 2562

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Project	**E25834 80 O' Connell Street, Kingswood**
Order Number	**E25834**
Samples	19

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SGS Reference	**SE239147 R0**
Date Received	15/11/2022
Date Reported	22/11/2022

COMMENTS

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VOC's in Soil [AN433] Tested: 17/11/2022

PARAMETER	UOM	LOR	BHF6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.002	BHE6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.003	BHG5 - 1.6-1.7 SOIL - 10/11/2022 SE239147.005	BHD4 - 1.8-1.9 SOIL - 10/11/2022 SE239147.007	BHF4 - 0.6-0.7 SOIL - 10/11/2022 SE239147.008
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BHG3 - 0.9-1.0 SOIL - 10/11/2022 SE239147.010	BHA2 - 3.0-3.1 SOIL - 11/11/2022 SE239147.012	BHC5 - 0.9-1.0 SOIL - 11/11/2022 SE239147.013	BHD3 - 1.5-1.6 SOIL - 11/11/2022 SE239147.015	BHB1 - 0.8-0.9 SOIL - 14/11/2022 SE239147.018
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 17/11/2022

PARAMETER	UOM	LOR	BHF6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.002	BHE6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.003	BHG5 - 1.6-1.7 SOIL - 10/11/2022 SE239147.005	BHD4 - 1.8-1.9 SOIL - 10/11/2022 SE239147.007	BHF4 - 0.6-0.7 SOIL - 10/11/2022 SE239147.008
TRH C6-C10 raw	µg/L	0.05	**4.2**	**1.4**	**1.2**	<0.050	**0.087**
TRH C6-C9 raw	µg/L	0.05	**2.8**	**1.1**	**1.1**	<0.050	**0.21**
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BHG3 - 0.9-1.0 SOIL - 10/11/2022 SE239147.010	BHA2 - 3.0-3.1 SOIL - 11/11/2022 SE239147.012	BHC5 - 0.9-1.0 SOIL - 11/11/2022 SE239147.013	BHD3 - 1.5-1.6 SOIL - 11/11/2022 SE239147.015	BHB1 - 0.8-0.9 SOIL - 14/11/2022 SE239147.018
TRH C6-C10 raw	µg/L	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
TRH C6-C9 raw	µg/L	0.05	**0.11**	**0.13**	<0.050	<0.050	<0.050
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 17/11/2022

PARAMETER	UOM	LOR	BHG6 - 0.7-0.8 SOIL - 10/11/2022 SE239147.001	BHF6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.002	BHE6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.003	BHG5 - 1.6-1.7 SOIL - 10/11/2022 SE239147.005	BHD4 - 1.8-1.9 SOIL - 10/11/2022 SE239147.007
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BHF4 - 0.6-0.7 SOIL - 10/11/2022 SE239147.008	BHG3 - 0.9-1.0 SOIL - 10/11/2022 SE239147.010	BHA2 - 3.0-3.1 SOIL - 11/11/2022 SE239147.012	BHC5 - 0.9-1.0 SOIL - 11/11/2022 SE239147.013	BHD3 - 1.5-1.6 SOIL - 11/11/2022 SE239147.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BHB1 - 0.8-0.9 SOIL - 14/11/2022 SE239147.018	BHB2 - 0.5-0.6 SOIL - 14/11/2022 SE239147.019
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 17/11/2022

PARAMETER	UOM	LOR	BHF6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.002	BHE6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.003	BHG5 - 1.6-1.7 SOIL - 10/11/2022 SE239147.005	BHD4 - 1.8-1.9 SOIL - 10/11/2022 SE239147.007	BHF4 - 0.6-0.7 SOIL - 10/11/2022 SE239147.008
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BHG3 - 0.9-1.0 SOIL - 10/11/2022 SE239147.010	BHA2 - 3.0-3.1 SOIL - 11/11/2022 SE239147.012	BHC5 - 0.9-1.0 SOIL - 11/11/2022 SE239147.013	BHD3 - 1.5-1.6 SOIL - 11/11/2022 SE239147.015	BHB1 - 0.8-0.9 SOIL - 14/11/2022 SE239147.018
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 17/11/2022

PARAMETER	UOM	LOR	BHF6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.002	BHE6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.003	BHG5 - 1.6-1.7 SOIL - 10/11/2022 SE239147.005	BHD4 - 1.8-1.9 SOIL - 10/11/2022 SE239147.007	BHF4 - 0.6-0.7 SOIL - 10/11/2022 SE239147.008
Arsenic, As	mg/kg	1	10	12	7	12	8
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	20	22	23	16	18
Copper, Cu	mg/kg	0.5	26	26	31	26	14
Lead, Pb	mg/kg	1	15	19	14	16	11
Nickel, Ni	mg/kg	0.5	18	18	23	18	15
Zinc, Zn	mg/kg	2	39	45	64	39	30

PARAMETER	UOM	LOR	BHG3 - 0.9-1.0 SOIL - 10/11/2022 SE239147.010	BHA2 - 3.0-3.1 SOIL - 11/11/2022 SE239147.012	BHC5 - 0.9-1.0 SOIL - 11/11/2022 SE239147.013	BHD3 - 1.5-1.6 SOIL - 11/11/2022 SE239147.015	BHB1 - 0.8-0.9 SOIL - 14/11/2022 SE239147.018
Arsenic, As	mg/kg	1	15	7	11	12	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	22	20	19	17	20
Copper, Cu	mg/kg	0.5	35	19	25	34	22
Lead, Pb	mg/kg	1	14	14	12	15	12
Nickel, Ni	mg/kg	0.5	27	14	19	25	20
Zinc, Zn	mg/kg	2	78	35	40	73	31

Mercury in Soil [AN312] Tested: 17/11/2022

PARAMETER	UOM	LOR	BHG6 - 0.7-0.8 SOIL - 10/11/2022 SE239147.001	BHF6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.002	BHE6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.003	BHF5 - 0.2-0.3 SOIL - 10/11/2022 SE239147.004	BHG5 - 1.6-1.7 SOIL - 10/11/2022 SE239147.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHH5 - 1.5-1.6 SOIL - 10/11/2022 SE239147.006	BHD4 - 1.8-1.9 SOIL - 10/11/2022 SE239147.007	BHF4 - 0.6-0.7 SOIL - 10/11/2022 SE239147.008	BHH3 - 1.2-1.3 SOIL - 10/11/2022 SE239147.009	BHG3 - 0.9-1.0 SOIL - 10/11/2022 SE239147.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHB2 - 3.5-3.6 SOIL - 11/11/2022 SE239147.011	BHA2 - 3.0-3.1 SOIL - 11/11/2022 SE239147.012	BHC5 - 0.9-1.0 SOIL - 11/11/2022 SE239147.013	BHE4 - 2.0-2.1 SOIL - 11/11/2022 SE239147.014	BHD3 - 1.5-1.6 SOIL - 11/11/2022 SE239147.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHF3 - 0.6-0.7 SOIL - 11/11/2022 SE239147.016	BHG4 - 1.2-1.3 SOIL - 11/11/2022 SE239147.017	BHB1 - 0.8-0.9 SOIL - 14/11/2022 SE239147.018	BHB2 - 0.5-0.6 SOIL - 14/11/2022 SE239147.019
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 17/11/2022

PARAMETER	UOM	LOR	BHG6 - 0.7-0.8 SOIL - 10/11/2022 SE239147.001	BHF6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.002	BHE6 - 0.5-0.6 SOIL - 10/11/2022 SE239147.003	BHF5 - 0.2-0.3 SOIL - 10/11/2022 SE239147.004	BHG5 - 1.6-1.7 SOIL - 10/11/2022 SE239147.005
% Moisture	%w/w	1	19.1	16.4	17.8	15.2	15.3

PARAMETER	UOM	LOR	BHH5 - 1.5-1.6 SOIL - 10/11/2022 SE239147.006	BHD4 - 1.8-1.9 SOIL - 10/11/2022 SE239147.007	BHF4 - 0.6-0.7 SOIL - 10/11/2022 SE239147.008	BHH3 - 1.2-1.3 SOIL - 10/11/2022 SE239147.009	BHG3 - 0.9-1.0 SOIL - 10/11/2022 SE239147.010
% Moisture	%w/w	1	15.5	20.0	18.4	16.8	19.3

PARAMETER	UOM	LOR	BHB2 - 3.5-3.6 SOIL - 11/11/2022 SE239147.011	BHA2 - 3.0-3.1 SOIL - 11/11/2022 SE239147.012	BHC5 - 0.9-1.0 SOIL - 11/11/2022 SE239147.013	BHE4 - 2.0-2.1 SOIL - 11/11/2022 SE239147.014	BHD3 - 1.5-1.6 SOIL - 11/11/2022 SE239147.015
% Moisture	%w/w	1	17.0	15.3	16.3	17.1	12.9

PARAMETER	UOM	LOR	BHF3 - 0.6-0.7 SOIL - 11/11/2022 SE239147.016	BHG4 - 1.2-1.3 SOIL - 11/11/2022 SE239147.017	BHB1 - 0.8-0.9 SOIL - 14/11/2022 SE239147.018	BHB2 - 0.5-0.6 SOIL - 14/11/2022 SE239147.019
% Moisture	%w/w	1	21.3	9.7	17.6	12.9

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <LOR results are zero, the second assuming all < LOR results are half the LOR and the third assuming all <LOR results are the LOR.
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

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Order Number	**E25834**
Samples	12

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SGS Reference	**SE239306 R0**
Date Received	18/11/2022
Date Reported	23/11/2022

COMMENTS

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

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VOC's in Soil [AN433] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.6-0.7 SOIL - 15/11/2022 SE239306.001	BHH4_0.2-0.3 SOIL - 15/11/2022 SE239306.003	BHE3_0.4-0.5 SOIL - 15/11/2022 SE239306.004	BHD1_0.6-0.7 SOIL - 15/11/2022 SE239306.005	BHF2_0.6-0.7 SOIL - 15/11/2022 SE239306.006
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BHE5_0.5-0.6 SOIL - 15/11/2022 SE239306.007	BHH7_0.2-0.3 SOIL - 15/11/2022 SE239306.008	BHH2_0.4-0.5 SOIL - 15/11/2022 SE239306.009	BHE1_0.5-0.6 SOIL - 15/11/2022 SE239306.010	BHC7_0.3-0.4 SOIL - 15/11/2022 SE239306.012
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.6-0.7 SOIL - 15/11/2022 SE239306.001	BHH4_0.2-0.3 SOIL - 15/11/2022 SE239306.003	BHE3_0.4-0.5 SOIL - 15/11/2022 SE239306.004	BHD1_0.6-0.7 SOIL - 15/11/2022 SE239306.005	BHF2_0.6-0.7 SOIL - 15/11/2022 SE239306.006
TRH C6-C10 raw	µg/L	0.05	**3.0**	**0.58**	**0.42**	**0.46**	**0.21**
TRH C6-C9 raw	µg/L	0.05	**2.1**	**0.46**	**0.36**	**0.45**	**0.18**
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BHE5_0.5-0.6 SOIL - 15/11/2022 SE239306.007	BHH7_0.2-0.3 SOIL - 15/11/2022 SE239306.008	BHH2_0.4-0.5 SOIL - 15/11/2022 SE239306.009	BHE1_0.5-0.6 SOIL - 15/11/2022 SE239306.010	BHC7_0.3-0.4 SOIL - 15/11/2022 SE239306.012
TRH C6-C10 raw	µg/L	0.05	**0.52**	**0.46**	<0.050	**0.15**	**0.27**
TRH C6-C9 raw	µg/L	0.05	**0.47**	**0.45**	<0.050	**0.17**	**0.28**
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.6-0.7 SOIL - 15/11/2022 SE239306.001	BHH4_0.2-0.3 SOIL - 15/11/2022 SE239306.003	BHE3_0.4-0.5 SOIL - 15/11/2022 SE239306.004	BHD1_0.6-0.7 SOIL - 15/11/2022 SE239306.005	BHF2_0.6-0.7 SOIL - 15/11/2022 SE239306.006
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BHE5_0.5-0.6 SOIL - 15/11/2022 SE239306.007	BHH7_0.2-0.3 SOIL - 15/11/2022 SE239306.008	BHH2_0.4-0.5 SOIL - 15/11/2022 SE239306.009	BHE1_0.5-0.6 SOIL - 15/11/2022 SE239306.010	BHC7_0.3-0.4 SOIL - 15/11/2022 SE239306.012
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.6-0.7 SOIL - 15/11/2022 SE239306.001	BHH4_0.2-0.3 SOIL - 15/11/2022 SE239306.003	BHE3_0.4-0.5 SOIL - 15/11/2022 SE239306.004	BHD1_0.6-0.7 SOIL - 15/11/2022 SE239306.005	BHF2_0.6-0.7 SOIL - 15/11/2022 SE239306.006
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BHE5_0.5-0.6 SOIL - 15/11/2022 SE239306.007	BHH7_0.2-0.3 SOIL - 15/11/2022 SE239306.008	BHH2_0.4-0.5 SOIL - 15/11/2022 SE239306.009	BHE1_0.5-0.6 SOIL - 15/11/2022 SE239306.010	BHC7_0.3-0.4 SOIL - 15/11/2022 SE239306.012
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 22/11/2022

PARAMETER	UOM	LOR	BHG1M_0.6-0.7 SOIL - 15/11/2022 SE239306.001	BHH4_0.2-0.3 SOIL - 15/11/2022 SE239306.003	BHE3_0.4-0.5 SOIL - 15/11/2022 SE239306.004	BHD1_0.6-0.7 SOIL - 15/11/2022 SE239306.005	BHF2_0.6-0.7 SOIL - 15/11/2022 SE239306.006
Arsenic, As	mg/kg	1	7	6	6	6	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	23	16	21	12
Copper, Cu	mg/kg	0.5	20	33	23	25	21
Lead, Pb	mg/kg	1	8	13	12	8	10
Nickel, Ni	mg/kg	0.5	16	26	17	18	13
Zinc, Zn	mg/kg	2	29	90	37	31	33

PARAMETER	UOM	LOR	BHE5_0.5-0.6 SOIL - 15/11/2022 SE239306.007	BHH7_0.2-0.3 SOIL - 15/11/2022 SE239306.008	BHH2_0.4-0.5 SOIL - 15/11/2022 SE239306.009	BHE1_0.5-0.6 SOIL - 15/11/2022 SE239306.010	BHC7_0.3-0.4 SOIL - 15/11/2022 SE239306.012
Arsenic, As	mg/kg	1	7	8	9	4	11
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	22	15	23	16	21
Copper, Cu	mg/kg	0.5	27	33	28	23	30
Lead, Pb	mg/kg	1	12	17	12	10	11
Nickel, Ni	mg/kg	0.5	21	14	17	18	26
Zinc, Zn	mg/kg	2	59	37	45	28	75

Mercury in Soil [AN312] Tested: 22/11/2022

PARAMETER	UOM	LOR	BHG1M_0.6-0.7 SOIL - 15/11/2022 SE239306.001	BHH4_0.2-0.3 SOIL - 15/11/2022 SE239306.003	BHE3_0.4-0.5 SOIL - 15/11/2022 SE239306.004	BHD1_0.6-0.7 SOIL - 15/11/2022 SE239306.005	BHF2_0.6-0.7 SOIL - 15/11/2022 SE239306.006
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BHE5_0.5-0.6 SOIL - 15/11/2022 SE239306.007	BHH7_0.2-0.3 SOIL - 15/11/2022 SE239306.008	BHH2_0.4-0.5 SOIL - 15/11/2022 SE239306.009	BHE1_0.5-0.6 SOIL - 15/11/2022 SE239306.010	BHC7_0.3-0.4 SOIL - 15/11/2022 SE239306.012
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 21/11/2022

PARAMETER	UOM	LOR	BHG1M_0.6-0.7 SOIL - 15/11/2022 SE239306.001	BHH4_0.2-0.3 SOIL - 15/11/2022 SE239306.003	BHE3_0.4-0.5 SOIL - 15/11/2022 SE239306.004	BHD1_0.6-0.7 SOIL - 15/11/2022 SE239306.005	BHF2_0.6-0.7 SOIL - 15/11/2022 SE239306.006
% Moisture	%w/w	1	**18.7**	**11.4**	**21.1**	**17.2**	**17.3**

PARAMETER	UOM	LOR	BHE5_0.5-0.6 SOIL - 15/11/2022 SE239306.007	BHH7_0.2-0.3 SOIL - 15/11/2022 SE239306.008	BHH2_0.4-0.5 SOIL - 15/11/2022 SE239306.009	BHE1_0.5-0.6 SOIL - 15/11/2022 SE239306.010	BHC7_0.3-0.4 SOIL - 15/11/2022 SE239306.012
% Moisture	%w/w	1	**18.8**	**13.3**	**20.0**	**19.1**	**7.9**

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <LOR results are zero, the second assuming all < LOR results are half the LOR and the third assuming all <LOR results are the LOR.
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
		NVL	Not validated.	LOR	Limit of Reporting.
**	Indicative data, theoretical holding time exceeded.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		
***	Indicates that both * and ** apply.				

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

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Order Number	**E25834**
Samples	4

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SGS Reference	**SE239470 R0**
Date Received	18/11/2022
Date Reported	25/11/2022

COMMENTS

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

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VOC's in Soil [AN433] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.6-0.8 SOIL - 11/11/2022 SE239470.001	BHA4_0.7-0.8 SOIL - 11/11/2022 SE239470.002	BHA7M_0.7-0.8 SOIL - 10/11/2022 SE239470.003	BHC1_0.7-0.8 SOIL - 14/11/2022 SE239470.004
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.6-0.8 SOIL - 11/11/2022 SE239470.001	BHA4_0.7-0.8 SOIL - 11/11/2022 SE239470.002	BHA7M_0.7-0.8 SOIL - 10/11/2022 SE239470.003	BHC1_0.7-0.8 SOIL - 14/11/2022 SE239470.004
TRH C6-C9	mg/kg	20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.6-0.8 SOIL - 11/11/2022 SE239470.001	BHA4_0.7-0.8 SOIL - 11/11/2022 SE239470.002	BHA7M_0.7-0.8 SOIL - 10/11/2022 SE239470.003	BHC1_0.7-0.8 SOIL - 14/11/2022 SE239470.004
TRH C10-C14	mg/kg	20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.6-0.8 SOIL - 11/11/2022 SE239470.001	BHA4_0.7-0.8 SOIL - 11/11/2022 SE239470.002	BHA7M_0.7-0.8 SOIL - 10/11/2022 SE239470.003	BHC1_0.7-0.8 SOIL - 14/11/2022 SE239470.004
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA1M_0.6-0.8 SOIL - 11/11/2022 SE239470.001	BHA4_0.7-0.8 SOIL - 11/11/2022 SE239470.002	BHA7M_0.7-0.8 SOIL - 10/11/2022 SE239470.003	BHC1_0.7-0.8 SOIL - 14/11/2022 SE239470.004
Arsenic, As	mg/kg	1	**4**	**7**	**2**	**5**
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	**18**	**19**	**3.4**	**17**
Copper, Cu	mg/kg	0.5	**18**	**16**	**34**	**15**
Lead, Pb	mg/kg	1	**14**	**13**	**14**	**10**
Nickel, Ni	mg/kg	0.5	**18**	**13**	**6.1**	**15**
Zinc, Zn	mg/kg	2	**30**	**29**	**23**	**23**

Mercury in Soil [AN312] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHA1M_0.6-0.8 SOIL - 11/11/2022 SE239470.001	BHA4_0.7-0.8 SOIL - 11/11/2022 SE239470.002	BHA7M_0.7-0.8 SOIL - 10/11/2022 SE239470.003	BHC1_0.7-0.8 SOIL - 14/11/2022 SE239470.004
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 23/11/2022

PARAMETER	UOM	LOR	BHA1M_0.6-0.8 SOIL - 11/11/2022 SE239470.001	BHA4_0.7-0.8 SOIL - 11/11/2022 SE239470.002	BHA7M_0.7-0.8 SOIL - 10/11/2022 SE239470.003	BHC1_0.7-0.8 SOIL - 14/11/2022 SE239470.004
% Moisture	%w/w	1	**17.1**	**13.4**	**10.3**	**14.2**

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken . This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup /fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <LOR results are zero, the second assuming all < LOR results are half the LOR and the third assuming all <LOR results are the LOR.
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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ANALYTICAL REPORT

Accreditation No. 2562

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Samples	3

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SGS Reference	**SE239522 R0**
Date Received	18/11/2022
Date Reported	28/11/2022

COMMENTS

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

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VOC's in Soil [AN433] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHB3_1.1-1.0 SOIL - 11/11/2022 SE239522.001	BHB5_1.0-1.1 SOIL - 11/11/2022 SE239522.002	BHB7_1.5-1.6 SOIL - 11/11/2022 SE239522.003
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHB3_1.1-1.0 SOIL - 11/11/2022 SE239522.001	BHB5_1.0-1.1 SOIL - 11/11/2022 SE239522.002	BHB7_1.5-1.6 SOIL - 11/11/2022 SE239522.003
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHB3_1.1-1.0 SOIL - 11/11/2022 SE239522.001	BHB5_1.0-1.1 SOIL - 11/11/2022 SE239522.002	BHB7_1.5-1.6 SOIL - 11/11/2022 SE239522.003
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHB3_1.1-1.0 SOIL - 11/11/2022 SE239522.001	BHB5_1.0-1.1 SOIL - 11/11/2022 SE239522.002	BHB7_1.5-1.6 SOIL - 11/11/2022 SE239522.003
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	**0.2**
Anthracene	mg/kg	0.1	<0.1	<0.1	**0.2**
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHB3_1.1-1.0 SOIL - 11/11/2022 SE239522.001	BHB5_1.0-1.1 SOIL - 11/11/2022 SE239522.002	BHB7_1.5-1.6 SOIL - 11/11/2022 SE239522.003
Arsenic, As	mg/kg	1	**6**	**2**	**2**
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	**14**	**12**	**14**
Copper, Cu	mg/kg	0.5	**30**	**29**	**44**
Lead, Pb	mg/kg	1	**14**	**13**	**16**
Nickel, Ni	mg/kg	0.5	**16**	**25**	**23**
Zinc, Zn	mg/kg	2	**53**	**76**	**86**

Mercury in Soil [AN312] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHB3_1.1-1.0 SOIL - 11/11/2022 SE239522.001	BHB5_1.0-1.1 SOIL - 11/11/2022 SE239522.002	BHB7_1.5-1.6 SOIL - 11/11/2022 SE239522.003
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 24/11/2022

PARAMETER	UOM	LOR	BHB3_1.1-1.0 SOIL - 11/11/2022 SE239522.001	BHB5_1.0-1.1 SOIL - 11/11/2022 SE239522.002	BHB7_1.5-1.6 SOIL - 11/11/2022 SE239522.003
% Moisture	%w/w	1	**14.7**	**10.4**	**8.9**

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid , mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser . Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken . This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup /fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <LOR results are zero, the second assuming all < LOR results are half the LOR and the third assuming all <LOR results are the LOR.
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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CERTIFICATE OF ANALYSIS 310909

Client Details

Client	EI Australia
Attention	Leo Ho
Address	Suite 6.01, 55 Miller Street, Pyrmont, NSW, 2009

Sample Details

Your Reference	**E25834, Kingswood**
Number of Samples	2 Soil
Date samples received	17/11/2022
Date completed instructions received	17/11/2022

Analysis Details

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

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

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

Report Details

Date results requested by	24/11/2022
Date of Issue	24/11/2022

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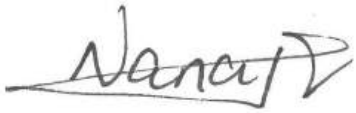
Results Approved By
Giovanni Agosti, Group Technical Manager
Josh Williams, Organics and LC Supervisor
Liam Timmins, Organic Instruments Team Leader

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		310909-1	310909-2
Your Reference	UNITS	QT1	QT2
Date Sampled		10/11/2022	11/11/2022
Type of sample		Soil	Soil
Date extracted	-	18/11/2022	18/11/2022
Date analysed	-	18/11/2022	18/11/2022
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
Naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	98	99

svTRH (C10-C40) in Soil			
Our Reference		310909-1	310909-2
Your Reference	UNITS	QT1	QT2
Date Sampled		10/11/2022	11/11/2022
Type of sample		Soil	Soil
Date extracted	-	18/11/2022	18/11/2022
Date analysed	-	19/11/2022	19/11/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	75	75

Acid Extractable metals in soil			
Our Reference		310909-1	310909-2
Your Reference	UNITS	QT1	QT2
Date Sampled		10/11/2022	11/11/2022
Type of sample		Soil	Soil
Date prepared	-	22/11/2022	22/11/2022
Date analysed	-	23/11/2022	23/11/2022
Arsenic	mg/kg	10	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	19	5
Copper	mg/kg	34	4
Lead	mg/kg	10	7
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	21	3
Zinc	mg/kg	58	14

Moisture			
Our Reference		310909-1	310909-2
Your Reference	UNITS	QT1	QT2
Date Sampled		10/11/2022	11/11/2022
Type of sample		Soil	Soil
Date prepared	-	18/11/2022	18/11/2022
Date analysed	-	21/11/2022	21/11/2022
Moisture	%	11	6.3

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-3	[NT]
Date extracted	-			18/11/2022	[NT]	[NT]	[NT]	[NT]	18/11/2022	[NT]
Date analysed	-			18/11/2022	[NT]	[NT]	[NT]	[NT]	18/11/2022	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	102	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	111	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	96	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	88	[NT]	[NT]	[NT]	[NT]	108	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			18/11/2022	[NT]	[NT]	[NT]	[NT]	18/11/2022	[NT]
Date analysed	-			18/11/2022	[NT]	[NT]	[NT]	[NT]	18/11/2022	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	115	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	71	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	115	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	71	[NT]
Surrogate o-Terphenyl	%		Org-020	81	[NT]	[NT]	[NT]	[NT]	83	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date prepared	-			22/11/2022	[NT]	[NT]	[NT]	[NT]	22/11/2022	[NT]
Date analysed	-			23/11/2022	[NT]	[NT]	[NT]	[NT]	23/11/2022	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	98	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	99	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]

Result Definitions

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

Quality Control Definitions

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

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

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

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

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O`Connell St, Kingswood**
Order Number	**E25834**
Samples	9

LABORATORY DETAILS

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Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
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Email	au.environmental.sydney@sgs.com
SGS Reference	**SE239398 R0**
Date Received	21/11/2022
Date Reported	25/11/2022

COMMENTS

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

SIGNATORIES

Dong LIANG
Metals/Inorganics Team Leader

Ly Kim HA
Organic Section Head

Teresa NGUYEN
Organic Chemist

VOCs in Water [AN433] Tested: 23/11/2022

PARAMETER	UOM	LOR	GW-BHA1M WATER - 21/11/2022 SE239398.001	GW-BHD4M WATER - 21/11/2022 SE239398.002	GW-BHG1M WATER - 21/11/2022 SE239398.003	GW-BHA7M WATER - 21/11/2022 SE239398.004	GW-BHH7M WATER - 21/11/2022 SE239398.005
Benzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m/p-xylene	µg/L	1	<1	<1	<1	<1	<1
o-xylene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Total BTEX	µg/L	3	<3	<3	<3	<3	<3
Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane (CFC-12)	µg/L	5	<5	<5	<5	<5	<5
Chloromethane	µg/L	5	<5	<5	<5	<5	<5
Vinyl chloride (Chloroethene)	µg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Bromomethane	µg/L	10	<10	<10	<10	<10	<10
Chloroethane	µg/L	5	<5	<5	<5	<5	<5
Trichlorofluoromethane	µg/L	1	<1	<1	<1	<1	<1
Acetone (2-propanone)	µg/L	10	<10	<10	<10	<10	<10
Iodomethane	µg/L	5	<5	<5	<5	<5	<5
1,1-dichloroethene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acrylonitrile	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloromethane (Methylene chloride)	µg/L	5	<5	<5	<5	<5	<5
Allyl chloride	µg/L	2	<2	<2	<2	<2	<2
Carbon disulfide	µg/L	2	<2	<2	<2	<2	<2
trans-1,2-dichloroethene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MtBE (Methyl-tert-butyl ether)	µg/L	2	<2	<2	<2	<2	<2
1,1-dichloroethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl acetate*	µg/L	10	<10	<10	<10	<10	<10
MEK (2-butanone)	µg/L	10	<10	<10	<10	<10	<10
cis-1,2-dichloroethene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromochloromethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform (THM)	µg/L	0.5	<0.5	**55**	**10**	**3.6**	**14**
2,2-dichloropropane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dichloroethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-trichloroethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-dichloropropene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dichloropropane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitropropane	µg/L	100	<100	<100	<100	<100	<100
Bromodichloromethane (THM)	µg/L	0.5	<0.5	**9.2**	<0.5	<0.5	<0.5
MIBK (4-methyl-2-pentanone)	µg/L	5	<5	<5	<5	<5	<5
cis-1,3-dichloropropene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-dichloropropene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-trichloroethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane (THM)	µg/L	0.5	<0.5	**1.5**	<0.5	<0.5	<0.5
2-hexanone (MBK)	µg/L	5	<5	<5	<5	<5	<5
1,2-dibromoethane (EDB)	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene (Perchloroethylene,PCE)	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform (THM)	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,4-dichloro-2-butene	µg/L	1	<1	<1	<1	<1	<1
Styrene (Vinyl benzene)	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-tetrachloroethane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-trichloropropane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,4-dichloro-2-butene	µg/L	1	<1	<1	<1	<1	<1

VOCs in Water [AN433] Tested: 23/11/2022 (continued)

PARAMETER	UOM	LOR	GW-BHA1M WATER - 21/11/2022 SE239398.001	GW-BHD4M WATER - 21/11/2022 SE239398.002	GW-BHG1M WATER - 21/11/2022 SE239398.003	GW-BHA7M WATER - 21/11/2022 SE239398.004	GW-BHH7M WATER - 21/11/2022 SE239398.005
Isopropylbenzene (Cumene)	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-propylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-chlorotoluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-chlorotoluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-trimethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
tert-butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-trimethylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
sec-butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-dichlorobenzene	µg/L	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
p-isopropyltoluene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-butylbenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dibromo-3-chloropropane	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-trichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-trichlorobenzene	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total VOC	µg/L	10	<10	66	11	<10	16

VOCs in Water [AN433] Tested: 23/11/2022 (continued)

