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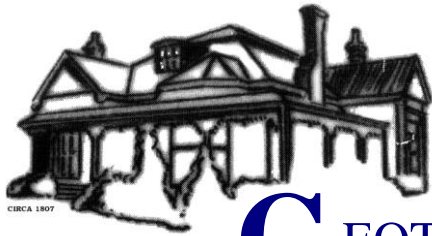


**UPDATED DETAILED SITE INVESTIGATION  
(PHASE 2 CONTAMINATION ASSESSMENT)**

**PROPOSED NARWEE PARKLAND CARE COMMUNITY**

**LOTS D & C DP403467, LOT 2 DP518877 AND LOTS 2 & 3 DP16063  
59-67 KARNE STREET NORTH, NARWEE**

**REPORT NO 20219/5-AA      27 OCTOBER 2022**



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Job No: 20219/5  
Our Ref: 20219/5-AA  
27 October 2022

Cyre Projects Pty Ltd  
Level 8, Suite 18, 100 Walker Street  
NORTH SYDNEY NSW 2060  
Email: [marlon@cyreprojects.com.au](mailto:marlon@cyreprojects.com.au)

Attention: Mr M Zunac

Dear Sir

re: **Proposed Narwee Parkland Care Community  
Lots D & C DP403467, Lot 2 DP518877 and Lots 2 & 3 DP16063  
59-67 Karne Street North, Narwee  
Updated Detailed Site Investigation (Phase 2 Contamination Assessment)**

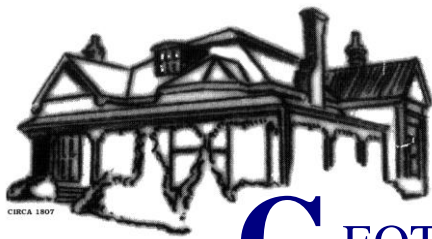
Please find herewith our updated detailed site investigation (Phase 2 Contamination Assessment) report for the above site. It is understood that the site is proposed for aged care facility development.

A brief summary of the outcome of the assessment is presented in the Executive Summary.

If you have any questions, please do not hesitate to contact the undersigned.

Yours faithfully  
GEOTECHNIQUE PTY LTD

ANWAR BARBHUYIA  
Senior Associate  
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## EXECUTIVE SUMMARY

Further to the phase 1 preliminary site assessment (PSA) report (Report No 13977/1-AA dated 31 March 2017), and phase 2 contamination assessment (CA) (Report No 13977/2-AA dated 9 May 2017), prepared by Geotechnique Pty Ltd (Geotechnique) for the property currently registered as Lots D and C in DP403467, Lot 2 in DP518877 and Lot 2 in DP16063, located at 59-65 Karne Street North, Narwee, this executive summary presents a synopsis of an updated detailed site investigation (DSI) (Phase 2 CA) for a parcel of land currently registered as Lots D and C DP403467, Lot 2 DP518877 and Lots 2 and 3 DP16063, located at 59-67 Karne Street North, Narwee (hereafter referred as site), in the local government area of City of Canterbury-Bankstown to address part of Condition 17 of the Planning Secretary's Environmental Assessment Requirement.

We understand that the proposed development includes demolition of existing structures, and construction of a new aged care facility with basement car park.

The objectives of the assessment were to ascertain whether the site presents a risk of harm to human health and the environment, and to determine the suitability of the site for the proposed aged care facility development, in consideration of State Environmental Planning Policy (Resilience and Hazards, 2021-Chapter 4 Remediation of Land) under the Environmental Planning and Assessment Act 1979.

The scope of work included review of the phase 1 PSA and phase 2 CA reports, site reconnaissance, review of site history information and geological maps, borehole drilling, soil sampling and testing, and preparation of this report.

The findings of the Phase 2 CA and updated DSI are summarised as follows:

- The site primarily comprises a former nursing home, and two disused residential properties in the north-west corner of the site.
- We understand that the proposed development includes demolition of existing structures, and construction of a new aged care facility with basement car park
- The general soil profile comprised fill materials overlying natural clayey soil and siltstone bedrock. Topsoil underlain by natural clayey soil and siltstone bedrock was encountered at a few locations. The boreholes and test pits did not reveal any visual evidence of asbestos or other indicators of significant contamination, such as staining, odours or significant foreign matter, with the exception of the presence of one fibro-cement piece in the fill profile at borehole BH12, one fibro-cement piece on the ground surface at borehole FCP1, and a number of fibro-cement pieces in the fill profile at borehole BH120. The laboratory confirmed that the fibro-cement pieces within the fill profile at BH12 and BH120, and on the surface at FCP1 contained asbestos containing material (ACM). As no asbestos-cement pieces were observed on the ground surface at and in the vicinity of FCP1 after collecting the asbestos-cement piece, asbestos is no longer considered an issue at FCP1.

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Executive Summary continued

- All the laboratory test results satisfied the criteria for stating that the analytes selected are either not present, i.e. at concentrations less than laboratory limits of reporting, or present in the sampled soil at concentrations that do not pose a risk of hazard to human health or the environment under a “residential with minimal opportunities for soil access” form of development, with the exception of asbestos [fibrous asbestos (FA)] contamination in the fill profile at borehole location BH120. Asbestos (FA) presents a risk of harm to human health due to the exceedance of relevant Health Screening Levels for a Residential setting.
- On-site sieving tests in accordance with gravimetric procedures as per NEPM 1999 (April 2013) indicated that the concentrations of ACM in all soil samples recovered from at and in the vicinity previously identified asbestos contaminated location BH12 were equal to zero. Therefore, asbestos is no longer considered an issue at BH12. On-site sieving test also indicated that the bonded ACM fragments were in excess of relevant Health Screening Levels for Residential setting in the fill materials at borehole BH120. Bonded ACM fragments present a potential risk of harm to human health as these fragments may release asbestos dust or fibres if tooled, cut, etc.
- The data quality objectives outlined in the report have been satisfied.

Based on this assessment, it is our opinion that the site is suitable for the proposed new aged care facility development, subject to implementation of the following recommendations prior to earthworks:

- Detailed sampling and/or testing in the vicinity of BH120 to delineate the extent of asbestos contamination.
- Sampling and testing of soils beneath the houses, building, and concrete covered areas after demolition and removal of site features.
- Development of a remedial action plan (RAP) to remediate asbestos contaminated fill, plus any other contamination identified through the recommended additional sampling and testing, followed by appropriate validation.

FA 0.0002% w/w was detected in the surface fill sample at borehole location BH115, which can remain in the site, as the level is below the relevant Health Screening Levels (HSL) for Residential setting, 0.001% w/w. As borehole location BH115 is located in the proposed basement car park area, the soil at and in the vicinity of BH115 must be disposed at a landfill facility as asbestos waste during bulk earthworks.

If any suspect materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos sheets/pieces/pipes, ash material, etc.) are encountered between the sampling locations during any stage of future earthworks/site preparation/demolitions, the Unexpected Finds Management Protocol (Appendix J) should be implemented. In the event of contamination, detailed assessment, remediation, and validation will be necessary.

For any materials to be excavated and removed from the site, it is recommended that waste classification of the materials, in accordance with the "Waste Classification Guidelines Part 1: Classifying Waste" (NSW EPA 2014), NSW EPA resource recovery exemptions and orders under the Protection of the Environment Operations (Waste) Regulation 2014, or NSW EPA Certification: Virgin excavated natural material is undertaken prior to disposal at an appropriately licensed landfill or potential re-use at other sites.

Any imported soil (fill) must be assessed by a qualified environmental consultant, prior to importation, to ensure suitability for the proposed use. In addition, the imported fill must not contain asbestos and ash,



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*Executive Summary continued*

be free of unusual odour, not be discoloured, and not acid sulphate soil or potential acid sulphate soil. The imported fill should either be virgin excavated natural material or excavated natural material.

Reference should be made to Section 16.0 of the report and Appendix K, which set out details of the limitations of the assessment.

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**APPENDICES**

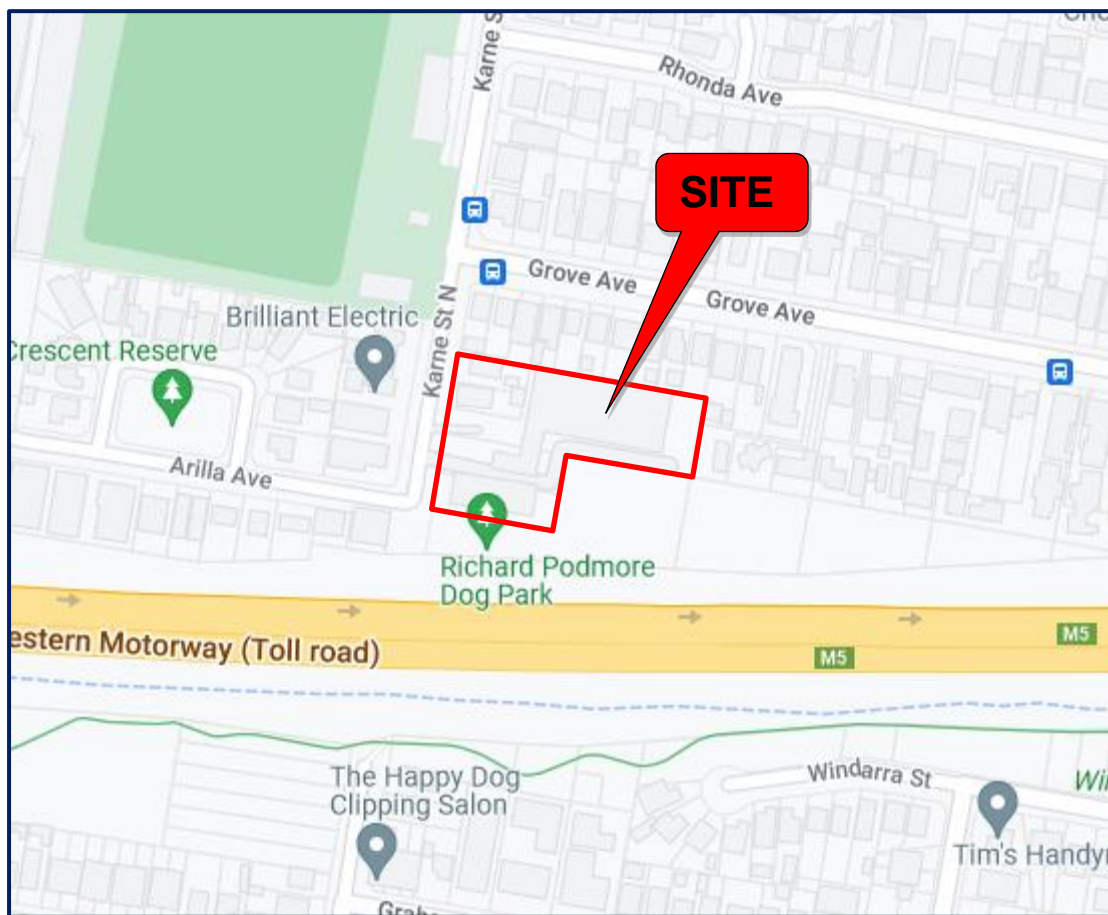
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59-67 Karne Street North, Narwee

## 1.0 INTRODUCTION

Further to the phase 1 preliminary site assessment (PSA) report (Report No 13977/1-AA dated 31 March 2017), and phase 2 contamination assessment (CA) (Report No 13977/2-AA dated 9 May 2017), prepared by Geotechnique Pty Ltd (Geotechnique) for the property currently registered as Lots D and C in DP403467, Lot 2 in DP518877 and Lot 2 in DP16063, located at 59-65 Karne Street North, Narwee, this report presents the results of an updated detailed site investigation (DSI) (Phase 2 CA) for a parcel of land currently registered as Lots D and C DP403467, Lot 2 DP518877 and Lots 2 and 3 DP16063, located at 59-67 Karne Street North, Narwee (hereafter referred as site), in the local government area of City of Canterbury-Bankstown, as indicated on Figure 1 below.

**FIGURE 1**



Map Data ©2022 Google

We understand that the proposed development at the site includes demolition of existing structures and construction of a new aged care facility with basement car park. The proposed development plans are included in Appendix A.

The objectives of the assessment were to ascertain whether the site presents a risk of harm to human health and the environment, and to determine the suitability of the site for the proposed aged care facility development, in consideration of State Environmental Planning Policy (Resilience and Hazards, 2021-Chapter 4 Remediation of Land) under the Environmental Planning and Assessment Act 1979.

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This report was prepared in accordance with the NSW Environment Protection Authority (EPA), "Consultants Reporting on Contaminated Land" – 2020, to address part of Condition 17 of the Planning Secretary's Environmental Assessment Requirement.

## **2.0 SCOPE OF WORK**

In order to achieve the objective of this assessment, the following scope of work was conducted in accordance with our fee proposal (Q-Revised-Narwee) dated 2 June 2022:

- Review and summary of the *PSA* and *phase 2 CA* reports prepared by Geotechnique in 2017.
- A desktop study of:
  - Historical aerial photographs.
  - NSW Land Registry Services records.
  - Section 10.7 (2 & 5) Planning Certificates.
  - EPA records of notices.
  - Groundwater bore records of Department of Primary Industries, Office of Water.
  - Soil and geological maps.
- Inspection by an Environmental Engineer from Geotechnique to identify the site conditions and any areas of potential environmental concern based on visual and olfactory indicators of potential contamination.
- Soil sampling by the Environmental Engineer beneath the site features and open area of the disused residential land in the north western corner of the site, aimed at ascertaining the presence or otherwise of soil contaminants beneath the site features and in the open area of the disused residential land.
- Implementation of industry standard quality assurance (QA) and quality control (QC) measures. QC samples were also forwarded to the testing laboratories.
- Carrying out on-site sieving tests to identify any fibro-cement pieces in the fill materials at and in the vicinity of the previously identified location with inclusions of asbestos-cement piece in the fill profile.
- Chemical analysis by National Association of Testing Authorities (NATA) accredited testing laboratories, in accordance with chains of custody (COC) prepared by Geotechnique.
- Assessment of the laboratory analytical results of soil samples against current applicable guidelines.
- Assessment of field and laboratory QA and QC.
- Assessment of the contamination status of soil in the site.
- Preparation of this report.

## **3.0 SITE INFORMATION**

The site is located at 59-67 Karne Street, Narwee, in the local government area of City of Canterbury-Bankstown, and is registered as Lots D and C in DP403467, Lot 2 in DP518877 and Lots 2 and 3 in DP16063. Reference may be made to Drawing No 20219/5-AA1 for the lot layout.

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During the Phase 1 PSA and Phase 2 CA in 2017, Lot 3 in DP16063 (67 Karne Street North) was not part of the site, which is now included for the current updated DSI.

As shown on Drawing No 20219/5-AA1, the site is irregular in shape, covering an area of approximately 7,160m<sup>2</sup>. Reference may be made to the cadastral and deposited plans in Appendix C for details of the site location and dimensions.

During the inspection for the DSI on 6 July 2022, the site primarily comprised a former nursing home, and also two disused residential properties in the north-west corner of the site. Although the residential land and former nursing home remained almost unchanged as observed during PSA and Phase 2 CA in 2017, the following changes in Site Features (SF) were noted including those in the additional residential land in the north western corner of the site:

- Metal sheds with concrete floor (SF#7) have been removed.
- Aviary/chicken pen (SF#8) has been removed.
- Chemical storage area (SF#9) has been removed.
- Black rubbish bag, bag with asbestos and scattered asbestos pieces (SF#11) has been removed.
- Metal shed with hot water heater (SF#12) has been removed.
- Scattered fibro-cement pieces on the concrete floor have been removed. One fibro-cement piece on the grass surface was observed in the south eastern portion of the site (SF#13).
- Rubbish covered with blue tarpaulin (SF#14) has been removed.
- Plastic foam/mulch (SF#15) has been removed.
- Solar panels (SF#16) have been removed.
- Brick building with tile roof has been removed. Concrete slab remains (SF#18).
- Fibro-cement eaves lining in the buildings (SF#19) has been removed.
- Presence of fibro building with asbestos roof in the disused residential land in the north western corner of the site (SF#20).
- Presence of fibro building with tile roof in the disused residential land in the north western corner of the site (SF#21).
- Presence of shipping container in the former nursing home (SF#22).
- Presence of relocatable house/shed in the former nursing home (SF#23).

The updated site features are indicated on Drawing No 20219/5-AA1.

There was no petroleum hydrocarbon staining on the ground surface of the site that would indicate the potential for contamination. There were no visual or olfactory indicators of potential contamination. There were no obvious features associated with underground storage tanks (bowsers, breather pipe, inlet valve and piping).

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The site is bound to the north and east by residential properties, to the south by Richard Podmore Dog Park, and to the west by Karne Street North and further west, residential properties.

#### **4.0 TOPOGRAPHY, GEOLOGY & HYDROGEOLOGY**

In general, ground surface gently slopes (decline) from north to south and east to west.

The Geological Map of Sydney (Geological Series Sheet 9130, Scale 1:100,000, 1983), published by the Department of Mineral Resources indicates the residual soils within the site to be underlain by Triassic Age Shale of the Wianamatta Group, comprising black to dark grey shale and laminite.

The Soil Landscape Map of Sydney (Soil Landscape Series Sheet 9130, Scale 1:100,000, 2002), prepared by the Soil Conservation Service of NSW, indicates that the site is primarily located within the Blacktown and Birrong landscape areas. Blacktown group soils typically consist of highly plastic and relatively impermeable residual soil. Birrong group soils usually occur where they may be localised.

There was no water body such as a creek, river or wetland in close proximity to the site. Salt Pan Creek is located approximately 2.3km to the west of the site. Obvious local depressions that might capture or divert stormwater run-off were not observed within the site. Anticipated stormwater run-off would be towards the south of the site.

A site-specific groundwater analysis was outside the scope of this assessment. However, a search was carried out on 7 July 2022 through the website of Department of Primary Industries Office of Water for any registered groundwater bore data within a radius of 500m of the site. The search revealed no bores within a radius of 500m of the site. The groundwater map is included in Appendix G of this report.

Groundwater or perched water was not encountered during sampling to a maximum depth of about 1.2m below existing ground level. Based on previous experience in the region, groundwater in the site is anticipated to be in excess of 3.0m below the existing ground surface. Groundwater flow is anticipated to be towards the south of the site.

#### **5.0 SITE HISTORY**

Geotechnique carried out a review of site history information in 2017 as part of the Phase 1 PSA. The review included historical aerial photographs, certificates of land titles (past and present), Planning Certificates issued by Council under Section 149 of the Environmental Planning and Assessment Act 1979, EPA records, and SafeWork NSW information pertaining to storage of hazardous chemicals. For details, reference should be made to Report 13977/1-AA.

Historical aerial photographs revealed that the site was predominantly residential land in 1950s. The current buildings on the site were observed to be gradually erected since the 1970s, and the adjoining properties were predominantly occupied by residential dwellings.

NSW Department of Lands records indicated that private proprietors owned the site from the 1950s/1960s to late 1960s/1980s/2010s. Based on the occupation of the private proprietors, the eastern and centre portion of the site might have been used for carpentry activities between 1940 and 1959, and for welding activities between 1959 and 1966. Several commercial enterprises owned the site afterwards. The eastern and centre portion of the site was used as a Convalescent Hospital between 1968 and 1991.



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The Section 149 (2) Planning Certificates revealed no matters arising under the Contaminated Land Management (CLM) Act 1997.

A search of the NSW EPA records revealed no EPA Notices issued for the site. A search of the Protection of the Environment Operations (POEO) Public Register found no records for the site.

A search of the records held by SafeWork NSW has not located any records on storage of hazardous chemicals pertaining to the site.

Due to the 5 year gap since the review of site history information, and the addition of Lot 3 in DP16063, located at 67 Karne Street North, to the site area, Geotechnique obtained and/or reviewed information including historical aerial photographs, NSW Land Registry Services records, Planning Certificates issued by Council under Section 10.7 of the Environmental Planning and Assessment Act 1979 and NSW EPA records regarding notices for contaminated land as a part of the site history for the updated DSI. The information reviewed is presented in the following sub-sections.

### 5.1 Aerial Photographs

Aerial photographs taken in 1951, 1970, 1978, 1986, 1994, 2002, September 2012, and June 2022 were examined. Copies of the aerial photographs are attached in Appendix A. The writer made the following observations. Due to scale, some of the listed observations are best interpretations only.

<b>1951</b>	The site appears to be predominantly residential land. Part of the north eastern portion appeared to be used as commercial land. Neighbouring properties to the north and west appear to be residential dwellings. Neighbouring properties to the east and south appear to be vacant land.
<b>1970, 1978, 1986</b>	A large structure has been constructed on the northern portion of the site, and two additional houses/sheds have been constructed on the south western portion of the site. The surrounding properties appear to remain unchanged since 1951, with the exception of the presence of a house/shed in the eastern neighbouring property since the 1970s.
<b>1994, 2002</b>	It appears the site remains unchanged since 1986, with the exception of construction of a large building at the south western portion of the site in place of the older house/shed. The neighbouring properties appear to remain unchanged, with exception of a major road that has been constructed to the south of the site.
<b>Sept 2012</b>	The site appears unchanged since 2002. It appears the neighbouring properties to the west beyond Karne Street North have likely been demolished with new recent residential buildings erected in place of the older buildings.
<b>June 2022</b>	The north western portion of the site and adjoining properties appear unchanged since 2002. Buildings in the remainder of the site have been demolished.

In summary, the aerial photographs reveal that the site was residential land prior to 1970s, and then centre and eastern portions of the site modified into nursing homes in the 1970s. The northern, eastern and western adjoining properties were residential land since at least the 1950s/1970s. The southern adjoining land was vacant land since at least the 1950s.

### 5.2 NSW Land Registry Services Records

The chronological list of proprietors for the site is presented in Appendix C.



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NSW Land Registry Services records indicate that private proprietors owned the site since the 1950s/1960s to late 1960s/1980s/2010s. Based on the occupation of the private proprietors, the eastern and centre portion of the site might have been used for carpentry activities between 1940 and 1959, and for welding activities between 1959 and 1966.

Several Commercial enterprises owned the site afterwards. The eastern and centre portion of the site was used as a Convalescent Hospital between 1968 and 1991.

### **5.3 Section 10.7 (2 & 5) Planning Certificates**

The Planning Certificates (Certificate No: 20225208, 20225209, 20225210, 20225211 & 20225212) under Section 10.7 (2 & 5) Environmental Planning and Assessment Act 1979 for Lot D DP403467, Lot C DP403467, Lot 2 DP518877, Lot 2 DP16063, and Lot 3 DP16063, issued by City of Canterbury Bankstown Council on 30 June 2022, indicated the following:

- The site is zoned R3 Medium Density Residential, under the Canterbury Bankstown Local Environmental Plan 2012.
- An item of environmental heritage is not situated on the site.
- The site is not proclaimed a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act, 1961*.
- The site is not affected by road widening or road realignment under Division 2 of Part 3 of the Roads Act 1993, any environmental planning instrument, or any resolution of the Council.
- The site is not affected by policy restriction related to acid sulfate soils.
- The site is not affected by any of the matters prescribed by Section 59(2) of the Contaminated Land Management Act 1997.
- The site does not contain any residential premises that contain loose-fill asbestos ceiling insulation.

Reference may be made to Appendix D for the Section 10.7 (2 & 5) Certificates.

### **5.4 NSW EPA Record of Notices and Environment Protection Licences**

The NSW OEH maintains the record of EPA notices for contaminated lands under Section 58 of the CLM Act 1997. The notices relate to investigation and/or remediation of site contamination considered to pose a significant risk of harm under the definition in the CLM Act. A search of the EPA notices on 7 July 2022 revealed no notices issued for the site. It should be noted that the NSW EPA record for Contaminated Land does not provide a record of all contaminated lands in NSW. At the time of searching the records, 415 sites in NSW were registered in the database.

The EPA issues environment protection licences to owners or operators of various industrial premises under the POEO Act to control the air, noise, water and waste impacts of an activity. A search of the POEO Public Register on 7 July 2022 found no records for the site.

NSW EPA and the POEO Public Register records are detailed in Appendix E.

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## 6.0 POTENTIAL FOR CONTAMINATION / CONCEPTUAL SITE MODEL

### 6.1 Potential Areas of Environmental Concern

Based on the preceding sections, areas of environmental concern (AEC) and associated contaminants of potential concern have been identified, and are presented in the following table:

Area of Potential Environmental Concern	Rationale / Detail	Potential Contaminant <sup>1</sup>
The site	Part of the site might have been used for carpentry activities in the 1940s and 1950s and also for welding activities in the 1960s, which indicates the potential for Metals, solvent, Benzene, Phenols, and Formaldehyde contamination.	Metals (chromium, titanium, zinc) Volatile organic compounds (VOC) Phenols Formaldehyde
The site	Part of the site had been used as a Convalescent Hospital in the 1970s and 1980s, which indicates the potential for Metals, Tetrachloroethene, Toluene, and Formaldehyde contamination.	Metals (chromium, mercury) VOC Formaldehyde
Brick buildings	In the surface soils surrounding the house and shed there is potential for metals and Organochlorine Pesticides (OCP) contamination due to possible pest control.	Arsenic and Lead OCP Foot print of the brick building and its vicinity in the previous hospital area could also be contaminated with other chemicals, as detailed above.
Fibro features	In the surface soils surrounding the house, building and shed there is potential for metals and OCP contamination due to possible pest control. Possible fibro house/fibro building may also contain asbestos.	Arsenic and Lead OCP Asbestos
Metal sheds and shipping container	There is potential for Metals contamination in the vicinity of the metal building and shipping container, resulting from degradation of the metals.	Metals <sup>2</sup>
Fibro-cement eaves and pieces	Fibro-cement eaves and pieces may contain asbestos.	Asbestos
Car park	The car park is potentially contaminated with lead, resulting from exhaust residue associated with vehicle parking. In addition, there is potential for petroleum hydrocarbon contamination resulting from possible motor oil/fuel leaks.	Lead Total Petroleum Hydrocarbons (TPH) Benzene, Toluene, Ethyl Benzene, Xylene (BTEX) Polycyclic Aromatic Hydrocarbons (PAH) Phenols

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Area of Potential Environmental Concern	Rationale / Detail	Potential Contaminant <sup>1</sup>
The site	Imported fill materials was found within the open area of the site and beneath the site features. There is potential for the fill materials to be contaminated, as the source of fill materials is generally unknown.	Metals <sup>3</sup> TPH BTEX PAH Phenols OCP Polychlorinated Biphenyls (PCB) Phenols Cyanides

<sup>1</sup> The suite of potential contaminants identified will be reviewed subject to the findings of the excavated materials and added to if considered appropriate

<sup>2</sup> Metals suite includes cadmium, chromium, copper, lead, nickel and zinc

<sup>3</sup> Metals suite includes arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc

## 6.2 Potentially Contaminated Media

Potentially contaminated media present at the site include:

- Topsoil and potential fill material.
- Natural soils.