PARAMETER	UOM	LOR	GW-QD1 WATER - 21/11/2022 SE239398.006	GW-QTB1 WATER - 21/11/2022 SE239398.007	GW-QTS1 WATER - 21/11/2022 SE239398.008	GW-QR1 WATER - 21/11/2022 SE239398.009
Benzene	µg/L	0.5	<0.5	<0.5	[106%]	<0.5
Toluene	µg/L	0.5	<0.5	<0.5	[104%]	<0.5
Ethylbenzene	µg/L	0.5	<0.5	<0.5	[103%]	<0.5
m/p-xylene	µg/L	1	<1	<1	[102%]	<1
o-xylene	µg/L	0.5	<0.5	<0.5	[102%]	<0.5
Total Xylenes	µg/L	1.5	<1.5	<1.5	-	<1.5
Total BTEX	µg/L	3	<3	<3	-	<3
Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	[96%]	<0.5
Dichlorodifluoromethane (CFC-12)	µg/L	5	-	-	-	-
Chloromethane	µg/L	5	-	-	-	-
Vinyl chloride (Chloroethene)	µg/L	0.3	-	-	-	-
Bromomethane	µg/L	10	-	-	-	-
Chloroethane	µg/L	5	-	-	-	-
Trichlorofluoromethane	µg/L	1	-	-	-	-
Acetone (2-propanone)	µg/L	10	-	-	-	-
Iodomethane	µg/L	5	-	-	-	-
1,1-dichloroethene	µg/L	0.5	-	-	-	-
Acrylonitrile	µg/L	0.5	-	-	-	-
Dichloromethane (Methylene chloride)	µg/L	5	-	-	-	-
Allyl chloride	µg/L	2	-	-	-	-
Carbon disulfide	µg/L	2	-	-	-	-
trans-1,2-dichloroethene	µg/L	0.5	-	-	-	-
MtBE (Methyl-tert-butyl ether)	µg/L	2	-	-	-	-
1,1-dichloroethane	µg/L	0.5	-	-	-	-
Vinyl acetate*	µg/L	10	-	-	-	-
MEK (2-butanone)	µg/L	10	-	-	-	-
cis-1,2-dichloroethene	µg/L	0.5	-	-	-	-
Bromochloromethane	µg/L	0.5	-	-	-	-
Chloroform (THM)	µg/L	0.5	-	-	-	-
2,2-dichloropropane	µg/L	0.5	-	-	-	-
1,2-dichloroethane	µg/L	0.5	-	-	-	-
1,1,1-trichloroethane	µg/L	0.5	-	-	-	-
1,1-dichloropropene	µg/L	0.5	-	-	-	-
Carbon tetrachloride	µg/L	0.5	-	-	-	-
Dibromomethane	µg/L	0.5	-	-	-	-
1,2-dichloropropane	µg/L	0.5	-	-	-	-
Trichloroethene (Trichloroethylene,TCE)	µg/L	0.5	-	-	-	-
2-nitropropane	µg/L	100	-	-	-	-
Bromodichloromethane (THM)	µg/L	0.5	-	-	-	-
MIBK (4-methyl-2-pentanone)	µg/L	5	-	-	-	-
cis-1,3-dichloropropene	µg/L	0.5	-	-	-	-
trans-1,3-dichloropropene	µg/L	0.5	-	-	-	-
1,1,2-trichloroethane	µg/L	0.5	-	-	-	-
1,3-dichloropropane	µg/L	0.5	-	-	-	-
Dibromochloromethane (THM)	µg/L	0.5	-	-	-	-
2-hexanone (MBK)	µg/L	5	-	-	-	-
1,2-dibromoethane (EDB)	µg/L	0.5	-	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	µg/L	0.5	-	-	-	-
1,1,1,2-tetrachloroethane	µg/L	0.5	-	-	-	-
Chlorobenzene	µg/L	0.5	-	-	-	-
Bromoform (THM)	µg/L	0.5	-	-	-	-
cis-1,4-dichloro-2-butene	µg/L	1	-	-	-	-
Styrene (Vinyl benzene)	µg/L	0.5	-	-	-	-
1,1,2,2-tetrachloroethane	µg/L	0.5	-	-	-	-
1,2,3-trichloropropane	µg/L	0.5	-	-	-	-
trans-1,4-dichloro-2-butene	µg/L	1	-	-	-	-

VOCs in Water [AN433] Tested: 23/11/2022 (continued)

PARAMETER	UOM	LOR	GW-QD1 WATER - 21/11/2022 SE239398.006	GW-QTB1 WATER - 21/11/2022 SE239398.007	GW-QTS1 WATER - 21/11/2022 SE239398.008	GW-QR1 WATER - 21/11/2022 SE239398.009
Isopropylbenzene (Cumene)	µg/L	0.5	-	-	-	-
Bromobenzene	µg/L	0.5	-	-	-	-
n-propylbenzene	µg/L	0.5	-	-	-	-
2-chlorotoluene	µg/L	0.5	-	-	-	-
4-chlorotoluene	µg/L	0.5	-	-	-	-
1,3,5-trimethylbenzene	µg/L	0.5	-	-	-	-
tert-butylbenzene	µg/L	0.5	-	-	-	-
1,2,4-trimethylbenzene	µg/L	0.5	-	-	-	-
sec-butylbenzene	µg/L	0.5	-	-	-	-
1,3-dichlorobenzene	µg/L	0.5	-	-	-	-
1,4-dichlorobenzene	µg/L	0.3	-	-	-	-
p-isopropyltoluene	µg/L	0.5	-	-	-	-
1,2-dichlorobenzene	µg/L	0.5	-	-	-	-
n-butylbenzene	µg/L	0.5	-	-	-	-
1,2-dibromo-3-chloropropane	µg/L	0.5	-	-	-	-
1,2,4-trichlorobenzene	µg/L	0.5	-	-	-	-
Hexachlorobutadiene	µg/L	0.5	-	-	-	-
1,2,3-trichlorobenzene	µg/L	0.5	-	-	-	-
Total VOC	µg/L	10	-	-	-	-

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 23/11/2022

PARAMETER	UOM	LOR	GW-BHA1M WATER - 21/11/2022 SE239398.001	GW-BHD4M WATER - 21/11/2022 SE239398.002	GW-BHG1M WATER - 21/11/2022 SE239398.003	GW-BHA7M WATER - 21/11/2022 SE239398.004	GW-BHH7M WATER - 21/11/2022 SE239398.005
TRH C6-C9	µg/L	40	<40	<40	<40	<40	<40
Benzene (F0)	µg/L	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TRH C6-C10	µg/L	50	<50	<50	<50	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	<50	<50	<50

PARAMETER	UOM	LOR	GW-QD1 WATER - 21/11/2022 SE239398.006	GW-QR1 WATER - 21/11/2022 SE239398.009
TRH C6-C9	µg/L	40	<40	<40
Benzene (F0)	µg/L	0.5	<0.5	<0.5
TRH C6-C10	µg/L	50	<50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 23/11/2022

PARAMETER	UOM	LOR	GW-BHA1M WATER - 21/11/2022 SE239398.001	GW-BHD4M WATER - 21/11/2022 SE239398.002	GW-BHG1M WATER - 21/11/2022 SE239398.003	GW-BHA7M WATER - 21/11/2022 SE239398.004	GW-BHH7M WATER - 21/11/2022 SE239398.005
TRH C10-C14	µg/L	50	<50	<50	<50	**91**	<50
TRH C15-C28	µg/L	200	<200	<200	<200	<200	<200
TRH C29-C36	µg/L	200	<200	<200	<200	<200	<200
TRH C37-C40	µg/L	200	<200	<200	<200	<200	<200
TRH >C10-C16	µg/L	60	<60	<60	<60	**91**	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	<60	**91**	<60
TRH >C16-C34 (F3)	µg/L	500	<500	<500	<500	<500	<500
TRH >C34-C40 (F4)	µg/L	500	<500	<500	<500	<500	<500
TRH C10-C40	µg/L	320	<320	<320	<320	<320	<320

PARAMETER	UOM	LOR	GW-QD1 WATER - 21/11/2022 SE239398.006	GW-QR1 WATER - 21/11/2022 SE239398.009
TRH C10-C14	µg/L	50	<50	<50
TRH C15-C28	µg/L	200	<200	<200
TRH C29-C36	µg/L	200	<200	<200
TRH C37-C40	µg/L	200	<200	<200
TRH >C10-C16	µg/L	60	<60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60
TRH >C16-C34 (F3)	µg/L	500	<500	<500
TRH >C34-C40 (F4)	µg/L	500	<500	<500
TRH C10-C40	µg/L	320	<320	<320

PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420] Tested: 23/11/2022

PARAMETER	UOM	LOR	GW-BHA1M WATER - 21/11/2022 SE239398.001	GW-BHD4M WATER - 21/11/2022 SE239398.002	GW-BHG1M WATER - 21/11/2022 SE239398.003	GW-BHA7M WATER - 21/11/2022 SE239398.004	GW-BHH7M WATER - 21/11/2022 SE239398.005
Naphthalene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Total PAH (18)	µg/L	1	<1	<1	<1	<1	<1

Total Phenolics in Water [AN295] Tested: 23/11/2022

PARAMETER	UOM	LOR	GW-BHA1M WATER - 21/11/2022 SE239398.001	GW-BHD4M WATER - 21/11/2022 SE239398.002	GW-BHG1M WATER - 21/11/2022 SE239398.003	GW-BHA7M WATER - 21/11/2022 SE239398.004	GW-BHH7M WATER - 21/11/2022 SE239398.005
Total Phenols	mg/L	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 23/11/2022

PARAMETER	UOM	LOR	GW-BHA1M WATER - 21/11/2022 SE239398.001	GW-BHD4M WATER - 21/11/2022 SE239398.002	GW-BHG1M WATER - 21/11/2022 SE239398.003	GW-BHA7M WATER - 21/11/2022 SE239398.004	GW-BHH7M WATER - 21/11/2022 SE239398.005
Arsenic	µg/L	1	<1	<1	<1	5	<1
Cadmium	µg/L	0.1	0.3	0.1	<0.1	<0.1	<0.1
Chromium	µg/L	1	11	<1	<1	<1	<1
Copper	µg/L	1	1	2	2	2	1
Lead	µg/L	1	1	<1	<1	<1	<1
Nickel	µg/L	1	1	4	1	7	<1
Zinc	µg/L	5	12	7	<5	8	<5

PARAMETER	UOM	LOR	GW-QD1 WATER - 21/11/2022 SE239398.006	GW-QR1 WATER - 21/11/2022 SE239398.009
Arsenic	µg/L	1	<1	<1
Cadmium	µg/L	0.1	0.3	<0.1
Chromium	µg/L	1	12	<1
Copper	µg/L	1	2	<1
Lead	µg/L	1	2	<1
Nickel	µg/L	1	1	<1
Zinc	µg/L	5	11	<5

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 23/11/2022

PARAMETER	UOM	LOR	GW-BHA1M WATER - 21/11/2022 SE239398.001	GW-BHD4M WATER - 21/11/2022 SE239398.002	GW-BHG1M WATER - 21/11/2022 SE239398.003	GW-BHA7M WATER - 21/11/2022 SE239398.004	GW-BHH7M WATER - 21/11/2022 SE239398.005
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

PARAMETER	UOM	LOR	GW-QD1 WATER - 21/11/2022 SE239398.006	GW-QR1 WATER - 21/11/2022 SE239398.009
Mercury	mg/L	0.0001	<0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN295	The water sample or extract of sample is distilled in a phosphoric acid stream. Phenolic compounds in the distillate react with a reagent stream of potassium hexacyanoferrate(III) and 4-Amino-2,3-dimethyl-3-pryazolin-5-one in an alkaline medium to form a coloured complex which is analysed spectrophotometrically onboard a continuous flow analyser.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). Where F2 is corrected for Naphthalene, the VOC data for Naphthalene is used.
AN403	Additionally, the volatile C6-C9/C6-C10 fractions may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoveerable Hydrocarbons - Silica (TRH-Silica) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken . This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the " Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.
Note that in terms of units of radioactivity:

a. 1 Bq is equivalent to 27 pCi
b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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CERTIFICATE OF ANALYSIS 311316

Client Details

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

Sample Details

Your Reference	**E25834, 80 O'Connell St Kingswood**
Number of Samples	1 Water
Date samples received	22/11/2022
Date completed instructions received	22/11/2022

Analysis Details

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

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

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

Report Details

Date results requested by	25/11/2022
Date of Issue	25/11/2022

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Results Approved By
Giovanni Agosti, Group Technical Manager
Josh Williams, Organics and LC Supervisor
Kyle Gavrily, Senior Chemist
Liam Timmins, Organic Instruments Team Leader

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Water		
Our Reference		311316-1
Your Reference	UNITS	GW-QT1
Date Sampled		21/11/2022
Type of sample		Water
Date extracted	-	24/11/2022
Date analysed	-	24/11/2022
TRH C_6 - C_9	µg/L	<10
TRH C_6 - C_{10}	µg/L	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	104
Surrogate toluene-d8	%	101
Surrogate 4-BFB	%	103

svTRH (C10-C40) in Water		
Our Reference		311316-1
Your Reference	UNITS	GW-QT1
Date Sampled		21/11/2022
Type of sample		Water
Date extracted	-	24/11/2022
Date analysed	-	25/11/2022
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	<100
TRH C_{29} - C_{36}	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	<50
TRH >C_{10} - C_{16}	µg/L	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50
TRH >C_{16} - C_{34}	µg/L	<100
TRH >C_{34} - C_{40}	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	<50
Surrogate o-Terphenyl	%	85

PAHs in Water		
Our Reference		311316-1
Your Reference	UNITS	GW-QT1
Date Sampled		21/11/2022
Type of sample		Water
Date extracted	-	24/11/2022
Date analysed	-	25/11/2022
Naphthalene	µg/L	<1
Acenaphthylene	µg/L	<1
Acenaphthene	µg/L	<1
Fluorene	µg/L	<1
Phenanthrene	µg/L	<1
Anthracene	µg/L	<1
Fluoranthene	µg/L	<1
Pyrene	µg/L	<1
Benzo(a)anthracene	µg/L	<1
Chrysene	µg/L	<1
Benzo(b,j+k)fluoranthene	µg/L	<2
Benzo(a)pyrene	µg/L	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1
Dibenzo(a,h)anthracene	µg/L	<1
Benzo(g,h,i)perylene	µg/L	<1
Benzo(a)pyrene TEQ	µg/L	<5
Total +ve PAH's	µg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	80

HM in water - dissolved		
Our Reference	UNITS	311316-1
Your Reference		GW-QT1
Date Sampled		21/11/2022
Type of sample		Water
Date prepared	-	24/11/2022
Date analysed	-	24/11/2022
Arsenic-Dissolved	µg/L	<1
Cadmium-Dissolved	µg/L	0.3
Chromium-Dissolved	µg/L	11
Copper-Dissolved	µg/L	3
Lead-Dissolved	µg/L	5
Mercury-Dissolved	µg/L	<0.05
Nickel-Dissolved	µg/L	1
Zinc-Dissolved	µg/L	20

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-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			24/11/2022	[NT]	[NT]	[NT]	[NT]	24/11/2022	[NT]
Date analysed	-			24/11/2022	[NT]	[NT]	[NT]	[NT]	24/11/2022	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	87	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	94	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	96	[NT]
Surrogate toluene-d8	%		Org-023	100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate 4-BFB	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			24/11/2022	[NT]	[NT]	[NT]	[NT]	24/11/2022	[NT]
Date analysed	-			25/11/2022	[NT]	[NT]	[NT]	[NT]	25/11/2022	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	78	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	78	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate o-Terphenyl	%		Org-020	88	[NT]	[NT]	[NT]	[NT]	82	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	311316-1
Date extracted	-			24/11/2022	[NT]	[NT]	[NT]	[NT]	24/11/2022	24/11/2022
Date analysed	-			25/11/2022	[NT]	[NT]	[NT]	[NT]	25/11/2022	25/11/2022
Naphthalene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	65	84
Acenaphthylene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	73	83
Fluorene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	80	90
Phenanthrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	86	100
Anthracene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	80	90
Pyrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	85	93
Benzo(a)anthracene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	83	103
Benzo(b,j+k)fluoranthene	µg/L	2	Org-022/025	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	78	84
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	1	Org-022/025	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	69	[NT]	[NT]	[NT]	[NT]	75	83

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date prepared	-			24/11/2022	[NT]	[NT]	[NT]	[NT]	24/11/2022	[NT]
Date analysed	-			24/11/2022	[NT]	[NT]	[NT]	[NT]	24/11/2022	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	[NT]	[NT]	[NT]	[NT]	96	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]

Result Definitions

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

Quality Control Definitions

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

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

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

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

Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

Measurement Uncertainty estimates are available for most tests upon request.

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

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

Appendix L – QA/QC Assessment

L1.1 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 DSI is presented in **Table L-1**.

Table L-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 and plastic bags, which were filled to minimise headspace, and sealed using Teflon-coated lids. Groundwater samples were obtained using sample bottles/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.	The PID screening was not conducted. Given all analytical results were below adopted criteria, VOCs in soil can be ruled out as an environmental concern.
Equipment Decontamination	Sampling equipment to be decontaminated after the collection of each soil sample by washing with phosphate-free detergent 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. One was collected during the soil investigation on 11 November 2022 and the other was collected during the groundwater monitoring event on 21 November 2022. All results were reported as below the detection limits.
Transport	Samples stored in a chilled 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 samples were to be prepared and analysed by the primary laboratory for BTEX. Analytical results to be below the laboratory LOR, indicating satisfactory sample transport and handling conditions were achieved.	Three trip blank samples prepared by the primary laboratory were analysed for BTEX during soil and groundwater testing. Note: one trip blank sample was lost by the primary laboratory. All the other results were reported below the laboratory LOR, indicating that ideal sample transport and handling conditions were achieved (i.e. no cross-contamination of volatiles during sample transport and subsequent handling).

Task	Description	Project
Trip Spikes	Trip spike samples were to be prepared and analysed by the primary laboratory for BTEX. Analytical results to be within 80-120% recovery, indicating satisfactory sample transport and handling conditions were achieved.	Three trip spike samples prepared by the primary laboratory were analysed for BTEX during soil and groundwater testing. Note: one trip spike sample was lost by the primary laboratory. All the other results were within the recovery acceptance levels, indicating that satisfactory sample transport and handling conditions were achieved (i.e. no loss of volatiles during sample transport and subsequent handling).
Duplicates	Field duplicate samples were to be analysed as follows (as per NEPM): ▪ intra-laboratory duplicates at a rate of 1 in 20 primary samples; and ▪ inter-laboratory duplicates at a rate of 1 in 20 primary samples. 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.	The required sampling density of 1 per 20 duplicated primary samples was achieved and sufficient for the investigation. Laboratory duplicates prepared and analysed. Minor non-conformance, with negligible effects on data use for interpretative purposes. Field QC samples and calculated RPD values are presented in **Table L-5**. Copies of laboratory reports are included in **Appendix K**.
Laboratory QA/QC		
Laboratory Analysis	The laboratories selected are NATA accredited for the analytes selected and perform their own internal QA/QC programs.	Yes SGS - primary laboratory Envirolab - secondary laboratory Laboratory QA/QC analyses are included in **Appendix M.**
	Appropriate detection limits were used for the analyses to be undertaken.	Practical Quantitation Limits for all tested parameters during the DSI are presented in laboratory analytical reports in **Appendix K.**
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.	All samples were analysed within the holding times.

Task	Description	Project
Method Blanks	A method blank contains 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.	Yes
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. Duplicate RPD outside acceptable range for metals (chromium, nickel, copper and lead), PAHs and TRHs. Reported concentrations were within 10 x LOR and some samples were heterogeneous. Data was acceptable.
Laboratory Control Standard	A laboratory control standard is a standard reference material used in preparing primary standards. The concentration should be equivalent to a mid-range standard to confirm the primary calibration. Laboratory control samples should be performed on a frequency of 1 per 20 samples or at least one per analytical run.	Assessment of laboratory control standard has been undertaken by the laboratory. All laboratory control standards were within acceptable ranges.
Matrix Spikes	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. Duplicate RPD outside acceptable range for metals (nickel, mercury, chromium, lead and zinc), VOCs and TRHs due to matrix interference. Duplicate RPD outside acceptable range for PAHs and metals (lead, zinc) due to sample heterogeneity. Duplicate RPD outside acceptable range for TRHs due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level). Data was acceptable.
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. All data quality objectives were met.

Task	Description	Project
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.

L1.2 Calculation of Relative Percentage Difference (RPD)

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.

L2.1 Field QA/QC

Field QC Samples

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

Table L-2 Field QC Sampling Program

Matrix	Primary QA Sample	Duplicate (Primary Lab)	Triplicate (Secondary Lab)	Total Duplicates
Soil	BHD4_0.4-0.5	QD1	QT1	2
	BHA3_0.2-0.3	QD2	QT2	2
Groundwater	GW-BHA1M	GW-QD1	GW-QT1	2

L2.2 Field QC Summary

Review of the field data quality indicators is presented in **Table L-3** below.

Table L-3 Field Data Quality Indicators

QA Component	Data Quality Indicator(s)	Conformance
Accuracy – a quantitative measure of the closeness of reported data to the "true" value	SOPs appropriate and complied with	Yes
	Results for inter-laboratory (split field) duplicates acceptable	Yes
Precision – A quantitative measure of the variability (or reproducibility) of data	SOPs appropriate and complied with	Yes
	Results for intra-laboratory (blind field) duplicates acceptable	Yes
Completeness – A measure of the amount of useable data from a data collection activity	Each critical location sampled	Yes
	Samples collected at targeted locations and depth	Yes
	SAQP appropriate and complied with	Yes

QA Component	Data Quality Indicator(s)	Conformance
	Experienced sampler	Yes
	Field documentation correct	Yes
Comparability – The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event	Same sampling method used on each occasion/location	Yes
	Experienced sampler	Yes
	Same type of samples collected (filtered, size, fractions)	Yes
Representativeness – The confidence (expressed qualitatively) that data are representative of each medium present onsite	Appropriate media sampled according to SAQP	Yes
	Each media identified in SAQP sampled	Yes
	Appropriate sample collection methodologies, handling, storage and preservation techniques used	Yes

L2.3 Conclusion for the Field QA/QC

All field work, including equipment decontamination and sample preservation and transport, was conducted in accordance with the SAQP, which were devised with reference to industry-approved guidelines. Appropriate QC measures were integrated into each sampling event and the DQIs were met.

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. EI considered the field QA/QC program carried out during the DSI to be appropriate.

L2.4 Laboratory QA/QC

Laboratory Accreditation

Primary and intra-laboratory duplicate samples were analysed by SGS (located in Alexandria NSW), with inter-laboratory duplicate samples analysed by Envirolab (located in Chatswood NSW). All laboratories are accredited by NATA for the analyses undertaken.

Laboratory QC Summary

Review of the laboratory data quality indicators is presented in **Table L-4** below.

Table L-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	Sample analytical methods used (including clean-up)	**Yes**

DQI	Item	Conformance
The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event	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/ rinsate blanks	**Yes**
	Analysis of method blanks	**Yes**
	Analysis of matrix spikes (MS)	**Yes**
	Analysis of surrogate spikes	**Yes**
	Analysis of reference materials	Not applicable
	Analysis of laboratory control samples	**Yes**

L2.5 Conclusion 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 DQIs 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 DSI to be appropriate.

L2.6 Summary of Project QA/QC

The sampling (including sample preservation, transport and decontamination procedures) and laboratory methods followed during this investigation were consistent with EI protocols. The project DQOs specified in **Section 5.2**, **Table 5-1** were considered to have been achieved. The adopted QA/QC program ensured that the data collated during the DSI were accurate, precise and representative of the site condition. It was therefore considered that the data were sufficiently precise and accurate and that the results could be used for DSI interpretative purposes.

Appendix M – Laboratory QA/QC and DQOs

STATEMENT OF QA/QC PERFORMANCE

SE239146 R0

CLIENT DETAILS

Contact	Leo Ho
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	leo.ho@eiaustralia.com.au
Project	**E25834 80 O'Connell Street, Kingswood**
Order Number	**E25834**
Samples	39

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE239146 R0**
Date Received	15 Nov 2022
Date Reported	22 Nov 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
Matrix Spike	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	3 items
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	37 Soil, 2 Water
Date documentation received	15/11/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.6C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE239146 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHD6_0.1-0.2	SE239146.009	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHD5_0.1-0.2	SE239146.010	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264244	10 Nov 2022	15 Nov 2022	10 Nov 2023	18 Nov 2022	10 Nov 2023	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHB3_0.4-0.5	SE239146.027	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHA3_0.2-0.3	SE239146.029	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHC5_0.1-0.2	SE239146.031	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264244	11 Nov 2022	15 Nov 2022	11 Nov 2023	18 Nov 2022	11 Nov 2023	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264244	14 Nov 2022	15 Nov 2022	14 Nov 2023	18 Nov 2022	14 Nov 2023	22 Nov 2022

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QRB	SE239146.019	LB264097	11 Nov 2022	15 Nov 2022	09 Dec 2022	17 Nov 2022	09 Dec 2022	17 Nov 2022
QR1	SE239146.020	LB264097	11 Nov 2022	15 Nov 2022	09 Dec 2022	17 Nov 2022	09 Dec 2022	17 Nov 2022

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHD6_0.1-0.2	SE239146.009	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHD5_0.1-0.2	SE239146.010	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
QD1	SE239146.016	LB264262	10 Nov 2022	15 Nov 2022	08 Dec 2022	18 Nov 2022	08 Dec 2022	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264262	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264262	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264262	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil (continued) — Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHB3_0.4-0.5	SE239146.027	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHA3_0.2-0.3	SE239146.029	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHC5_0.1-0.2	SE239146.031	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
QD2	SE239146.036	LB264316	11 Nov 2022	15 Nov 2022	09 Dec 2022	18 Nov 2022	09 Dec 2022	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264316	14 Nov 2022	15 Nov 2022	12 Dec 2022	18 Nov 2022	12 Dec 2022	22 Nov 2022

Moisture Content — Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHD6_0.1-0.2	SE239146.009	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHD5_0.1-0.2	SE239146.010	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
QD1	SE239146.016	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
TB1	SE239146.017	LB264281	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264281	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264281	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264281	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHB3_0.4-0.5	SE239146.027	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHA3_0.2-0.3	SE239146.029	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHC5_0.1-0.2	SE239146.031	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
QD2	SE239146.036	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
TB2	SE239146.037	LB264299	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264299	14 Nov 2022	15 Nov 2022	28 Nov 2022	18 Nov 2022	23 Nov 2022	22 Nov 2022

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD6_0.1-0.2	SE239146.009	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

OC Pesticides in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHD5_0.1-0.2	SE239146.010	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QD1	SE239146.016	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB3_0.4-0.5	SE239146.027	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA3_0.2-0.3	SE239146.029	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC5_0.1-0.2	SE239146.031	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QD2	SE239146.036	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264290	14 Nov 2022	15 Nov 2022	28 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD6_0.1-0.2	SE239146.009	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD5_0.1-0.2	SE239146.010	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QD1	SE239146.016	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB3_0.4-0.5	SE239146.027	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA3_0.2-0.3	SE239146.029	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC5_0.1-0.2	SE239146.031	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QD2	SE239146.036	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264290	14 Nov 2022	15 Nov 2022	28 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022

HOLDING TIME SUMMARY

SE239146 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

PAH (Polynuclear Aromatic Hydrocarbons) in Soil — **Method: ME-(AU)-[ENV]AN420**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD6_0.1-0.2	SE239146.009	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD5_0.1-0.2	SE239146.010	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QD1	SE239146.016	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB3_0.4-0.5	SE239146.027	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA3_0.2-0.3	SE239146.029	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC5_0.1-0.2	SE239146.031	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QD2	SE239146.036	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264290	14 Nov 2022	15 Nov 2022	28 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022

PCBs in Soil — **Method: ME-(AU)-[ENV]AN420**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD6_0.1-0.2	SE239146.009	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD5_0.1-0.2	SE239146.010	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QD1	SE239146.016	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB3_0.4-0.5	SE239146.027	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022

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Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

PCBs in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA3_0.2-0.3	SE239146.029	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC5_0.1-0.2	SE239146.031	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QD2	SE239146.036	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264290	14 Nov 2022	15 Nov 2022	28 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHD6_0.1-0.2	SE239146.009	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHD5_0.1-0.2	SE239146.010	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
QD1	SE239146.016	LB264263	10 Nov 2022	15 Nov 2022	09 May 2023	18 Nov 2022	09 May 2023	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264263	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264263	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264263	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHB3_0.4-0.5	SE239146.027	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHA3_0.2-0.3	SE239146.029	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHC5_0.1-0.2	SE239146.031	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
QD2	SE239146.036	LB264305	11 Nov 2022	15 Nov 2022	10 May 2023	18 Nov 2022	10 May 2023	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264305	14 Nov 2022	15 Nov 2022	13 May 2023	18 Nov 2022	13 May 2023	22 Nov 2022

Trace Metals (Dissolved) in Water by ICPMS — Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QRB	SE239146.019	LB264078	11 Nov 2022	15 Nov 2022	10 May 2023	17 Nov 2022	10 May 2023	17 Nov 2022
QR1	SE239146.020	LB264078	11 Nov 2022	15 Nov 2022	10 May 2023	17 Nov 2022	10 May 2023	17 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

TRH (Total Recoverable Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHD6_0.1-0.2	SE239146.009	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD5_0.1-0.2	SE239146.010	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QD1	SE239146.016	LB264245	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264245	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB3_0.4-0.5	SE239146.027	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHA3_0.2-0.3	SE239146.029	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC5_0.1-0.2	SE239146.031	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QD2	SE239146.036	LB264290	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264290	14 Nov 2022	15 Nov 2022	28 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Water — Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QRB	SE239146.019	LB264233	11 Nov 2022	15 Nov 2022	18 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022
QR1	SE239146.020	LB264233	11 Nov 2022	15 Nov 2022	18 Nov 2022	18 Nov 2022	28 Dec 2022	22 Nov 2022

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHD6_0.1-0.2	SE239146.009	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHD5_0.1-0.2	SE239146.010	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
QD1	SE239146.016	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
TB1	SE239146.017	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
TSP1	SE239146.018	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264295	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264295	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264295	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB3_0.4-0.5	SE239146.027	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHA3_0.2-0.3	SE239146.029	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022

HOLDING TIME SUMMARY

SE239146 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHC5_0.1-0.2	SE239146.031	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
QD2	SE239146.036	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
TB2	SE239146.037	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
TSP2	SE239146.038	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264296	14 Nov 2022	15 Nov 2022	28 Nov 2022	18 Nov 2022	28 Nov 2022	22 Nov 2022

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QRB	SE239146.019	LB264207	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	21 Nov 2022
QR1	SE239146.020	LB264207	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	21 Nov 2022

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF7_0.2-0.3	SE239146.001	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHE7_0.0-0.1	SE239146.002	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHD7_0.0-0.1	SE239146.003	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHG7_0.4-0.5	SE239146.004	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHH6_0.5-0.6	SE239146.005	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHG6_0.1-0.2	SE239146.006	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHF6_0.0-0.1	SE239146.007	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHE6_0.0-0.1	SE239146.008	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHD6_0.1-0.2	SE239146.009	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHD5_0.1-0.2	SE239146.010	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHG5_0.3-0.4	SE239146.011	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHH5_0.3-0.4	SE239146.012	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHD4_0.4-0.5	SE239146.013	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHH3_0.2-0.3	SE239146.014	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHG3_0.3-0.4	SE239146.015	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
QD1	SE239146.016	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
TB1	SE239146.017	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
TSP1	SE239146.018	LB264295	10 Nov 2022	15 Nov 2022	24 Nov 2022	18 Nov 2022	24 Nov 2022	22 Nov 2022
BHA6_0.7-0.8	SE239146.021	LB264295	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHA5_0.3-0.4	SE239146.022	LB264295	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB7_0.5-0.6	SE239146.023	LB264295	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB6_0.3-0.4	SE239146.024	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB5_0.3-0.4	SE239146.025	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB4_0.3-0.4	SE239146.026	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB3_0.4-0.5	SE239146.027	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHB2_0.4-0.5	SE239146.028	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHA3_0.2-0.3	SE239146.029	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHC3_0.2-0.3	SE239146.030	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHC5_0.1-0.2	SE239146.031	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHC6_0.6-0.7	SE239146.032	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHE4_0.3-0.4	SE239146.033	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHD3_0.3-0.4	SE239146.034	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHG4_0.3-0.4	SE239146.035	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
QD2	SE239146.036	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
TB2	SE239146.037	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
TSP2	SE239146.038	LB264296	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	22 Nov 2022
BHC2_0.2-0.3	SE239146.039	LB264296	14 Nov 2022	15 Nov 2022	28 Nov 2022	18 Nov 2022	28 Nov 2022	22 Nov 2022

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QRB	SE239146.019	LB264207	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	21 Nov 2022
QR1	SE239146.020	LB264207	11 Nov 2022	15 Nov 2022	25 Nov 2022	18 Nov 2022	25 Nov 2022	21 Nov 2022