Based on the potential mobility of contaminants and their associated potential leachability through the soil/fill profile, vertical migration of contaminants from the surface soils and fill material into the underlying natural soils might have occurred. As a result, the natural soils are also considered to be potentially contaminated media.

Groundwater or perched water was not encountered during sampling to a maximum depth of about 1.2m below existing ground level. If a substantial source of contamination is identified within the soil on-site, a groundwater assessment could be necessary.

As there is no permanent waterbody transecting the site, surface water is not identified as a potentially contaminated medium.

## 6.3 Potential Migration

Contaminants generally migrate from a site via a combination of windblown dust, rainwater infiltration, groundwater migration, and surface water run-off. The potential for contaminants to migrate is a combination of:

- The nature of the contaminants (solid / liquid and mobility characteristics).
- The extent of the contaminants (isolated or widespread).
- The location of the contaminants (surface soils or at depth).
- The site topography, geology, hydrology and hydrogeology.

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Off-site impacts of contaminants in soil are generally governed by the transport media available and likely receptors. The most common transport medium is water, whilst receptors include initially uncontaminated soils, groundwater, surface waterbodies, humans, flora and fauna.

The site is grass covered or sealed by hard stand (house, sheds, buildings, asphalt concrete, and concrete covered areas) across most of the surface. The potential for migration of contaminants via wind-blown dust is considered low as a result of the exposed soils within the site. The potential for migration of contamination via surface run-off is also expected to be minor. There is no waterbody such as a creek, river or wetland close to the site. Obvious local depressions that might capture or divert stormwater run-off were not observed within the site. As such, the potential for contamination of surface water bodies as a result of any contaminants within the site is considered to be low.

Migration of soil contaminants to the deeper soils or groundwater regime would generally be via leaching of contaminants from the surface soil or fill, facilitated by infiltration of surface water. If high levels or widespread contaminants are detected through the proposed detailed contamination assessment, a groundwater assessment will be recommended.

Sensitive receptors at the site under the current site conditions and in the immediate vicinity are considered to include site visitors who may come into contact with potentially contaminated media within the site.

## **7.0 SUMMARY OF PREVIOUS ASSESSMENTS**

Contamination assessments were carried out for the subject site in 2017. The relevant reports are as follows:

- *Phase 1 PSA Report* (Ref 13977/1-AA dated 31 March 2017), prepared by Geotechnique.
- *Phase 2 CA Report* (Ref: 13977/2-AA dated 9 May 2017), prepared by Geotechnique

This section presents a summary of the scope of works involved in each assessment stage, and the subsequent findings and recommendations.

### **7.1 Phase 1 Preliminary Site Assessment (PSA) Report**

A Phase 1 PSA was carried out for the site currently registered as Lots D and C in DP403467, Lot 2 in DP518877 and Lot 2 in DP16063, located at 59-65 Karne Street North, Narwee, in the local government area of City of Canterbury-Bankstown. The results were presented in the Geotechnique report *Phase 1 PSA* (Ref 13977/1-AA dated 31 March 2017). The site was proposed for a new aged care home.

The objectives of the assessment were to identify any areas of potential contamination, and to assess if the site potentially presents a risk of harm to human health and the environment under the conditions of the proposed use.

In order to achieve the objectives of the assessment, the scope of work included a study of site history, geological information and a site inspection.

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An inspection of the site was carried out by an Environmental Engineer from Geotechnique on 16 March 2017, and the following observations were made:

- The site is located in close proximity to the corner of Karne Street North and Arilla Avenue, Narwee.
- The site was utilised primarily as a nursing home, with the one property in the north-west corner being used for residential purposes.
- The residential property consisted of possible fibro house with metal roofing. There was also another brick building with a metal roof.
- The areas which were utilised for the nursing home consisted of brick buildings with tiled roofing and solar panels.
- The areas forming the perimeter of the building were predominantly concreted areas.
- A couple of areas were discovered to have buildings which were previously used for chemical storage.
- An asphaltic concrete parking area was situated at the eastern boundary of the site.
- Scattered fibro cement pieces and a black plastic bag containing fibro cement pieces were found toward the far southern boundary of the site.
- There were no obvious features associated with any underground storage tanks (bowser, breather pipe, inlet valve and piping).

There were no air emissions emanating from the site and neighbouring properties.

The site is bound to the north and east by residential properties, to the south by an off leash dog area, and to the west by Karne Street North and further west, residential properties.

Based on the information obtained in preparation of this report, it is considered that the site has potential for contamination due to past and present site activities.

As the site is proposed for a new aged care home after demolition of existing structures, implementation of a suitable sampling and testing plan as a phase 2 contamination assessment to target the potential for contamination listed in Section 7.0 of the report was recommended. If any contaminants are identified, the site could be made suitable for the proposed use following appropriate remediation and validation.

## **7.2 Phase 2 Contamination Assessment (CA) Report**

A Phase 2 CA was carried out for the site currently registered as Lots D and C in DP403467, Lot 2 in DP518877 and Lot 2 in DP16063, located at 59-65 Karne Street North, Narwee, in the local government area of City of Canterbury-Bankstown. The results were presented in the Geotechnique report *Phase 2 CA* (Ref 13977/2-AA dated 9 May 2017). The site was proposed for new aged care home.

We understand that the proposed development includes demolition of existing structures and construction of a new aged care home for 144 to 160 beds. Details on the new structures have not yet been finalised, however construction of the proposed structure is anticipated to involve excavation up to about 3.0m deep and some fill placement.

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The objective of the Phase 2 CA was to supplement the Phase 1 PSA Report with appropriate soil sampling and testing, in order to ascertain whether the site is likely to present a risk of harm to human health and/or the environment.

In order to achieve the objective of this assessment, the scope of work included review of the preliminary site assessment report, site reconnaissance, borehole drilling and test pit digging, soil sampling and testing, and preparation of a report.

During the inspection for the phase 2 CA, the site was utilised primarily as a nursing home, with one property in the north-west corner being used for residential purposes. The site remained unchanged as observed during Phase 1 PSA in March 2017, as shown on Drawing No 13977/1-AA1.

There were no air emissions emanating from the site or neighbouring properties.

The site is bound to the north and east by residential properties, to the south by an off leash dog area, and to the west by Karne Street North and further west, residential properties.

Based on the "Sampling Design Guidelines for Contaminated Sites" 1995 EPA, seventeen systematic sampling locations were adopted across the site, aimed at maximising coverage of the site area. Six sampling locations were drilled by a track mounted drilling rig (BH1 to BH6), nine locations were drilled by a bobcat fitted with auger (BH8 to BH13 and BH15 to BH17) and two locations (TP7 and TP14) were dug by mattock due to the access limitations. Three judgmental material samples (FCP1 to FCP3) were also taken from scattered fibro-cement pieces on concrete surface.

The borehole, test pit and sample locations are shown on Drawing No 13977/2-AA1.

Based on information from the sample locations, the sub-surface profile across the site is generalised as follows:

<b>Hardstand</b>	60mm to 150mm thick asphaltic concrete and 50mm to 160mm thick concrete was encountered on the surface of most of the site. A 50mm thick 2 <sup>nd</sup> concrete layer was also encountered at BH6, underneath 1m of fill material.
<b>Basecourse</b>	160mm thick roadbase gravel was encountered in BH10 beneath the asphaltic concrete, underlain by fill material.
<b>Topsoil</b>	200mm to 400mm thick topsoil comprising sandy clay, low plasticity, grey at BH2 and BH3, and comprising silty clay, low to medium plasticity, brown, with root fibres was encountered at BH11, underlain by natural clayey soil.
<b>Fill</b>	The following 9 types of fill were encountered:  Type 1: 150mm thick sandy clay, medium plasticity, grey, was encountered at BH1, underlain by natural clayey soil.  Type 2: 80mm thick gravelly sand, medium grained, yellow, was encountered at BH4, underlain by natural clayey soil.  Type 3: 450mm thick gravelly sandy clay, medium plasticity, grey, was encountered at BH5, underlain by natural clayey soil.  Type 4: 950mm thick sandy clay, low plasticity, grey, was encountered at BH6, underlain by a layer of concrete.

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<b>Fill (continued)</b>	<p>Type 5: 200mm thick silty clay, medium plasticity, brown, with inclusion of sand and gravel was encountered at BH12 underlain by natural clayey soil. Type 5 fill was also encountered at TP7 up to 300mm below existing ground level (EGL); however the thickness of Type 5 fill was unknown due to limitation of manual digging by hand tools.</p> <p>Type 6: 200mm to 280mm thick silty clay, medium plasticity, brown, was encountered at BH8 and BH10, underlain by Type 7 fill and natural clayey soil, respectively.</p> <p>Type 7: 200mm to 600mm thick silty clay, high plasticity, brown, was encountered at BH8 and BH17, underlain by natural clayey soil. Type 7 fill was also encountered at BH13 from 460mm to 600mm. The thickness of Type 7 fill was unknown due to limitation of manual digging by hand tools.</p> <p>Type 8: 100mm to 200mm thick silty sand, fine to medium grained, brown, was encountered at BH13, TP14 and BH15, underlain by Type 9 fill. Type 8 fill was also encountered at BH16 from 80mm to 180mm; however the thickness of Type 8 fill was unknown due to auger refusal on possible roadbase or gravelly fill.</p> <p>Type 9: 160mm to 300mm thick silty sand, fine to medium grained, yellow, was encountered at BH13 and BH15, underlain by Type 8 fill and natural clayey soil respectively. Type 9 fill was also encountered at TP14 from 200mm to 500mm. The thickness of Type 9 fill was unknown due to limitation of manual digging by hand tools.</p> <p>Based on the contents of the fill, the natural soil profiles and regional geological information, it appears that Types 1, 6 and 7 fill could have originated from within the site, whilst Types 2 to 5, 8 and 9 fill, and basecourse could be imported to the site.</p>
<b>Natural Soil</b>	<p>Silty/shaley/sandy clay, low to high plasticity, brown, grey, red, yellow, was encountered below asphaltic concrete and/or fill material across the site except for TP7, BH13 and TP14 due to limitation of manual digging by hand tools, and in BH16 due to auger refusal on possible roadbase or gravelly fill. Natural silty clay, high plasticity, red was encountered on the surface at BH9.</p>
<b>Bedrock</b>	<p>Siltstone, grey, extremely weathered, very low strength bedrock was encountered at depths ranging from 1.3m to 2.7m below the EGL.</p>

In summary, most of the site was covered with concrete or asphaltic concrete. The general soil profile comprised fill materials overlying natural clayey soil and siltstone bedrock. Topsoil underlain by natural clayey soil and siltstone bedrock was encountered at three locations. Roadbase gravel was also encountered at one location.

The boreholes and test pits did not reveal any visual evidence of asbestos or other indicators of significant contamination, such as staining, odours or significant foreign matter, with the exception of the presence of a fibro-cement piece in the fill profile at borehole BH12. Scattered fibro-cement pieces and a bag with fibro-cement pieces were observed on the concrete surface along part of the southern boundary of the site.

As a result, and generally based on the potential for contamination identified in the *Phase 1 Preliminary Site Assessment* report, discrete fill, topsoil, roadbase and surface natural soil samples were analysed for Metals (arsenic, cadmium, chromium, copper, mercury, nickel, titanium and/or zinc), TPH, BTEX, PAH, OCP, PCB, Phenols, Cyanides, VOC, Formaldehyde and/or asbestos. A number of fibro-cement pieces found on the surface and in the borehole were analysed for asbestos for screening purposes. Reference may be made to Appendix H of the updated DSI report for the actual laboratory analytical reports for the Phase 2 CA.



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The site is proposed for new aged care home. Therefore, with regard to human health, analytical results were assessed against risk based Health Investigation Levels (HIL) for *residential with minimal opportunities for soil access* (HIL B). The analytical results for selected petroleum compounds, fractions and Naphthalene were assessed against the available Health Screening Levels (HSL) for *high density residential* (HSL B) for clay and sand to depth of 0m to <1m. The analytical results for selected petroleum hydrocarbon compounds, TRH fractions and Benzo(a)Pyrene were assessed against the available Ecological Screening Levels (ESL) for *urban residential* for fine-grained soil (clay) and coarse-grained soil (sand). The analytical results for selected metals were assessed against the available Soil Quality Guidelines (SQG) / Ecological Investigation Levels (EIL) for *urban residential* land use for aged contamination in soil for low traffic volume. For DDT and Naphthalene, generic EIL are adopted for *urban residential* land use for fresh contaminants.

For discrete soil samples, the individual concentrations of analytes were assessed against the HIL B / HSL B / ESL / EIL.

For asbestos, the assessed soil must not contain ACM in excess of 0.01%w/w, surface soil within the site is free of visible ACM, and asbestos fines (AF) and fibrous asbestos (FA) in the soil is <0.001% w/w.

The findings of the Phase 2 CA are summarised as follows:

- The site primarily comprised a nursing home, and one residential property in the north-west corner of the site.
- The site is proposed for a new aged care, and includes demolition of existing structures and construction of a new aged care home.
- The general soil profile comprised fill materials overlying natural clayey soil and siltstone bedrock. Topsoil underlain by natural clayey soil and siltstone bedrock was encountered at a couple of locations. The boreholes and test pits did not reveal any visual evidence of asbestos or other indicators of significant contamination, such as staining, odours or significant foreign matter, with the exception of the presence of one fibro-cement piece in the fill profile at borehole BH12.
- All the laboratory test results satisfied the criteria for stating that the analytes selected are either not present, i.e. concentrations less than laboratory limits of reporting, or present in the sampled soil at concentrations that do not pose a risk of hazard to human health or the environment under a "residential with minimal opportunities for soil access" form of development. The laboratory confirmed that the fibro-cement piece within the fill profile at BH12 and the fibro-cement pieces observed on the surface at locations FCP1 to FCP3 contained ACM, as shown on Drawing No 13977/2-AA2. ACM presents a potential risk of harm to human health.
- The data quality objectives outlined in the report have been satisfied.

Based on the assessment, it is considered that the site can be made suitable for the proposed new aged care home development, subject to implementation of the following recommendations, prior to site preparation and earthworks:

- Detailed sampling and/or testing in the vicinity of BH12 to delineate the extent of potential asbestos contamination.
- Sampling and testing of soils beneath the house, sheds, buildings and concrete covered areas after demolition and removal of site features and hardstand area.



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- Development of a remedial action plan (RAP) to remediate potential asbestos contaminated fill and areas with scattered ACM fragments, plus any other contamination identified through the recommended additional sampling and testing, followed by appropriate validation.

## **8.0 DATA QUALITY OBJECTIVES**

The data qualitative objectives (DQO) are qualitative and quantitative statements that specify the quality of the data required for the assessment. DQO must ensure that the data obtained is sufficient to characterise the contamination of a site and enable appropriate assessment of health and environmental risks for the current or proposed use. The DQO were developed for this assessment in accordance with National Environment Protection (Assessment of Site Contamination) Measure (NEPM) 1999 (April 2013), as well as in accordance with the Australian Standard “*Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 1: Non-volatile and semi-volatile compounds*” (AS4482.1-2005) and “*Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 2: Volatile substances*” (AS4482.2-1999). The DQO process adopted is outlined below:

### **State the Problem**

The site primarily comprises a former nursing home, and two disused residential properties in the north-west corner of the site. Part of the site might have been used for carpentry activities and welding activities in the past. Part of the site was also used as a Convalescent Hospital in the past. The site also contains fill materials, houses, sheds, former buildings, fibro-cement materials, bitumen car park and concrete covered areas. As a result, the potential exists for contamination to have occurred within the site in the past and presently.

The site is proposed for a new aged care home.

The following key professional personnel were involved in the assessment:

Mr Anwar Barbhuyia	Senior Associate
Mr Saurabh Sapkota	Environmental Engineer

### **Identify the Decisions**

The decisions to be made in completing the assessment are as follows:

- Does the site, or is the site, likely to present a risk of harm to human health or the environment?
- Is the site currently suitable for the proposed end use?
- Is there any potential for groundwater contamination?
- Are there any off-site migration issues to be considered?
- Is further investigation required to adequately address the abovementioned decisions?
- Is further investigation required to delineate the extent of contamination identified?
- Does the site require remediation to ensure suitability for the proposed end use?

### **Identify Inputs to the Decisions**

The inputs into the decision process are as follows:

- Historical information (presented in Section 5.0).

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- Site operations and observation details (presented in Section 3.0).
- Judgemental sampling, targeting site features and scattered fibro-cement piece on ground surface.
- Systematic soil sampling in the open area of the residential land.
- Soil profile information obtained through the sampling phase.
- Chemical and/or physical test data on analysed samples.
- Assessment of test data/data sets against applicable soil investigation levels in the NEPM 1999 (April 2013) (Section 13.0). For asbestos assessment, the assessed soil must not contain ACM in excess of 0.04%w/w, surface soil within the site is free of visible ACM, and AF and FA in the soil is <0.001% w/w.

### **Define the Study Boundaries**

The study boundary for this assessment is defined by the boundaries of the subject site, as shown on Drawing No 20219/5-AA1, and summarised in Section 3.0 of this report.

### **Develop a Decision Rule**

The information obtained through this assessment will be used to characterise the subject site in terms of contamination issues and risk to human health and the environment. The decision rule in characterising the site will be as follows:

- The assessment criteria are the NSW EPA produced and/or endorsed criteria, as specified in Section 13.0 of this report. For asbestos assessment, the assessed soil must not contain ACM in excess of 0.04%w/w, surface soil within the site is free of visible ACM, and AF and FA in the soil is <0.001% w/w.
- The site will be deemed to potentially contain contamination “hot spots” if any of the individual concentrations exceed the assessment criteria adopted, asbestos-cement pieces are present on the surface soil, the presence of ACM in excess of 0.04%w/w in the assessed soil, or detection of AF and FA in excess of 0.001%w/w in the assessed soil.
- Further investigation, remediation and / or management will be recommended if the site is found to be contaminated.

Laboratory test results will only be accepted and considered useable for this assessment under the following conditions:

- All laboratories used are accredited by NATA for the analyses undertaken.
- All detection limits set by the laboratories fall below the assessment criteria adopted.
- Analyte concentrations in the rinsate water sample should be less than laboratory limits of reporting or should not be detected significantly (refer to Section 10.3).
- The recovery of spike concentrations in the trip spike sample is sufficient so as not to affect the reported concentrations of the soil samples when the same recovery is applied (BTEx only) (refer to Section 10.4).
- The differences between the reported concentrations of analytes in the field duplicate samples and the corresponding original samples are within accepted limits (refer to Section 10.5).

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- The differences between the reported concentrations of analytes in the inter-laboratory duplicate (split) samples and the corresponding original samples are within accepted limits (refer to Section 10.6).
- The QA / QC protocols and results reported by the laboratories comply with the requirements of the NEPM 1999 (April 2013) "*Guideline on Laboratory Analysis of Potentially Contaminated Soils*".

#### **Specify Limits on Decision Errors**

The limits on decision errors for this assessment are as follows:

- The analyte selection is based on the site history, site activities, site features, soil profile and previously identified contamination. The possibility of any other potential contaminants that would be detected through field observation (odours, staining, and colouring) during sampling may need to be included. The potential for contaminants other than those analysed is considered remote.
- The assessment criteria adopted from the guidelines stated in Section 13.0 have risk probabilities already incorporated.
- The acceptable limits for field and inter-laboratory duplicate (split) comparisons are outlined in Sections 10.5 and 10.6 of this report.
- The acceptance limits for laboratory QA/QC parameters are based on the laboratory reported acceptance limits and those stated in the NEPM 1999 (April 2013) "*Guideline on Laboratory Analysis of Potentially Contaminated Soils*".

#### **Optimise the Design for Obtaining Data**

The following measures were undertaken to ensure accurate data collection:

- The procedures adopted for location and collection of environmental samples were developed prior to implementation, in accordance with NSW EPA guidelines and current industry practice. The sampling program was designed to ensure integrity of data collection during the assessment, including decontamination techniques, sample labelling, storage, and COC protocols.

Adequate judgemental sample numbers were adopted for characterisation of soil beneath site features.

Adequate systematic sample numbers were adopted for characterisation of the open area of the disused residential land.

- The analytical program was developed prior to undertaking the sampling (based on the site history, site activities, site features and previously identified contamination) and refined on the basis of field observations (both surface and sub-surface) during the sampling phase. All potential contaminants beneath most of the site features and open area of the disused residential land have been covered.
- Only laboratories accredited by NATA for the analyses undertaken were used for this assessment. The laboratory performance is assessed through review of statistics calculated for QA samples such as blanks, spikes, duplicates and surrogates.
- The field QA/QC protocols adopted are outlined in Section 10.0 of this report. The QA/QC program incorporates preparation of traceable documentation of procedures used in the sampling and analytical program and in data validation procedures.

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### Data Quality Indicators

The performance of the assessment in achieving the DQO will be assessed through the application of Data Quality Indicators (DQI), defined as follows:

<b>Precision</b>	A quantitative measure of the variability (or reproducibility) of data.
<b>Accuracy</b>	A quantitative measure of the closeness of reported data to the "true" value.
<b>Representativeness</b>	The confidence (expressed qualitatively) that data is representative of each media present on the site.
<b>Completeness</b>	A measure of the amount of useable data from a data collection activity.
<b>Comparability</b>	The confidence (expressed qualitatively) that data can be considered equivalent for each sampling and analytical event.

An assessment of the DQI is presented in Section 9.0 (sampling) and Section 12.0 (analysis) of this report.

## 9.0 SAMPLING, ANALYSIS AND QUALITY PLAN (SAQP) AND SAMPLING METHODOLOGY

Sampling and analyses for the contamination assessment were carried out to obtain a reasonable assessment of the following:

1. Nature, location and likely distribution of soil contaminants beneath the site features and in the open area of the disused residential land at the north western corner of the site (67 Karne Street North).
2. The risks that the contaminants (if present) pose to human health or the environment under the conditions of the proposed use.

The risk of harm to human health and the environment was determined through comparison of test results with EPA produced or endorsed criteria available at the time, as discussed in Section 12.0 of this report.

As part of the DSI, judgemental sampling beneath the site features and systematic sampling in the open area of the north western corner of the site was also carried out on 6 July 2022 by the Environmental Engineer from Geotechnique, using an excavator fitted with auger.

The judgemental samples identification are summarised in the following table:

S/F No	Description	Sampling Points	Sample ID
7	Former metal shed with concrete floor	2	BH101 & BH102
9	Former chemical storage area	1	BH103
10	Carpark/bitumen/asphalt	2	BH104 & BH105
12	Former metal shed with hot water heater	1	BH106
13	Fibro-cement piece	1	FCP1
17	Concrete pathway	5	BH107 to BH111
18	Former brick building with tile roof, concrete slab remains	8	BH112 to BH119

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Two systematic sampling points (BH120 & BH121) were positioned in the open area in the disused residential land in the north western corner of the site.

As a part of the DSI, detailed sampling in the vicinity of BH12 (BH12a and BH12-1 to BH12-4) was also carried out to delineate the extent of potential asbestos contamination at BH12. During the Phase 2 CA in 2017, one asbestos-cement piece was observed in the fill profile at borehole BH12.

The borehole locations are shown on Drawing No 20219/5-AA2.

The Environmental Engineer was responsible for visually assessing the site, positioning the borehole locations as close as possible to nominated locations, supervising drilling of boreholes, recovery of soil samples and fibro-cement pieces, carrying out on-site sieve testing of soil samples with inclusions of fibro-cement pieces and detailed samples at and in the vicinity of BH12, preparation of samples for delivery to NATA accredited laboratories, and logging the sub-surface profile encountered at each borehole location.

The sampling procedures adopted were as follows:

- The borehole was drilled using an excavator fitted with an auger, over the depth interval nominated by the Environmental Engineer. The representative soil sample was recovered directly from the auger using disposable gloves.
- The auger was decontaminated prior to use in order to prevent cross contamination (refer to Section 10.2 for details of the procedures for decontamination of the auger).
- The recovered soil sample for asbestos analysis was transferred into a small plastic zip-lock bag, which was placed in a container.
- The recovered fibro-cement piece for asbestos testing was transferred into a small plastic bag and placed inside a container.

In order to measure the reproducibility of test results, duplicate and split (interlaboratory duplicates) samples were prepared for analyses. Samples were kept in labelled, laboratory supplied, glass jars (acid-washed and solvent-rinsed) and sealed with airtight, Teflon screw top lids. The fully filled jars were placed in a chilled container.

At completion of sampling, a rinsate water sample was collected and placed in a glass bottle and a vial supplied by the laboratory. The fully filled bottle and vial were labelled and placed in a chilled container. At completion of field sampling, the chilled containers were transported to our Penrith office. The chilled containers were then transferred to a refrigerator where the temperature was maintained below 4°C.

The primary samples and QA / QC samples including the trip spike sample in the chilled container were forwarded under COC conditions to the primary testing laboratory of SGS Environmental Services (SGS). Inter-laboratory duplicate (split) samples were forwarded to the secondary testing laboratory of Envirolab Services Pty Ltd (Envirolab). For asbestos testing, selected soil samples and fibro-cement piece in the container was sent to Australian Safer Environment & Technology Pty Ltd (ASET). SGS, Envirolab and ASET are NATA accredited.

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On receipt of the samples and COC, the laboratories returned the Sample Receipt Confirmation, verifying the integrity of all samples received.