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	60 - 130%	92
	BHE7_0.0-0.1	SE239146.002	%	60 - 130%	97
	BHD7_0.0-0.1	SE239146.003	%	60 - 130%	100
	BHG7_0.4-0.5	SE239146.004	%	60 - 130%	94
	BHH6_0.5-0.6	SE239146.005	%	60 - 130%	100
	BHG6_0.1-0.2	SE239146.006	%	60 - 130%	97
	BHF6_0.0-0.1	SE239146.007	%	60 - 130%	100
	BHE6_0.0-0.1	SE239146.008	%	60 - 130%	97
	BHD6_0.1-0.2	SE239146.009	%	60 - 130%	97
	BHD5_0.1-0.2	SE239146.010	%	60 - 130%	91
	BHG5_0.3-0.4	SE239146.011	%	60 - 130%	101
	BHH5_0.3-0.4	SE239146.012	%	60 - 130%	96
	BHD4_0.4-0.5	SE239146.013	%	60 - 130%	102
	BHH3_0.2-0.3	SE239146.014	%	60 - 130%	98
	BHG3_0.3-0.4	SE239146.015	%	60 - 130%	100
	BHA6_0.7-0.8	SE239146.021	%	60 - 130%	97
	BHA5_0.3-0.4	SE239146.022	%	60 - 130%	99
	BHB7_0.5-0.6	SE239146.023	%	60 - 130%	91
	BHB6_0.3-0.4	SE239146.024	%	60 - 130%	114
	BHB5_0.3-0.4	SE239146.025	%	60 - 130%	109
	BHB4_0.3-0.4	SE239146.026	%	60 - 130%	109
	BHB3_0.4-0.5	SE239146.027	%	60 - 130%	101
	BHB2_0.4-0.5	SE239146.028	%	60 - 130%	108
	BHA3_0.2-0.3	SE239146.029	%	60 - 130%	109
	BHC3_0.2-0.3	SE239146.030	%	60 - 130%	110
	BHC5_0.1-0.2	SE239146.031	%	60 - 130%	110
	BHC6_0.6-0.7	SE239146.032	%	60 - 130%	109
	BHE4_0.3-0.4	SE239146.033	%	60 - 130%	114
	BHD3_0.3-0.4	SE239146.034	%	60 - 130%	111
	BHG4_0.3-0.4	SE239146.035	%	60 - 130%	106
	BHC2_0.2-0.3	SE239146.039	%	60 - 130%	111

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	60 - 130%	91
	BHE7_0.0-0.1	SE239146.002	%	60 - 130%	93
	BHD7_0.0-0.1	SE239146.003	%	60 - 130%	99
	BHG7_0.4-0.5	SE239146.004	%	60 - 130%	86
	BHH6_0.5-0.6	SE239146.005	%	60 - 130%	87
	BHG6_0.1-0.2	SE239146.006	%	60 - 130%	89
	BHF6_0.0-0.1	SE239146.007	%	60 - 130%	89
	BHE6_0.0-0.1	SE239146.008	%	60 - 130%	91
	BHD6_0.1-0.2	SE239146.009	%	60 - 130%	92
	BHD5_0.1-0.2	SE239146.010	%	60 - 130%	91
	BHG5_0.3-0.4	SE239146.011	%	60 - 130%	91
	BHH5_0.3-0.4	SE239146.012	%	60 - 130%	92
	BHD4_0.4-0.5	SE239146.013	%	60 - 130%	89
	BHH3_0.2-0.3	SE239146.014	%	60 - 130%	107
	BHG3_0.3-0.4	SE239146.015	%	60 - 130%	89
	BHA6_0.7-0.8	SE239146.021	%	60 - 130%	90
	BHA5_0.3-0.4	SE239146.022	%	60 - 130%	91
	BHB7_0.5-0.6	SE239146.023	%	60 - 130%	92
	BHB6_0.3-0.4	SE239146.024	%	60 - 130%	90
	BHB5_0.3-0.4	SE239146.025	%	60 - 130%	91
	BHB4_0.3-0.4	SE239146.026	%	60 - 130%	89
	BHB3_0.4-0.5	SE239146.027	%	60 - 130%	89
	BHB2_0.4-0.5	SE239146.028	%	60 - 130%	92
	BHA3_0.2-0.3	SE239146.029	%	60 - 130%	89
	BHC3_0.2-0.3	SE239146.030	%	60 - 130%	90
	BHC5_0.1-0.2	SE239146.031	%	60 - 130%	90
	BHC6_0.6-0.7	SE239146.032	%	60 - 130%	86

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OP Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHE4_0.3-0.4	SE239146.033	%	60 - 130%	108
	BHD3_0.3-0.4	SE239146.034	%	60 - 130%	90
	BHG4_0.3-0.4	SE239146.035	%	60 - 130%	91
	BHC2_0.2-0.3	SE239146.039	%	60 - 130%	92
d14-p-terphenyl (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	60 - 130%	91
	BHE7_0.0-0.1	SE239146.002	%	60 - 130%	94
	BHD7_0.0-0.1	SE239146.003	%	60 - 130%	101
	BHG7_0.4-0.5	SE239146.004	%	60 - 130%	86
	BHH6_0.5-0.6	SE239146.005	%	60 - 130%	88
	BHG6_0.1-0.2	SE239146.006	%	60 - 130%	91
	BHF6_0.0-0.1	SE239146.007	%	60 - 130%	90
	BHE6_0.0-0.1	SE239146.008	%	60 - 130%	92
	BHD6_0.1-0.2	SE239146.009	%	60 - 130%	94
	BHD5_0.1-0.2	SE239146.010	%	60 - 130%	94
	BHG5_0.3-0.4	SE239146.011	%	60 - 130%	92
	BHH5_0.3-0.4	SE239146.012	%	60 - 130%	94
	BHD4_0.4-0.5	SE239146.013	%	60 - 130%	91
	BHH3_0.2-0.3	SE239146.014	%	60 - 130%	108
	BHG3_0.3-0.4	SE239146.015	%	60 - 130%	92
	BHA6_0.7-0.8	SE239146.021	%	60 - 130%	92
	BHA5_0.3-0.4	SE239146.022	%	60 - 130%	92
	BHB7_0.5-0.6	SE239146.023	%	60 - 130%	93
	BHB6_0.3-0.4	SE239146.024	%	60 - 130%	91
	BHB5_0.3-0.4	SE239146.025	%	60 - 130%	92
	BHB4_0.3-0.4	SE239146.026	%	60 - 130%	91
	BHB3_0.4-0.5	SE239146.027	%	60 - 130%	91
	BHB2_0.4-0.5	SE239146.028	%	60 - 130%	93
	BHA3_0.2-0.3	SE239146.029	%	60 - 130%	92
	BHC3_0.2-0.3	SE239146.030	%	60 - 130%	91
	BHC5_0.1-0.2	SE239146.031	%	60 - 130%	90
	BHC6_0.6-0.7	SE239146.032	%	60 - 130%	87
	BHE4_0.3-0.4	SE239146.033	%	60 - 130%	110
	BHD3_0.3-0.4	SE239146.034	%	60 - 130%	92
	BHG4_0.3-0.4	SE239146.035	%	60 - 130%	93
	BHC2_0.2-0.3	SE239146.039	%	60 - 130%	94

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	70 - 130%	91
	BHE7_0.0-0.1	SE239146.002	%	70 - 130%	93
	BHD7_0.0-0.1	SE239146.003	%	70 - 130%	99
	BHG7_0.4-0.5	SE239146.004	%	70 - 130%	86
	BHH6_0.5-0.6	SE239146.005	%	70 - 130%	87
	BHG6_0.1-0.2	SE239146.006	%	70 - 130%	89
	BHF6_0.0-0.1	SE239146.007	%	70 - 130%	89
	BHE6_0.0-0.1	SE239146.008	%	70 - 130%	91
	BHD6_0.1-0.2	SE239146.009	%	70 - 130%	92
	BHD5_0.1-0.2	SE239146.010	%	70 - 130%	91
	BHG5_0.3-0.4	SE239146.011	%	70 - 130%	91
	BHH5_0.3-0.4	SE239146.012	%	70 - 130%	92
	BHD4_0.4-0.5	SE239146.013	%	70 - 130%	89
	BHH3_0.2-0.3	SE239146.014	%	70 - 130%	107
	BHG3_0.3-0.4	SE239146.015	%	70 - 130%	89
	BHA6_0.7-0.8	SE239146.021	%	70 - 130%	90
	BHA5_0.3-0.4	SE239146.022	%	70 - 130%	91
	BHB7_0.5-0.6	SE239146.023	%	70 - 130%	92
	BHB6_0.3-0.4	SE239146.024	%	70 - 130%	90
	BHB5_0.3-0.4	SE239146.025	%	70 - 130%	91
	BHB4_0.3-0.4	SE239146.026	%	70 - 130%	89
	BHB3_0.4-0.5	SE239146.027	%	70 - 130%	89
	BHB2_0.4-0.5	SE239146.028	%	70 - 130%	92

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — **Method: ME-(AU)-[ENV]AN420**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHA3_0.2-0.3	SE239146.029	%	70 - 130%	89
	BHC3_0.2-0.3	SE239146.030	%	70 - 130%	90
	BHC5_0.1-0.2	SE239146.031	%	70 - 130%	90
	BHC6_0.6-0.7	SE239146.032	%	70 - 130%	86
	BHE4_0.3-0.4	SE239146.033	%	70 - 130%	108
	BHD3_0.3-0.4	SE239146.034	%	70 - 130%	90
	BHG4_0.3-0.4	SE239146.035	%	70 - 130%	91
	BHC2_0.2-0.3	SE239146.039	%	70 - 130%	92
d14-p-terphenyl (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	70 - 130%	91
	BHE7_0.0-0.1	SE239146.002	%	70 - 130%	94
	BHD7_0.0-0.1	SE239146.003	%	70 - 130%	101
	BHG7_0.4-0.5	SE239146.004	%	70 - 130%	86
	BHH6_0.5-0.6	SE239146.005	%	70 - 130%	88
	BHG6_0.1-0.2	SE239146.006	%	70 - 130%	91
	BHF6_0.0-0.1	SE239146.007	%	70 - 130%	90
	BHE6_0.0-0.1	SE239146.008	%	70 - 130%	92
	BHD6_0.1-0.2	SE239146.009	%	70 - 130%	94
	BHD5_0.1-0.2	SE239146.010	%	70 - 130%	94
	BHG5_0.3-0.4	SE239146.011	%	70 - 130%	92
	BHH5_0.3-0.4	SE239146.012	%	70 - 130%	94
	BHD4_0.4-0.5	SE239146.013	%	70 - 130%	91
	BHH3_0.2-0.3	SE239146.014	%	70 - 130%	108
	BHG3_0.3-0.4	SE239146.015	%	70 - 130%	92
	BHA6_0.7-0.8	SE239146.021	%	70 - 130%	92
	BHA5_0.3-0.4	SE239146.022	%	70 - 130%	92
	BHB7_0.5-0.6	SE239146.023	%	70 - 130%	93
	BHB6_0.3-0.4	SE239146.024	%	70 - 130%	91
	BHB5_0.3-0.4	SE239146.025	%	70 - 130%	92
	BHB4_0.3-0.4	SE239146.026	%	70 - 130%	91
	BHB3_0.4-0.5	SE239146.027	%	70 - 130%	91
	BHB2_0.4-0.5	SE239146.028	%	70 - 130%	93
	BHA3_0.2-0.3	SE239146.029	%	70 - 130%	92
	BHC3_0.2-0.3	SE239146.030	%	70 - 130%	91
	BHC5_0.1-0.2	SE239146.031	%	70 - 130%	90
	BHC6_0.6-0.7	SE239146.032	%	70 - 130%	87
	BHE4_0.3-0.4	SE239146.033	%	70 - 130%	110
	BHD3_0.3-0.4	SE239146.034	%	70 - 130%	92
	BHG4_0.3-0.4	SE239146.035	%	70 - 130%	93
	BHC2_0.2-0.3	SE239146.039	%	70 - 130%	94
d5-nitrobenzene (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	70 - 130%	105
	BHE7_0.0-0.1	SE239146.002	%	70 - 130%	108
	BHD7_0.0-0.1	SE239146.003	%	70 - 130%	116
	BHG7_0.4-0.5	SE239146.004	%	70 - 130%	101
	BHH6_0.5-0.6	SE239146.005	%	70 - 130%	103
	BHG6_0.1-0.2	SE239146.006	%	70 - 130%	105
	BHF6_0.0-0.1	SE239146.007	%	70 - 130%	105
	BHE6_0.0-0.1	SE239146.008	%	70 - 130%	109
	BHD6_0.1-0.2	SE239146.009	%	70 - 130%	110
	BHD5_0.1-0.2	SE239146.010	%	70 - 130%	109
	BHG5_0.3-0.4	SE239146.011	%	70 - 130%	108
	BHH5_0.3-0.4	SE239146.012	%	70 - 130%	108
	BHD4_0.4-0.5	SE239146.013	%	70 - 130%	106
	BHH3_0.2-0.3	SE239146.014	%	70 - 130%	127
	BHG3_0.3-0.4	SE239146.015	%	70 - 130%	106
	BHA6_0.7-0.8	SE239146.021	%	70 - 130%	109
	BHA5_0.3-0.4	SE239146.022	%	70 - 130%	109
	BHB7_0.5-0.6	SE239146.023	%	70 - 130%	108
	BHB6_0.3-0.4	SE239146.024	%	70 - 130%	106
	BHB5_0.3-0.4	SE239146.025	%	70 - 130%	108
	BHB4_0.3-0.4	SE239146.026	%	70 - 130%	107
	BHB3_0.4-0.5	SE239146.027	%	70 - 130%	108

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d5-nitrobenzene (Surrogate)	BHB2_0.4-0.5	SE239146.028	%	70 - 130%	109
	BHA3_0.2-0.3	SE239146.029	%	70 - 130%	106
	BHC3_0.2-0.3	SE239146.030	%	70 - 130%	106
	BHC5_0.1-0.2	SE239146.031	%	70 - 130%	107
	BHC6_0.6-0.7	SE239146.032	%	70 - 130%	103
	BHE4_0.3-0.4	SE239146.033	%	70 - 130%	128
	BHD3_0.3-0.4	SE239146.034	%	70 - 130%	108
	BHG4_0.3-0.4	SE239146.035	%	70 - 130%	107
	BHC2_0.2-0.3	SE239146.039	%	70 - 130%	109

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	60 - 130%	92
	BHE7_0.0-0.1	SE239146.002	%	60 - 130%	97
	BHD7_0.0-0.1	SE239146.003	%	60 - 130%	100
	BHG7_0.4-0.5	SE239146.004	%	60 - 130%	94
	BHH6_0.5-0.6	SE239146.005	%	60 - 130%	100
	BHG6_0.1-0.2	SE239146.006	%	60 - 130%	97
	BHF6_0.0-0.1	SE239146.007	%	60 - 130%	100
	BHE6_0.0-0.1	SE239146.008	%	60 - 130%	97
	BHD6_0.1-0.2	SE239146.009	%	60 - 130%	97
	BHD5_0.1-0.2	SE239146.010	%	60 - 130%	91
	BHG5_0.3-0.4	SE239146.011	%	60 - 130%	101
	BHH5_0.3-0.4	SE239146.012	%	60 - 130%	96
	BHD4_0.4-0.5	SE239146.013	%	60 - 130%	102
	BHH3_0.2-0.3	SE239146.014	%	60 - 130%	98
	BHG3_0.3-0.4	SE239146.015	%	60 - 130%	100
	BHA6_0.7-0.8	SE239146.021	%	60 - 130%	97
	BHA5_0.3-0.4	SE239146.022	%	60 - 130%	99
	BHB7_0.5-0.6	SE239146.023	%	60 - 130%	91
	BHB6_0.3-0.4	SE239146.024	%	60 - 130%	110
	BHB5_0.3-0.4	SE239146.025	%	60 - 130%	105
	BHB4_0.3-0.4	SE239146.026	%	60 - 130%	106
	BHB3_0.4-0.5	SE239146.027	%	60 - 130%	98
	BHB2_0.4-0.5	SE239146.028	%	60 - 130%	105
	BHA3_0.2-0.3	SE239146.029	%	60 - 130%	106
	BHC3_0.2-0.3	SE239146.030	%	60 - 130%	107
	BHC5_0.1-0.2	SE239146.031	%	60 - 130%	107
	BHC6_0.6-0.7	SE239146.032	%	60 - 130%	106
	BHE4_0.3-0.4	SE239146.033	%	60 - 130%	111
	BHD3_0.3-0.4	SE239146.034	%	60 - 130%	108
	BHG4_0.3-0.4	SE239146.035	%	60 - 130%	103
	BHC2_0.2-0.3	SE239146.039	%	60 - 130%	108

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	60 - 130%	83
	BHE7_0.0-0.1	SE239146.002	%	60 - 130%	84
	BHD7_0.0-0.1	SE239146.003	%	60 - 130%	104
	BHG7_0.4-0.5	SE239146.004	%	60 - 130%	81
	BHH6_0.5-0.6	SE239146.005	%	60 - 130%	81
	BHG6_0.1-0.2	SE239146.006	%	60 - 130%	80
	BHF6_0.0-0.1	SE239146.007	%	60 - 130%	75
	BHE6_0.0-0.1	SE239146.008	%	60 - 130%	106
	BHD6_0.1-0.2	SE239146.009	%	60 - 130%	81
	BHD5_0.1-0.2	SE239146.010	%	60 - 130%	77
	BHG5_0.3-0.4	SE239146.011	%	60 - 130%	80
	BHH5_0.3-0.4	SE239146.012	%	60 - 130%	81
	BHD4_0.4-0.5	SE239146.013	%	60 - 130%	79
	BHH3_0.2-0.3	SE239146.014	%	60 - 130%	81
	BHG3_0.3-0.4	SE239146.015	%	60 - 130%	80
	QD1	SE239146.016	%	60 - 130%	83

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TB1	SE239146.017	%	60 - 130%	83
	TSP1	SE239146.018	%	60 - 130%	87
	BHA6_0.7-0.8	SE239146.021	%	60 - 130%	79
	BHA5_0.3-0.4	SE239146.022	%	60 - 130%	80
	BHB7_0.5-0.6	SE239146.023	%	60 - 130%	73
	BHB6_0.3-0.4	SE239146.024	%	60 - 130%	93
	BHB5_0.3-0.4	SE239146.025	%	60 - 130%	92
	BHB4_0.3-0.4	SE239146.026	%	60 - 130%	92
	BHB3_0.4-0.5	SE239146.027	%	60 - 130%	94
	BHB2_0.4-0.5	SE239146.028	%	60 - 130%	91
	BHA3_0.2-0.3	SE239146.029	%	60 - 130%	95
	BHC3_0.2-0.3	SE239146.030	%	60 - 130%	94
	BHC5_0.1-0.2	SE239146.031	%	60 - 130%	91
	BHC6_0.6-0.7	SE239146.032	%	60 - 130%	90
	BHE4_0.3-0.4	SE239146.033	%	60 - 130%	92
	BHD3_0.3-0.4	SE239146.034	%	60 - 130%	97
	BHG4_0.3-0.4	SE239146.035	%	60 - 130%	96
	QD2	SE239146.036	%	60 - 130%	96
	BHC2_0.2-0.3	SE239146.039	%	60 - 130%	94
d4-1,2-dichloroethane (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	60 - 130%	75
	BHE7_0.0-0.1	SE239146.002	%	60 - 130%	81
	BHD7_0.0-0.1	SE239146.003	%	60 - 130%	103
	BHG7_0.4-0.5	SE239146.004	%	60 - 130%	75
	BHH6_0.5-0.6	SE239146.005	%	60 - 130%	84
	BHG6_0.1-0.2	SE239146.006	%	60 - 130%	78
	BHF6_0.0-0.1	SE239146.007	%	60 - 130%	79
	BHE6_0.0-0.1	SE239146.008	%	60 - 130%	105
	BHD6_0.1-0.2	SE239146.009	%	60 - 130%	86
	BHD5_0.1-0.2	SE239146.010	%	60 - 130%	78
	BHG5_0.3-0.4	SE239146.011	%	60 - 130%	80
	BHH5_0.3-0.4	SE239146.012	%	60 - 130%	84
	BHD4_0.4-0.5	SE239146.013	%	60 - 130%	80
	BHH3_0.2-0.3	SE239146.014	%	60 - 130%	85
	BHG3_0.3-0.4	SE239146.015	%	60 - 130%	84
	QD1	SE239146.016	%	60 - 130%	79
	TB1	SE239146.017	%	60 - 130%	84
	TSP1	SE239146.018	%	60 - 130%	86
	BHA6_0.7-0.8	SE239146.021	%	60 - 130%	85
	BHA5_0.3-0.4	SE239146.022	%	60 - 130%	81
	BHB7_0.5-0.6	SE239146.023	%	60 - 130%	77
	BHB6_0.3-0.4	SE239146.024	%	60 - 130%	91
	BHB5_0.3-0.4	SE239146.025	%	60 - 130%	93
	BHB4_0.3-0.4	SE239146.026	%	60 - 130%	91
	BHB3_0.4-0.5	SE239146.027	%	60 - 130%	93
	BHB2_0.4-0.5	SE239146.028	%	60 - 130%	90
	BHA3_0.2-0.3	SE239146.029	%	60 - 130%	92
	BHC3_0.2-0.3	SE239146.030	%	60 - 130%	93
	BHC5_0.1-0.2	SE239146.031	%	60 - 130%	89
	BHC6_0.6-0.7	SE239146.032	%	60 - 130%	90
	BHE4_0.3-0.4	SE239146.033	%	60 - 130%	91
	BHD3_0.3-0.4	SE239146.034	%	60 - 130%	97
	BHG4_0.3-0.4	SE239146.035	%	60 - 130%	95
	QD2	SE239146.036	%	60 - 130%	96
	BHC2_0.2-0.3	SE239146.039	%	60 - 130%	93
d8-toluene (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	60 - 130%	77
	BHE7_0.0-0.1	SE239146.002	%	60 - 130%	81
	BHD7_0.0-0.1	SE239146.003	%	60 - 130%	101
	BHG7_0.4-0.5	SE239146.004	%	60 - 130%	72
	BHH6_0.5-0.6	SE239146.005	%	60 - 130%	83
	BHG6_0.1-0.2	SE239146.006	%	60 - 130%	78
	BHF6_0.0-0.1	SE239146.007	%	60 - 130%	80

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	BHE6_0.0-0.1	SE239146.008	%	60 - 130%	104
	BHD6_0.1-0.2	SE239146.009	%	60 - 130%	85
	BHD5_0.1-0.2	SE239146.010	%	60 - 130%	79
	BHG5_0.3-0.4	SE239146.011	%	60 - 130%	83
	BHH5_0.3-0.4	SE239146.012	%	60 - 130%	85
	BHD4_0.4-0.5	SE239146.013	%	60 - 130%	76
	BHH3_0.2-0.3	SE239146.014	%	60 - 130%	82
	BHG3_0.3-0.4	SE239146.015	%	60 - 130%	82
	QD1	SE239146.016	%	60 - 130%	81
	TB1	SE239146.017	%	60 - 130%	81
	TSP1	SE239146.018	%	60 - 130%	85
	BHA6_0.7-0.8	SE239146.021	%	60 - 130%	82
	BHA5_0.3-0.4	SE239146.022	%	60 - 130%	79
	BHB7_0.5-0.6	SE239146.023	%	60 - 130%	76
	BHB6_0.3-0.4	SE239146.024	%	60 - 130%	91
	BHB5_0.3-0.4	SE239146.025	%	60 - 130%	91
	BHB4_0.3-0.4	SE239146.026	%	60 - 130%	90
	BHB3_0.4-0.5	SE239146.027	%	60 - 130%	93
	BHB2_0.4-0.5	SE239146.028	%	60 - 130%	88
	BHA3_0.2-0.3	SE239146.029	%	60 - 130%	92
	BHC3_0.2-0.3	SE239146.030	%	60 - 130%	94
	BHC5_0.1-0.2	SE239146.031	%	60 - 130%	89
	BHC6_0.6-0.7	SE239146.032	%	60 - 130%	89
	BHE4_0.3-0.4	SE239146.033	%	60 - 130%	88
	BHD3_0.3-0.4	SE239146.034	%	60 - 130%	96
	BHG4_0.3-0.4	SE239146.035	%	60 - 130%	93
	QD2	SE239146.036	%	60 - 130%	98
	BHC2_0.2-0.3	SE239146.039	%	60 - 130%	92

VOCs in Water — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QRB	SE239146.019	%	40 - 130%	104
	QR1	SE239146.020	%	40 - 130%	105
d4-1,2-dichloroethane (Surrogate)	QRB	SE239146.019	%	40 - 130%	104
	QR1	SE239146.020	%	40 - 130%	101
d8-toluene (Surrogate)	QRB	SE239146.019	%	40 - 130%	105
	QR1	SE239146.020	%	40 - 130%	106

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	60 - 130%	83
	BHE7_0.0-0.1	SE239146.002	%	60 - 130%	84
	BHD7_0.0-0.1	SE239146.003	%	60 - 130%	104
	BHG7_0.4-0.5	SE239146.004	%	60 - 130%	81
	BHH6_0.5-0.6	SE239146.005	%	60 - 130%	81
	BHG6_0.1-0.2	SE239146.006	%	60 - 130%	80
	BHF6_0.0-0.1	SE239146.007	%	60 - 130%	75
	BHE6_0.0-0.1	SE239146.008	%	60 - 130%	106
	BHD6_0.1-0.2	SE239146.009	%	60 - 130%	81
	BHD5_0.1-0.2	SE239146.010	%	60 - 130%	77
	BHG5_0.3-0.4	SE239146.011	%	60 - 130%	80
	BHH5_0.3-0.4	SE239146.012	%	60 - 130%	81
	BHD4_0.4-0.5	SE239146.013	%	60 - 130%	79
	BHH3_0.2-0.3	SE239146.014	%	60 - 130%	81
	BHG3_0.3-0.4	SE239146.015	%	60 - 130%	80
	QD1	SE239146.016	%	60 - 130%	83
	BHA6_0.7-0.8	SE239146.021	%	60 - 130%	79
	BHA5_0.3-0.4	SE239146.022	%	60 - 130%	80
	BHB7_0.5-0.6	SE239146.023	%	60 - 130%	73
	BHB6_0.3-0.4	SE239146.024	%	60 - 130%	93
	BHB5_0.3-0.4	SE239146.025	%	60 - 130%	92
	BHB4_0.3-0.4	SE239146.026	%	60 - 130%	92

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHB3_0.4-0.5	SE239146.027	%	60 - 130%	94
	BHB2_0.4-0.5	SE239146.028	%	60 - 130%	91
	BHA3_0.2-0.3	SE239146.029	%	60 - 130%	95
	BHC3_0.2-0.3	SE239146.030	%	60 - 130%	94
	BHC5_0.1-0.2	SE239146.031	%	60 - 130%	91
	BHC6_0.6-0.7	SE239146.032	%	60 - 130%	90
	BHE4_0.3-0.4	SE239146.033	%	60 - 130%	92
	BHD3_0.3-0.4	SE239146.034	%	60 - 130%	97
	BHG4_0.3-0.4	SE239146.035	%	60 - 130%	96
	QD2	SE239146.036	%	60 - 130%	96
	BHC2_0.2-0.3	SE239146.039	%	60 - 130%	94
d4-1,2-dichloroethane (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	60 - 130%	75
	BHE7_0.0-0.1	SE239146.002	%	60 - 130%	81
	BHD7_0.0-0.1	SE239146.003	%	60 - 130%	103
	BHG7_0.4-0.5	SE239146.004	%	60 - 130%	75
	BHH6_0.5-0.6	SE239146.005	%	60 - 130%	84
	BHG6_0.1-0.2	SE239146.006	%	60 - 130%	78
	BHF6_0.0-0.1	SE239146.007	%	60 - 130%	79
	BHE6_0.0-0.1	SE239146.008	%	60 - 130%	105
	BHD6_0.1-0.2	SE239146.009	%	60 - 130%	86
	BHD5_0.1-0.2	SE239146.010	%	60 - 130%	78
	BHG5_0.3-0.4	SE239146.011	%	60 - 130%	80
	BHH5_0.3-0.4	SE239146.012	%	60 - 130%	84
	BHD4_0.4-0.5	SE239146.013	%	60 - 130%	80
	BHH3_0.2-0.3	SE239146.014	%	60 - 130%	85
	BHG3_0.3-0.4	SE239146.015	%	60 - 130%	84
	QD1	SE239146.016	%	60 - 130%	79
	BHA6_0.7-0.8	SE239146.021	%	60 - 130%	85
	BHA5_0.3-0.4	SE239146.022	%	60 - 130%	81
	BHB7_0.5-0.6	SE239146.023	%	60 - 130%	77
	BHB6_0.3-0.4	SE239146.024	%	60 - 130%	91
	BHB5_0.3-0.4	SE239146.025	%	60 - 130%	93
	BHB4_0.3-0.4	SE239146.026	%	60 - 130%	91
	BHB3_0.4-0.5	SE239146.027	%	60 - 130%	93
	BHB2_0.4-0.5	SE239146.028	%	60 - 130%	90
	BHA3_0.2-0.3	SE239146.029	%	60 - 130%	92
	BHC3_0.2-0.3	SE239146.030	%	60 - 130%	93
	BHC5_0.1-0.2	SE239146.031	%	60 - 130%	89
	BHC6_0.6-0.7	SE239146.032	%	60 - 130%	90
	BHE4_0.3-0.4	SE239146.033	%	60 - 130%	91
	BHD3_0.3-0.4	SE239146.034	%	60 - 130%	97
	BHG4_0.3-0.4	SE239146.035	%	60 - 130%	95
	QD2	SE239146.036	%	60 - 130%	96
	BHC2_0.2-0.3	SE239146.039	%	60 - 130%	93
d8-toluene (Surrogate)	BHF7_0.2-0.3	SE239146.001	%	60 - 130%	77
	BHE7_0.0-0.1	SE239146.002	%	60 - 130%	81
	BHD7_0.0-0.1	SE239146.003	%	60 - 130%	101
	BHG7_0.4-0.5	SE239146.004	%	60 - 130%	72
	BHH6_0.5-0.6	SE239146.005	%	60 - 130%	83
	BHG6_0.1-0.2	SE239146.006	%	60 - 130%	78
	BHF6_0.0-0.1	SE239146.007	%	60 - 130%	80
	BHE6_0.0-0.1	SE239146.008	%	60 - 130%	104
	BHD6_0.1-0.2	SE239146.009	%	60 - 130%	85
	BHD5_0.1-0.2	SE239146.010	%	60 - 130%	79
	BHG5_0.3-0.4	SE239146.011	%	60 - 130%	83
	BHH5_0.3-0.4	SE239146.012	%	60 - 130%	85
	BHD4_0.4-0.5	SE239146.013	%	60 - 130%	76
	BHH3_0.2-0.3	SE239146.014	%	60 - 130%	82
	BHG3_0.3-0.4	SE239146.015	%	60 - 130%	82
	QD1	SE239146.016	%	60 - 130%	81
	BHA6_0.7-0.8	SE239146.021	%	60 - 130%	82

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	BHA5_0.3-0.4	SE239146.022	%	60 - 130%	79
	BHB7_0.5-0.6	SE239146.023	%	60 - 130%	76
	BHB6_0.3-0.4	SE239146.024	%	60 - 130%	91
	BHB5_0.3-0.4	SE239146.025	%	60 - 130%	91
	BHB4_0.3-0.4	SE239146.026	%	60 - 130%	90
	BHB3_0.4-0.5	SE239146.027	%	60 - 130%	93
	BHB2_0.4-0.5	SE239146.028	%	60 - 130%	88
	BHA3_0.2-0.3	SE239146.029	%	60 - 130%	92
	BHC3_0.2-0.3	SE239146.030	%	60 - 130%	94
	BHC5_0.1-0.2	SE239146.031	%	60 - 130%	89
	BHC6_0.6-0.7	SE239146.032	%	60 - 130%	89
	BHE4_0.3-0.4	SE239146.033	%	60 - 130%	88
	BHD3_0.3-0.4	SE239146.034	%	60 - 130%	96
	BHG4_0.3-0.4	SE239146.035	%	60 - 130%	93
	QD2	SE239146.036	%	60 - 130%	98
	BHC2_0.2-0.3	SE239146.039	%	60 - 130%	92