Reference should be made to Table 1 in Appendix F for descriptions of the soils encountered during sampling for this assessment. Based on information from the sample locations, the sub-surface profile beneath the site features and open area of the disused residential land in the north western corner of the site is generalised as follows:

<b>Hardstand</b>	Concrete hardstand was encountered beneath site features, ranging in thickness from 70mm to 180mm below the EGL, underlain by natural clayey soil or fill materials.  Bitumen hardstand was encountered at BH104 & BH105, to a depth of 40mm below the EGL, underlain by fill materials.
<b>Fill</b>	The following 8 types of fill were encountered:  Type 1: Silty Sandy Clay, low to medium plasticity, brown was encountered in BH101, to 400mm below the EGL, underlain by natural clayey soil.  Type 2: Clayey Gravel, dark brown / black, was encountered beneath site features ranging in thickness from 40mm to 150mm, overlain by bitumen hardstand or below the EGL, and underlain by natural clayey soil.  Type 3: Silty Sand, fine to medium grained, brown, inclusion of bricks, concrete and timber, was encountered beneath site features ranging from 150mm to 200mm in thickness, overlain by bitumen hardstand or below the EGL, and underlain Type 5 fill.  Type 4: Silty Clay, medium to high plasticity, brown, red, grey, with black gravel, was encountered at BH107, 690mm thick, overlain by concrete hardstand and underlain natural clayey soil.  Type 5: Silty Sand, fine to medium grained, yellow, with or without inclusion of glass, bricks, timber and concrete, was encountered beneath site features ranging from 100mm to 200mm in thickness, overlain by Type 3 fill, concrete hardstand or below the EGL, and underlain by natural clayey soil.  Type 6: Silty Clay, medium to high plasticity, brown, with inclusion of terracotta fragments, rusted metal and asbestos fragments, was encountered at BH120, 200mm thick below the EGL, and underlain Type 7 fill.  Type 7: Silty Sandy Clay, high plasticity, yellow, was encountered at BH120, 50mm thick below the EGL and underlain natural clayey soil.  Type 8: Silty Clay, medium to high plasticity, dark grey, with gravel, was encountered beneath site features, ranging from 120mm to 160mm in thickness, overlain by concrete hardstand and underlain natural clayey soil.  Based on the contents of the fill materials, the natural soil profiles and regional geological information, it appears that all types of fill have probably been imported to the site.
<b>Topsoil</b>	Silty Clay, low to medium plasticity, brown, with root fibres, was encountered in the open area, to a depth of 200mm below the EGL, underlain by natural clayey soil
<b>Natural Soil</b>	Silty clay, medium to high plasticity, brown and red mottled grey, was encountered below concrete hardstand, topsoil or fill material across the site.

There were no obvious ash materials, fibre-cement pieces or odour in the boreholes, with the exception of the presence of a number of fibro-cement pieces in the fill profile at borehole location BH120 and one fibro-cement piece on the ground surface at borehole FCP1.

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Based on the chemical of concern mentioned in Section 7.0, discrete fill and topsoil, samples were analysed for Metals (arsenic, cadmium, chromium, copper, mercury, nickel, titanium and/or zinc), TRH, BTEX, PAH, OCP, PCB, Phenols, Cyanides, VOC, Formaldehyde, and/or asbestos. A number of fibro-cement pieces found on the surface and in the boreholes were analysed for asbestos for screening purposes.

The following table provides a list of the DQI (refer to Section 8.0) for the soil sampling phase of the assessment, and the methods adopted in ensuring that the DQI were met.

DATA QUALITY INDICATOR	METHOD(S) OF ACHIEVEMENT
Completeness	Good sampling coverage beneath the site features and open area of the disused residential land. Representative coverage of potential contaminants in the site based on site history, site activities, site features, soil profile, and previously identified contamination. On site visual assessment of soils uncovered. Use of trained and qualified field staff (Section 10.1). Preparation of sample location plan. Preparation of soil profile logs. Preparation of COC records.
Comparability	Using appropriate techniques for sample recovery. Appropriate industry standard decontamination procedures adopted (Section 10.2). Experienced samplers used. Using appropriate sample storage and transportation methods.
Representativeness	Good sampling coverage beneath the site features and open area of the disused residential land. Representative coverage of potential contaminants in the site based on site history, site activities, site features, soil profile and previous identified contamination.
Precision and Accuracy	Rinsate blank water, trip spike, field duplicate, and inter-laboratory duplicate / split samples recovered or prepared (Section 10.3 to 10.6).

## 10.0 FIELD QUALITY ASSURANCE AND QUALITY CONTROL

### 10.1 Sampling Personnel

Geotechnique undertook all the sampling associated with this assessment. An Environmental Engineer from Geotechnique (Saurabh Sapkota) nominated sampling positions based on the project brief prepared by the Project Manager, supervised (full time) the drilling of boreholes, logged the soil profile encountered, recovered soil samples at a frequency determined by the sampling plan (project brief), and packed the samples (refer to Section 9.0).

Mr Sapkota has a Bachelor of Science degree and has been employed by Geotechnique as an Environmental Engineer since 2014. At commencement of employment, Mr Sapkota underwent supervised training in Geotechnique procedures for sampling and logging.



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## 10.2 Decontamination Procedures

As stated in Section 9.0, soil sampling was carried out using an excavator fitted with an auger. Representative soil samples were transferred directly from the auger to the laboratory supplied glass jar and plastic bag using disposable gloves. The stainless steel auger was decontaminated prior to use. As detailed in Sections 10.5 and 10.6, a trowel was used to divide the soil sample into two portions to prepare duplicate/split samples. Decontamination of the auger and trowel involved the following:

- Removal of soils adhering to the auger and trowel by scrubbing with a brush.
- Washing the auger and trowel thoroughly in a solution of phosphate free detergent (Decon 90) using brushes and disposable gloves.
- Rinsing the auger and trowel thoroughly with distilled water.
- Repeating the washing / rinsing steps, and rinsing with water.
- Drying the auger and trowel with a clean cloth.

A sample of the final rinsate water sample was recovered at completion of each day sampling.

## 10.3 Rinsate

A rinsate water sample (RS1) was recovered on completion of field works for soil sampling in order to identify possible cross contamination between the sampling locations.

The rinsate water sample was analysed for Metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, titanium and zinc), TRH, BTEX and PAH. The test results for the rinsate water samples are summarised in Table A. The laboratory test results certificates are included in Appendix I.

As indicated in Table A, all concentrations of analytes in the rinsate blank samples were less than the laboratory detection limits, which indicates that adequate decontamination had been carried out in the field.

## 10.4 Trip Spike

Trip spike samples are obtained from the laboratory on a regular basis, prior to conducting field sampling where volatile substances are suspected. The samples are held in the Penrith office of Geotechnique, at less than 4°C, for a period of not more than seven days. During the field work, the trip spike sample was kept in the chilled container with soil samples recovered from the site. The trip spike sample was then forwarded to the primary laboratory together with the soil samples recovered from the site.

The laboratory prepares the trip spike by adding a known amount of pure petrol standard to a clean sand sample. The sample is mixed thoroughly to ensure a relatively homogenous distribution of the spike throughout the sample. When the sample is submitted for analysis, the same procedure is adopted for testing as for the soil samples being analysed from the site.

The purpose of the trip spike is to detect any loss or potential loss of volatiles from the soil samples during field work, transportation, sample extraction or testing.



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One trip spike sample (TS1) was forwarded to the primary analytical laboratory with the samples collected from the site, and was tested for BTEX. The test results for the trip spike, reported as a percentage recovery of the applied and known spike concentrations, are shown in Table B. The laboratory test results certificates are included in Appendix I.

As indicated in Table B, the results show a good recovery of the spike concentrations, ranging between 104% and 107%, which are within the acceptable ranges (70% to 130%). Furthermore, there were no visible or olfactory indications of hydrocarbon contamination.

Based on the above, it is considered that any loss of volatiles from the recovered samples that might have occurred would not affect the outcome / conclusions of this report.

### 10.5 Duplicate Samples

A field duplicate sample was prepared in the field through the following processes:

- A larger than normal quantity of soil was recovered from the sample location selected for duplication.
- The sample was placed in a decontaminated stainless bowl and divided into two portions using the decontaminated trowel.
- One portion of the sub-sample was immediately transferred using the decontaminated trowel into a labelled, laboratory supplied, 250ml glass jar, and sealed with an airtight Teflon screw top lid. The fully filled jar was labelled as the duplicate sample and immediately placed in a chilled container.
- The remaining portion was stored in the same way and labelled as the original sample.

Duplicate samples were prepared on the basis of sample numbers recovered during the field work. The duplicate sample frequency was computed using the total number of samples analysed as part of this assessment. The duplicate sample frequencies computed for soil samples are as follows:

Metals:	26 samples analysed;	2 duplicates;	7.7% frequency
TRH/BTEX	17 samples analysed;	1 duplicate;	5.9% frequency
PAH	17 samples analysed;	1 duplicate;	5.9% frequency
OCP	18 samples analysed;	1 duplicate;	5.6% frequency
PCB	16 samples analysed;	1 duplicate;	6.3% frequency
Phenols	15 samples analysed;	2 duplicates;	13% frequency
Cyanides	15 samples analysed;	1 duplicate;	6.7% frequency

The duplicate frequency adopted complies with the Schedule B3 Guideline on Laboratory Analysis of Potentially Contaminated Soils of the NEPM 1999 (April 2013), which recommends a duplicate frequency of at least 5%.

The duplicate sample test results are presented with the analytical reports in Appendix I, and summarised in Tables C1 and C2.

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A comparison was made of the laboratory test results for the duplicate samples with the original samples and the Relative Percentage Differences (RPD) were computed to assess the accuracy of the laboratory test procedures. RPD within 30% are generally considered acceptable. However, this variation can be higher for organic analysis than for inorganics, and for low concentrations of analytes or non-homogeneous samples.

As shown in Tables C1 and C2, the comparisons between the duplicate and corresponding original sample indicated acceptable RPD.

Based on the above, it is concluded that the laboratory test data provided by SGS are of adequate accuracy and reliability for this assessment.

#### **10.6 Inter-laboratory Duplicate (Split) Samples**

The inter-laboratory duplicate (split) sample provides a check on the analytical performance of the primary laboratory. The split sample was prepared in the same manner as the duplicate sample. Reference should be made to Section 10.5. The split sample was prepared on the basis of sample numbers recovered during field work and the analyses undertaken by the primary laboratory. Split samples were submitted for analysis to a secondary laboratory (Envirolab).

The split sample frequency was computed using the total number of samples analysed as part of this assessment. The split sample frequencies computed for soil samples are as follows:

Metals:	26 samples analysed;	2 splits ;	7.7% frequency
TRH/BTEX	17 samples analysed;	2 splits ;	12% frequency
PAH	17 samples analysed;	2 splits;	12% frequency
OCP	18 samples analysed;	2 splits;	11% frequency
PCB	16 samples analysed;	2 splits;	13% frequency
Phenols	15 samples analysed;	2 splits;	13% frequency
Cyanides	15 samples analysed;	2 splits;	13% frequency

The split sample frequency adopted complies with the Schedule B3 of the NEPM 1999 (April 2013), which recommends a frequency of 5%.

The laboratory certificates of analysis from Envirolab are included in Appendix I of this report. The results are also summarised in Tables D1 and D2.

Based on Schedule B3 of the NEPM 1999 (April 2013), the difference in the results between the split samples should generally be within 30% of the mean concentration determined by both laboratories, i.e., RPD should be within 30%. However, this variation can be higher for organic analysis than for inorganics and for low concentrations of analytes or non-homogeneous samples.

As shown in Tables D1 and D2, the comparisons between the splits and corresponding original samples indicated generally acceptable RPD, with the exception of RPD for arsenic. This is considered to be due to the low concentrations detected.

Both the concentrations with RPD in excess of 30% in the split pairs were less than the relevant assessment criteria.

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Based on the above, the variation is not considered critical. Based on the overall split sample numbers and comparisons, it is concluded that the test results provided by the primary laboratory are deemed reliable for this assessment.

#### **11.0 LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL**

Geotechnique uses only laboratories accredited by the NATA for chemical analyses. The laboratory must also incorporate quality laboratory management systems to ensure trained analysts using validated methods and suitably calibrated equipment to produce reliable results.

In addition to the QC samples, the laboratory must also ensure that all analysts receive certification as to their competence in carrying out the analysis, and participate in national and international proficiency studies.

SGS and Envirolab are both accredited by NATA and operate a Quality System designed to comply with ISO/IEC 17025. For asbestos testing, ASET was also used for this assessment, which is accredited by NATA, and operates a Quality System designed to comply with ISO / IEC 17025.

The recovered discrete soil samples were generally analysed within the allowable holding times detailed in Schedule B3 of the NEPM 1999 (April 2013). It should be noted that there is no specific holding time for asbestos analysis. The rinsate sample was analysed within the allowable holding times for water detailed in Standard Methods for the Examination of Water and Wastewater (APHA).

The test methods adopted by the laboratory are indicated with the laboratory test results certificates in Appendix I. As part of the analytical run for the project the laboratory included laboratory blanks, duplicate samples, laboratory control samples, matrix spikes, and/or surrogate spikes.