Volatile Petroleum Hydrocarbons in Water — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QRB	SE239146.019	%	40 - 130%	104
	QR1	SE239146.020	%	40 - 130%	105
d4-1,2-dichloroethane (Surrogate)	QRB	SE239146.019	%	60 - 130%	104
	QR1	SE239146.020	%	60 - 130%	101
d8-toluene (Surrogate)	QRB	SE239146.019	%	40 - 130%	105
	QR1	SE239146.020	%	40 - 130%	106

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury (dissolved) in Water — Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB264097.001	Mercury	mg/L	0.0001	<0.0001

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB264262.001	Mercury	mg/kg	0.05	<0.05
LB264316.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264245.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89
LB264290.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	100

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264245.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	91
		d14-p-terphenyl (Surrogate)	%	-	93
LB264290.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	87
		d14-p-terphenyl (Surrogate)	%	-	88

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264245.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	109
		2-fluorobiphenyl (Surrogate)	%	-	91
		d14-p-terphenyl (Surrogate)	%	-	93
LB264290.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264290.001		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	105
		2-fluorobiphenyl (Surrogate)	%	-	87
		d14-p-terphenyl (Surrogate)	%	-	88

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264245.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	TCMX (Surrogate)	%	-	89
LB264290.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	TCMX (Surrogate)	%	-	97

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB264263.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0
LB264305.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB264078.001	Arsenic	µg/L	1	<1
	Cadmium	µg/L	0.1	<0.1
	Chromium	µg/L	1	<1
	Copper	µg/L	1	<1
	Lead	µg/L	1	<1
	Nickel	µg/L	1	<1
	Zinc	µg/L	5	<5

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB264245.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110
LB264290.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB264233.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264295.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	90
		d8-toluene (Surrogate)	%	-	87
		Bromofluorobenzene (Surrogate)	%	-	88
	Totals	Total BTEX*	mg/kg	0.6	<0.6
LB264296.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	92
		d8-toluene (Surrogate)	%	-	91
		Bromofluorobenzene (Surrogate)	%	-	91
	Totals	Total BTEX*	mg/kg	0.6	<0.6

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264207.001	Monocyclic Aromatic	Benzene	µg/L	0.5	<0.5
	Hydrocarbons	Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		o-xylene	µg/L	0.5	<0.5
	Polycyclic VOCs	Naphthalene (VOC)*	µg/L	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	104
		d8-toluene (Surrogate)	%	-	102
		Bromofluorobenzene (Surrogate)	%	-	101

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264295.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	90
LB264296.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	92

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Volatile Petroleum Hydrocarbons in Water (continued) **Method: ME-(AU)-[ENV]AN433**

Sample Number		Parameter	Units	LOR	Result
LB264207.001		TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	104
		d8-toluene (Surrogate)	%	-	102
		Bromofluorobenzene (Surrogate)	%	-	101

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239178.020	LB264097.012	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	22

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.010	LB264262.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE239146.023	LB264262.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE239146.029	LB264316.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE239146.039	LB264316.023	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.010	LB264281.011	% Moisture	%w/w	1	10.6	11.3	39	7
SE239146.023	LB264281.022	% Moisture	%w/w	1	8.3	7.8	42	6
SE239146.029	LB264299.011	% Moisture	%w/w	1	5.8	5.8	47	0
SE239146.039	LB264299.021	% Moisture	%w/w	1	15.0	14.2	37	6

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.010	LB264245.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	30	1
SE239146.023	LB264245.024		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued) **Method: ME-(AU)-[ENV]AN420**

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.023	LB264245.024		o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	30	10
SE239146.029	LB264290.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30	5
SE239146.039	LB264290.023		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.039	LB264290.023		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.17	0.17	30	2

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.010	LB264245.014		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
SE239146.023	LB264245.024		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	4
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	4
SE239146.029	LB264290.014		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OP Pesticides in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.029	LB264290.014	Surrogates	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
SE239146.039	LB264290.023		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.010	LB264245.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
SE239146.023	LB264245.024		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	0.1	0.1	125	2
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	0.3	0.3	67	6
			Pyrene	mg/kg	0.1	0.3	0.3	64	6
			Benzo(a)anthracene	mg/kg	0.1	0.1	0.1	101	9
			Chrysene	mg/kg	0.1	0.1	0.1	98	4
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.2	0.2	93	5
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	172	0
			Benzo(a)pyrene	mg/kg	0.1	0.1	0.1	99	4
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	134	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	0.2	0.1	97	5

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.023	LB264245.024		Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	118	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	0.2	0.2	93	3
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	111	0
			Total PAH (18)	mg/kg	0.8	1.5	1.4	37	5
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	3
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	4
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	4
SE239146.029	LB264290.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	2
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
SE239146.039	LB264290.023		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0

PCBs in Soil — Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.010	LB264245.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	1
SE239146.023	LB264245.024		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	10
SE239146.029	LB264290.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	5
SE239146.039	LB264290.023		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.010	LB264263.014	Arsenic, As	mg/kg	1	7	7	45	3
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	11	12	34	9
		Copper, Cu	mg/kg	0.5	21	22	32	4
		Nickel, Ni	mg/kg	0.5	16	17	33	5
		Lead, Pb	mg/kg	1	13	13	38	3
		Zinc, Zn	mg/kg	2	49	50	34	3
SE239146.023	LB264263.024	Arsenic, As	mg/kg	1	2	3	76	49
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	10	19	33	58 ②
		Copper, Cu	mg/kg	0.5	56	64	31	14
		Nickel, Ni	mg/kg	0.5	7.8	11	35	38 ②
		Lead, Pb	mg/kg	1	9	10	41	11
		Zinc, Zn	mg/kg	2	31	31	36	2

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.029	LB264305.014	Arsenic, As	mg/kg	1	1	2	93	20
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	6.2	7.0	38	12
		Copper, Cu	mg/kg	0.5	4.2	7.4	39	56 ②
		Nickel, Ni	mg/kg	0.5	4.1	4.8	41	15
		Lead, Pb	mg/kg	1	8	9	42	16
		Zinc, Zn	mg/kg	2	16	21	41	26
SE239146.039	LB264305.023	Arsenic, As	mg/kg	1	7	7	44	7
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	15	17	33	11
		Copper, Cu	mg/kg	0.5	35	33	31	4
		Nickel, Ni	mg/kg	0.5	20	17	33	11
		Lead, Pb	mg/kg	1	19	25	35	25
		Zinc, Zn	mg/kg	2	53	49	34	8

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239178.020	LB264078.019	Arsenic	µg/L	1	<1	<1	200	0
		Cadmium	µg/L	0.1	<0.1	<0.1	200	0
		Chromium	µg/L	1	<1	<1	200	0
		Copper	µg/L	1	<1	<1	200	0
		Lead	µg/L	1	<1	<1	200	0
		Nickel	µg/L	1	<1	<1	200	0
		Zinc	µg/L	5	<5	<5	200	0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.010	LB264245.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE239146.023	LB264245.024		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	100	76	80	32
			TRH C29-C36	mg/kg	45	200	180	54	9
			TRH C37-C40	mg/kg	100	140	150	98	4
			TRH C10-C36 Total	mg/kg	110	300	260	69	16
			TRH >C10-C40 Total (F bands)	mg/kg	210	440	410	79	9
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	210	180	76	19
			TRH >C34-C40 (F4)	mg/kg	120	230	230	82	0
SE239146.029	LB264290.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE239146.039	LB264290.023		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.039	LB264290.023		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.010	LB264295.015	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.8	8.3	50	6
			d8-toluene (Surrogate)	mg/kg	-	7.9	8.4	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	8.1	50	5
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE239146.022	LB264295.027	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.1	8.1	50	0
			d8-toluene (Surrogate)	mg/kg	-	7.9	7.7	50	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.0	7.8	50	3
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE239146.029	LB264296.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	8.8	50	5
			d8-toluene (Surrogate)	mg/kg	-	9.2	8.8	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.5	9.0	50	5
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE239146.039	LB264296.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.3	9.7	50	5
			d8-toluene (Surrogate)	mg/kg	-	9.2	9.7	50	6
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.4	9.8	50	5
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239062.005	LB264207.022	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200	0
		Hydrocarbons	Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.5	10.2	30	3

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOCs in Water (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239062.005	LB264207.022	Surrogates	d8-toluene (Surrogate)	µg/L	-	10.7	10.6	30	0
			Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10.4	30	2
		Totals	Total BTEX	µg/L	3	<3	<3	200	0
SE239146.020	LB264207.023	Monocyclic	Benzene	µg/L	0.5	<0.5	<0.5	200	0
		Aromatic	Toluene	µg/L	0.5	<0.5	<0.5	200	0
		Hydrocarbons	Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0
			m/p-xylene	µg/L	1	<1	<1	200	0
			o-xylene	µg/L	0.5	<0.5	<0.5	200	0
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	<0.5	<0.5	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.1	10.6	30	5
			d8-toluene (Surrogate)	µg/L	-	10.6	9.7	30	9
			Bromofluorobenzene (Surrogate)	µg/L	-	10.5	10.2	30	2
		Totals	Total BTEX	µg/L	3	<3	<3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.010	LB264295.015		TRH C6-C10 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C9 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.8	8.3	30	6
			d8-toluene (Surrogate)	mg/kg	-	7.9	8.4	30	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	8.1	30	5
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE239146.022	LB264295.027		TRH C6-C10 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C9 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.1	8.1	30	0
			d8-toluene (Surrogate)	mg/kg	-	7.9	7.7	30	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.0	7.8	30	3
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE239146.029	LB264296.014		TRH C6-C10 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C9 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	8.8	30	5
			d8-toluene (Surrogate)	mg/kg	-	9.2	8.8	30	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.5	9.0	30	5
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE239146.039	LB264296.025		TRH C6-C10 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C9 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.3	9.7	30	5
			d8-toluene (Surrogate)	mg/kg	-	9.2	9.7	30	6
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.4	9.8	30	5
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239062.005	LB264207.022		TRH C6-C10	µg/L	50	<50	<50	200	0
			TRH C6-C9	µg/L	40	<40	<40	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.5	10.2	30	3
			d8-toluene (Surrogate)	µg/L	-	10.7	10.6	30	0
			Bromofluorobenzene (Surrogate)	µg/L	-	10.7	10.4	30	2
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Volatile Petroleum Hydrocarbons in Water (continued) — **Method: ME-(AU)-[ENV]AN433**

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239146.020	LB264207.023		TRH C6-C10	µg/L	50	<50	<50	200	0
			TRH C6-C9	µg/L	40	<40	<40	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.1	10.6	30	5
			d8-toluene (Surrogate)	µg/L	-	10.6	9.7	30	9
			Bromofluorobenzene (Surrogate)	µg/L	-	10.5	10.2	30	2
		VPH F Bands	Benzene (F0)	µg/L	0.5	<0.5	<0.5	200	0
			TRH C6-C10 minus BTEX (F1)	µg/L	50	<50	<50	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264262.002	Mercury	mg/kg	0.05	0.18	0.2	70 - 130	92
LB264316.002	Mercury	mg/kg	0.05	0.18	0.2	70 - 130	90

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264245.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	83
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	83
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	80
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	77
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	83
		p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	62
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.15	40 - 130	84
LB264290.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	84
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	88
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	84
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	82
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	89
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	76
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	101

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264245.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.8	2	60 - 140	92
		Diazinon (Dimpylate)	mg/kg	0.5	1.9	2	60 - 140	96
		Dichlorvos	mg/kg	0.5	1.7	2	60 - 140	83
		Ethion	mg/kg	0.2	1.4	2	60 - 140	71
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	95
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	89
LB264290.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	2	60 - 140	95
		Diazinon (Dimpylate)	mg/kg	0.5	2.0	2	60 - 140	99
		Dichlorvos	mg/kg	0.5	1.6	2	60 - 140	81
		Ethion	mg/kg	0.2	1.7	2	60 - 140	84
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	95
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264245.002		Naphthalene	mg/kg	0.1	4.5	4	60 - 140	113
		Acenaphthylene	mg/kg	0.1	4.3	4	60 - 140	107
		Acenaphthene	mg/kg	0.1	4.5	4	60 - 140	111
		Phenanthrene	mg/kg	0.1	4.6	4	60 - 140	114
		Anthracene	mg/kg	0.1	4.5	4	60 - 140	111
		Fluoranthene	mg/kg	0.1	4.5	4	60 - 140	113
		Pyrene	mg/kg	0.1	4.3	4	60 - 140	107
		Benzo(a)pyrene	mg/kg	0.1	4.2	4	60 - 140	105
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	107
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	95
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	89
LB264290.002		Naphthalene	mg/kg	0.1	4.5	4	60 - 140	112
		Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	109
		Acenaphthene	mg/kg	0.1	4.5	4	60 - 140	111
		Phenanthrene	mg/kg	0.1	4.5	4	60 - 140	113
		Anthracene	mg/kg	0.1	4.5	4	60 - 140	111
		Fluoranthene	mg/kg	0.1	4.5	4	60 - 140	112
		Pyrene	mg/kg	0.1	4.1	4	60 - 140	103
		Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	104
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	108
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	95
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264245.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	99
LB264290.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	91

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264263.002	Arsenic, As	mg/kg	1	320	318.22	80 - 120	101
	Cadmium, Cd	mg/kg	0.3	4.4	4.81	70 - 130	92
	Chromium, Cr	mg/kg	0.5	36	38.31	80 - 120	95
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	106
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	102
	Lead, Pb	mg/kg	1	93	89.9	80 - 120	104
	Zinc, Zn	mg/kg	2	280	273	80 - 120	101
LB264305.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	105
	Cadmium, Cd	mg/kg	0.3	4.7	4.81	70 - 130	97
	Chromium, Cr	mg/kg	0.5	39	38.31	80 - 120	102
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	106
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	94	89.9	80 - 120	105
	Zinc, Zn	mg/kg	2	280	273	80 - 120	102

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264078.002	Arsenic	µg/L	1	20	20	80 - 120	98
	Cadmium	µg/L	0.1	20	20	80 - 120	99
	Chromium	µg/L	1	19	20	80 - 120	93
	Copper	µg/L	1	19	20	80 - 120	95
	Lead	µg/L	1	20	20	80 - 120	98
	Nickel	µg/L	1	19	20	80 - 120	96
	Zinc	µg/L	5	19	20	80 - 120	96

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264245.002		TRH C10-C14	mg/kg	20	46	40	60 - 140	115
		TRH C15-C28	mg/kg	45	46	40	60 - 140	115
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	95
	TRH F Bands	TRH >C10-C16	mg/kg	25	46	40	60 - 140	115
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	110
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	100
LB264290.002		TRH C10-C14	mg/kg	20	48	40	60 - 140	120
		TRH C15-C28	mg/kg	45	50	40	60 - 140	125
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	105
	TRH F Bands	TRH >C10-C16	mg/kg	25	48	40	60 - 140	120
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	120
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	110

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264233.002		TRH C10-C14	µg/L	50	1000	1200	60 - 140	83
		TRH C15-C28	µg/L	200	1500	1200	60 - 140	121
		TRH C29-C36	µg/L	200	1500	1200	60 - 140	121
	TRH F Bands	TRH >C10-C16	µg/L	60	1200	1200	60 - 140	96
		TRH >C16-C34 (F3)	µg/L	500	1600	1200	60 - 140	133
		TRH >C34-C40 (F4)	µg/L	500	680	600	60 - 140	113

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264295.002	Monocyclic	Benzene	mg/kg	0.1	4.2	5	60 - 140	84
	Aromatic	Toluene	mg/kg	0.1	4.3	5	60 - 140	85
	Hydrocarbons	Ethylbenzene	mg/kg	0.1	4.6	5	60 - 140	92
		m/p-xylene	mg/kg	0.2	8.8	10	60 - 140	88
		o-xylene	mg/kg	0.1	4.7	5	60 - 140	94
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.4	10	70 - 130	84

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264295.002	Surrogates	d8-toluene (Surrogate)	mg/kg	-	8.6	10	70 - 130	86
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
LB264296.002	Monocyclic	Benzene	mg/kg	0.1	4.3	5	60 - 140	86
	Aromatic	Toluene	mg/kg	0.1	4.3	5	60 - 140	85
	Hydrocarbons	Ethylbenzene	mg/kg	0.1	4.4	5	60 - 140	88
		m/p-xylene	mg/kg	0.2	8.5	10	60 - 140	85
		o-xylene	mg/kg	0.1	4.6	5	60 - 140	93
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.0	10	70 - 130	110
		d8-toluene (Surrogate)	mg/kg	-	10.5	10	70 - 130	105
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.8	10	70 - 130	98

VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264207.002	Monocyclic	Benzene	µg/L	0.5	49	45.45	60 - 140	108
	Aromatic	Toluene	µg/L	0.5	45	45.45	60 - 140	99
	Hydrocarbons	Ethylbenzene	µg/L	0.5	50	45.45	60 - 140	110
		m/p-xylene	µg/L	1	98	90.9	60 - 140	108
		o-xylene	µg/L	0.5	49	45.45	60 - 140	108
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.2	10	60 - 140	92
		d8-toluene (Surrogate)	µg/L	-	9.4	10	70 - 130	94
		Bromofluorobenzene (Surrogate)	µg/L	-	10.5	10	70 - 130	105

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264295.002		TRH C6-C10	mg/kg	25	75	92.5	60 - 140	81
		TRH C6-C9	mg/kg	20	68	80	60 - 140	84
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.4	10	70 - 130	84
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	49	62.5	60 - 140	78
LB264296.002		TRH C6-C10	mg/kg	25	89	92.5	60 - 140	96
		TRH C6-C9	mg/kg	20	78	80	60 - 140	98
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.0	10	70 - 130	110
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	63	62.5	60 - 140	100

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264207.002		TRH C6-C10	µg/L	50	1000	946.63	60 - 140	108
		TRH C6-C9	µg/L	40	900	818.71	60 - 140	110
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.2	10	60 - 140	92
		d8-toluene (Surrogate)	µg/L	-	9.4	10	70 - 130	94
		Bromofluorobenzene (Surrogate)	µg/L	-	10.5	10	70 - 130	105
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	730	639.67	60 - 140	114

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239092.001	LB264316.004	Mercury	mg/kg	0.05	0.23	0.05	0.2	86
SE239146.001	LB264262.004	Mercury	mg/kg	0.05	0.21	<0.05	0.2	92

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239092.002	LB264290.025		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	103
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	107
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	102
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	100
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	108
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	91
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	-	105
SE239146.001	LB264245.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	99
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	102
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	99
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	95
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	103
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	80
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239146.001	LB264245.004		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.14	-	97

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239092.002	LB264290.025		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	<0.2	2	96
			Diazinon (Dimpylate)	mg/kg	0.5	2.0	<0.5	2	100
			Dichlorvos	mg/kg	0.5	1.5	<0.5	2	76
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.6	<0.2	2	82
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	7.1	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	93
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	86
SE239146.001	LB264245.004		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.0	<0.2	2	99
			Diazinon (Dimpylate)	mg/kg	0.5	2.0	<0.5	2	98
			Dichlorvos	mg/kg	0.5	1.6	<0.5	2	81
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.7	<0.2	2	83
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	7.3	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	95
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	92

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239092.002	LB264290.025		Naphthalene	mg/kg	0.1	4.4	<0.1	4	110
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.3	<0.1	4	107
			Acenaphthene	mg/kg	0.1	4.4	<0.1	4	109
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.5	<0.1	4	111
			Anthracene	mg/kg	0.1	4.4	<0.1	4	110
			Fluoranthene	mg/kg	0.1	4.4	<0.1	4	110
			Pyrene	mg/kg	0.1	4.1	<0.1	4	101
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.1	<0.1	4	101
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	4.1	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.1	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.2	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	35	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	106

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239092.002	LB264290.025	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	93
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	86
SE239146.001	LB264245.004		Naphthalene	mg/kg	0.1	4.2	<0.1	4	105
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.0	<0.1	4	99
			Acenaphthene	mg/kg	0.1	4.4	<0.1	4	109
			Fluorene	mg/kg	0.1	0.3	<0.1	-	-
			Phenanthrene	mg/kg	0.1	7.9	<0.1	4	196 ⑨
			Anthracene	mg/kg	0.1	5.2	<0.1	4	130
			Fluoranthene	mg/kg	0.1	7.7	<0.1	4	191 ⑨
			Pyrene	mg/kg	0.1	8.3	<0.1	4	205 ⑨
			Benzo(a)anthracene	mg/kg	0.1	2.0	<0.1	-	-
			Chrysene	mg/kg	0.1	1.9	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	1.3	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	0.6	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	5.1	<0.1	4	126
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.7	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	0.2	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	0.7	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	5.8	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	5.8	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	5.8	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	55	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	107
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	95
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	92

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239092.002	LB264290.025		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.4	<0.2	0.4	106
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	-	102
SE239146.001	LB264245.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.5	<0.2	0.4	114
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	-	97

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239092.001	LB264305.004	Arsenic, As	mg/kg	1	45	3	50	84
		Cadmium, Cd	mg/kg	0.3	40	<0.3	50	80
		Chromium, Cr	mg/kg	0.5	48	5.7	50	86
		Copper, Cu	mg/kg	0.5	68	25	50	85
		Nickel, Ni	mg/kg	0.5	65	35	50	59 ④
		Lead, Pb	mg/kg	1	53	13	50	80
		Zinc, Zn	mg/kg	2	130	99	50	71

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239146.001	LB264263.004	Arsenic, As	mg/kg	1	50	4	50	91
		Cadmium, Cd	mg/kg	0.3	45	<0.3	50	89
		Chromium, Cr	mg/kg	0.5	60	14	50	92
		Copper, Cu	mg/kg	0.5	70	22	50	97
		Nickel, Ni	mg/kg	0.5	59	15	50	88
		Lead, Pb	mg/kg	1	58	12	50	92
		Zinc, Zn	mg/kg	2	90	47	50	87

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239092.001	LB264290.004		TRH C10-C14	mg/kg	20	48	<20	40	120
			TRH C15-C28	mg/kg	45	48	<45	40	120
			TRH C29-C36	mg/kg	45	<45	<45	40	105
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	50	<25	40	125
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	50	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	120
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-
SE239146.001	LB264245.004		TRH C10-C14	mg/kg	20	48	<20	40	120
			TRH C15-C28	mg/kg	45	60	<45	40	117
			TRH C29-C36	mg/kg	45	66	<45	40	71
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	170	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	48	<25	40	120
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	48	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	107
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239092.001	LB264296.004	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	3.8	<0.1	5	76
			Toluene	mg/kg	0.1	3.9	<0.1	5	78
			Ethylbenzene	mg/kg	0.1	4.1	<0.1	5	82
			m/p-xylene	mg/kg	0.2	7.9	<0.2	10	79
			o-xylene	mg/kg	0.1	4.3	<0.1	5	86
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.2	9.9	10	102
			d8-toluene (Surrogate)	mg/kg	-	9.8	9.8	10	98
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.4	10.1	10	94
		Totals	Total BTEX*	mg/kg	0.6	24	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	12	<0.3	-	-
SE239146.001	LB264295.004	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	4.2	<0.1	5	84
			Toluene	mg/kg	0.1	4.3	<0.1	5	87
			Ethylbenzene	mg/kg	0.1	4.2	<0.1	5	83
			m/p-xylene	mg/kg	0.2	8.1	<0.2	10	81
			o-xylene	mg/kg	0.1	4.3	<0.1	5	86
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.7	7.5	10	117
			d8-toluene (Surrogate)	mg/kg	-	11.1	7.7	10	111
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.7	8.3	10	107
		Totals	Total BTEX*	mg/kg	0.6	25	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	12	<0.3	-	-

VOCs in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239062.003	LB264207.026	Monocyclic Aromatic Hydrocarbons	Benzene	µg/L	0.5	59	0	45.45	131
			Toluene	µg/L	0.5	59	0.010679659	45.45	130
			Ethylbenzene	µg/L	0.5	59	0.005630670	45.45	130
			m/p-xylene	µg/L	1	120	0.021361199	90.9	129

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOCs in Water (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239062.003	LB264207.026	Monocyclic	o-xylene	µg/L	0.5	59	0.020580567	45.45	130
		Polycyclic	Naphthalene (VOC)*	µg/L	0.5	61	0.020904903	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.6	10.40610215	-	106
			Bromofluorobenzene (Surrogate)	µg/L	-	9.6	10.53362400	-	96
		Totals	Total BTEX	µg/L	3	350	0	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239092.001	LB264296.004		TRH C6-C10 raw	µg/L	0.05	980	<0.050	-	-
			TRH C6-C9 raw	µg/L	0.05	860	<0.050	-	-
			TRH C6-C10	mg/kg	25	84	<25	92.5	91
			TRH C6-C9	mg/kg	20	75	<20	80	93
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.2	9.9	10	102
			d8-toluene (Surrogate)	mg/kg	-	9.8	9.8	10	98
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.4	10.1	-	94
		VPH F	Benzene (F0)	mg/kg	0.1	3.8	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	60	<25	62.5	97
SE239146.001	LB264295.004		TRH C6-C10 raw	µg/L	0.05	890	7.8	-	-
			TRH C6-C9 raw	µg/L	0.05	630	<0.050	-	-
			TRH C6-C10	mg/kg	25	78	<25	92.5	84
			TRH C6-C9	mg/kg	20	55	<20	80	68
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.7	7.5	10	117
			d8-toluene (Surrogate)	mg/kg	-	11.1	7.7	10	111
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.7	8.3	-	107
		VPH F	Benzene (F0)	mg/kg	0.1	4.2	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	53	<25	62.5	83

Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239062.003	LB264207.026		TRH C6-C10	µg/L	50	960	0.567780690	946.63	102
			TRH C6-C9	µg/L	40	850	0.664625546	818.71	103
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.6	10.40610215	-	106
			d8-toluene (Surrogate)	µg/L	-	10.1	10.59667069	-	101
			Bromofluorobenzene (Surrogate)	µg/L	-	9.6	10.53362400	-	96
		VPH F	Benzene (F0)	µg/L	0.5		0	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	610	0.567780690	639.67	95

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

QC Sample	Sample Number	Parameter	Units	LOR

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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STATEMENT OF QA/QC PERFORMANCE

SE239307 R0

CLIENT DETAILS

Contact	Li Wei
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	li.wei@eiaustralia.com.au
Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	13

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE239307 R0**
Date Received	18 Nov 2022
Date Reported	23 Nov 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	13 Soil
Date documentation received	18/11/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	9.8C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days		

HOLDING TIME SUMMARY

SE239307 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264360	15 Nov 2022	18 Nov 2022	15 Nov 2023	21 Nov 2022	15 Nov 2023	23 Nov 2022

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264450	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264403	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022

HOLDING TIME SUMMARY

SE239307 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264449	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022

HOLDING TIME SUMMARY

SE239307 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264378	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.1-0.2	SE239307.001	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE1_0.1-0.2	SE239307.002	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHC4_0.1-0.2	SE239307.003	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE2_0.1-0.2	SE239307.004	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE3_0.1-0.1	SE239307.005	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHD1_0.1-0.2	SE239307.006	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE5_0.1-0.2	SE239307.007	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE7_0.1-0.2	SE239307.008	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHH2_0.1-0.2	SE239307.009	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHF2_0.1-0.2	SE239307.010	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHG2_0.1-0.2	SE239307.011	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHD2_0.1-0.2	SE239307.012	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHF1_0.1-0.2	SE239307.013	LB264388	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	60 - 130%	104
	BHE1_0.1-0.2	SE239307.002	%	60 - 130%	102
	BHC4_0.1-0.2	SE239307.003	%	60 - 130%	101
	BHE2_0.1-0.2	SE239307.004	%	60 - 130%	105
	BHE3_0.1-0.1	SE239307.005	%	60 - 130%	113
	BHD1_0.1-0.2	SE239307.006	%	60 - 130%	108
	BHE5_0.1-0.2	SE239307.007	%	60 - 130%	92
	BHE7_0.1-0.2	SE239307.008	%	60 - 130%	95
	BHH2_0.1-0.2	SE239307.009	%	60 - 130%	88
	BHF2_0.1-0.2	SE239307.010	%	60 - 130%	96
	BHG2_0.1-0.2	SE239307.011	%	60 - 130%	92
	BHD2_0.1-0.2	SE239307.012	%	60 - 130%	95
	BHF1_0.1-0.2	SE239307.013	%	60 - 130%	95

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	60 - 130%	93
	BHE1_0.1-0.2	SE239307.002	%	60 - 130%	92
	BHC4_0.1-0.2	SE239307.003	%	60 - 130%	93
	BHE2_0.1-0.2	SE239307.004	%	60 - 130%	91
	BHE3_0.1-0.1	SE239307.005	%	60 - 130%	93
	BHD1_0.1-0.2	SE239307.006	%	60 - 130%	92
	BHE5_0.1-0.2	SE239307.007	%	60 - 130%	106
	BHE7_0.1-0.2	SE239307.008	%	60 - 130%	91
	BHH2_0.1-0.2	SE239307.009	%	60 - 130%	90
	BHF2_0.1-0.2	SE239307.010	%	60 - 130%	92
	BHG2_0.1-0.2	SE239307.011	%	60 - 130%	92
	BHD2_0.1-0.2	SE239307.012	%	60 - 130%	88
	BHF1_0.1-0.2	SE239307.013	%	60 - 130%	91
d14-p-terphenyl (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	60 - 130%	96
	BHE1_0.1-0.2	SE239307.002	%	60 - 130%	95
	BHC4_0.1-0.2	SE239307.003	%	60 - 130%	96
	BHE2_0.1-0.2	SE239307.004	%	60 - 130%	94
	BHE3_0.1-0.1	SE239307.005	%	60 - 130%	97
	BHD1_0.1-0.2	SE239307.006	%	60 - 130%	94
	BHE5_0.1-0.2	SE239307.007	%	60 - 130%	110
	BHE7_0.1-0.2	SE239307.008	%	60 - 130%	94
	BHH2_0.1-0.2	SE239307.009	%	60 - 130%	93
	BHF2_0.1-0.2	SE239307.010	%	60 - 130%	96
	BHG2_0.1-0.2	SE239307.011	%	60 - 130%	95
	BHD2_0.1-0.2	SE239307.012	%	60 - 130%	91
	BHF1_0.1-0.2	SE239307.013	%	60 - 130%	94

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	70 - 130%	93
	BHE1_0.1-0.2	SE239307.002	%	70 - 130%	92
	BHC4_0.1-0.2	SE239307.003	%	70 - 130%	93
	BHE2_0.1-0.2	SE239307.004	%	70 - 130%	91
	BHE3_0.1-0.1	SE239307.005	%	70 - 130%	93
	BHD1_0.1-0.2	SE239307.006	%	70 - 130%	92
	BHE5_0.1-0.2	SE239307.007	%	70 - 130%	106
	BHE7_0.1-0.2	SE239307.008	%	70 - 130%	91
	BHH2_0.1-0.2	SE239307.009	%	70 - 130%	90
	BHF2_0.1-0.2	SE239307.010	%	70 - 130%	92
	BHG2_0.1-0.2	SE239307.011	%	70 - 130%	92
	BHD2_0.1-0.2	SE239307.012	%	70 - 130%	88
	BHF1_0.1-0.2	SE239307.013	%	70 - 130%	91
d14-p-terphenyl (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	70 - 130%	96
	BHE1_0.1-0.2	SE239307.002	%	70 - 130%	95
	BHC4_0.1-0.2	SE239307.003	%	70 - 130%	96
	BHE2_0.1-0.2	SE239307.004	%	70 - 130%	94

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued) — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d14-p-terphenyl (Surrogate)	BHE3_0.1-0.1	SE239307.005	%	70 - 130%	97
	BHD1_0.1-0.2	SE239307.006	%	70 - 130%	94
	BHE5_0.1-0.2	SE239307.007	%	70 - 130%	110
	BHE7_0.1-0.2	SE239307.008	%	70 - 130%	94
	BHH2_0.1-0.2	SE239307.009	%	70 - 130%	93
	BHF2_0.1-0.2	SE239307.010	%	70 - 130%	96
	BHG2_0.1-0.2	SE239307.011	%	70 - 130%	95
	BHD2_0.1-0.2	SE239307.012	%	70 - 130%	91
	BHF1_0.1-0.2	SE239307.013	%	70 - 130%	94
d5-nitrobenzene (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	70 - 130%	109
	BHE1_0.1-0.2	SE239307.002	%	70 - 130%	105
	BHC4_0.1-0.2	SE239307.003	%	70 - 130%	108
	BHE2_0.1-0.2	SE239307.004	%	70 - 130%	104
	BHE3_0.1-0.1	SE239307.005	%	70 - 130%	109
	BHD1_0.1-0.2	SE239307.006	%	70 - 130%	107
	BHE5_0.1-0.2	SE239307.007	%	70 - 130%	125
	BHE7_0.1-0.2	SE239307.008	%	70 - 130%	109
	BHH2_0.1-0.2	SE239307.009	%	70 - 130%	107
	BHF2_0.1-0.2	SE239307.010	%	70 - 130%	110
	BHG2_0.1-0.2	SE239307.011	%	70 - 130%	111
	BHD2_0.1-0.2	SE239307.012	%	70 - 130%	106
	BHF1_0.1-0.2	SE239307.013	%	70 - 130%	108

PCBs in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	60 - 130%	104
	BHE1_0.1-0.2	SE239307.002	%	60 - 130%	102
	BHC4_0.1-0.2	SE239307.003	%	60 - 130%	101
	BHE2_0.1-0.2	SE239307.004	%	60 - 130%	105
	BHE3_0.1-0.1	SE239307.005	%	60 - 130%	113
	BHD1_0.1-0.2	SE239307.006	%	60 - 130%	108
	BHE5_0.1-0.2	SE239307.007	%	60 - 130%	92
	BHE7_0.1-0.2	SE239307.008	%	60 - 130%	95
	BHH2_0.1-0.2	SE239307.009	%	60 - 130%	87
	BHF2_0.1-0.2	SE239307.010	%	60 - 130%	95
	BHG2_0.1-0.2	SE239307.011	%	60 - 130%	92
	BHD2_0.1-0.2	SE239307.012	%	60 - 130%	95
	BHF1_0.1-0.2	SE239307.013	%	60 - 130%	95

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	60 - 130%	77
	BHE1_0.1-0.2	SE239307.002	%	60 - 130%	81
	BHC4_0.1-0.2	SE239307.003	%	60 - 130%	83
	BHE2_0.1-0.2	SE239307.004	%	60 - 130%	77
	BHE3_0.1-0.1	SE239307.005	%	60 - 130%	71
	BHD1_0.1-0.2	SE239307.006	%	60 - 130%	78
	BHE5_0.1-0.2	SE239307.007	%	60 - 130%	79
	BHE7_0.1-0.2	SE239307.008	%	60 - 130%	77
	BHH2_0.1-0.2	SE239307.009	%	60 - 130%	74
	BHF2_0.1-0.2	SE239307.010	%	60 - 130%	75
	BHG2_0.1-0.2	SE239307.011	%	60 - 130%	77
	BHD2_0.1-0.2	SE239307.012	%	60 - 130%	80
	BHF1_0.1-0.2	SE239307.013	%	60 - 130%	78
d4-1,2-dichloroethane (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	60 - 130%	86
	BHE1_0.1-0.2	SE239307.002	%	60 - 130%	92
	BHC4_0.1-0.2	SE239307.003	%	60 - 130%	94
	BHE2_0.1-0.2	SE239307.004	%	60 - 130%	89
	BHE3_0.1-0.1	SE239307.005	%	60 - 130%	82
	BHD1_0.1-0.2	SE239307.006	%	60 - 130%	92
	BHE5_0.1-0.2	SE239307.007	%	60 - 130%	91
	BHE7_0.1-0.2	SE239307.008	%	60 - 130%	85

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	BHH2_0.1-0.2	SE239307.009	%	60 - 130%	84
	BHF2_0.1-0.2	SE239307.010	%	60 - 130%	85
	BHG2_0.1-0.2	SE239307.011	%	60 - 130%	87
	BHD2_0.1-0.2	SE239307.012	%	60 - 130%	91
	BHF1_0.1-0.2	SE239307.013	%	60 - 130%	90
d8-toluene (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	60 - 130%	86
	BHE1_0.1-0.2	SE239307.002	%	60 - 130%	94
	BHC4_0.1-0.2	SE239307.003	%	60 - 130%	95
	BHE2_0.1-0.2	SE239307.004	%	60 - 130%	90
	BHE3_0.1-0.1	SE239307.005	%	60 - 130%	80
	BHD1_0.1-0.2	SE239307.006	%	60 - 130%	92
	BHE5_0.1-0.2	SE239307.007	%	60 - 130%	91
	BHE7_0.1-0.2	SE239307.008	%	60 - 130%	85
	BHH2_0.1-0.2	SE239307.009	%	60 - 130%	84
	BHF2_0.1-0.2	SE239307.010	%	60 - 130%	85
	BHG2_0.1-0.2	SE239307.011	%	60 - 130%	87
	BHD2_0.1-0.2	SE239307.012	%	60 - 130%	91
	BHF1_0.1-0.2	SE239307.013	%	60 - 130%	91

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	60 - 130%	77
	BHE1_0.1-0.2	SE239307.002	%	60 - 130%	81
	BHC4_0.1-0.2	SE239307.003	%	60 - 130%	83
	BHE2_0.1-0.2	SE239307.004	%	60 - 130%	77
	BHE3_0.1-0.1	SE239307.005	%	60 - 130%	71
	BHD1_0.1-0.2	SE239307.006	%	60 - 130%	78
	BHE5_0.1-0.2	SE239307.007	%	60 - 130%	79
	BHE7_0.1-0.2	SE239307.008	%	60 - 130%	77
	BHH2_0.1-0.2	SE239307.009	%	60 - 130%	74
	BHF2_0.1-0.2	SE239307.010	%	60 - 130%	75
	BHG2_0.1-0.2	SE239307.011	%	60 - 130%	77
	BHD2_0.1-0.2	SE239307.012	%	60 - 130%	80
	BHF1_0.1-0.2	SE239307.013	%	60 - 130%	78
d4-1,2-dichloroethane (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	60 - 130%	86
	BHE1_0.1-0.2	SE239307.002	%	60 - 130%	92
	BHC4_0.1-0.2	SE239307.003	%	60 - 130%	94
	BHE2_0.1-0.2	SE239307.004	%	60 - 130%	89
	BHE3_0.1-0.1	SE239307.005	%	60 - 130%	82
	BHD1_0.1-0.2	SE239307.006	%	60 - 130%	92
	BHE5_0.1-0.2	SE239307.007	%	60 - 130%	91
	BHE7_0.1-0.2	SE239307.008	%	60 - 130%	85
	BHH2_0.1-0.2	SE239307.009	%	60 - 130%	84
	BHF2_0.1-0.2	SE239307.010	%	60 - 130%	85
	BHG2_0.1-0.2	SE239307.011	%	60 - 130%	87
	BHD2_0.1-0.2	SE239307.012	%	60 - 130%	91
	BHF1_0.1-0.2	SE239307.013	%	60 - 130%	90
d8-toluene (Surrogate)	BHG1M_0.1-0.2	SE239307.001	%	60 - 130%	86
	BHE1_0.1-0.2	SE239307.002	%	60 - 130%	94
	BHC4_0.1-0.2	SE239307.003	%	60 - 130%	95
	BHE2_0.1-0.2	SE239307.004	%	60 - 130%	90
	BHE3_0.1-0.1	SE239307.005	%	60 - 130%	80
	BHD1_0.1-0.2	SE239307.006	%	60 - 130%	92
	BHE5_0.1-0.2	SE239307.007	%	60 - 130%	91
	BHE7_0.1-0.2	SE239307.008	%	60 - 130%	85
	BHH2_0.1-0.2	SE239307.009	%	60 - 130%	84
	BHF2_0.1-0.2	SE239307.010	%	60 - 130%	85
	BHG2_0.1-0.2	SE239307.011	%	60 - 130%	87
	BHD2_0.1-0.2	SE239307.012	%	60 - 130%	91
	BHF1_0.1-0.2	SE239307.013	%	60 - 130%	91

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB264450.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264378.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	93

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264378.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	96
		d14-p-terphenyl (Surrogate)	%	-	99

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB264378.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264378.001		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	111
		2-fluorobiphenyl (Surrogate)	%	-	96
		d14-p-terphenyl (Surrogate)	%	-	99

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264378.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	TCMX (Surrogate)	%	-	93

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number		Parameter	Units	LOR	Result
LB264449.001		Arsenic, As	mg/kg	1	<1
		Cadmium, Cd	mg/kg	0.3	<0.3
		Chromium, Cr	mg/kg	0.5	<0.5
		Copper, Cu	mg/kg	0.5	<0.5
		Nickel, Ni	mg/kg	0.5	<0.5
		Lead, Pb	mg/kg	1	<1
		Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result
LB264378.001		TRH C10-C14	mg/kg	20	<20
		TRH C15-C28	mg/kg	45	<45
		TRH C29-C36	mg/kg	45	<45
		TRH C37-C40	mg/kg	100	<100
		TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264388.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	95
		d8-toluene (Surrogate)	%	-	95
		Bromofluorobenzene (Surrogate)	%	-	82
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264388.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	95

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264450.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264403.011	% Moisture	%w/w	1	6.6	6.9	45	5
SE239307.013	LB264403.022	% Moisture	%w/w	1	14.6	14.9	37	2

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264378.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	198	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.16	30	5
SE239307.013	LB264378.025		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.013	LB264378.025		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	30	3

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264378.014		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	4
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
SE239307.013	LB264378.025		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264378.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264378.014		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	6
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	4
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
SE239307.013	LB264378.025		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	0
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264378.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	5
SE239307.013	LB264378.025		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	3

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate		Parameter	Units	LOR

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264449.014	Arsenic, As	mg/kg	1	3	3	67	9
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	16	26	32	45 ②
		Copper, Cu	mg/kg	0.5	2.4	1.6	55	42
		Nickel, Ni	mg/kg	0.5	2.4	1.6	55	41
		Lead, Pb	mg/kg	1	6	6	46	0
		Zinc, Zn	mg/kg	2	7.7	5.0	61	43

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264378.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE239307.013	LB264378.025		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264388.014	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.4	9.3	50	1
			d8-toluene (Surrogate)	mg/kg	-	9.5	9.4	50	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	8.1	50	2
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE239307.013	LB264388.025	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.0	8.9	50	1
			d8-toluene (Surrogate)	mg/kg	-	9.1	9.0	50	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.8	8.1	50	3
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264388.014	TRH C6-C10 raw	µg/L	0.05	<0.05	<0.05	200	0
		TRH C6-C9 raw	µg/L	0.05	<0.05	<0.05	200	0
		TRH C6-C10	mg/kg	25	<25	<25	200	0
		TRH C6-C9	mg/kg	20	<20	<20	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Volatile Petroleum Hydrocarbons in Soil (continued) **Method: ME-(AU)-[ENV]AN433**

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239307.003	LB264388.014	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.4	9.3	30	1
			d8-toluene (Surrogate)	mg/kg	-	9.5	9.4	30	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	8.1	30	2
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE239307.013	LB264388.025		TRH C6-C10 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C9 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.0	8.9	30	1
			d8-toluene (Surrogate)	mg/kg	-	9.1	9.0	30	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.8	8.1	30	3
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264450.002	Mercury	mg/kg	0.05	0.21	0.2	70 - 130	104

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264378.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	103
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	104
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	102
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	105
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	103
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	96
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130	96

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264378.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.7	2	60 - 140	84
		Diazinon (Dimpylate)	mg/kg	0.5	1.7	2	60 - 140	84
		Dichlorvos	mg/kg	0.5	1.5	2	60 - 140	74
		Ethion	mg/kg	0.2	1.3	2	60 - 140	67
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	91
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	95

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264378.002		Naphthalene	mg/kg	0.1	4.3	4	60 - 140	108
		Acenaphthylene	mg/kg	0.1	4.1	4	60 - 140	102
		Acenaphthene	mg/kg	0.1	4.3	4	60 - 140	108
		Phenanthrene	mg/kg	0.1	4.3	4	60 - 140	108
		Anthracene	mg/kg	0.1	4.2	4	60 - 140	104
		Fluoranthene	mg/kg	0.1	4.1	4	60 - 140	103
		Pyrene	mg/kg	0.1	4.3	4	60 - 140	108
		Benzo(a)pyrene	mg/kg	0.1	3.7	4	60 - 140	93
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	102
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	91
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	95

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264378.002	Arochlor 1260	mg/kg	0.2	0.5	0.4	60 - 140	117

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264449.002	Arsenic, As	mg/kg	1	320	318.22	80 - 120	101
	Cadmium, Cd	mg/kg	0.3	4.6	4.81	70 - 130	96
	Chromium, Cr	mg/kg	0.5	40	38.31	80 - 120	105
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	104
	Nickel, Ni	mg/kg	0.5	180	187	80 - 120	99
	Lead, Pb	mg/kg	1	90	89.9	80 - 120	100
	Zinc, Zn	mg/kg	2	270	273	80 - 120	98

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264378.002		TRH C10-C14	mg/kg	20	42	40	60 - 140	105
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	110
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	90
	TRH F Bands	TRH >C10-C16	mg/kg	25	44	40	60 - 140	110
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	105
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264388.002	Monocyclic	Benzene	mg/kg	0.1	4.7	5	60 - 140	95
	Aromatic	Toluene	mg/kg	0.1	4.7	5	60 - 140	94
	Hydrocarbons	Ethylbenzene	mg/kg	0.1	4.8	5	60 - 140	96
		m/p-xylene	mg/kg	0.2	9.3	10	60 - 140	93
		o-xylene	mg/kg	0.1	5.0	5	60 - 140	99
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
		d8-toluene (Surrogate)	mg/kg	-	10.2	10	70 - 130	102
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.9	10	70 - 130	99

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264388.002		TRH C6-C10	mg/kg	25	74	92.5	60 - 140	80
		TRH C6-C9	mg/kg	20	64	80	60 - 140	79
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.9	10	70 - 130	99
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	45	62.5	60 - 140	73

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264450.004	Mercury	mg/kg	0.05	0.30	0.12	0.2	87

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264378.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	119
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	121
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	117
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	0.2	<0.2	0.2	119
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	114
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	108
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.17	0.16	-	110

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264378.004		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.8	<0.2	2	92
			Diazinon (Dimpylate)	mg/kg	0.5	1.8	<0.5	2	91
			Dichlorvos	mg/kg	0.5	1.6	<0.5	2	80
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.7	<0.2	2	84
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	7.0	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	91
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	93

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264378.004	Naphthalene	mg/kg	0.1	4.3	<0.1	4	108
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.1	<0.1	4	103
		Acenaphthene	mg/kg	0.1	4.3	<0.1	4	108
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264378.004		Phenanthrene	mg/kg	0.1	4.3	<0.1	4	108
			Anthracene	mg/kg	0.1	4.1	<0.1	4	103
			Fluoranthene	mg/kg	0.1	4.2	0.1	4	103
			Pyrene	mg/kg	0.1	4.2	0.1	4	103
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	3.8	<0.1	4	94
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	3.8	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	3.9	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.0	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	34	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	105
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	91
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	93

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264378.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.5	<0.2	0.4	121
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	-	110

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264449.004		Arsenic, As	mg/kg	1	54	8	50	92
			Cadmium, Cd	mg/kg	0.3	46	0.4	50	92
			Chromium, Cr	mg/kg	0.5	64	27	50	74
			Copper, Cu	mg/kg	0.5	78	41	50	75
			Nickel, Ni	mg/kg	0.5	52	3.4	50	98
			Lead, Pb	mg/kg	1	210	180	50	66 ⑨
			Zinc, Zn	mg/kg	2	280	260	50	50 ⑨

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264378.004		TRH C10-C14	mg/kg	20	46	<20	40	115
			TRH C15-C28	mg/kg	45	90	<45	40	115
			TRH C29-C36	mg/kg	45	90	63	40	66
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	230	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F	TRH >C10-C16	mg/kg	25	46	<25	40	115
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	46	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	130	90	40	99
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264388.004	Monocyclic	Benzene	mg/kg	0.1	5.1	<0.1	5	103
		Aromatic	Toluene	mg/kg	0.1	5.2	<0.1	5	103
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	5.3	<0.1	5	106
			m/p-xylene	mg/kg	0.2	10	<0.2	10	103

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264388.004	Monocyclic	o-xylene	mg/kg	0.1	5.5	<0.1	5	109
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	10.0	10	92
			d8-toluene (Surrogate)	mg/kg	-	9.6	10.0	10	96
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	10.1	10	93
		Totals	Total BTEX*	mg/kg	0.6	31	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	16	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239305.001	LB264388.004		TRH C6-C10 raw	µg/L	0.05		2.8	-	-
			TRH C6-C9 raw	µg/L	0.05		1.9	-	-
			TRH C6-C10	mg/kg	25	79	<25	92.5	85
			TRH C6-C9	mg/kg	20	70	<20	80	87
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	10.0	10	92
			d8-toluene (Surrogate)	mg/kg	-	9.6	10.0	10	96
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	10.1	-	93
		VPH F	Benzene (F0)	mg/kg	0.1	5.1	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	48	<25	62.5	76

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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STATEMENT OF QA/QC PERFORMANCE

SE239469 R0

CLIENT DETAILS

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Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	4

LABORATORY DETAILS

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SGS Reference	**SE239469 R0**
Date Received	18 Nov 2022
Date Reported	28 Nov 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	5 items
Matrix Spike	Mercury in Soil	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	3 items
	TRH (Total Recoverable Hydrocarbons) in Soil	3 items

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	4 Soil
Date documentation received	18/11/2022 @11am	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	15.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE239469 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264623	11 Nov 2022	18 Nov 2022	11 Nov 2023	23 Nov 2022	11 Nov 2023	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264623	11 Nov 2022	18 Nov 2022	11 Nov 2023	23 Nov 2022	11 Nov 2023	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264623	10 Nov 2022	18 Nov 2022	10 Nov 2023	23 Nov 2022	10 Nov 2023	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264623	14 Nov 2022	18 Nov 2022	14 Nov 2023	23 Nov 2022	14 Nov 2023	24 Nov 2022

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264663	11 Nov 2022	18 Nov 2022	09 Dec 2022	23 Nov 2022	09 Dec 2022	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264663	11 Nov 2022	18 Nov 2022	09 Dec 2022	23 Nov 2022	09 Dec 2022	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264663	10 Nov 2022	18 Nov 2022	08 Dec 2022	23 Nov 2022	08 Dec 2022	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264663	14 Nov 2022	18 Nov 2022	12 Dec 2022	23 Nov 2022	12 Dec 2022	24 Nov 2022

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264652	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264652	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264652	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264652	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264645	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264645	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264645	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264645	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264645	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264645	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264645	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264645	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264660	11 Nov 2022	18 Nov 2022	10 May 2023	23 Nov 2022	10 May 2023	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264660	11 Nov 2022	18 Nov 2022	10 May 2023	23 Nov 2022	10 May 2023	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264660	10 Nov 2022	18 Nov 2022	09 May 2023	23 Nov 2022	09 May 2023	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264660	14 Nov 2022	18 Nov 2022	13 May 2023	23 Nov 2022	13 May 2023	24 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264645	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264645	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref

HOLDING TIME SUMMARY

SE239469 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

VOC's in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264647	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	25 Nov 2022	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264647	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	25 Nov 2022	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264647	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	24 Nov 2022	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264647	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022

Volatile Petroleum Hydrocarbons in Soil — **Method: ME-(AU)-[ENV]AN433**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.1-0.2	SE239469.001	LB264647	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	25 Nov 2022	24 Nov 2022
BHA4_0.2-0.3	SE239469.002	LB264647	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	25 Nov 2022	24 Nov 2022
BHA7M_0.2-0.3	SE239469.003	LB264647	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	24 Nov 2022	24 Nov 2022
BHC1_0.1-0.2	SE239469.004	LB264647	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	60 - 130%	92
	BHA4_0.2-0.3	SE239469.002	%	60 - 130%	88
	BHA7M_0.2-0.3	SE239469.003	%	60 - 130%	89
	BHC1_0.1-0.2	SE239469.004	%	60 - 130%	88

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	60 - 130%	96
	BHA4_0.2-0.3	SE239469.002	%	60 - 130%	90
	BHA7M_0.2-0.3	SE239469.003	%	60 - 130%	114
	BHC1_0.1-0.2	SE239469.004	%	60 - 130%	110
d14-p-terphenyl (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	60 - 130%	104
	BHA4_0.2-0.3	SE239469.002	%	60 - 130%	96
	BHA7M_0.2-0.3	SE239469.003	%	60 - 130%	123
	BHC1_0.1-0.2	SE239469.004	%	60 - 130%	117

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	70 - 130%	96
	BHA4_0.2-0.3	SE239469.002	%	70 - 130%	90
	BHA7M_0.2-0.3	SE239469.003	%	70 - 130%	114
	BHC1_0.1-0.2	SE239469.004	%	70 - 130%	110
d14-p-terphenyl (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	70 - 130%	104
	BHA4_0.2-0.3	SE239469.002	%	70 - 130%	96
	BHA7M_0.2-0.3	SE239469.003	%	70 - 130%	123
	BHC1_0.1-0.2	SE239469.004	%	70 - 130%	117
d5-nitrobenzene (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	70 - 130%	116
	BHA4_0.2-0.3	SE239469.002	%	70 - 130%	114
	BHA7M_0.2-0.3	SE239469.003	%	70 - 130%	128
	BHC1_0.1-0.2	SE239469.004	%	70 - 130%	124

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	60 - 130%	92
	BHA4_0.2-0.3	SE239469.002	%	60 - 130%	88
	BHA7M_0.2-0.3	SE239469.003	%	60 - 130%	89
	BHC1_0.1-0.2	SE239469.004	%	60 - 130%	88

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	60 - 130%	88
	BHA4_0.2-0.3	SE239469.002	%	60 - 130%	83
	BHA7M_0.2-0.3	SE239469.003	%	60 - 130%	75
	BHC1_0.1-0.2	SE239469.004	%	60 - 130%	84
d4-1,2-dichloroethane (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	60 - 130%	95
	BHA4_0.2-0.3	SE239469.002	%	60 - 130%	86
	BHA7M_0.2-0.3	SE239469.003	%	60 - 130%	82
	BHC1_0.1-0.2	SE239469.004	%	60 - 130%	88
d8-toluene (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	60 - 130%	98
	BHA4_0.2-0.3	SE239469.002	%	60 - 130%	86
	BHA7M_0.2-0.3	SE239469.003	%	60 - 130%	78
	BHC1_0.1-0.2	SE239469.004	%	60 - 130%	96

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	60 - 130%	88
	BHA4_0.2-0.3	SE239469.002	%	60 - 130%	83
	BHA7M_0.2-0.3	SE239469.003	%	60 - 130%	75
	BHC1_0.1-0.2	SE239469.004	%	60 - 130%	84
d4-1,2-dichloroethane (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	60 - 130%	95
	BHA4_0.2-0.3	SE239469.002	%	60 - 130%	86
	BHA7M_0.2-0.3	SE239469.003	%	60 - 130%	82
	BHC1_0.1-0.2	SE239469.004	%	60 - 130%	88

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	BHA1M_0.1-0.2	SE239469.001	%	60 - 130%	98
	BHA4_0.2-0.3	SE239469.002	%	60 - 130%	86
	BHA7M_0.2-0.3	SE239469.003	%	60 - 130%	78
	BHC1_0.1-0.2	SE239469.004	%	60 - 130%	96

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB264663.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264645.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	91

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264645.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	88
		d14-p-terphenyl (Surrogate)	%	-	92

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB264645.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264645.001		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	111
		2-fluorobiphenyl (Surrogate)	%	-	88
		d14-p-terphenyl (Surrogate)	%	-	92

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264645.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	TCMX (Surrogate)	%	-	91

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number		Parameter	Units	LOR	Result
LB264660.001		Arsenic, As	mg/kg	1	<1
		Cadmium, Cd	mg/kg	0.3	<0.3
		Chromium, Cr	mg/kg	0.5	<0.5
		Copper, Cu	mg/kg	0.5	<0.5
		Nickel, Ni	mg/kg	0.5	<0.5
		Lead, Pb	mg/kg	1	<1
		Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result
LB264645.001		TRH C10-C14	mg/kg	20	<20
		TRH C15-C28	mg/kg	45	<45
		TRH C29-C36	mg/kg	45	<45
		TRH C37-C40	mg/kg	100	<100
		TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264647.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	81
		d8-toluene (Surrogate)	%	-	79
		Bromofluorobenzene (Surrogate)	%	-	81
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264647.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	81

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239151.007	LB264663.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE239151.020	LB264663.020	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264652.010	% Moisture	%w/w	1	6.7	6.5	45	4

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239451A.006	LB264645.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.14	30	4
SE239475.001	LB264645.027		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264645.027		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	30	4

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239451A.008	LB264645.028		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	9
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	5

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264645.027		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	1.4	1.9	36	29
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	188	0
			Fluorene	mg/kg	0.1	0.1	0.2	105	27
			Phenanthrene	mg/kg	0.1	0.2	0.4	67	62
			Anthracene	mg/kg	0.1	0.3	0.5	56	32
			Fluoranthene	mg/kg	0.1	1.4	2.0	36	39 ②
			Pyrene	mg/kg	0.1	1.9	2.7	34	37 ②
			Benzo(a)anthracene	mg/kg	0.1	1.2	1.8	37	35
			Chrysene	mg/kg	0.1	1.4	1.7	37	21
			Benzo(b&j)fluoranthene	mg/kg	0.1	2.4	2.7	34	14
			Benzo(k)fluoranthene	mg/kg	0.1	0.7	0.9	43	16
			Benzo(a)pyrene	mg/kg	0.1	1.7	2.2	35	23
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	1.0	1.3	38	25
			Dibenzo(ah)anthracene	mg/kg	0.1	0.2	0.3	66	28
			Benzo(ghi)perylene	mg/kg	0.1	0.9	1.2	39	28
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	2.5	3.2	17	23 ②
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	2.5	3.2	17	23 ②
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	2.5	3.2	20	23 ②
			Total PAH (18)	mg/kg	0.8	15	20	31	28
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.6	30	18
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	16
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.6	30	16

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239451A.006	LB264645.014	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239451A.006	LB264645.014		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	4
SE239475.001	LB264645.027		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	4

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239151.003	LB264660.014		Arsenic, As	mg/kg	1	2	2	78	17
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	2.2	2.3	52	5
			Copper, Cu	mg/kg	0.5	1.6	1.7	60	6
			Nickel, Ni	mg/kg	0.5	0.9	0.9	84	4
			Lead, Pb	mg/kg	1	3	3	64	3
			Zinc, Zn	mg/kg	2	16	17	42	11
SE239151.020	LB264660.022		Arsenic, As	mg/kg	1	4	4	54	2
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	5.4	5.2	39	4
			Copper, Cu	mg/kg	0.5	1.5	1.6	62	7
			Nickel, Ni	mg/kg	0.5	2.6	2.5	50	7
			Lead, Pb	mg/kg	1	3	3	62	0
			Zinc, Zn	mg/kg	2	16	16	42	4

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264645.027		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	330	380	43	14
			TRH C29-C36	mg/kg	45	91	120	73	24
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	420	500	54	16
			TRH >C10-C40 Total (F bands)	mg/kg	210	390	460	79	16
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	390	460	51	16
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264647.019	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	9.1	50	6
			d8-toluene (Surrogate)	mg/kg	-	8.7	9.1	50	4
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	8.4	50	8
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264647.019	Totals	Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264647.019		TRH C6-C10 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C9 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	9.1	30	6
			d8-toluene (Surrogate)	mg/kg	-	8.7	9.1	30	4
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	8.4	30	8
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264663.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	98

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264645.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	86
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	87
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	84
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	83
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	88
		p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	71
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.15	40 - 130	85

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264645.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.0	2	60 - 140	102
		Diazinon (Dimpylate)	mg/kg	0.5	2.1	2	60 - 140	104
		Dichlorvos	mg/kg	0.5	1.6	2	60 - 140	82
		Ethion	mg/kg	0.2	1.8	2	60 - 140	92
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	97
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	101

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264645.002		Naphthalene	mg/kg	0.1	4.8	4	60 - 140	121
		Acenaphthylene	mg/kg	0.1	4.7	4	60 - 140	117
		Acenaphthene	mg/kg	0.1	4.9	4	60 - 140	121
		Phenanthrene	mg/kg	0.1	4.8	4	60 - 140	120
		Anthracene	mg/kg	0.1	4.7	4	60 - 140	117
		Fluoranthene	mg/kg	0.1	4.7	4	60 - 140	117
		Pyrene	mg/kg	0.1	4.7	4	60 - 140	117
		Benzo(a)pyrene	mg/kg	0.1	4.2	4	60 - 140	106
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	116
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	97
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	101

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264645.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	101

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264660.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	103
	Cadmium, Cd	mg/kg	0.3	4.9	4.81	70 - 130	102
	Chromium, Cr	mg/kg	0.5	37	38.31	80 - 120	95
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	108
	Nickel, Ni	mg/kg	0.5	180	187	80 - 120	99
	Lead, Pb	mg/kg	1	95	89.9	80 - 120	106
	Zinc, Zn	mg/kg	2	270	273	80 - 120	100

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264645.002		TRH C10-C14	mg/kg	20	42	40	60 - 140	105
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	110
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	90
	TRH F Bands	TRH >C10-C16	mg/kg	25	42	40	60 - 140	105
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	105
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264647.002	Monocyclic	Benzene	mg/kg	0.1	4.6	5	60 - 140	91
	Aromatic	Toluene	mg/kg	0.1	4.5	5	60 - 140	90
	Hydrocarbons	Ethylbenzene	mg/kg	0.1	4.5	5	60 - 140	90
		m/p-xylene	mg/kg	0.2	8.6	10	60 - 140	86
		o-xylene	mg/kg	0.1	4.5	5	60 - 140	90
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	10	70 - 130	95
		d8-toluene (Surrogate)	mg/kg	-	10.1	10	70 - 130	101
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264647.002		TRH C6-C10	mg/kg	25	90	92.5	60 - 140	97
		TRH C6-C9	mg/kg	20	83	80	60 - 140	104
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	10	70 - 130	95
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	63	62.5	60 - 140	101

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264663.004	Mercury	mg/kg	0.05	0.43	0.37	0.2	31 ④

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264645.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	85
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	85
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	83
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	84
			Endrin	mg/kg	0.2	<0.2	<0.2	0.2	85
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.1	<0.1	0.2	73
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	<1	<1	-	-
			Total OC VIC EPA	mg/kg	1	<1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	-	94

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264645.004		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.2	<0.2	2	108
			Diazinon (Dimpylate)	mg/kg	0.5	2.2	<0.5	2	108
			Dichlorvos	mg/kg	0.5	1.7	<0.5	2	85
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	2.2	<0.2	2	108
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	8.2	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	101
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	107

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264645.004	Naphthalene	mg/kg	0.1	4.7	<0.1	4	118
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.6	<0.1	4	115
		Acenaphthene	mg/kg	0.1	4.8	<0.1	4	119
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264645.004		Phenanthrene	mg/kg	0.1	4.8	<0.1	4	118
			Anthracene	mg/kg	0.1	4.7	<0.1	4	116
			Fluoranthene	mg/kg	0.1	4.7	0.2	4	114
			Pyrene	mg/kg	0.1	4.8	0.2	4	115
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.2	<0.1	4	103
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	4.2	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.3	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.4	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	37	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.6	-	123
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	101
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	107

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264645.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.4	<0.2	0.4	104
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	-	94