We have checked the QA/QC procedures and results adopted by the laboratories against the appropriate guidelines. The QC sample numbers adopted by SGS and Envirolab are considered adequate for the analyses undertaken.

The methods used by SGS, Envirolab and ASET have been validated as recommended in the NEPM and ANZECC guidelines and endorsed by NATA.

The samples analysed for TPH (C<sub>6</sub>–C<sub>9</sub>) and/or BTEX were extracted by the purge and trap method recommended by the NSW EPA.

All reported laboratory Limits of Reporting (LOR) / Practical Quantitation Limits (PQL) were less than the assessment criteria adopted for each analyte or analyte group.

Overall, the QC elements adopted by SGS and Envirolab indicate that the analytical data falls within acceptable levels of accuracy and precision for analysis of soil. The analytical data provided is therefore considered to be reliable and useable for this assessment.

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## 12.0 QA/QC DATA EVALUATION

The following table provides a list of the DQI for the analytical phase of the assessment, and the methods adopted in ensuring that the DQI were met:

DATA QUALITY INDICATOR	METHOD(S) OF ACHIEVEMENT
Data Completeness	Laboratory sample receipt information received confirming receipt of samples intact and appropriate COC. Analysis for all potential contaminants of concern in the site. NATA registered laboratory analytical reports / certificates of analysis provided.
Data Comparability	Use of NATA registered laboratories. Test methods consistent for each sample. Test methods comparable between primary and secondary laboratory. Acceptable RPD between original samples and field duplicates and inter-laboratory duplicate / split samples.
Data Representativeness	Representative coverage of potential contaminants in the site based on site history, site activities, site features, and soil profile. Adequate duplicate, split, trip spike and rinsate sample numbers. Adequate laboratory internal QC and QA methods, complying with the NEPM.
Data Precision and Accuracy	Acceptable concentrations in rinsate blank water sample. Acceptable recoveries of spike concentrations in trip spike sample. Acceptable RPD for duplicate comparison. Acceptable RPD for inter-laboratory duplicate / split sample comparison overall. Appropriate and validated laboratory test methods used. Adequate laboratory performance based on results of the blank samples, duplicates, surrogate spike samples, control samples and/or matrix spike samples.

Based on the above, it is considered that the QA and QC DQI have been complied with, both in the field and in the laboratory. As such, it is concluded that the laboratory test data obtained as part of this assessment is reliable and useable for this assessment.

## 13.0 ASSESSMENT CRITERIA

Investigation levels and screening levels developed in the NEPM 1999 (April 2013) were used in this assessment, as follows:

- Risk-based HIL for a broad range of metals and organic substances. The HIL are applicable for assessing human health risk via all relevant pathways of exposure. The HIL as listed in Table 1A(1) of Schedule B1 "Guideline on Investigation Levels for Soil and Groundwater" are provided for different land uses and applicable to the top 3m of soil for residential use.

We understand that the proposed development includes demolition of existing structures and construction of a new aged care facility with basement car park. Therefore, with regard to human health, analytical results were assessed against risk based HIL for *residential with minimal opportunities for soil access* (HIL B).

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- HSL for selected petroleum compounds, fractions and Naphthalene are applicable for assessing human health risk via inhalation pathway. The HSL depend on specific soil physicochemical properties, land use scenarios and the characteristics of building structures. The HSL listed in Table 1A(3) of Schedule B1 “*Guideline on Investigation Levels for Soil and Groundwater*” apply to different soil types and depths below surface to >4 m.

For this assessment, the analytical results were assessed against the available HSL for *high density residential* (HSL B) for clay to depth of 0m to <1m and sand (and gravel) to depth of 0m to <1m.

- ESL for selected petroleum hydrocarbon compounds, TRH fractions and Benzo(a)Pyrene are applicable for assessing the risk to terrestrial ecosystems. ESL listed in Table 1B(6) of Schedule B1 “*Guideline on Investigation Levels for Soil and Groundwater*” broadly apply to coarse and fine-grained soils and various land uses and are generally applicable to the top 2m of soil.

The analytical results were assessed against the available ESL for *urban residential* for fine-grained soil (clay) and coarse-grained soil (sand/gravel).

- EIL, a specific type of SQG for selected metals, is applicable for assessing the risk to terrestrial ecosystems. EIL listed in Table 1B(1-5) of Schedule B1 “*Guideline on Investigation Levels for Soil and Groundwater*” depend on specific soil physicochemical properties and land use scenarios and generally apply to the top 2m of soil. For arsenic and lead, generic EIL are adopted, for *urban residential* land use for aged contamination. For other metals, where available, EIL are calculated using the EIL calculator developed by CSIRO for NEPC.

For this assessment, the analytical results were assessed against the available SQG / EIL for *urban residential* land use for aged contamination in soil for low traffic volume.

For DDT and Naphthalene, generic EIL are adopted, for *urban residential* land use for fresh contaminants.

For discrete soil samples, the individual concentrations of analytes were assessed against the HIL B / HSL B / ESL / EIL.

For asbestos, the assessed soil must not contain ACM in excess of 0.04%w/w, surface soil within the site is free of visible ACM, and AF and FA in the soil is <0.001% w/w.

The site will be deemed contaminated or containing contamination “hot spots” if the above criteria are unfulfilled. Further investigation, remediation and/or management will be recommended if the area of concern is found to be contaminated or containing contamination “hot spots”.

The adopted assessment criteria for the soil samples are detailed in Tables E1 to E4 and F to J.

## **14.0 FIELD & LABORATORY TEST RESULTS, ASSESSMENT & DISCUSSION**

### **14.1 Field Results**

Details of the sub-surface conditions encountered during field work for this assessment are presented in Table 1 - Borehole logs in Appendix E of this report. As discussed in Section 6.0, the general soil profile comprises fill materials underlain by natural clayey soil. Topsoil was encountered at one location in the disused residential area, underlain by natural clayey soil.

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The boreholes did not reveal any visual evidence of asbestos or other indicators of significant contamination, such as staining, odours, or significant foreign matter, with the exception of the presence of fibro-cement pieces in the fill profile at BH120 and one fibro-cement piece on the ground surface at FCP1. No other fibro-cement pieces were observed on the ground surface at FCP1.

## **14.2 Analytical Results**

Reference may be made to Appendix I for the actual laboratory analytical reports from SGS and ASET. The test results are also presented in Tables E1 to E4 and F to K together with the assessment criteria adopted. A discussion of the test data is presented in the following sub-sections:

### **14.2.1 Metals (As, Cd, Cr, Cu, Pb, Hg, Ni, Ti & Zn)**

Test results for CEC and pH were adopted to calculate EIL in Tables E1 to E4.

The Metals test result for discrete fill samples, topsoil sample and natural soil samples immediately below the concrete layer in the site features are presented in Tables E1 to E4, and as indicated, all concentrations of Metals were below the relevant available EIL and HIL B.

### **14.2.2 TRH and BTEX**

The TRH and BTEX test results for selected discrete fill samples and selected natural soil samples immediately below the concrete layer in the site features are presented in Table F. As shown, the concentrations of F1 (TRH C6-C10 less BTEX), F2 (TRH >C10-C16 less Naphthalene), F3 (TRH >C16-C34), F4 (TRH >C34-C40) and BTEX were below the relevant HSL B and / or ESL adopted. Moreover, most of the test results were below the laboratory LOR.

### **14.2.3 Polycyclic Aromatic Hydrocarbons (PAH)**

The PAH test results for selected discrete fill samples and selected natural soil samples immediately below the concrete layer in the site features are presented in Table G. As shown, concentrations of Benzo(a)Pyrene, Benzo(a)Pyrene TEQ, Naphthalene and Total PAH were well below the relevant HIL B, ESL, HSL B, or EIL adopted, with the exception of the highlighted Benzo(a)pyrene (BaP) concentration in fill sample BH105. The highlighted BaP concentration marginally exceeded the relevant ESL.

The elevated BaP concentration (0.9mg/kg) might impact on terrestrial ecosystems due to the exceedance of relevant ESL (0.7mg/kg). However, as BH105 is located within the footprint of the proposed building, ESL will no longer be applicable for that location. Hence the marginally elevated BaP concentration in BH105 is not considered an issue.

The proposed development plan of the site is included in the report.

### **14.2.4 Organochlorine Pesticides (OCP)**

The OCP test results for discrete fill samples and topsoil sample are presented in Table H and as indicated, all concentrations of OCP were well below the relevant HIL B. Concentrations of DDT were also below the EIL. Moreover, most of the test results test results were below the laboratory LOR.

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#### **14.2.5 Polychlorinated Biphenyls (PCB)**

The PCB test results for selected discrete fill samples are presented in Table H and as indicated, the concentrations of PCB were below the relevant HIL B adopted as well as below the laboratory LOR.

#### **14.2.6 Cyanides**

The Cyanides test results for the selected discrete fill samples are presented in Table H and as indicated, the concentrations of Cyanides were well below the relevant HIL B adopted. Moreover, most of the test results were below the laboratory LOR.

#### **14.2.7 Phenols**

The Phenols test results for the selected discrete fill samples and selected natural soil samples immediately below the concrete layer in the site features are presented in Table H and as indicated, the concentrations of Phenols were well below the relevant HIL B adopted, as well as below the laboratory LOR.

#### **14.2.8 Volatile Organic Compounds (VOC)**

The VOC test results of selected discrete fill samples and selected natural soil samples immediately below the concrete layer in the site features are presented in the SGS Laboratory Analytical Report (Ref: SE234102) in Appendix I and as indicated, the concentrations of all VOC were below the laboratory LOR.

#### **14.2.9 Asbestos**

The asbestos test results for the selected discrete fill samples, where demolition waste and/or fibro-cement pieces were encountered in the fill profile or fibro-cement piece was observed on the ground surface of the sampling location, are presented in Table I. As indicated, FA in excess of 0.001%w/w was found in the fill sample at BH120, which present a risk of harm to human health due to the exceedance of relevant Health Screening Level (HSL) for Residential setting.

However, FA 0.0002% w/w was detected in the surface fill sample at borehole location BH115, which can remain in the site, as the level is below the relevant HSL for Residential setting 0.001% w/w. As borehole location BH115 is located in the proposed basement car park area, the soil at and in the vicinity of BH115 must be disposed at a landfill facility as asbestos waste during bulk earthworks.

The asbestos test results for the fibro-cement pieces observed in the fill profile at BH120 and on the ground surface at FCP1 contained ACM, as also indicated in Table I, which presents a potential risk of harm to human health as these fragments may release asbestos dust or fibres if tooled, cut, etc.

However, as no asbestos-cement pieces were observed on the ground surface at and in the vicinity of FCP1 after collecting the asbestos-cement piece for laboratory testing, asbestos is no longer an issue at FCP1.

#### **14.2.10 Asbestos Sieve Test**

In total, five samples were recovered for on-site sieving test in accordance with gravimetric procedures as per NEPM 1999 (April 2013), at and in the vicinity of the previously identified asbestos contaminated location BH12, where one asbestos-cement piece was observed in the fill profile. One fill sample at



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BH120 was also recovered for on-site sieving test, where a number of fibro-cement pieces were observed in the fill profile during the updated DSI.

The on-site sieving test results for asbestos are presented in Table J.

As indicated in Table J, the concentrations of ACM in all five soil samples recovered at and in the vicinity of BH12 (each about 10L volume) were equal to zero. Therefore, asbestos is no longer an issue at BH12.

As also indicated in Table J, bonded ACM in excess of 0.04%w/w was detected in the fill materials at BH120 (0.308%w/w), which presents a potential risk of harm to human health as these fragments may release asbestos dust or fibres if tooled, cut, etc.

#### **14.2.11 Formaldehyde**

As presented in Table K, the Formaldehyde concentrations for the selected discrete fill samples and selected natural soil samples immediately below the concrete layer in the site features were less than the laboratory LOR.

### **15.0 CONCLUSION AND RECOMMENDATIONS**

The DQO outlined in the report have been satisfied. The findings of the Phase 2 CA and updated DSI are summarised as follows:

- The site primarily comprises a former nursing home, and two disused residential properties in the north-west corner of the site.
- We understand that the proposed development includes demolition of existing structures, and construction of a new aged care facility with basement car park.
- The general soil profile comprises fill materials overlying natural clayey soil and siltstone bedrock. Topsoil underlain by natural clayey soil and siltstone bedrock was encountered at a couple of locations. The boreholes and test pits did not reveal any visual evidence of asbestos or other indicators of significant contamination, such as staining, odours or significant foreign matter, with the exception of the presence of one fibro-cement piece in the fill profile at borehole BH12, one fibro-cement piece on the ground surface at borehole FCP1, and a number of fibro-cement pieces in the fill profile at borehole BH120. The laboratory confirmed that the fibro-cement pieces within the fill profile at BH12 and BH120, and on the surface at FCP1 contained ACM. As no asbestos-cement pieces were observed on the ground surface at and in the vicinity of FCP1 after collecting the asbestos-cement piece for laboratory testing, asbestos is no longer considered an issue for the location FCP1.
- As presented in summary Tables E1 to E4, F to I and K, and discussed in Section 14.2, all the laboratory test results satisfied the criteria for stating that the analytes selected are either not present, i.e. concentrations less than laboratory LOR, or present in the sampled soil at concentrations that do not pose a risk of hazard to human health or the environment under a “residential with minimal opportunities for soil access” form of development, with the exception of asbestos (AF) contamination in the fill profile at borehole location BH120, as shown on Drawing No 20219/5-AA3. Asbestos (AF) presents a risk of harm to human health due to the exceedance of relevant HSL for a Residential setting.