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264660.004		Arsenic, As	mg/kg	1	53	8	50	90
			Cadmium, Cd	mg/kg	0.3	45	0.3	50	88
			Chromium, Cr	mg/kg	0.5	56	14	50	83
			Copper, Cu	mg/kg	0.5	98	69	50	57 ④
			Nickel, Ni	mg/kg	0.5	52	8.1	50	88
			Lead, Pb	mg/kg	1	67	33	50	69 ④
			Zinc, Zn	mg/kg	2	140	140	50	4 ⑥

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264645.004		TRH C10-C14	mg/kg	20	44	<20	40	110
			TRH C15-C28	mg/kg	45	150	200	40	-131 ⑤
			TRH C29-C36	mg/kg	45	220	350	40	-330 ⑤
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	410	550	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	300	400	-	-
		TRH F	TRH >C10-C16	mg/kg	25	48	<25	40	120
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	48	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	250	400	40	-380 ⑤
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264647.004	Monocyclic	Benzene	mg/kg	0.1	5.6	<0.1	5	112
		Aromatic	Toluene	mg/kg	0.1	6.0	<0.1	5	121
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	6.6	<0.1	5	131
			m/p-xylene	mg/kg	0.2	13	<0.2	10	127

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264647.004	Monocyclic	o-xylene	mg/kg	0.1	6.6	<0.1	5	132
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.3	9.5	10	73
			d8-toluene (Surrogate)	mg/kg	-	7.3	9.8	10	73
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.6	8.8	10	76
		Totals	Total BTEX*	mg/kg	0.6	38	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	19	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264647.004		TRH C6-C10 raw	µg/L	0.05		5.6	-	-
			TRH C6-C9 raw	µg/L	0.05		<0.050	-	-
			TRH C6-C10	mg/kg	25	86	<25	92.5	92
			TRH C6-C9	mg/kg	20	76	<20	80	95
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.3	9.5	10	73
			d8-toluene (Surrogate)	mg/kg	-	7.3	9.8	10	73
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.6	8.8	-	76
		VPH F	Benzene (F0)	mg/kg	0.1	3.4	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	63	<25	62.5	100

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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STATEMENT OF QA/QC PERFORMANCE

SE239584 R0

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Order Number	**E25834**
Samples	1

LABORATORY DETAILS

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SGS Reference	**SE239584 R0**
Date Received	18 Nov 2022
Date Reported	25 Nov 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	1 Soil
Date documentation received	18/11/2022@3:12pn	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	15.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE239584 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil — Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264787	18 Nov 2022	18 Nov 2022	18 Nov 2023	24 Nov 2022	18 Nov 2023	25 Nov 2022

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264860	18 Nov 2022	18 Nov 2022	16 Dec 2022	25 Nov 2022	16 Dec 2022	25 Nov 2022

Moisture Content — Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264798	18 Nov 2022	18 Nov 2022	02 Dec 2022	24 Nov 2022	29 Nov 2022	25 Nov 2022

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264793	18 Nov 2022	18 Nov 2022	02 Dec 2022	24 Nov 2022	03 Jan 2023	25 Nov 2022

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264793	18 Nov 2022	18 Nov 2022	02 Dec 2022	24 Nov 2022	03 Jan 2023	25 Nov 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264793	18 Nov 2022	18 Nov 2022	02 Dec 2022	24 Nov 2022	03 Jan 2023	25 Nov 2022

PCBs in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264793	18 Nov 2022	18 Nov 2022	02 Dec 2022	24 Nov 2022	03 Jan 2023	25 Nov 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264811	18 Nov 2022	18 Nov 2022	17 May 2023	24 Nov 2022	17 May 2023	25 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264793	18 Nov 2022	18 Nov 2022	02 Dec 2022	24 Nov 2022	03 Jan 2023	25 Nov 2022

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264801	18 Nov 2022	18 Nov 2022	02 Dec 2022	24 Nov 2022	02 Dec 2022	25 Nov 2022

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA2_0.3-0.4	SE239584.001	LB264801	18 Nov 2022	18 Nov 2022	02 Dec 2022	24 Nov 2022	02 Dec 2022	25 Nov 2022

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	60 - 130%	94

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	60 - 130%	98
d14-p-terphenyl (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	60 - 130%	96

PAH (Polynuclear Aromatic Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	70 - 130%	98
d14-p-terphenyl (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	70 - 130%	96
d5-nitrobenzene (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	70 - 130%	110

PCBs in Soil — Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	60 - 130%	94

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	60 - 130%	72
d4-1,2-dichloroethane (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	60 - 130%	74
d8-toluene (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	60 - 130%	67

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	60 - 130%	72
d4-1,2-dichloroethane (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	60 - 130%	74
d8-toluene (Surrogate)	BHA2_0.3-0.4	SE239584.001	%	60 - 130%	67

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB264860.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264793.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	100

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264793.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	92
		d14-p-terphenyl (Surrogate)	%	-	96

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB264793.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264793.001		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	106
		2-fluorobiphenyl (Surrogate)	%	-	92
		d14-p-terphenyl (Surrogate)	%	-	96

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264793.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	TCMX (Surrogate)	%	-	101

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number		Parameter	Units	LOR	Result
LB264811.001		Arsenic, As	mg/kg	1	<1
		Cadmium, Cd	mg/kg	0.3	<0.3
		Chromium, Cr	mg/kg	0.5	<0.5
		Copper, Cu	mg/kg	0.5	<0.5
		Nickel, Ni	mg/kg	0.5	<0.5
		Lead, Pb	mg/kg	1	<1
		Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result
LB264793.001		TRH C10-C14	mg/kg	20	<20
		TRH C15-C28	mg/kg	45	<45
		TRH C29-C36	mg/kg	45	<45
		TRH C37-C40	mg/kg	100	<100
		TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264801.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	79
		d8-toluene (Surrogate)	%	-	76
		Bromofluorobenzene (Surrogate)	%	-	79
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264801.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	79

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239582.010	LB264860.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE239584.001	LB264860.023	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239582.010	LB264798.011	% Moisture	%w/w	1	32.1	34.1	33	6
SE239584.001	LB264798.021	% Moisture	%w/w	1	5.0	6.8	47	31

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239584.001	LB264793.024		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.16	30	16

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239584.001	LB264793.024		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	6

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239584.001	LB264793.024		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	192	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	192	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.6	30	2
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	6

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239584.001	LB264793.024		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	16

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239582.010	LB264811.014	Arsenic, As	mg/kg	1	7	6	45	22
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	16	14	33	10
		Copper, Cu	mg/kg	0.5	21	20	32	5
		Nickel, Ni	mg/kg	0.5	9.5	9.9	35	5
		Lead, Pb	mg/kg	1	21	26	34	23
		Zinc, Zn	mg/kg	2	33	33	36	2
SE239584.001	LB264811.023	Arsenic, As	mg/kg	1	<1	<1	143	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	4.9	8.6	37	55 ②
		Copper, Cu	mg/kg	0.5	3.4	4.5	43	28
		Nickel, Ni	mg/kg	0.5	3.4	9.3	38	92 ②
		Lead, Pb	mg/kg	1	5	5	50	6
		Zinc, Zn	mg/kg	2	13	16	44	24

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239584.001	LB264793.024	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	<45	<45	200	0
		TRH C29-C36	mg/kg	45	<45	<45	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239584.001	LB264793.024		TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239584.001	LB264801.024	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.4	7.7	50	4
			d8-toluene (Surrogate)	mg/kg	-	6.7	5.8	50	13
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.2	7.7	50	7
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239584.001	LB264801.024		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.4	7.7	30	4
			d8-toluene (Surrogate)	mg/kg	-	6.7	5.8	30	13
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.2	7.7	30	7
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264860.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	93

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264793.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	98
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	103
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	100
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	97
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	93
		p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	75
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.15	40 - 130	105

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264793.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	2	60 - 140	95
		Diazinon (Dimpylate)	mg/kg	0.5	1.9	2	60 - 140	95
		Dichlorvos	mg/kg	0.5	1.6	2	60 - 140	81
		Ethion	mg/kg	0.2	1.8	2	60 - 140	90
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	98

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264793.002		Naphthalene	mg/kg	0.1	4.9	4	60 - 140	122
		Acenaphthylene	mg/kg	0.1	4.7	4	60 - 140	119
		Acenaphthene	mg/kg	0.1	5.0	4	60 - 140	125
		Phenanthrene	mg/kg	0.1	5.1	4	60 - 140	128
		Anthracene	mg/kg	0.1	4.9	4	60 - 140	124
		Fluoranthene	mg/kg	0.1	5.0	4	60 - 140	126
		Pyrene	mg/kg	0.1	5.0	4	60 - 140	125
		Benzo(a)pyrene	mg/kg	0.1	4.5	4	60 - 140	114
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	106
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	98

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264793.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	93

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264811.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	105
	Cadmium, Cd	mg/kg	0.3	5.0	4.81	70 - 130	104
	Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	100
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	106
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	102
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	103
	Zinc, Zn	mg/kg	2	280	273	80 - 120	101

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264793.002		TRH C10-C14	mg/kg	20	44	40	60 - 140	110
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	110
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	85
	TRH F Bands	TRH >C10-C16	mg/kg	25	44	40	60 - 140	110
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	100
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	85

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264801.002	Monocyclic	Benzene	mg/kg	0.1	4.1	5	60 - 140	81
	Aromatic	Toluene	mg/kg	0.1	4.4	5	60 - 140	88
	Hydrocarbons	Ethylbenzene	mg/kg	0.1	4.2	5	60 - 140	83
		m/p-xylene	mg/kg	0.2	8.1	10	60 - 140	81
		o-xylene	mg/kg	0.1	4.3	5	60 - 140	87
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
		d8-toluene (Surrogate)	mg/kg	-	9.3	10	70 - 130	93
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	10	70 - 130	83

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264801.002		TRH C6-C10	mg/kg	25	91	92.5	60 - 140	99
		TRH C6-C9	mg/kg	20	81	80	60 - 140	101
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	10	70 - 130	83
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	66	62.5	60 - 140	106

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239582.001	LB264860.004	Mercury	mg/kg	0.05	0.21	0.016549111	0.2	98

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239582.001	LB264811.004	Arsenic, As	mg/kg	1	53	7.750455106	50	90
		Cadmium, Cd	mg/kg	0.3	43	0.070573071	50	85
		Chromium, Cr	mg/kg	0.5	57	15.08130132	50	84
		Copper, Cu	mg/kg	0.5	54	11.17680509	50	85
		Nickel, Ni	mg/kg	0.5	50	5.906801989	50	89
		Lead, Pb	mg/kg	1	54	13.33940473	50	82
		Zinc, Zn	mg/kg	2	62	24.73230567	50	75

MATRIX SPIKE DUPLICATES

SE239584 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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STATEMENT OF QA/QC PERFORMANCE

SE239584A R0

CLIENT DETAILS

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Project	**E25834 80 O'Connell St, Kingswood-Add**
Order Number	**E25834**
Samples	2

LABORATORY DETAILS

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SGS Reference	**SE239584A R0**
Date Received	24 Nov 2022
Date Reported	29 Nov 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	1 Soil
Date documentation received	24/11/2022@5:18PM	Type of documentation received	Email
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	15.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days		

HOLDING TIME SUMMARY

SE239584A R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil — Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB265074	18 Nov 2022	24 Nov 2022	18 Nov 2023	28 Nov 2022	18 Nov 2023	29 Nov 2022

Mercury in Soil — Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB265020	18 Nov 2022	24 Nov 2022	16 Dec 2022	28 Nov 2022	16 Dec 2022	29 Nov 2022

Moisture Content — Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB264872	18 Nov 2022	24 Nov 2022	02 Dec 2022	25 Nov 2022	30 Nov 2022	28 Nov 2022

OC Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB264869	18 Nov 2022	24 Nov 2022	02 Dec 2022	25 Nov 2022	04 Jan 2023	28 Nov 2022

OP Pesticides in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB264869	18 Nov 2022	24 Nov 2022	02 Dec 2022	25 Nov 2022	04 Jan 2023	28 Nov 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB264869	18 Nov 2022	24 Nov 2022	02 Dec 2022	25 Nov 2022	04 Jan 2023	28 Nov 2022

PCBs in Soil — Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB264869	18 Nov 2022	24 Nov 2022	02 Dec 2022	25 Nov 2022	04 Jan 2023	28 Nov 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES — Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB265019	18 Nov 2022	24 Nov 2022	17 May 2023	28 Nov 2022	17 May 2023	29 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Soil — Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB264869	18 Nov 2022	24 Nov 2022	02 Dec 2022	25 Nov 2022	04 Jan 2023	28 Nov 2022

VOC's in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB264870	18 Nov 2022	24 Nov 2022	02 Dec 2022	25 Nov 2022	02 Dec 2022	28 Nov 2022

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHF5_1.4-1.5	SE239584A.002	LB264870	18 Nov 2022	24 Nov 2022	02 Dec 2022	25 Nov 2022	02 Dec 2022	28 Nov 2022

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	60 - 130%	90

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	60 - 130%	88
d14-p-terphenyl (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	60 - 130%	92

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	70 - 130%	88
d14-p-terphenyl (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	70 - 130%	92
d5-nitrobenzene (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	70 - 130%	103

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	60 - 130%	90

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	60 - 130%	93
d4-1,2-dichloroethane (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	60 - 130%	88
d8-toluene (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	60 - 130%	88

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	60 - 130%	93
d4-1,2-dichloroethane (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	60 - 130%	88
d8-toluene (Surrogate)	BHF5_1.4-1.5	SE239584A.002	%	60 - 130%	88

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB265020.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264869.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	85

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264869.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	89
		d14-p-terphenyl (Surrogate)	%	-	93

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB264869.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264869.001		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	103
		2-fluorobiphenyl (Surrogate)	%	-	89
		d14-p-terphenyl (Surrogate)	%	-	93

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264869.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	TCMX (Surrogate)	%	-	85

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB265019.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB264869.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264870.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	98
		d8-toluene (Surrogate)	%	-	100
		Bromofluorobenzene (Surrogate)	%	-	100
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264870.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	98

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239439.010	LB265020.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE239584A.002	LB265020.019	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239536.001	LB264872.011	% Moisture	%w/w	1	4.0	5.0	52	21
SE239584A.002	LB264872.021	% Moisture	%w/w	1	16.4	16.5	36	0

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239536.001	LB264869.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.13	30	1
SE239584A.002	LB264869.024		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239584A.002	LB264869.024		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.14	30	1

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239536.001	LB264869.014		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
SE239584A.002	LB264869.024		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	18
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	26

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239536.001	LB264869.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239536.001	LB264869.014		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	4
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
SE239584A.002	LB264869.024		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	13
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	18
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	26

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239536.001	LB264869.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	1
SE239584A.002	LB264869.024		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate		Parameter	Units	LOR

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239439.010	LB265019.014	Arsenic, As	mg/kg	1	8	9	42	16
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	15	18	33	21
		Copper, Cu	mg/kg	0.5	17	17	33	5
		Nickel, Ni	mg/kg	0.5	4.2	4.7	41	12
		Lead, Pb	mg/kg	1	19	18	35	4
		Zinc, Zn	mg/kg	2	23	26	38	10
SE239584A.002	LB265019.019	Arsenic, As	mg/kg	1	9	11	40	14
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	19	20	33	5
		Copper, Cu	mg/kg	0.5	21	23	32	10
		Nickel, Ni	mg/kg	0.5	15	18	33	19
		Lead, Pb	mg/kg	1	16	23	35	36 ②
		Zinc, Zn	mg/kg	2	36	37	35	3

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239536.001	LB264869.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE239584A.002	LB264869.024		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239537.001	LB264870.014	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	9.4	50	1
			d8-toluene (Surrogate)	mg/kg	-	9.5	9.4	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.7	9.6	50	1
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE239584A.002	LB264870.022	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	8.9	50	0
			d8-toluene (Surrogate)	mg/kg	-	8.8	8.7	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	9.2	50	2
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Volatile Petroleum Hydrocarbons in Soil — **Method: ME-(AU)-[ENV]AN433**

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239537.001	LB264870.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	9.4	30	1
			d8-toluene (Surrogate)	mg/kg	-	9.5	9.4	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.7	9.6	30	1
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE239584A.002	LB264870.022		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	8.9	30	0
			d8-toluene (Surrogate)	mg/kg	-	8.8	8.7	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	9.2	30	2
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB265020.002	Mercury	mg/kg	0.05	0.24	0.2	70 - 130	118

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264869.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	80
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	83
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	82
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	83
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	89
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	83
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.15	40 - 130	84

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264869.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	2	60 - 140	97
		Diazinon (Dimpylate)	mg/kg	0.5	2.0	2	60 - 140	101
		Dichlorvos	mg/kg	0.5	1.7	2	60 - 140	87
		Ethion	mg/kg	0.2	2.0	2	60 - 140	101
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	100
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	102

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264869.002		Naphthalene	mg/kg	0.1	4.9	4	60 - 140	122
		Acenaphthylene	mg/kg	0.1	4.7	4	60 - 140	118
		Acenaphthene	mg/kg	0.1	4.9	4	60 - 140	122
		Phenanthrene	mg/kg	0.1	4.9	4	60 - 140	123
		Anthracene	mg/kg	0.1	4.5	4	60 - 140	114
		Fluoranthene	mg/kg	0.1	4.9	4	60 - 140	124
		Pyrene	mg/kg	0.1	4.7	4	60 - 140	118
		Benzo(a)pyrene	mg/kg	0.1	4.4	4	60 - 140	110
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	114
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	100
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	102

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264869.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	94

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB265019.002	Arsenic, As	mg/kg	1	320	318.22	80 - 120	102
	Cadmium, Cd	mg/kg	0.3	4.5	4.81	70 - 130	93
	Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	99
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	107
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	102
	Zinc, Zn	mg/kg	2	270	273	80 - 120	99

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264869.002		TRH C10-C14	mg/kg	20	40	40	60 - 140	100
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	110
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	85
	TRH F Bands	TRH >C10-C16	mg/kg	25	42	40	60 - 140	105
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	110
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	100

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264870.002	Monocyclic	Benzene	mg/kg	0.1	4.8	5	60 - 140	96
	Aromatic	Toluene	mg/kg	0.1	3.9	5	60 - 140	77
	Hydrocarbons	Ethylbenzene	mg/kg	0.1	4.6	5	60 - 140	91
		m/p-xylene	mg/kg	0.2	8.6	10	60 - 140	86
		o-xylene	mg/kg	0.1	4.6	5	60 - 140	93
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.6	10	70 - 130	116
		d8-toluene (Surrogate)	mg/kg	-	9.3	10	70 - 130	93
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.8	10	70 - 130	98

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264870.002		TRH C6-C10	mg/kg	25	100	92.5	60 - 140	110
		TRH C6-C9	mg/kg	20	91	80	60 - 140	114
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.6	10	70 - 130	116
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	75	62.5	60 - 140	120

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239439.001	LB265020.004	Mercury	mg/kg	0.05	0.25	0.000654166	0.2	126

OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239534.001	LB264869.026		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	83
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	87
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	86
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	87
			Endrin	mg/kg	0.2	<0.2	<0.2	0.2	93
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	88
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.13	-	89

OP Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239534.001	LB264869.026		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	<0.2	2	94
			Diazinon (Dimpylate)	mg/kg	0.5	1.9	<0.5	2	97
			Dichlorvos	mg/kg	0.5	1.7	<0.5	2	81
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	2.0	<0.2	2	99
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	7.5	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	84
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	86

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239534.001	LB264869.026	Naphthalene	mg/kg	0.1	4.0	<0.1	4	100
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	3.9	<0.1	4	98
		Acenaphthene	mg/kg	0.1	4.1	<0.1	4	102
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239534.001	LB264869.026		Phenanthrene	mg/kg	0.1	4.1	<0.1	4	103
			Anthracene	mg/kg	0.1	4.1	<0.1	4	101
			Fluoranthene	mg/kg	0.1	4.1	<0.1	4	103
			Pyrene	mg/kg	0.1	3.9	<0.1	4	98
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	3.6	<0.1	4	91
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	3.6	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	3.7	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	3.8	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	32	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	98
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	84
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	86

PCBs in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239534.001	LB264869.026		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.4	<0.2	0.4	97
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	-	89

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239439.001	LB265019.004		Arsenic, As	mg/kg	1	50	10.77030056	50	79
			Cadmium, Cd	mg/kg	0.3	42	0.047382360	50	85
			Chromium, Cr	mg/kg	0.5	65	23.71148681	50	82
			Copper, Cu	mg/kg	0.5	67	26.78747228	50	81
			Nickel, Ni	mg/kg	0.5	53	12.19708980	50	82
			Lead, Pb	mg/kg	1	60	23.51325449	50	73
			Zinc, Zn	mg/kg	2	77	44.03658536	50	66 ④

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239534.001	LB264869.026		TRH C10-C14	mg/kg	20	36	<20	40	90
			TRH C15-C28	mg/kg	45	<45	<45	40	90
			TRH C29-C36	mg/kg	45	<45	<45	40	80
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F	TRH >C10-C16	mg/kg	25	38	<25	40	95
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	38	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	90
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239518.001	LB264870.004	Monocyclic	Benzene	mg/kg	0.1	4.0	<0.1	5	80
		Aromatic	Toluene	mg/kg	0.1	3.6	<0.1	5	71
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	4.2	<0.1	5	83
			m/p-xylene	mg/kg	0.2	7.9	<0.2	10	79

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239518.001	LB264870.004	Monocyclic	o-xylene	mg/kg	0.1	4.3	<0.1	5	86
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.3	9.5	10	123
			d8-toluene (Surrogate)	mg/kg	-	10.2	9.6	10	102
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.6	9.8	10	106
		Totals	Total BTEX*	mg/kg	0.6	24	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	12	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239518.001	LB264870.004		TRH C6-C10	mg/kg	25	96	<25	92.5	103
			TRH C6-C9	mg/kg	20	86	<20	80	107
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.3	9.5	10	123
			d8-toluene (Surrogate)	mg/kg	-	10.2	9.6	10	102
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.6	9.8	-	106
		VPH F	Benzene (F0)	mg/kg	0.1	4.0	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	72	<25	62.5	114

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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STATEMENT OF QA/QC PERFORMANCE

SE239147 R0

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Email	leo.ho@eiaustralia.com.au
Project	**E25834 80 O' Connell Street, Kingswood**
Order Number	**E25834**
Samples	19

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE239147 R0**
Date Received	15 Nov 2022
Date Reported	22 Nov 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	10 Soil
Date documentation received	15/11/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.6°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE239147 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG6 - 0.7-0.8	SE239147.001	LB264170	10 Nov 2022	15 Nov 2022	08 Dec 2022	17 Nov 2022	08 Dec 2022	21 Nov 2022
BHF6 - 0.5-0.6	SE239147.002	LB264170	10 Nov 2022	15 Nov 2022	08 Dec 2022	17 Nov 2022	08 Dec 2022	21 Nov 2022
BHE6 - 0.5-0.6	SE239147.003	LB264170	10 Nov 2022	15 Nov 2022	08 Dec 2022	17 Nov 2022	08 Dec 2022	21 Nov 2022
BHF5 - 0.2-0.3	SE239147.004	LB264170	10 Nov 2022	15 Nov 2022	08 Dec 2022	17 Nov 2022	08 Dec 2022	21 Nov 2022
BHG5 - 1.6-1.7	SE239147.005	LB264170	10 Nov 2022	15 Nov 2022	08 Dec 2022	17 Nov 2022	08 Dec 2022	21 Nov 2022
BHH5 - 1.5-1.6	SE239147.006	LB264170	10 Nov 2022	15 Nov 2022	08 Dec 2022	17 Nov 2022	08 Dec 2022	21 Nov 2022
BHD4 - 1.8-1.9	SE239147.007	LB264170	10 Nov 2022	15 Nov 2022	08 Dec 2022	17 Nov 2022	08 Dec 2022	21 Nov 2022
BHF4 - 0.6-0.7	SE239147.008	LB264170	10 Nov 2022	15 Nov 2022	08 Dec 2022	17 Nov 2022	08 Dec 2022	21 Nov 2022
BHH3 - 1.2-1.3	SE239147.009	LB264170	10 Nov 2022	15 Nov 2022	08 Dec 2022	17 Nov 2022	08 Dec 2022	21 Nov 2022
BHG3 - 0.9-1.0	SE239147.010	LB264170	10 Nov 2022	15 Nov 2022	08 Dec 2022	17 Nov 2022	08 Dec 2022	21 Nov 2022
BHB2 - 3.5-3.6	SE239147.011	LB264170	11 Nov 2022	15 Nov 2022	09 Dec 2022	17 Nov 2022	09 Dec 2022	21 Nov 2022
BHA2 - 3.0-3.1	SE239147.012	LB264170	11 Nov 2022	15 Nov 2022	09 Dec 2022	17 Nov 2022	09 Dec 2022	21 Nov 2022
BHC5 - 0.9-1.0	SE239147.013	LB264170	11 Nov 2022	15 Nov 2022	09 Dec 2022	17 Nov 2022	09 Dec 2022	21 Nov 2022
BHE4 - 2.0-2.1	SE239147.014	LB264170	11 Nov 2022	15 Nov 2022	09 Dec 2022	17 Nov 2022	09 Dec 2022	21 Nov 2022
BHD3 - 1.5-1.6	SE239147.015	LB264170	11 Nov 2022	15 Nov 2022	09 Dec 2022	17 Nov 2022	09 Dec 2022	21 Nov 2022
BHF3 - 0.6-0.7	SE239147.016	LB264170	11 Nov 2022	15 Nov 2022	09 Dec 2022	17 Nov 2022	09 Dec 2022	21 Nov 2022
BHG4 - 1.2-1.3	SE239147.017	LB264170	11 Nov 2022	15 Nov 2022	09 Dec 2022	17 Nov 2022	09 Dec 2022	21 Nov 2022
BHB1 - 0.8-0.9	SE239147.018	LB264170	14 Nov 2022	15 Nov 2022	12 Dec 2022	17 Nov 2022	12 Dec 2022	21 Nov 2022
BHB2 - 0.5-0.6	SE239147.019	LB264170	14 Nov 2022	15 Nov 2022	12 Dec 2022	17 Nov 2022	12 Dec 2022	21 Nov 2022

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG6 - 0.7-0.8	SE239147.001	LB264167	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHF6 - 0.5-0.6	SE239147.002	LB264167	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHE6 - 0.5-0.6	SE239147.003	LB264167	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHF5 - 0.2-0.3	SE239147.004	LB264167	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHG5 - 1.6-1.7	SE239147.005	LB264167	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHH5 - 1.5-1.6	SE239147.006	LB264167	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHD4 - 1.8-1.9	SE239147.007	LB264167	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHF4 - 0.6-0.7	SE239147.008	LB264167	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHH3 - 1.2-1.3	SE239147.009	LB264167	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHG3 - 0.9-1.0	SE239147.010	LB264167	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHB2 - 3.5-3.6	SE239147.011	LB264167	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHA2 - 3.0-3.1	SE239147.012	LB264167	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHC5 - 0.9-1.0	SE239147.013	LB264167	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHE4 - 2.0-2.1	SE239147.014	LB264167	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHD3 - 1.5-1.6	SE239147.015	LB264167	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHF3 - 0.6-0.7	SE239147.016	LB264167	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHG4 - 1.2-1.3	SE239147.017	LB264167	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHB1 - 0.8-0.9	SE239147.018	LB264167	14 Nov 2022	15 Nov 2022	28 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022
BHB2 - 0.5-0.6	SE239147.019	LB264167	14 Nov 2022	15 Nov 2022	28 Nov 2022	17 Nov 2022	22 Nov 2022	21 Nov 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG6 - 0.7-0.8	SE239147.001	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHF6 - 0.5-0.6	SE239147.002	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHE6 - 0.5-0.6	SE239147.003	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHF5 - 0.2-0.3	SE239147.004	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHG5 - 1.6-1.7	SE239147.005	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHH5 - 1.5-1.6	SE239147.006	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHD4 - 1.8-1.9	SE239147.007	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHF4 - 0.6-0.7	SE239147.008	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHH3 - 1.2-1.3	SE239147.009	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHG3 - 0.9-1.0	SE239147.010	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHB2 - 3.5-3.6	SE239147.011	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHA2 - 3.0-3.1	SE239147.012	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHC5 - 0.9-1.0	SE239147.013	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHE4 - 2.0-2.1	SE239147.014	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHD3 - 1.5-1.6	SE239147.015	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHF3 - 0.6-0.7	SE239147.016	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHG4 - 1.2-1.3	SE239147.017	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022

HOLDING TIME SUMMARY

SE239147 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHB1 - 0.8-0.9	SE239147.018	LB264165	14 Nov 2022	15 Nov 2022	28 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHB2 - 0.5-0.6	SE239147.019	LB264165	14 Nov 2022	15 Nov 2022	28 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG6 - 0.7-0.8	SE239147.001	LB264169	10 Nov 2022	15 Nov 2022	09 May 2023	17 Nov 2022	09 May 2023	21 Nov 2022
BHF6 - 0.5-0.6	SE239147.002	LB264169	10 Nov 2022	15 Nov 2022	09 May 2023	17 Nov 2022	09 May 2023	21 Nov 2022
BHE6 - 0.5-0.6	SE239147.003	LB264169	10 Nov 2022	15 Nov 2022	09 May 2023	17 Nov 2022	09 May 2023	21 Nov 2022
BHF5 - 0.2-0.3	SE239147.004	LB264169	10 Nov 2022	15 Nov 2022	09 May 2023	17 Nov 2022	09 May 2023	21 Nov 2022
BHG5 - 1.6-1.7	SE239147.005	LB264169	10 Nov 2022	15 Nov 2022	09 May 2023	17 Nov 2022	09 May 2023	21 Nov 2022
BHH5 - 1.5-1.6	SE239147.006	LB264169	10 Nov 2022	15 Nov 2022	09 May 2023	17 Nov 2022	09 May 2023	21 Nov 2022
BHD4 - 1.8-1.9	SE239147.007	LB264169	10 Nov 2022	15 Nov 2022	09 May 2023	17 Nov 2022	09 May 2023	21 Nov 2022
BHF4 - 0.6-0.7	SE239147.008	LB264169	10 Nov 2022	15 Nov 2022	09 May 2023	17 Nov 2022	09 May 2023	21 Nov 2022
BHH3 - 1.2-1.3	SE239147.009	LB264169	10 Nov 2022	15 Nov 2022	09 May 2023	17 Nov 2022	09 May 2023	21 Nov 2022
BHG3 - 0.9-1.0	SE239147.010	LB264169	10 Nov 2022	15 Nov 2022	09 May 2023	17 Nov 2022	09 May 2023	21 Nov 2022
BHB2 - 3.5-3.6	SE239147.011	LB264169	11 Nov 2022	15 Nov 2022	10 May 2023	17 Nov 2022	10 May 2023	21 Nov 2022
BHA2 - 3.0-3.1	SE239147.012	LB264169	11 Nov 2022	15 Nov 2022	10 May 2023	17 Nov 2022	10 May 2023	21 Nov 2022
BHC5 - 0.9-1.0	SE239147.013	LB264169	11 Nov 2022	15 Nov 2022	10 May 2023	17 Nov 2022	10 May 2023	21 Nov 2022
BHE4 - 2.0-2.1	SE239147.014	LB264169	11 Nov 2022	15 Nov 2022	10 May 2023	17 Nov 2022	10 May 2023	21 Nov 2022
BHD3 - 1.5-1.6	SE239147.015	LB264169	11 Nov 2022	15 Nov 2022	10 May 2023	17 Nov 2022	10 May 2023	21 Nov 2022
BHF3 - 0.6-0.7	SE239147.016	LB264169	11 Nov 2022	15 Nov 2022	10 May 2023	17 Nov 2022	10 May 2023	21 Nov 2022
BHG4 - 1.2-1.3	SE239147.017	LB264169	11 Nov 2022	15 Nov 2022	10 May 2023	17 Nov 2022	10 May 2023	21 Nov 2022
BHB1 - 0.8-0.9	SE239147.018	LB264169	14 Nov 2022	15 Nov 2022	13 May 2023	17 Nov 2022	13 May 2023	21 Nov 2022
BHB2 - 0.5-0.6	SE239147.019	LB264169	14 Nov 2022	15 Nov 2022	13 May 2023	17 Nov 2022	13 May 2023	21 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG6 - 0.7-0.8	SE239147.001	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHF6 - 0.5-0.6	SE239147.002	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHE6 - 0.5-0.6	SE239147.003	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHF5 - 0.2-0.3	SE239147.004	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	22 Nov 2022
BHG5 - 1.6-1.7	SE239147.005	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHH5 - 1.5-1.6	SE239147.006	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	22 Nov 2022
BHD4 - 1.8-1.9	SE239147.007	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHF4 - 0.6-0.7	SE239147.008	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHH3 - 1.2-1.3	SE239147.009	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	22 Nov 2022
BHG3 - 0.9-1.0	SE239147.010	LB264165	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHB2 - 3.5-3.6	SE239147.011	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	22 Nov 2022
BHA2 - 3.0-3.1	SE239147.012	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHC5 - 0.9-1.0	SE239147.013	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHE4 - 2.0-2.1	SE239147.014	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	22 Nov 2022
BHD3 - 1.5-1.6	SE239147.015	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHF3 - 0.6-0.7	SE239147.016	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	22 Nov 2022
BHG4 - 1.2-1.3	SE239147.017	LB264165	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	27 Dec 2022	22 Nov 2022
BHB1 - 0.8-0.9	SE239147.018	LB264165	14 Nov 2022	15 Nov 2022	28 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022
BHB2 - 0.5-0.6	SE239147.019	LB264165	14 Nov 2022	15 Nov 2022	28 Nov 2022	17 Nov 2022	27 Dec 2022	21 Nov 2022

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG6 - 0.7-0.8	SE239147.001	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHF6 - 0.5-0.6	SE239147.002	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHE6 - 0.5-0.6	SE239147.003	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHF5 - 0.2-0.3	SE239147.004	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHG5 - 1.6-1.7	SE239147.005	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHH5 - 1.5-1.6	SE239147.006	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHD4 - 1.8-1.9	SE239147.007	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHF4 - 0.6-0.7	SE239147.008	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHH3 - 1.2-1.3	SE239147.009	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHG3 - 0.9-1.0	SE239147.010	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHB2 - 3.5-3.6	SE239147.011	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHA2 - 3.0-3.1	SE239147.012	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022

HOLDING TIME SUMMARY

SE239147 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHC5 - 0.9-1.0	SE239147.013	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHE4 - 2.0-2.1	SE239147.014	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHD3 - 1.5-1.6	SE239147.015	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHF3 - 0.6-0.7	SE239147.016	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHG4 - 1.2-1.3	SE239147.017	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHB1 - 0.8-0.9	SE239147.018	LB264166	14 Nov 2022	15 Nov 2022	28 Nov 2022	17 Nov 2022	28 Nov 2022	22 Nov 2022
BHB2 - 0.5-0.6	SE239147.019	LB264166	14 Nov 2022	15 Nov 2022	28 Nov 2022	17 Nov 2022	28 Nov 2022	22 Nov 2022

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG6 - 0.7-0.8	SE239147.001	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHF6 - 0.5-0.6	SE239147.002	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHE6 - 0.5-0.6	SE239147.003	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHF5 - 0.2-0.3	SE239147.004	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHG5 - 1.6-1.7	SE239147.005	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHH5 - 1.5-1.6	SE239147.006	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHD4 - 1.8-1.9	SE239147.007	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHF4 - 0.6-0.7	SE239147.008	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHH3 - 1.2-1.3	SE239147.009	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHG3 - 0.9-1.0	SE239147.010	LB264166	10 Nov 2022	15 Nov 2022	24 Nov 2022	17 Nov 2022	24 Nov 2022	22 Nov 2022
BHB2 - 3.5-3.6	SE239147.011	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHA2 - 3.0-3.1	SE239147.012	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHC5 - 0.9-1.0	SE239147.013	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHE4 - 2.0-2.1	SE239147.014	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHD3 - 1.5-1.6	SE239147.015	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHF3 - 0.6-0.7	SE239147.016	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHG4 - 1.2-1.3	SE239147.017	LB264166	11 Nov 2022	15 Nov 2022	25 Nov 2022	17 Nov 2022	25 Nov 2022	22 Nov 2022
BHB1 - 0.8-0.9	SE239147.018	LB264166	14 Nov 2022	15 Nov 2022	28 Nov 2022	17 Nov 2022	28 Nov 2022	22 Nov 2022
BHB2 - 0.5-0.6	SE239147.019	LB264166	14 Nov 2022	15 Nov 2022	28 Nov 2022	17 Nov 2022	28 Nov 2022	22 Nov 2022

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHF6 - 0.5-0.6	SE239147.002	%	70 - 130%	94
	BHE6 - 0.5-0.6	SE239147.003	%	70 - 130%	91
	BHG5 - 1.6-1.7	SE239147.005	%	70 - 130%	95
	BHD4 - 1.8-1.9	SE239147.007	%	70 - 130%	116
	BHF4 - 0.6-0.7	SE239147.008	%	70 - 130%	93
	BHG3 - 0.9-1.0	SE239147.010	%	70 - 130%	94
	BHA2 - 3.0-3.1	SE239147.012	%	70 - 130%	92
	BHC5 - 0.9-1.0	SE239147.013	%	70 - 130%	95
	BHD3 - 1.5-1.6	SE239147.015	%	70 - 130%	93
	BHB1 - 0.8-0.9	SE239147.018	%	70 - 130%	90
d14-p-terphenyl (Surrogate)	BHF6 - 0.5-0.6	SE239147.002	%	70 - 130%	95
	BHE6 - 0.5-0.6	SE239147.003	%	70 - 130%	94
	BHG5 - 1.6-1.7	SE239147.005	%	70 - 130%	98
	BHD4 - 1.8-1.9	SE239147.007	%	70 - 130%	121
	BHF4 - 0.6-0.7	SE239147.008	%	70 - 130%	95
	BHG3 - 0.9-1.0	SE239147.010	%	70 - 130%	96
	BHA2 - 3.0-3.1	SE239147.012	%	70 - 130%	96
	BHC5 - 0.9-1.0	SE239147.013	%	70 - 130%	96
	BHD3 - 1.5-1.6	SE239147.015	%	70 - 130%	97
	BHB1 - 0.8-0.9	SE239147.018	%	70 - 130%	93
d5-nitrobenzene (Surrogate)	BHF6 - 0.5-0.6	SE239147.002	%	70 - 130%	108
	BHE6 - 0.5-0.6	SE239147.003	%	70 - 130%	106
	BHG5 - 1.6-1.7	SE239147.005	%	70 - 130%	110
	BHD4 - 1.8-1.9	SE239147.007	%	70 - 130%	127
	BHF4 - 0.6-0.7	SE239147.008	%	70 - 130%	106
	BHG3 - 0.9-1.0	SE239147.010	%	70 - 130%	107
	BHA2 - 3.0-3.1	SE239147.012	%	70 - 130%	105
	BHC5 - 0.9-1.0	SE239147.013	%	70 - 130%	106
	BHD3 - 1.5-1.6	SE239147.015	%	70 - 130%	106
	BHB1 - 0.8-0.9	SE239147.018	%	70 - 130%	105

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHF6 - 0.5-0.6	SE239147.002	%	60 - 130%	111
	BHE6 - 0.5-0.6	SE239147.003	%	60 - 130%	72
	BHG5 - 1.6-1.7	SE239147.005	%	60 - 130%	75
	BHD4 - 1.8-1.9	SE239147.007	%	60 - 130%	75
	BHF4 - 0.6-0.7	SE239147.008	%	60 - 130%	68
	BHG3 - 0.9-1.0	SE239147.010	%	60 - 130%	75
	BHA2 - 3.0-3.1	SE239147.012	%	60 - 130%	85
	BHC5 - 0.9-1.0	SE239147.013	%	60 - 130%	75
	BHD3 - 1.5-1.6	SE239147.015	%	60 - 130%	77
	BHB1 - 0.8-0.9	SE239147.018	%	60 - 130%	74
d4-1,2-dichloroethane (Surrogate)	BHF6 - 0.5-0.6	SE239147.002	%	60 - 130%	110
	BHE6 - 0.5-0.6	SE239147.003	%	60 - 130%	80
	BHG5 - 1.6-1.7	SE239147.005	%	60 - 130%	77
	BHD4 - 1.8-1.9	SE239147.007	%	60 - 130%	82
	BHF4 - 0.6-0.7	SE239147.008	%	60 - 130%	77
	BHG3 - 0.9-1.0	SE239147.010	%	60 - 130%	84
	BHA2 - 3.0-3.1	SE239147.012	%	60 - 130%	91
	BHC5 - 0.9-1.0	SE239147.013	%	60 - 130%	84
	BHD3 - 1.5-1.6	SE239147.015	%	60 - 130%	86
	BHB1 - 0.8-0.9	SE239147.018	%	60 - 130%	80
d8-toluene (Surrogate)	BHF6 - 0.5-0.6	SE239147.002	%	60 - 130%	108
	BHE6 - 0.5-0.6	SE239147.003	%	60 - 130%	80
	BHG5 - 1.6-1.7	SE239147.005	%	60 - 130%	78
	BHD4 - 1.8-1.9	SE239147.007	%	60 - 130%	81
	BHF4 - 0.6-0.7	SE239147.008	%	60 - 130%	73
	BHG3 - 0.9-1.0	SE239147.010	%	60 - 130%	83
	BHA2 - 3.0-3.1	SE239147.012	%	60 - 130%	91
	BHC5 - 0.9-1.0	SE239147.013	%	60 - 130%	82

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	BHD3 - 1.5-1.6	SE239147.015	%	60 - 130%	83
	BHB1 - 0.8-0.9	SE239147.018	%	60 - 130%	78

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHF6 - 0.5-0.6	SE239147.002	%	60 - 130%	111
	BHE6 - 0.5-0.6	SE239147.003	%	60 - 130%	72
	BHG5 - 1.6-1.7	SE239147.005	%	60 - 130%	75
	BHD4 - 1.8-1.9	SE239147.007	%	60 - 130%	75
	BHF4 - 0.6-0.7	SE239147.008	%	60 - 130%	68
	BHG3 - 0.9-1.0	SE239147.010	%	60 - 130%	75
	BHA2 - 3.0-3.1	SE239147.012	%	60 - 130%	85
	BHC5 - 0.9-1.0	SE239147.013	%	60 - 130%	75
	BHD3 - 1.5-1.6	SE239147.015	%	60 - 130%	77
	BHB1 - 0.8-0.9	SE239147.018	%	60 - 130%	74
d4-1,2-dichloroethane (Surrogate)	BHF6 - 0.5-0.6	SE239147.002	%	60 - 130%	110
	BHE6 - 0.5-0.6	SE239147.003	%	60 - 130%	80
	BHG5 - 1.6-1.7	SE239147.005	%	60 - 130%	77
	BHD4 - 1.8-1.9	SE239147.007	%	60 - 130%	82
	BHF4 - 0.6-0.7	SE239147.008	%	60 - 130%	77
	BHG3 - 0.9-1.0	SE239147.010	%	60 - 130%	84
	BHA2 - 3.0-3.1	SE239147.012	%	60 - 130%	91
	BHC5 - 0.9-1.0	SE239147.013	%	60 - 130%	84
	BHD3 - 1.5-1.6	SE239147.015	%	60 - 130%	86
	BHB1 - 0.8-0.9	SE239147.018	%	60 - 130%	80
d8-toluene (Surrogate)	BHF6 - 0.5-0.6	SE239147.002	%	60 - 130%	108
	BHE6 - 0.5-0.6	SE239147.003	%	60 - 130%	80
	BHG5 - 1.6-1.7	SE239147.005	%	60 - 130%	78
	BHD4 - 1.8-1.9	SE239147.007	%	60 - 130%	81
	BHF4 - 0.6-0.7	SE239147.008	%	60 - 130%	73
	BHG3 - 0.9-1.0	SE239147.010	%	60 - 130%	83
	BHA2 - 3.0-3.1	SE239147.012	%	60 - 130%	91
	BHC5 - 0.9-1.0	SE239147.013	%	60 - 130%	82
	BHD3 - 1.5-1.6	SE239147.015	%	60 - 130%	83
	BHB1 - 0.8-0.9	SE239147.018	%	60 - 130%	78

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB264170.001	Mercury	mg/kg	0.05	<0.05

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264165.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	111
		2-fluorobiphenyl (Surrogate)	%	-	94
		d14-p-terphenyl (Surrogate)	%	-	96

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB264169.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB264165.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264166.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	104
		d8-toluene (Surrogate)	%	-	103
		Bromofluorobenzene (Surrogate)	%	-	104
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264166.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	104

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239147.010	LB264170.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE239147.019	LB264170.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239147.010	LB264167.011	% Moisture	%w/w	1	19.3	19.0	35	1
SE239147.019	LB264167.021	% Moisture	%w/w	1	12.9	11.5	38	12

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239147.010	LB264165.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239147.010	LB264169.014	Arsenic, As	mg/kg	1	15	15	37	1
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	163	0
		Chromium, Cr	mg/kg	0.5	22	22	32	2
		Copper, Cu	mg/kg	0.5	35	37	31	5
		Nickel, Ni	mg/kg	0.5	27	28	32	6
		Lead, Pb	mg/kg	1	14	14	37	2
		Zinc, Zn	mg/kg	2	78	82	32	4

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239147.010	LB264165.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE239147.019	LB264165.024		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239147.019	LB264165.024		TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239147.010	LB264166.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.4	8.3	50	1
			d8-toluene (Surrogate)	mg/kg	-	8.3	8.2	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.5	7.6	50	2
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239147.010	LB264166.014		TRH C6-C10 raw	µg/L	0.05	<0.05	<0.05	200	0
			TRH C6-C9 raw	µg/L	0.05	0.11	<0.05	200	75
			TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.4	8.3	30	1
			d8-toluene (Surrogate)	mg/kg	-	8.3	8.2	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.5	7.6	30	2
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264170.002	Mercury	mg/kg	0.05	0.22	0.2	70 - 130	112

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264165.002		Naphthalene	mg/kg	0.1	4.5	4	60 - 140	113
		Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	110
		Acenaphthene	mg/kg	0.1	4.5	4	60 - 140	113
		Phenanthrene	mg/kg	0.1	4.6	4	60 - 140	116
		Anthracene	mg/kg	0.1	4.5	4	60 - 140	113
		Fluoranthene	mg/kg	0.1	4.6	4	60 - 140	114
		Pyrene	mg/kg	0.1	4.3	4	60 - 140	108
		Benzo(a)pyrene	mg/kg	0.1	4.2	4	60 - 140	106
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	109
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	98
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	93

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264169.002	Arsenic, As	mg/kg	1	320	318.22	80 - 120	102
	Cadmium, Cd	mg/kg	0.3	3.7	4.81	70 - 130	77
	Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	99
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	106
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	93	89.9	80 - 120	103
	Zinc, Zn	mg/kg	2	270	273	80 - 120	99

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264165.002		TRH C10-C14	mg/kg	20	48	40	60 - 140	120
		TRH C15-C28	mg/kg	45	48	40	60 - 140	120
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	95
	TRH F Bands	TRH >C10-C16	mg/kg	25	48	40	60 - 140	120
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	115
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	100

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264166.002	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	5.2	5	60 - 140	105
		Toluene	mg/kg	0.1	5.1	5	60 - 140	102
		Ethylbenzene	mg/kg	0.1	5.2	5	60 - 140	104
		m/p-xylene	mg/kg	0.2	10	10	60 - 140	101
		o-xylene	mg/kg	0.1	5.3	5	60 - 140	107
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.1	10	70 - 130	91
		d8-toluene (Surrogate)	mg/kg	-	9.1	10	70 - 130	91
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.1	10	70 - 130	91

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264166.002		TRH C6-C10	mg/kg	25	81	92.5	60 - 140	87
		TRH C6-C9	mg/kg	20	70	80	60 - 140	88
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.1	10	70 - 130	91
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.1	10	70 - 130	91
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	50	62.5	60 - 140	80

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239147.001	LB264170.004	Mercury	mg/kg	0.05	0.22	<0.05	0.2	99

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239147.001	LB264165.004		TRH C10-C14	mg/kg	20	44	<20	40	110
			TRH C15-C28	mg/kg	45	<45	<45	40	110
			TRH C29-C36	mg/kg	45	<45	<45	40	90
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	44	<25	40	110
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	44	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	105
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

MATRIX SPIKE DUPLICATES

SE239147 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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STATEMENT OF QA/QC PERFORMANCE

SE239306 R0

CLIENT DETAILS

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Order Number	**E25834**
Samples	12

LABORATORY DETAILS

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SGS Reference	**SE239306 R0**
Date Received	18 Nov 2022
Date Reported	23 Nov 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	TRH (Total Recoverable Hydrocarbons) in Soil	7 items

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	10 Soil
Date documentation received	18/11/2022	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	9.8C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days		

HOLDING TIME SUMMARY

SE239306 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.6-0.7	SE239306.001	LB264532	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHH4_0.2-0.3	SE239306.003	LB264532	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHE3_0.4-0.5	SE239306.004	LB264532	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHD1_0.6-0.7	SE239306.005	LB264532	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHF2_0.6-0.7	SE239306.006	LB264532	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHE5_0.5-0.6	SE239306.007	LB264532	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHH7_0.2-0.3	SE239306.008	LB264532	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHH2_0.4-0.5	SE239306.009	LB264532	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHE1_0.5-0.6	SE239306.010	LB264532	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022
BHC7_0.3-0.4	SE239306.012	LB264532	15 Nov 2022	18 Nov 2022	13 Dec 2022	22 Nov 2022	13 Dec 2022	23 Nov 2022

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.6-0.7	SE239306.001	LB264402	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHH4_0.2-0.3	SE239306.003	LB264402	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHE3_0.4-0.5	SE239306.004	LB264402	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHD1_0.6-0.7	SE239306.005	LB264402	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHF2_0.6-0.7	SE239306.006	LB264402	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHE5_0.5-0.6	SE239306.007	LB264402	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHH7_0.2-0.3	SE239306.008	LB264402	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHH2_0.4-0.5	SE239306.009	LB264402	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHE1_0.5-0.6	SE239306.010	LB264402	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022
BHC7_0.3-0.4	SE239306.012	LB264402	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	26 Nov 2022	23 Nov 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.6-0.7	SE239306.001	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH4_0.2-0.3	SE239306.003	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE3_0.4-0.5	SE239306.004	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD1_0.6-0.7	SE239306.005	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF2_0.6-0.7	SE239306.006	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE5_0.5-0.6	SE239306.007	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH7_0.2-0.3	SE239306.008	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH2_0.4-0.5	SE239306.009	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE1_0.5-0.6	SE239306.010	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHC7_0.3-0.4	SE239306.012	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.6-0.7	SE239306.001	LB264531	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHH4_0.2-0.3	SE239306.003	LB264531	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHE3_0.4-0.5	SE239306.004	LB264531	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHD1_0.6-0.7	SE239306.005	LB264531	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHF2_0.6-0.7	SE239306.006	LB264531	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHE5_0.5-0.6	SE239306.007	LB264531	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHH7_0.2-0.3	SE239306.008	LB264531	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHH2_0.4-0.5	SE239306.009	LB264531	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHE1_0.5-0.6	SE239306.010	LB264531	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022
BHC7_0.3-0.4	SE239306.012	LB264531	15 Nov 2022	18 Nov 2022	14 May 2023	22 Nov 2022	14 May 2023	23 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.6-0.7	SE239306.001	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH4_0.2-0.3	SE239306.003	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE3_0.4-0.5	SE239306.004	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHD1_0.6-0.7	SE239306.005	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHF2_0.6-0.7	SE239306.006	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE5_0.5-0.6	SE239306.007	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH7_0.2-0.3	SE239306.008	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHH2_0.4-0.5	SE239306.009	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHE1_0.5-0.6	SE239306.010	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022
BHC7_0.3-0.4	SE239306.012	LB264384	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	31 Dec 2022	23 Nov 2022

HOLDING TIME SUMMARY

SE239306 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.6-0.7	SE239306.001	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHH4_0.2-0.3	SE239306.003	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE3_0.4-0.5	SE239306.004	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHD1_0.6-0.7	SE239306.005	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHF2_0.6-0.7	SE239306.006	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE5_0.5-0.6	SE239306.007	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHH7_0.2-0.3	SE239306.008	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHH2_0.4-0.5	SE239306.009	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE1_0.5-0.6	SE239306.010	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHC7_0.3-0.4	SE239306.012	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHG1M_0.6-0.7	SE239306.001	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHH4_0.2-0.3	SE239306.003	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE3_0.4-0.5	SE239306.004	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHD1_0.6-0.7	SE239306.005	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHF2_0.6-0.7	SE239306.006	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE5_0.5-0.6	SE239306.007	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHH7_0.2-0.3	SE239306.008	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHH2_0.4-0.5	SE239306.009	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHE1_0.5-0.6	SE239306.010	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022
BHC7_0.3-0.4	SE239306.012	LB264389	15 Nov 2022	18 Nov 2022	29 Nov 2022	21 Nov 2022	29 Nov 2022	23 Nov 2022

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHG1M_0.6-0.7	SE239306.001	%	70 - 130%	91
	BHH4_0.2-0.3	SE239306.003	%	70 - 130%	90
	BHE3_0.4-0.5	SE239306.004	%	70 - 130%	91
	BHD1_0.6-0.7	SE239306.005	%	70 - 130%	104
	BHF2_0.6-0.7	SE239306.006	%	70 - 130%	91
	BHE5_0.5-0.6	SE239306.007	%	70 - 130%	93
	BHH7_0.2-0.3	SE239306.008	%	70 - 130%	86
	BHH2_0.4-0.5	SE239306.009	%	70 - 130%	89
	BHE1_0.5-0.6	SE239306.010	%	70 - 130%	89
	BHC7_0.3-0.4	SE239306.012	%	70 - 130%	92
d14-p-terphenyl (Surrogate)	BHG1M_0.6-0.7	SE239306.001	%	70 - 130%	95
	BHH4_0.2-0.3	SE239306.003	%	70 - 130%	95
	BHE3_0.4-0.5	SE239306.004	%	70 - 130%	95
	BHD1_0.6-0.7	SE239306.005	%	70 - 130%	110
	BHF2_0.6-0.7	SE239306.006	%	70 - 130%	97
	BHE5_0.5-0.6	SE239306.007	%	70 - 130%	99
	BHH7_0.2-0.3	SE239306.008	%	70 - 130%	91
	BHH2_0.4-0.5	SE239306.009	%	70 - 130%	93
	BHE1_0.5-0.6	SE239306.010	%	70 - 130%	95
	BHC7_0.3-0.4	SE239306.012	%	70 - 130%	96
d5-nitrobenzene (Surrogate)	BHG1M_0.6-0.7	SE239306.001	%	70 - 130%	101
	BHH4_0.2-0.3	SE239306.003	%	70 - 130%	100
	BHE3_0.4-0.5	SE239306.004	%	70 - 130%	99
	BHD1_0.6-0.7	SE239306.005	%	70 - 130%	116
	BHF2_0.6-0.7	SE239306.006	%	70 - 130%	101
	BHE5_0.5-0.6	SE239306.007	%	70 - 130%	102
	BHH7_0.2-0.3	SE239306.008	%	70 - 130%	97
	BHH2_0.4-0.5	SE239306.009	%	70 - 130%	98
	BHE1_0.5-0.6	SE239306.010	%	70 - 130%	99
	BHC7_0.3-0.4	SE239306.012	%	70 - 130%	101

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHG1M_0.6-0.7	SE239306.001	%	60 - 130%	75
	BHH4_0.2-0.3	SE239306.003	%	60 - 130%	80
	BHE3_0.4-0.5	SE239306.004	%	60 - 130%	80
	BHD1_0.6-0.7	SE239306.005	%	60 - 130%	77
	BHF2_0.6-0.7	SE239306.006	%	60 - 130%	76
	BHE5_0.5-0.6	SE239306.007	%	60 - 130%	76
	BHH7_0.2-0.3	SE239306.008	%	60 - 130%	78
	BHH2_0.4-0.5	SE239306.009	%	60 - 130%	73
	BHE1_0.5-0.6	SE239306.010	%	60 - 130%	76
	BHC7_0.3-0.4	SE239306.012	%	60 - 130%	77
d4-1,2-dichloroethane (Surrogate)	BHG1M_0.6-0.7	SE239306.001	%	60 - 130%	74
	BHH4_0.2-0.3	SE239306.003	%	60 - 130%	85
	BHE3_0.4-0.5	SE239306.004	%	60 - 130%	86
	BHD1_0.6-0.7	SE239306.005	%	60 - 130%	82
	BHF2_0.6-0.7	SE239306.006	%	60 - 130%	85
	BHE5_0.5-0.6	SE239306.007	%	60 - 130%	81
	BHH7_0.2-0.3	SE239306.008	%	60 - 130%	87
	BHH2_0.4-0.5	SE239306.009	%	60 - 130%	82
	BHE1_0.5-0.6	SE239306.010	%	60 - 130%	84
	BHC7_0.3-0.4	SE239306.012	%	60 - 130%	88
d8-toluene (Surrogate)	BHG1M_0.6-0.7	SE239306.001	%	60 - 130%	79
	BHH4_0.2-0.3	SE239306.003	%	60 - 130%	91
	BHE3_0.4-0.5	SE239306.004	%	60 - 130%	91
	BHD1_0.6-0.7	SE239306.005	%	60 - 130%	86
	BHF2_0.6-0.7	SE239306.006	%	60 - 130%	86
	BHE5_0.5-0.6	SE239306.007	%	60 - 130%	83
	BHH7_0.2-0.3	SE239306.008	%	60 - 130%	88
	BHH2_0.4-0.5	SE239306.009	%	60 - 130%	83

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	BHE1_0.5-0.6	SE239306.010	%	60 - 130%	85
	BHC7_0.3-0.4	SE239306.012	%	60 - 130%	89

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHG1M_0.6-0.7	SE239306.001	%	60 - 130%	75
	BHH4_0.2-0.3	SE239306.003	%	60 - 130%	80
	BHE3_0.4-0.5	SE239306.004	%	60 - 130%	80
	BHD1_0.6-0.7	SE239306.005	%	60 - 130%	77
	BHF2_0.6-0.7	SE239306.006	%	60 - 130%	76
	BHE5_0.5-0.6	SE239306.007	%	60 - 130%	76
	BHH7_0.2-0.3	SE239306.008	%	60 - 130%	78
	BHH2_0.4-0.5	SE239306.009	%	60 - 130%	73
	BHE1_0.5-0.6	SE239306.010	%	60 - 130%	76
	BHC7_0.3-0.4	SE239306.012	%	60 - 130%	77
d4-1,2-dichloroethane (Surrogate)	BHG1M_0.6-0.7	SE239306.001	%	60 - 130%	74
	BHH4_0.2-0.3	SE239306.003	%	60 - 130%	85
	BHE3_0.4-0.5	SE239306.004	%	60 - 130%	86
	BHD1_0.6-0.7	SE239306.005	%	60 - 130%	82
	BHF2_0.6-0.7	SE239306.006	%	60 - 130%	85
	BHE5_0.5-0.6	SE239306.007	%	60 - 130%	81
	BHH7_0.2-0.3	SE239306.008	%	60 - 130%	87
	BHH2_0.4-0.5	SE239306.009	%	60 - 130%	82
	BHE1_0.5-0.6	SE239306.010	%	60 - 130%	84
	BHC7_0.3-0.4	SE239306.012	%	60 - 130%	88
d8-toluene (Surrogate)	BHG1M_0.6-0.7	SE239306.001	%	60 - 130%	79
	BHH4_0.2-0.3	SE239306.003	%	60 - 130%	91
	BHE3_0.4-0.5	SE239306.004	%	60 - 130%	91
	BHD1_0.6-0.7	SE239306.005	%	60 - 130%	86
	BHF2_0.6-0.7	SE239306.006	%	60 - 130%	86
	BHE5_0.5-0.6	SE239306.007	%	60 - 130%	83
	BHH7_0.2-0.3	SE239306.008	%	60 - 130%	88
	BHH2_0.4-0.5	SE239306.009	%	60 - 130%	83
	BHE1_0.5-0.6	SE239306.010	%	60 - 130%	85
	BHC7_0.3-0.4	SE239306.012	%	60 - 130%	89

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB264532.001	Mercury	mg/kg	0.05	<0.05

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264384.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	99
		2-fluorobiphenyl (Surrogate)	%	-	88
		d14-p-terphenyl (Surrogate)	%	-	92

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB264531.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB264384.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264389.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	83
		d8-toluene (Surrogate)	%	-	83
		Bromofluorobenzene (Surrogate)	%	-	72
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264389.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	83

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239306.012	LB264532.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239137.010	LB264402.011	% Moisture	%w/w	1	14.2	14.0	37	1
SE239306.010	LB264402.022	% Moisture	%w/w	1	19.1	19.3	35	1
SE239306.012	LB264402.024	% Moisture	%w/w	1	7.9	7.7	43	2

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239306.012	LB264384.025		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	158	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	3
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239306.012	LB264531.014	Arsenic, As	mg/kg	1	11	11	39	4
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	21	21	32	1
		Copper, Cu	mg/kg	0.5	30	31	32	3
		Nickel, Ni	mg/kg	0.5	26	27	32	4
		Lead, Pb	mg/kg	1	11	12	38	6
		Zinc, Zn	mg/kg	2	75	78	33	4

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239137.012	LB264384.014		TRH C10-C14	mg/kg	20	100	<100	56	2
			TRH C15-C28	mg/kg	45	27000	13000	30	67 ②
			TRH C29-C36	mg/kg	45	29000	15000	30	63 ②
			TRH C37-C40	mg/kg	100	12000	6000	31	64 ②
			TRH C10-C36 Total	mg/kg	110	56000	28000	30	65 ②
			TRH >C10-C40 Total (F bands)	mg/kg	210	67000	34000	30	64 ②
		TRH F Bands	TRH >C10-C16	mg/kg	25	190	<125	48	42
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	190	<125	48	42
			TRH >C16-C34 (F3)	mg/kg	90	46000	24000	30	65 ②
			TRH >C34-C40 (F4)	mg/kg	120	20000	11000	31	63 ②
SE239306.012	LB264384.025		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239306.012	LB264384.025		TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239137.012	LB264389.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	7.3	50	12
			d8-toluene (Surrogate)	mg/kg	-	8.3	7.9	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.0	7.0	50	0
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE239306.012	LB264389.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	8.9	50	2
			d8-toluene (Surrogate)	mg/kg	-	8.9	9.0	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	8.0	50	4
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239137.012	LB264389.014		TRH C6-C10 raw	µg/L	0.05	2.2	5.1	200	78
			TRH C6-C9 raw	µg/L	0.05	1.7	3.9	200	79
			TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2	7.3	30	12
			d8-toluene (Surrogate)	mg/kg	-	8.3	7.9	30	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.0	7.0	30	0
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE239306.012	LB264389.025		TRH C6-C10 raw	µg/L	0.05	0.27	0.25	200	9
			TRH C6-C9 raw	µg/L	0.05	0.28	0.26	200	9
			TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	8.9	30	2
			d8-toluene (Surrogate)	mg/kg	-	8.9	9.0	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	8.0	30	4
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264532.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	99

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264384.002		Naphthalene	mg/kg	0.1	4.5	4	60 - 140	112
		Acenaphthylene	mg/kg	0.1	4.2	4	60 - 140	106
		Acenaphthene	mg/kg	0.1	4.5	4	60 - 140	113
		Phenanthrene	mg/kg	0.1	4.5	4	60 - 140	114
		Anthracene	mg/kg	0.1	4.4	4	60 - 140	111
		Fluoranthene	mg/kg	0.1	4.5	4	60 - 140	112
		Pyrene	mg/kg	0.1	4.3	4	60 - 140	107
		Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	103
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	112
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	103
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	100

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264531.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	104
	Cadmium, Cd	mg/kg	0.3	4.7	4.81	70 - 130	98
	Chromium, Cr	mg/kg	0.5	39	38.31	80 - 120	102
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	107
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	102
	Lead, Pb	mg/kg	1	94	89.9	80 - 120	104
	Zinc, Zn	mg/kg	2	280	273	80 - 120	101

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264384.002		TRH C10-C14	mg/kg	20	44	40	60 - 140	110
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	110
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	85
	TRH F Bands	TRH >C10-C16	mg/kg	25	44	40	60 - 140	110
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	105
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264389.002	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	4.6	5	60 - 140	92
		Toluene	mg/kg	0.1	4.6	5	60 - 140	92
		Ethylbenzene	mg/kg	0.1	4.7	5	60 - 140	95
		m/p-xylene	mg/kg	0.2	9.2	10	60 - 140	92
		o-xylene	mg/kg	0.1	4.9	5	60 - 140	98
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
		d8-toluene (Surrogate)	mg/kg	-	9.9	10	70 - 130	99
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.8	10	70 - 130	98

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264389.002		TRH C6-C10	mg/kg	25	74	92.5	60 - 140	80
		TRH C6-C9	mg/kg	20	57	80	60 - 140	71
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.8	10	70 - 130	98
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	46	62.5	60 - 140	73

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239306.001	LB264532.004	Mercury	mg/kg	0.05	0.21	<0.05	0.2	100

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239306.001	LB264531.004	Arsenic, As	mg/kg	1	47	7	50	81
		Cadmium, Cd	mg/kg	0.3	40	<0.3	50	81
		Chromium, Cr	mg/kg	0.5	57	16	50	82
		Copper, Cu	mg/kg	0.5	61	20	50	83
		Nickel, Ni	mg/kg	0.5	56	16	50	81
		Lead, Pb	mg/kg	1	50	8	50	84
		Zinc, Zn	mg/kg	2	70	29	50	80

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239137.001	LB264384.004		TRH C10-C14	mg/kg	20	42	0	40	105
			TRH C15-C28	mg/kg	45	<45	0	40	105
			TRH C29-C36	mg/kg	45	<45	0	40	85
			TRH C37-C40	mg/kg	100	<100	0	-	-
			TRH C10-C36 Total	mg/kg	110	<110	0	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	0	-	-
		TRH F	TRH >C10-C16	mg/kg	25	42	0	40	105
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	42	0	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	0	40	100
			TRH >C34-C40 (F4)	mg/kg	120	<120	0	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239137.001	LB264389.004	Monocyclic	Benzene	mg/kg	0.1	5.3	0.005140333	5	105
		Aromatic	Toluene	mg/kg	0.1	5.4	0.008344987	5	107
		Hydrocarbons	Ethylbenzene	mg/kg	0.1	5.6	0.008916670	5	111
			m/p-xylene	mg/kg	0.2	11	0.016960295	10	108
			o-xylene	mg/kg	0.1	5.7	0.007531058	5	115
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	0.001383819	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.1	9.200451133	10	81
			d8-toluene (Surrogate)	mg/kg	-	8.0	9.539625365	10	80
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.6	8.479041188	10	86
		Totals	Total BTEX*	mg/kg	0.6	33	0	-	-
			Total Xylenes*	mg/kg	0.3	17	0.024491354	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239137.001	LB264389.004		TRH C6-C10 raw	µg/L	0.05		2.837622917	-	-
			TRH C6-C9 raw	µg/L	0.05		2.062839975	-	-
			TRH C6-C10	mg/kg	25	80	0.315523150	92.5	87
			TRH C6-C9	mg/kg	20	62	0.229372889	80	77
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.1	9.200451133	10	81
			d8-toluene (Surrogate)	mg/kg	-	8.0	9.539625365	10	80
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.6	8.479041188	-	86
		VPH F	Benzene (F0)	mg/kg	0.1	5.3	0.005140333	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	48	0.315523150	62.5	76

MATRIX SPIKE DUPLICATES

SE239306 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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STATEMENT OF QA/QC PERFORMANCE

SE239470 R0

CLIENT DETAILS

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Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	4

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SGS Reference	**SE239470 R0**
Date Received	18 Nov 2022
Date Reported	06 Dec 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	5 items
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	TRH (Total Recoverable Hydrocarbons) in Soil	3 items

SAMPLE SUMMARY

Sample counts by matrix	4 Soil	Type of documentation received	COC
Date documentation received	18/11/2022 @11am	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	15.0°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE239470 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.6-0.8	SE239470.001	LB264777	11 Nov 2022	18 Nov 2022	09 Dec 2022	24 Nov 2022	09 Dec 2022	25 Nov 2022
BHA4_0.7-0.8	SE239470.002	LB264777	11 Nov 2022	18 Nov 2022	09 Dec 2022	24 Nov 2022	09 Dec 2022	25 Nov 2022
BHA7M_0.7-0.8	SE239470.003	LB264777	10 Nov 2022	18 Nov 2022	08 Dec 2022	24 Nov 2022	08 Dec 2022	25 Nov 2022
BHC1_0.7-0.8	SE239470.004	LB264777	14 Nov 2022	18 Nov 2022	12 Dec 2022	24 Nov 2022	12 Dec 2022	25 Nov 2022

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.6-0.8	SE239470.001	LB264652	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022
BHA4_0.7-0.8	SE239470.002	LB264652	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022
BHA7M_0.7-0.8	SE239470.003	LB264652	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022
BHC1_0.7-0.8	SE239470.004	LB264652	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.6-0.8	SE239470.001	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA4_0.7-0.8	SE239470.002	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA7M_0.7-0.8	SE239470.003	LB264645	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHC1_0.7-0.8	SE239470.004	LB264645	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.6-0.8	SE239470.001	LB264776	11 Nov 2022	18 Nov 2022	10 May 2023	24 Nov 2022	10 May 2023	25 Nov 2022
BHA4_0.7-0.8	SE239470.002	LB264776	11 Nov 2022	18 Nov 2022	10 May 2023	24 Nov 2022	10 May 2023	25 Nov 2022
BHA7M_0.7-0.8	SE239470.003	LB264776	10 Nov 2022	18 Nov 2022	09 May 2023	24 Nov 2022	09 May 2023	25 Nov 2022
BHC1_0.7-0.8	SE239470.004	LB264776	14 Nov 2022	18 Nov 2022	13 May 2023	24 Nov 2022	13 May 2023	25 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.6-0.8	SE239470.001	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA4_0.7-0.8	SE239470.002	LB264645	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHA7M_0.7-0.8	SE239470.003	LB264645	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022
BHC1_0.7-0.8	SE239470.004	LB264645	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	02 Jan 2023	24 Nov 2022

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.6-0.8	SE239470.001	LB264647	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	25 Nov 2022	24 Nov 2022
BHA4_0.7-0.8	SE239470.002	LB264647	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	25 Nov 2022	24 Nov 2022
BHA7M_0.7-0.8	SE239470.003	LB264647	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	24 Nov 2022	24 Nov 2022
BHC1_0.7-0.8	SE239470.004	LB264647	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHA1M_0.6-0.8	SE239470.001	LB264647	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	25 Nov 2022	24 Nov 2022
BHA4_0.7-0.8	SE239470.002	LB264647	11 Nov 2022	18 Nov 2022	25 Nov 2022	23 Nov 2022	25 Nov 2022	24 Nov 2022
BHA7M_0.7-0.8	SE239470.003	LB264647	10 Nov 2022	18 Nov 2022	24 Nov 2022	23 Nov 2022	24 Nov 2022	24 Nov 2022
BHC1_0.7-0.8	SE239470.004	LB264647	14 Nov 2022	18 Nov 2022	28 Nov 2022	23 Nov 2022	28 Nov 2022	24 Nov 2022

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHA1M_0.6-0.8	SE239470.001	%	70 - 130%	91
	BHA4_0.7-0.8	SE239470.002	%	70 - 130%	93
	BHA7M_0.7-0.8	SE239470.003	%	70 - 130%	93
	BHC1_0.7-0.8	SE239470.004	%	70 - 130%	93
d14-p-terphenyl (Surrogate)	BHA1M_0.6-0.8	SE239470.001	%	70 - 130%	97
	BHA4_0.7-0.8	SE239470.002	%	70 - 130%	98
	BHA7M_0.7-0.8	SE239470.003	%	70 - 130%	99
	BHC1_0.7-0.8	SE239470.004	%	70 - 130%	99
d5-nitrobenzene (Surrogate)	BHA1M_0.6-0.8	SE239470.001	%	70 - 130%	108
	BHA4_0.7-0.8	SE239470.002	%	70 - 130%	111
	BHA7M_0.7-0.8	SE239470.003	%	70 - 130%	110
	BHC1_0.7-0.8	SE239470.004	%	70 - 130%	111

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHA1M_0.6-0.8	SE239470.001	%	60 - 130%	80
	BHA4_0.7-0.8	SE239470.002	%	60 - 130%	74
	BHA7M_0.7-0.8	SE239470.003	%	60 - 130%	77
	BHC1_0.7-0.8	SE239470.004	%	60 - 130%	76
d4-1,2-dichloroethane (Surrogate)	BHA1M_0.6-0.8	SE239470.001	%	60 - 130%	81
	BHA4_0.7-0.8	SE239470.002	%	60 - 130%	80
	BHA7M_0.7-0.8	SE239470.003	%	60 - 130%	86
	BHC1_0.7-0.8	SE239470.004	%	60 - 130%	90
d8-toluene (Surrogate)	BHA1M_0.6-0.8	SE239470.001	%	60 - 130%	79
	BHA4_0.7-0.8	SE239470.002	%	60 - 130%	75
	BHA7M_0.7-0.8	SE239470.003	%	60 - 130%	85
	BHC1_0.7-0.8	SE239470.004	%	60 - 130%	84

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHA1M_0.6-0.8	SE239470.001	%	60 - 130%	80
	BHA4_0.7-0.8	SE239470.002	%	60 - 130%	74
	BHA7M_0.7-0.8	SE239470.003	%	60 - 130%	77
	BHC1_0.7-0.8	SE239470.004	%	60 - 130%	76
d4-1,2-dichloroethane (Surrogate)	BHA1M_0.6-0.8	SE239470.001	%	60 - 130%	81
	BHA4_0.7-0.8	SE239470.002	%	60 - 130%	80
	BHA7M_0.7-0.8	SE239470.003	%	60 - 130%	86
	BHC1_0.7-0.8	SE239470.004	%	60 - 130%	90
d8-toluene (Surrogate)	BHA1M_0.6-0.8	SE239470.001	%	60 - 130%	79
	BHA4_0.7-0.8	SE239470.002	%	60 - 130%	75
	BHA7M_0.7-0.8	SE239470.003	%	60 - 130%	85
	BHC1_0.7-0.8	SE239470.004	%	60 - 130%	84

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB264777.001	Mercury	mg/kg	0.05	<0.05

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264645.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	111
		2-fluorobiphenyl (Surrogate)	%	-	88
		d14-p-terphenyl (Surrogate)	%	-	92

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB264776.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB264645.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264647.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	81
		d8-toluene (Surrogate)	%	-	79
		Bromofluorobenzene (Surrogate)	%	-	81
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264647.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	81

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239279.010	LB264777.014	Mercury	mg/kg	0.05	<0.05	<0.05	168	0
SE239522.003	LB264777.024	Mercury	mg/kg	0.05	<0.05	<0.05	147	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264652.010	% Moisture	%w/w	1	6.7	6.5	45	4

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264645.027		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	1.4	1.9	36	29
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	188	0
			Fluorene	mg/kg	0.1	0.1	0.2	105	27
			Phenanthrene	mg/kg	0.1	0.2	0.4	67	62
			Anthracene	mg/kg	0.1	0.3	0.5	56	32
			Fluoranthene	mg/kg	0.1	1.4	2.0	36	39 ②
			Pyrene	mg/kg	0.1	1.9	2.7	34	37 ②
			Benzo(a)anthracene	mg/kg	0.1	1.2	1.8	37	35
			Chrysene	mg/kg	0.1	1.4	1.7	37	21
			Benzo(b&j)fluoranthene	mg/kg	0.1	2.4	2.7	34	14
			Benzo(k)fluoranthene	mg/kg	0.1	0.7	0.9	43	16
			Benzo(a)pyrene	mg/kg	0.1	1.7	2.2	35	23
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	1.0	1.3	38	25
			Dibenzo(ah)anthracene	mg/kg	0.1	0.2	0.3	66	28
			Benzo(ghi)perylene	mg/kg	0.1	0.9	1.2	39	28
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	2.5	3.2	17	23 ②
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	2.5	3.2	17	23 ②
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	2.5	3.2	20	23 ②
			Total PAH (18)	mg/kg	0.8	15	20	31	28
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.6	30	18
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	16
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.6	30	16

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239279.010	LB264776.014	Arsenic, As	mg/kg	1	<1	1	126	10
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	30	32	32	8
		Copper, Cu	mg/kg	0.5	2.8	2.9	48	3
		Nickel, Ni	mg/kg	0.5	23	24	32	5
		Lead, Pb	mg/kg	1	2	2	85	0
		Zinc, Zn	mg/kg	2	57	58	33	2
SE239522.003	LB264776.024	Arsenic, As	mg/kg	1	2	1	107	42
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	14	14	34	3
		Copper, Cu	mg/kg	0.5	44	42	31	4
		Nickel, Ni	mg/kg	0.5	23	22	32	4
		Lead, Pb	mg/kg	1	16	16	36	2
		Zinc, Zn	mg/kg	2	86	84	32	2

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264645.027	TRH C10-C14	mg/kg	20	<20	<20	200	0
		TRH C15-C28	mg/kg	45	330	380	43	14
		TRH C29-C36	mg/kg	45	91	120	73	24
		TRH C37-C40	mg/kg	100	<100	<100	200	0
		TRH C10-C36 Total	mg/kg	110	420	500	54	16

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264645.027		TRH >C10-C40 Total (F bands)	mg/kg	210	390	460	79	16
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	390	460	51	16
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264647.019	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	9.1	50	6
			d8-toluene (Surrogate)	mg/kg	-	8.7	9.1	50	4
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	8.4	50	8
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239475.001	LB264647.019		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	9.1	30	6
			d8-toluene (Surrogate)	mg/kg	-	8.7	9.1	30	4
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	8.4	30	8
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264777.002	Mercury	mg/kg	0.05	0.17	0.2	70 - 130	87

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264645.002		Naphthalene	mg/kg	0.1	4.8	4	60 - 140	121
		Acenaphthylene	mg/kg	0.1	4.7	4	60 - 140	117
		Acenaphthene	mg/kg	0.1	4.9	4	60 - 140	121
		Phenanthrene	mg/kg	0.1	4.8	4	60 - 140	120
		Anthracene	mg/kg	0.1	4.7	4	60 - 140	117
		Fluoranthene	mg/kg	0.1	4.7	4	60 - 140	117
		Pyrene	mg/kg	0.1	4.7	4	60 - 140	117
		Benzo(a)pyrene	mg/kg	0.1	4.2	4	60 - 140	106
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	116
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	97
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	101

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264776.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	104
	Cadmium, Cd	mg/kg	0.3	5.1	4.81	70 - 130	105
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	107
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	104
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	102
	Zinc, Zn	mg/kg	2	280	273	80 - 120	101

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264645.002		TRH C10-C14	mg/kg	20	42	40	60 - 140	105
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	110
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	90
	TRH F Bands	TRH >C10-C16	mg/kg	25	42	40	60 - 140	105
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	105
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264647.002	Monocyclic	Benzene	mg/kg	0.1	4.6	5	60 - 140	91
	Aromatic	Toluene	mg/kg	0.1	4.5	5	60 - 140	90
		Ethylbenzene	mg/kg	0.1	4.5	5	60 - 140	90
		m/p-xylene	mg/kg	0.2	8.6	10	60 - 140	86
		o-xylene	mg/kg	0.1	4.5	5	60 - 140	90
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	10	70 - 130	95
		d8-toluene (Surrogate)	mg/kg	-	10.1	10	70 - 130	101
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264647.002		TRH C6-C10	mg/kg	25	90	92.5	60 - 140	97
		TRH C6-C9	mg/kg	20	83	80	60 - 140	104
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	10	70 - 130	95
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	63	62.5	60 - 140	101

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239279.001	LB264777.004	Mercury	mg/kg	0.05	0.23	0.05	0.2	87

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264645.004		Naphthalene	mg/kg	0.1	4.7	<0.1	4	118
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.6	<0.1	4	115
			Acenaphthene	mg/kg	0.1	4.8	<0.1	4	119
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.8	<0.1	4	118
			Anthracene	mg/kg	0.1	4.7	<0.1	4	116
			Fluoranthene	mg/kg	0.1	4.7	0.2	4	114
			Pyrene	mg/kg	0.1	4.8	0.2	4	115
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.2	<0.1	4	103
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	4.2	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.3	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.4	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	37	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.6	-	123
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	101
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	107

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239279.001	LB264776.004	Arsenic, As	mg/kg	1	42	1	50	81
		Cadmium, Cd	mg/kg	0.3	43	<0.3	50	87
		Chromium, Cr	mg/kg	0.5	77	37	50	80
		Copper, Cu	mg/kg	0.5	50	6.0	50	89
		Nickel, Ni	mg/kg	0.5	57	14	50	85
		Lead, Pb	mg/kg	1	46	3	50	86
		Zinc, Zn	mg/kg	2	77	45	50	64 ④

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264645.004		TRH C10-C14	mg/kg	20	44	<20	40	110
			TRH C15-C28	mg/kg	45	150	200	40	-131 ⑤
			TRH C29-C36	mg/kg	45	220	350	40	-330 ⑤
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	410	550	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	300	400	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	48	<25	40	120
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	48	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	250	400	40	-380 ⑤
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264647.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	5.6	<0.1	5	112
			Toluene	mg/kg	0.1	6.0	<0.1	5	121
			Ethylbenzene	mg/kg	0.1	6.6	<0.1	5	131
			m/p-xylene	mg/kg	0.2	13	<0.2	10	127
			o-xylene	mg/kg	0.1	6.6	<0.1	5	132

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264647.004	Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.3	9.5	10	73
			d8-toluene (Surrogate)	mg/kg	-	7.3	9.8	10	73
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.6	8.8	10	76
		Totals	Total BTEX*	mg/kg	0.6	38	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	19	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239469.001	LB264647.004		TRH C6-C10	mg/kg	25	86	<25	92.5	92
			TRH C6-C9	mg/kg	20	76	<20	80	95
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.3	9.5	10	73
			d8-toluene (Surrogate)	mg/kg	-	7.3	9.8	10	73
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.6	8.8	-	76
		VPH F	Benzene (F0)	mg/kg	0.1	3.4	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	63	<25	62.5	100

MATRIX SPIKE DUPLICATES

SE239470 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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STATEMENT OF QA/QC PERFORMANCE

SE239522 R0

CLIENT DETAILS

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Project	**E25834 80 O'Connell St, Kingswood**
Order Number	**E25834**
Samples	3

LABORATORY DETAILS

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SGS Reference	**SE239522 R0**
Date Received	18 Nov 2022
Date Reported	28 Nov 2022

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	VOC's in Soil	3 items
	Volatile Petroleum Hydrocarbons in Soil	2 items

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	3 Soil
Date documentation received	18/11/2022@3:12pn	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	15.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE239522 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHB3_1.1-1.0	SE239522.001	LB264777	11 Nov 2022	18 Nov 2022	09 Dec 2022	24 Nov 2022	09 Dec 2022	25 Nov 2022
BHB5_1.0-1.1	SE239522.002	LB264777	11 Nov 2022	18 Nov 2022	09 Dec 2022	24 Nov 2022	09 Dec 2022	25 Nov 2022
BHB7_1.5-1.6	SE239522.003	LB264777	11 Nov 2022	18 Nov 2022	09 Dec 2022	24 Nov 2022	09 Dec 2022	25 Nov 2022

Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHB3_1.1-1.0	SE239522.001	LB264800	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	29 Nov 2022	25 Nov 2022
BHB5_1.0-1.1	SE239522.002	LB264800	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	29 Nov 2022	25 Nov 2022
BHB7_1.5-1.6	SE239522.003	LB264800	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	29 Nov 2022	25 Nov 2022

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHB3_1.1-1.0	SE239522.001	LB264797	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	03 Jan 2023	25 Nov 2022
BHB5_1.0-1.1	SE239522.002	LB264797	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	03 Jan 2023	25 Nov 2022
BHB7_1.5-1.6	SE239522.003	LB264797	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	03 Jan 2023	25 Nov 2022

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHB3_1.1-1.0	SE239522.001	LB264776	11 Nov 2022	18 Nov 2022	10 May 2023	24 Nov 2022	10 May 2023	25 Nov 2022
BHB5_1.0-1.1	SE239522.002	LB264776	11 Nov 2022	18 Nov 2022	10 May 2023	24 Nov 2022	10 May 2023	25 Nov 2022
BHB7_1.5-1.6	SE239522.003	LB264776	11 Nov 2022	18 Nov 2022	10 May 2023	24 Nov 2022	10 May 2023	25 Nov 2022

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHB3_1.1-1.0	SE239522.001	LB264797	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	03 Jan 2023	28 Nov 2022
BHB5_1.0-1.1	SE239522.002	LB264797	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	03 Jan 2023	28 Nov 2022
BHB7_1.5-1.6	SE239522.003	LB264797	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	03 Jan 2023	28 Nov 2022

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHB3_1.1-1.0	SE239522.001	LB264803	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	25 Nov 2022	25 Nov 2022
BHB5_1.0-1.1	SE239522.002	LB264803	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	25 Nov 2022	25 Nov 2022
BHB7_1.5-1.6	SE239522.003	LB264803	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	25 Nov 2022	25 Nov 2022

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BHB3_1.1-1.0	SE239522.001	LB264803	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	25 Nov 2022	25 Nov 2022
BHB5_1.0-1.1	SE239522.002	LB264803	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	25 Nov 2022	25 Nov 2022
BHB7_1.5-1.6	SE239522.003	LB264803	11 Nov 2022	18 Nov 2022	25 Nov 2022	24 Nov 2022	25 Nov 2022	25 Nov 2022

SURROGATES

SE239522 R0

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BHB3_1.1-1.0	SE239522.001	%	70 - 130%	96
	BHB5_1.0-1.1	SE239522.002	%	70 - 130%	96
	BHB7_1.5-1.6	SE239522.003	%	70 - 130%	94
d14-p-terphenyl (Surrogate)	BHB3_1.1-1.0	SE239522.001	%	70 - 130%	98
	BHB5_1.0-1.1	SE239522.002	%	70 - 130%	96
	BHB7_1.5-1.6	SE239522.003	%	70 - 130%	96
d5-nitrobenzene (Surrogate)	BHB3_1.1-1.0	SE239522.001	%	70 - 130%	110
	BHB5_1.0-1.1	SE239522.002	%	70 - 130%	108
	BHB7_1.5-1.6	SE239522.003	%	70 - 130%	104

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHB3_1.1-1.0	SE239522.001	%	60 - 130%	63
	BHB5_1.0-1.1	SE239522.002	%	60 - 130%	76
	BHB7_1.5-1.6	SE239522.003	%	60 - 130%	81
d4-1,2-dichloroethane (Surrogate)	BHB3_1.1-1.0	SE239522.001	%	60 - 130%	62
	BHB5_1.0-1.1	SE239522.002	%	60 - 130%	74
	BHB7_1.5-1.6	SE239522.003	%	60 - 130%	80
d8-toluene (Surrogate)	BHB3_1.1-1.0	SE239522.001	%	60 - 130%	62
	BHB5_1.0-1.1	SE239522.002	%	60 - 130%	73
	BHB7_1.5-1.6	SE239522.003	%	60 - 130%	79

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BHB3_1.1-1.0	SE239522.001	%	60 - 130%	63
	BHB5_1.0-1.1	SE239522.002	%	60 - 130%	76
	BHB7_1.5-1.6	SE239522.003	%	60 - 130%	81
d4-1,2-dichloroethane (Surrogate)	BHB3_1.1-1.0	SE239522.001	%	60 - 130%	62
	BHB5_1.0-1.1	SE239522.002	%	60 - 130%	74
	BHB7_1.5-1.6	SE239522.003	%	60 - 130%	80
d8-toluene (Surrogate)	BHB3_1.1-1.0	SE239522.001	%	60 - 130%	62
	BHB5_1.0-1.1	SE239522.002	%	60 - 130%	73
	BHB7_1.5-1.6	SE239522.003	%	60 - 130%	79

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB264777.001	Mercury	mg/kg	0.05	<0.05

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result
LB264797.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	98
		2-fluorobiphenyl (Surrogate)	%	-	89
		d14-p-terphenyl (Surrogate)	%	-	97

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB264776.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB264797.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264803.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	107
		d8-toluene (Surrogate)	%	-	106
		Bromofluorobenzene (Surrogate)	%	-	113
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result
LB264803.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	107

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239279.010	LB264777.014	Mercury	mg/kg	0.05	<0.05	<0.05	168	0
SE239522.003	LB264777.024	Mercury	mg/kg	0.05	<0.05	<0.05	147	0

Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239597.001	LB264800.011	% Moisture	%w/w	1	12.3	12.0	38	3
SE239597.009	LB264800.020	% Moisture	%w/w	1	7.3	8.5	43	15

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239597.001	LB264797.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	6
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	5
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
SE239597.008	LB264797.025		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	3
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239597.008	LB264797.025	Surrogates	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239279.010	LB264776.014		Arsenic, As	mg/kg	1	<1	1	126	10
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	30	32	32	8
			Copper, Cu	mg/kg	0.5	2.8	2.9	48	3
			Nickel, Ni	mg/kg	0.5	23	24	32	5
			Lead, Pb	mg/kg	1	2	2	85	0
			Zinc, Zn	mg/kg	2	57	58	33	2
SE239522.003	LB264776.024		Arsenic, As	mg/kg	1	2	1	107	42
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	14	14	34	3
			Copper, Cu	mg/kg	0.5	44	42	31	4
			Nickel, Ni	mg/kg	0.5	23	22	32	4
			Lead, Pb	mg/kg	1	16	16	36	2
			Zinc, Zn	mg/kg	2	86	84	32	2

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239597.001	LB264797.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE239597.008	LB264797.025		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239597.001	LB264803.014	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.5	8.4	50	12
			d8-toluene (Surrogate)	mg/kg	-	7.3	8.0	50	9
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	8.4	50	8
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE239597.009	LB264803.023	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.7	8.4	50	14

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOC's in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239597.009	LB264803.023	Surrogates	d8-toluene (Surrogate)	mg/kg	-	9.3	7.8	50	18
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.9	9.6	50	13
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE239597.001	LB264803.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.5	8.4	30	12
			d8-toluene (Surrogate)	mg/kg	-	7.3	8.0	30	9
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	8.4	30	8
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE239597.009	LB264803.023		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.7	8.4	30	14
			d8-toluene (Surrogate)	mg/kg	-	9.3	7.8	30	18
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.9	9.6	30	13
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264777.002	Mercury	mg/kg	0.05	0.17	0.2	70 - 130	87

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264797.002		Naphthalene	mg/kg	0.1	4.2	4	60 - 140	105
		Acenaphthylene	mg/kg	0.1	4.4	4	60 - 140	110
		Acenaphthene	mg/kg	0.1	4.0	4	60 - 140	100
		Phenanthrene	mg/kg	0.1	4.4	4	60 - 140	110
		Anthracene	mg/kg	0.1	4.3	4	60 - 140	107
		Fluoranthene	mg/kg	0.1	4.0	4	60 - 140	101
		Pyrene	mg/kg	0.1	4.3	4	60 - 140	108
		Benzo(a)pyrene	mg/kg	0.1	4.0	4	60 - 140	100
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	99
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	92

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264776.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	104
	Cadmium, Cd	mg/kg	0.3	5.1	4.81	70 - 130	105
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	107
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	104
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	102
	Zinc, Zn	mg/kg	2	280	273	80 - 120	101

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264797.002		TRH C10-C14	mg/kg	20	42	40	60 - 140	105
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	85
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	100
	TRH F Bands	TRH >C10-C16	mg/kg	25	40	40	60 - 140	100
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	95
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264803.002	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	5.4	5	60 - 140	108
		Toluene	mg/kg	0.1	4.1	5	60 - 140	82
		Ethylbenzene	mg/kg	0.1	4.7	5	60 - 140	94
		m/p-xylene	mg/kg	0.2	9.6	10	60 - 140	96
		o-xylene	mg/kg	0.1	4.6	5	60 - 140	92
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.1	10	70 - 130	121
		d8-toluene (Surrogate)	mg/kg	-	11.3	10	70 - 130	113
		Bromofluorobenzene (Surrogate)	mg/kg	-	11.1	10	70 - 130	111

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB264803.002		TRH C6-C10	mg/kg	25	72	92.5	60 - 140	78
		TRH C6-C9	mg/kg	20	64	80	60 - 140	81
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	12.1	10	70 - 130	121
		Bromofluorobenzene (Surrogate)	mg/kg	-	11.1	10	70 - 130	111
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	43	62.5	60 - 140	69

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239279.001	LB264777.004	Mercury	mg/kg	0.05	0.23	0.05	0.2	87

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239532.004	LB264797.004		Naphthalene	mg/kg	0.1	4.2	<0.1	4	106
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.2	<0.1	4	104
			Acenaphthene	mg/kg	0.1	4.3	<0.1	4	107
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.3	<0.1	4	108
			Anthracene	mg/kg	0.1	4.3	<0.1	4	108
			Fluoranthene	mg/kg	0.1	4.4	<0.1	4	110
			Pyrene	mg/kg	0.1	4.1	<0.1	4	103
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.0	<0.1	4	99
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	4.0	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.0	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.1	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	34	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	97
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	-	92
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	92

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239279.001	LB264776.004	Arsenic, As	mg/kg	1	42	1	50	81
		Cadmium, Cd	mg/kg	0.3	43	<0.3	50	87
		Chromium, Cr	mg/kg	0.5	77	37	50	80
		Copper, Cu	mg/kg	0.5	50	6.0	50	89
		Nickel, Ni	mg/kg	0.5	57	14	50	85
		Lead, Pb	mg/kg	1	46	3	50	86
		Zinc, Zn	mg/kg	2	77	45	50	64 ④

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239532.004	LB264797.004		TRH C10-C14	mg/kg	20	40	<20	40	100
			TRH C15-C28	mg/kg	45	<45	<45	40	100
			TRH C29-C36	mg/kg	45	<45	<45	40	90
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	38	<25	40	95
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	38	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	105
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239532.004	LB264803.004	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	3.2	<0.1	5	63
			Toluene	mg/kg	0.1	3.5	<0.1	5	69
			Ethylbenzene	mg/kg	0.1	3.5	<0.1	5	70
			m/p-xylene	mg/kg	0.2	7.0	<0.2	10	70
			o-xylene	mg/kg	0.1	3.8	<0.1	5	75

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub -sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's in Soil (continued) — Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239532.004	LB264803.004	Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	6.8	4.3	10	68 ④
			d8-toluene (Surrogate)	mg/kg	-	6.3	4.1	10	63 ④
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.7	4.3	10	67 ④
		Totals	Total BTEX*	mg/kg	0.6	21	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	11	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil — Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE239532.004	LB264803.004		TRH C6-C10	mg/kg	25	72	<25	92.5	69
			TRH C6-C9	mg/kg	20	56	<20	80	63
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	6.8	4.3	10	68 ④
			d8-toluene (Surrogate)	mg/kg	-	6.3	4.1	10	63 ④
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.7	4.3	-	67
		VPH F	Benzene (F0)	mg/kg	0.1	3.2	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	51	<25	62.5	69

MATRIX SPIKE DUPLICATES

SE239522 R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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