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- As presented in summary Table J and discussed in Section 14.2, on-site sieving test in accordance with gravimetric procedures as per NEPM 1999 (April 2013) indicated that the concentrations of ACM in all soil samples recovered from at and in the vicinity previously identified asbestos contaminated location BH12 were equal to zero. Therefore, asbestos is no longer an issue for the location BH12. On-site sieving tests at borehole BH120 indicated that the bonded ACM fragments were in excess of relevant HSL for a residential setting in the fill materials, as shown on Drawing No 20219/5-AA3. Bonded ACM fragments present a potential risk of harm to human health as these fragments may release asbestos dust or fibres if tooled, cut, etc.

Based on this assessment, in our opinion, the site is considered suitable for the proposed new aged care facility, development subject to implementation of the following recommendations prior to earthworks:

- Detailed sampling and/or testing in the vicinity of BH120 to delineate the extent of asbestos contamination.
- Sampling and testing of soils beneath the houses, building and concrete covered areas after demolition and removal of site features.
- Development of a RAP to remediate asbestos contaminated fill plus any other contamination identified through the recommended additional sampling and testing, followed by appropriate validation.

FA 0.0002% w/w was detected in the surface fill sample at borehole location BH115, which can remain in the site, as the level is below the relevant HSL for Residential setting 0.001% w/w. As borehole location BH115 is located in the proposed basement car park area, the soil at and in the vicinity of BH115 must be disposed at a landfill facility as asbestos waste during bulk earthworks.

If any suspect materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos sheets/pieces/pipes, ash material, etc.) are encountered between the sampling locations during any stage of future earthworks/site preparation/demolitions, the Unexpected Finds Management Protocol (Appendix J) should be implemented. In the event of contamination, detailed assessment, remediation and validation will be necessary.

For any materials to be excavated and removed from the site, it is recommended that waste classification of the materials, in accordance with the "Waste Classification Guidelines Part 1: Classifying Waste" (NSW EPA 2014), NSW EPA resource recovery exemptions and orders under the POEO (Waste) Regulation 2014, or NSW EPA Certification: Virgin excavated natural material is undertaken prior to disposal at an appropriately licensed landfill or potential re-use at other sites.

Any imported soil (fill) must be assessed by a qualified environmental consultant prior to importation, to ensure suitability for the proposed use. In addition, the imported fill must not contain asbestos or ash, be free of unusual odour, not be discoloured, and not acid sulphate soil or potential acid sulphate soil. The imported fill should either be virgin excavated natural material (VENM) or excavated natural material (ENM).

## **16.0 LIMITATIONS**

Within the scope of work outlined in our fee proposal dated 2 June 2022 (Reference Q-Revised-Narwee), the services performed by Geotechnique were conducted in a manner consistent with the level of quality and skill generally exercised by members of the profession and consulting practice.

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20219/5-AA  
Lots D & C DP403467, Lot 2 DP518877 and Lots 2 & 3 DP16063  
59-67 Karne Street North, Narwee

To the best of our knowledge, all information obtained and contained in this report is true and accurate. No further investigation has been carried out to authenticate the information provided. Supporting documentation was obtained where possible, some of which is contained in this report.

This report has been prepared for Cyre Projects Pty Ltd for the purposes stated within. Canterbury Bankstown City Council may rely upon the report for development and/or construction application determinations. Reliance on this report by other parties shall be at such parties' sole risk as the report might not contain sufficient information for other purposes

This report shall only be presented in full, and may not be used to support any objective other than those set out in the report, except where written approval is provided by Geotechnique Pty Ltd.

The information in this report is considered accurate at the completion of field sampling (6 June 2022). Any variations to the site form or use beyond that date will nullify the conclusion stated.

Whilst the assessment conducted at the site was carried out in accordance with current NSW guidelines, the potential always exists for contaminated soils to be present between sampled locations.

Presented in Appendix K is a document entitled "Environmental Notes", which should be read in conjunction with this report.

**LIST OF REFERENCES**

*Australian Standard "Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 1: Non-volatile and semi-volatile compounds" (AS4482.1-2005)*

*Australian Standard "Guide to the Sampling and Investigation of Potentially Contaminated Soil Part 2: Volatile substances" (AS4482.2-1999)*

*Contaminated Land Management Act 1997*

*Contaminated Land Management Regulation 1998*

*Contaminated Sites: Guidelines for Assessing Former Orchards and Market Gardens – Department of Environment and Conservation (NSW) 2005*

*Contaminated Sites: Consultants Reporting on Contaminated Land – NSW Environment Protection Authority 2020*

*Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd Edition) –NSW EPA 2017*

*Contaminated Sites: Sampling Design Guidelines - NSW Environment Protection Authority 1995*

*Geology of the Sydney 1:100,000 Sheet (9130) – Geological Survey of New South Wales, Department of Minerals and Energy 1983*

*National Environment Protection (Assessment of Site Contamination) Measure – National Environmental Protection Council (NEPM) 1999 (April 2013)*

*NHMRC 2008, National Guidelines for Managing Risk in Recreational Waters, Australian Government National Health and Medical Research Council (NHMRC).*

*Protection of the Environment Operations (Waste) Regulation 2005 – General Exemption Under Part 6, Clause 51 and 51A – The Excavated Natural Material Exemption & Order 2014*

*Soil Landscape of the Sydney 1:100,000 Sheet (9130) – Soil Conservation Service Survey of NSW 1983*

*Standard Methods for the Examination of Water and Wastewater – American Public Health Association (APHA) 2017*

*State Environmental Planning Policy (Resilience and Hazards, 2021) under the Environmental Planning and Assessment Act 1979*

*Waste Classification Guidelines Part 1: Classifying Waste - NSW DECC (November 2014)*

## **DRAWINGS**

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<i>Drawing No 20219/5-AA1</i>	<i>Lot Layout and Updated Site Features</i>
<i>Drawing No 13977/1-AA1</i>	<i>Lot layout &amp; Site Features</i>
<i>Drawing No 13977/2-AA1</i>	<i>Borehole, Test Pit and Sample Locations</i>
<i>Drawing No 13977/2-AA2</i>	<i>Locations of Concern</i>
<i>Drawing No 20219/5-AA2</i>	<i>Borehole Locations</i>
<i>Drawing No 20219/5-AA3</i>	<i>Revised Location of Contamination</i>





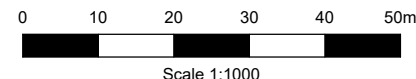
S/F#	Description
1	Possible fibro house with metal roof
2	Possible fill area
3	Grassed area
4	Metal shed/hazardous chemicals
5	Plastic sheeting
6	Brick building with metal roof
7	Former metal shed with concrete floor
8	Former aviary/chicken pen
9	Former chemical storage area
10	Carpark/bitumen/asphalt
11	Former black rubbish bag, bag with asbestos, and scattered asbestos pieces
12	Former metal shed with hot water heater
13	Fibro-cement piece
14	Former rubbish covered with blue tarpaulin
15	Former plastic foam/mulch
16	Former solar panels
17	Concrete pathway
18	Former brick building with tile roof, concrete slab remains
19	Former fibro-cement eaves lining adjacent to gutter (underneath the roof perimeter for both buildings)
20	Fibro building/asbestos roof
21	Fibro building/tiled roof
22	Shipping container
23	Temporary relocatable house/shed

S/F#: Site Feature Number

## LEGEND

- # Site Feature Number
- Slope

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## NOTES

- Site features are indicative and are not to scale.
- This drawing has been produced using a base plan provided by others to which additional information e.g test pits, borehole locations or notes have been added. Some or all of the plan may not be relevant at the time of producing this drawing

Cyre Projects Pty Limited  
Proposed Aged Care Facility  
Lots C & D DP403467, Lot 2 DP518877, Lots 2 & 3 DP16063  
59-67 Karne Street North, Narwee

Lot Layout and Updated Site Features

Drawing No: 20219/5-AA1  
Job No: 20219/5  
Drawn By: MH  
Date: 12 August 2022  
Checked By: SS/AB

File No: 20219-5  
Layers: 0, AA1





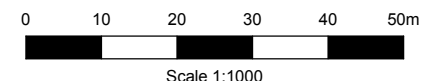
S/F#	Description
1	Possible fibro house with metal roof
2	Possible fill area
3	Grassed area
4	Metal shed/hazardous chemicals
5	Plastic sheeting
6	Brick building with metal roof
7	Metal shed with concrete floor
8	Aviary/chicken pen
9	Chemical storage area
10	Carpark/bitumen/asphalt
11	Black rubbish bag, bag with asbestos, and scattered asbestos pieces
12	Metal shed with hot water heater
13	Scattered asbestos pieces
14	Rubbish covered with blue tarpaulin
15	Plastic foam/mulch
16	Solar panels
17	Concrete pathway
18	Brick building with tile roof
19	Fibro-cement eaves lining adjacent to gutter (underneath the roof perimeter for both buildings)

S/F#: Site Feature Number

# LEGEND

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- # Site Feature Number  
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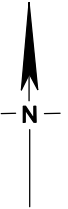
Nix Anderson Pty Ltd  
 Proposed New Ages Care Home  
 Lots D & C DP403467, Lot 2 DP518877 & Lot 2 DP16063  
 59-65 Karne Street North, Narwee

## Lot Layout & Site Features

Drawing No: 13977/1-AA1  
 Job No: 13977/1  
 Drawn By: MH  
 Date: 30 March 2017  
 Checked By: AB/SS

File No: 13977-1  
 Layers: 0, AA1





#### LEGEND

- Borehole
- Test Pit
- Sample

Imagery ©2017 NearMap.com

0 10 20 30 40 50m

Scale 1:1000



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Nix Anderson Pty Ltd  
Proposed New Ages Care Home  
Lots D & C DP403467, Lot 2 DP518877 & Lot 2 DP16063  
59-65 Karne Street North, Narwee

Borehole, Test Pit and Sample Locations

Drawing No: 13977/2-AA1  
Job No: 13977/2  
Drawn By: MH  
Date: 30 March 2017  
Checked By: AB/SS

File No: 13977-2  
Layers: 0, AA1



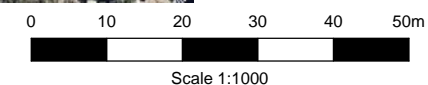


Sample Location	Depth (m)	Concern
BH12	0.16-0.36	Asbestos Containing Material (ACM) fragments
FCP1	Surface	ACM fragments
FCP2	Surface	ACM fragments
FCP3	Surface	ACM fragments

#### LEGEND

- Borehole
- Sample

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Nix Anderson Pty Ltd  
Proposed New Ages Care Home  
Lots D & C DP403467, Lot 2 DP518877 & Lot 2 DP16063  
59-65 Karne Street North, Narwee

Locations of Concern

Drawing No: 13977/2-AA2  
Job No: 13977/2  
Drawn By: MH  
Date: 11 April 2017  
Checked By: AB

File No: 13977-2  
Layers: 0, AA2

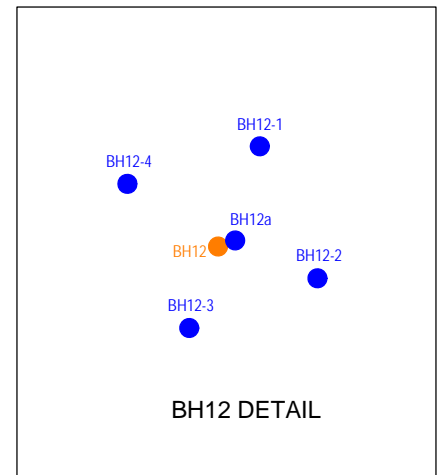
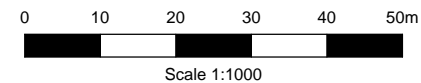




# LEGEND

- Borehole
- Borehole (March 2017)

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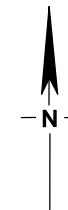
Cyre Projects Pty Limited  
Proposed Aged Care Facility  
Lots C & D DP403467, Lot 2 DP518877, Lots 2 & 3 DP16063  
59-67 Karne Street North, Narwee

## Borehole Locations

Drawing No: 20219/5-AA2  
Job No: 20219/5  
Drawn By: MH  
Date: 12 August 2022  
Checked By: SS/AB

File No: 20219-5  
Layers: 0, AA2





Location of Contamination	Depth (m)	Contaminant	Concentration
BH120	0-0.15	Asbestos (bonded ACM fragments)	<b>0.308% w/w</b>
BH120	0-0.15	Asbestos (<7mm FA)	<b>0.034% w/w</b>
<b>Assessment Criteria</b>	<b>0.04% w/w</b> for ACM in soil for residential land use  <b>0.001% w/w</b> for AF & FA in soil  <b>No visual asbestos (ACM)</b> for surface soil		

Notes:

ACM: Asbestos Containing Material

AF / FA: Asbestos Fine / Fibrous Asbestos

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# LEGEND

● Borehole

0 10 20 30 40 50m

Scale 1:1000



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Cyre Projects Pty Limited  
Proposed Aged Care Facility  
Lots C & D DP403467, Lot 2 DP518877, Lots 2 & 3 DP16063  
59-67 Karne Street North, Narwee

Revised Location of Contamination

Drawing No: 20219/5-AA3  
Job No: 20219/5  
Drawn By: MH  
Date: 12 August 2022  
Checked By: AB

File No: 20219-5  
Layers: 0, AA3

## TABLES

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<i>Table A</i>	<i>Rinsate</i>
<i>Table B</i>	<i>Trip Spike</i>
<i>Tables C1 &amp; C2</i>	<i>Duplicate Samples</i>
<i>Tables D1 &amp; D2</i>	<i>Split Samples</i>
<i>Tables E1 to E4</i>	<i>Metals, Cation Exchange Capacity (CEC) &amp; pH Test Results – Discrete Samples</i>
<i>Table F</i>	<i>Total Recoverable Hydrocarbons (TRH) &amp; BTEX Test Results – Discrete Samples</i>
<i>Table G</i>	<i>Polycyclic Aromatic Hydrocarbons (PAH) Test Results – Discrete Samples</i>
<i>Table H</i>	<i>Organochlorine Pesticides (OCP), Polychlorinated Biphenyls (PCB), Phenols &amp; Cyanides Test Results – Discrete Samples</i>
<i>Table I</i>	<i>Asbestos Test Results –Discret Samples</i>
<i>Table J</i>	<i>Asbestos In-Situ Sieving Test Results</i>
<i>Table K</i>	<i>Formaldehyde Test Results – Discrete Samples</i>

**TABLE A**  
**RINSATE**  
**(Ref No: 20219/5-AA)**

SAMPLE DATE	RS1 06/07/2022
<b>METAL</b>	<b>(mg/L)</b>
Arsenic	<0.02
Cadmium	<0.001
Chromium	<0.005
Copper	<0.005
Lead	<0.02
Mercury	<0.0001
Nickel	<0.005
Titanium	<0.005
Zinc	<0.01
<b>TOTAL RECOVERABLE HYDROCARBON (TRH)</b>	<b>(µg/L)</b>
F1 (C6-C10 less BTEX)	<50
F2 (>C10-C16)	<60
F3 (>C16-C34)	<500
F4 (>C34-C40)	<500
<b>BTEX</b>	<b>(µg/L)</b>
Benzene	<0.5
Toluene	<0.5
Ethyl Benzene	<0.5
Xylenes	<1.5
<b>POLYCYCLIC AROMATIC HYDROCARBON (PAH)</b>	<b>(µg/L)</b>
Total PAH	<1
Naphthalene	<0.1
Benzo(a)Pyrene	<0.1

**TABLE B**  
**TRIP SPIKE**  
**(Ref No: 20219/5-AA)**

Sample	Sampling Date	BTEX			
		Benzene	Toluene	Ethylbenzene	Xylenes
TS1	06/07/2022	107%	106%	104%	104%

Note : results are reported as percentage recovery of known spike concentrations

**TABLE C1**  
**DUPLICATE SAMPLE**  
**(Ref No: 20219/5-AA)**

<b>ANALYTE</b>	<b>BH114 0.15-0.25 (m) mg/kg</b>	<b>DDS1 mg/kg</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD) %</b>
Arsenic	6	5	18
Cadmium	<0.3	<0.3	-
Chromium	17	13	27
Copper	15	15	0
Lead	13	10	26
Mercury	<0.05	<0.05	-
Nickel	1.6	1.6	0
Titanium	<10	<10	-
Zinc	13	11	17
<b>Phenols</b>	<5	<5	-



**TABLE C2**  
**DUPLICATE SAMPLE**  
**(Ref No: 20219/5-AA)**

<b>ANALYTE</b>	<b>BH101 0.0-0.15 (m) mg/kg</b>	<b>DDS2 mg/kg</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD) %</b>
Arsenic	16	13	21
Cadmium	0.6	0.6	0
Chromium	12	9.3	25
Copper	21	19	10
Lead	51	45	13
Mercury	4.3	4.8	11
Nickel	4.4	4	10
Titanium	22	27	20
Zinc	200	190	5
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<25	-
F3 (>C16-C34)	<90	<90	-
F4 (>C34-C40)	<120	<120	-
<b>BTEX</b>			
Benzene	<0.1	<0.1	-
Toluene	<0.1	<0.1	-
Ethyl Benzene	<0.1	<0.1	-
Xylenes	<0.3	<0.3	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.3	-
Total PAH	<0.8	<0.8	-
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	<0.1	<0.1	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.15	-
Endrin	<0.2	<0.2	-
Methoxychlor	<0.1	<0.1	-
Mirex	<0.1	<0.1	-
Endosulfan (alpha, beta & sulphate)	<0.5	<0.5	-
DDD+DDE+DDT	<0.6	<0.6	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<1	-
<b>Phenols</b>	<5	<5	-
<b>Cyanides</b>	0.6	0.7	15

**TABLE D1**  
**SPLIT SAMPLE**  
**(Ref No: 20219/5-AA)**

<b>ANALYTE</b>	<b>BH112 0.14-0.3 (m) mg/kg (SGS)</b>	<b>DSS1 mg/kg (ENVIROLAB)</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD)  %</b>
Arsenic	6	4	40
Cadmium	<0.3	<0.4	-
Chromium	1.2	1	18
Copper	0.5	<1	-
Lead	2	2	0
Mercury	<0.05	<0.1	-
Nickel	0.6	<1	-
Titanium	<10	<1	-
Zinc	4	4	0
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<50	-
F3 (>C16-C34)	<90	<100	-
F4 (>C34-C40)	<120	<100	-
<b>BTEX</b>			
Benzene	<0.1	<0.2	-
Toluene	<0.1	<0.5	-
Ethyl Benzene	<0.1	<1	-
Xylenes	<0.3	<1	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS (PAH)</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.5	-
Total PAH	<0.8	<0.05	-
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	<0.1	<0.05	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	1.04	1.1	6
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.1	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<0.1	-
<b>Cyanides</b>	<0.5	<0.5	-
<b>Phenols</b>	<5	<5	-

**TABLE D2**  
**SPLIT SAMPLE**  
**(Ref No: 20219/5-AA)**

<b>ANALYTE</b>	<b>BH115 0.0-0.15 (m) mg/kg (SGS)</b>	<b>DSS2 mg/kg (ENVIROLAB)</b>	<b>RELATIVE PERCENTAGE DIFFERENCES (RPD)  %</b>
Arsenic	4	<4	-
Cadmium	<0.3	<0.4	-
Chromium	4.7	5	6
Copper	4.5	5	11
Lead	10	9	11
Mercury	4.3	4.5	5
Nickel	1.8	2	11
Titanium	<10	13	-
Zinc	31	30	3
<b>TOTAL RECOVERABLE HYDROCARBONS (TRH)</b>			
F1 (C6-C10 less BTEX)	<25	<25	-
F2 (>C10-C16)	<25	<50	-
F3 (>C16-C34)	<90	<100	-
F4 (>C34-C40)	<120	<100	-
<b>BTEX</b>			
Benzene	<0.1	<0.2	-
Toluene	<0.1	<0.5	-
Ethyl Benzene	<0.1	<1	-
Xylenes	<0.3	<1	-
<b>POLYCYCLIC AROMATIC HYDROCARBONS (PAH)</b>			
Benzo(a)Pyrene TEQ	<0.3	<0.5	-
Total PAH	<0.8	<0.05	-
Naphthalene	<0.1	<0.1	-
Benzo(a)Pyrene	<0.1	<0.05	-
<b>ORGANOCHLORINE PESTICIDES (OCP)</b>			
Hexachlorobenzene (HCB)	<0.1	<0.1	-
Heptachlor	<0.1	<0.1	-
Aldrin+Dieldrin	<0.15	<0.2	-
Endrin	<0.2	<0.1	-
Methoxychlor	<0.1	<0.1	-
Endosulfan (alpha (I), beta (II) & sulphate)	<0.5	<0.3	-
DDD+DDE+DDT	<0.6	<0.1	-
Chlordane (alpha & gamma)	<0.2	<0.2	-
<b>POLYCHLORINATED BIPHENYLS (PCB)</b>			
Total PCB	<1	<0.1	-
<b>Cyanides</b>	<0.5	<0.5	-
<b>Phenols</b>	<5	<5	-

**TABLE E1**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 20219/5-AA)**

			METAL (mg/kg)									CEC (cmol <sub>c</sub> /kg)	pH
			ARSENIC	CADMIUM	CHROMIUM (Total)	COPPER	LEAD	MERCURY	NICKEL	Titanium	ZINC		
Sample Location	Depth (m)												
BH101	0.0-0.15	Fill	16	0.6	12	21	51	4.3	4.4	22	200	12	5.2
BH104	0.04-0.08	Fill	14	<0.3	8.3	29	29	0.1	9.4	30	67	27	7.7
BH105	0.04-0.19	Fill	3	<0.3	11	18	24	<0.05	8.2	290	73	42	8.7
BH106	0.0-0.15	Fill	8	<0.3	5.3	7.1	9	0.51	8.7	110	23	15	8.2
BH108	0.15-0.25	Natural	4	<0.3	22	15	26	0.31	21	78	96	20	7.4
BH111	0.12-0.3	Fill	5	<0.3	18	20	12	<0.05	32	110	70	17	8.6
BH117	0.0-0.15	Fill	6	<0.3	16	14	19	0.54	13	79	76	29	7.2
BH120	0.0-0.15	Fill	5	0.4	12	36	370	0.11	6.9	-	230	13	6.5
BH120	0.2-0.25	Fill	3	<0.3	7.7	9.7	54	<0.05	3.6	-	83	13	7.1
BH121	0.0-0.15	Topsoil	9	<0.3	23	9.8	23	<0.05	7.5	-	23	20	7
Limit of Reporting (LOR)			1	0.3	0.5	0.5	1	0.05	0.5	10	2	0.02	0.1
NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)													
Health-based Investigation Levels (HIL) <sup>a</sup> B - Residential B			500	150	500 <sup>c</sup>	30000	1200	30 <sup>d</sup>	1200	-	60000		
Ecological Investigation Levels (EIL) <sup>b</sup> - Urban residential			100 <sup>e</sup>	-	190 <sup>f</sup>	120	1100 <sup>g</sup>	-	190	-	290		

Notes: a: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

b: EIL of aged chromium (III), copper, nickel & zinc were derived from calculation spreadsheet developed by CSIRO for NEPC; Old Suburb with Low Traffic; the lowest CEC=12 cmolc/kg & pH=5.2; the assumed clay content=1 % were selected for derivation of EIL; a conservative approach.

c: Chromium (VI)

d: Methyl Mercury

e: Generic EIL for aged arsenic

f: Chromium (III)

g: Generic added contaminant limit for aged lead .

**TABLE E2**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 20219/5-AA)**

			METAL (mg/kg)								CEC (cmol <sub>e</sub> /kg)	pH	
			ARSENIC	CADMIUM	CHROMIUM (Total)	COPPER	LEAD	MERCURY	NICKEL	Titanium			ZINC
Sample Location	Depth (m)												
BH102	0.15-0.25	Natural	14	<0.3	14	16	79	0.1	6.6	16	110	15	6.6
BH103	0.15-0.25	Natural	5	<0.3	19	13	16	<0.05	3.6	<10	17	24	7.2
BH107	0.11-0.41	Fill	6	<0.3	18	14	19	<0.05	2.9	<10	23	18	6.3
BH107	0.61-0.8	Fill	6	<0.3	12	12	17	<0.05	4.1	18	24	-	-
BH109	0.0-0.15	Fill	3	<0.3	2.6	5.7	14	22	0.9	<10	16	2	5.3
BH109	0.15-0.25	Fill	2	<0.3	1.1	0.9	2	0.69	<0.5	<10	6	1.7	5.2
BH110	0.15-0.25	Natural	7	<0.3	29	6.7	21	<0.05	4.5	21	25	9.1	6.1
BH112	0.14-0.3	Fill	6	<0.3	1.2	0.5	2	<0.05	0.6	<10	4	2.3	8.4
BH113	0.17-0.32	Natural	7	<0.3	20	14	39	0.1	5.6	20	76	10	6.5
BH114	0.15-0.25	Natural	6	<0.3	17	15	13	<0.05	1.6	<10	13	22	6.6
BH115	0.0-0.15	Fill	4	<0.3	4.7	4.5	10	4.3	1.8	21	31	19	8.6
BH115	0.2-0.4	Fill	2	<0.3	1	<0.5	1	0.48	<0.5	<10	5	1.5	8.3
BH116	0.0-0.15	Fill	4	<0.3	1.1	0.6	1	0.81	0.6	<10	4	2.6	7.8
BH119	0.07-0.17	Fill	5	<0.3	2.6	2.4	1	<0.05	1.2	17	29	17	8.6
Limit of Reporting (LOR)			1	0.3	0.5	0.5	1	0.05	0.5	10	2	0.02	0.1
NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)													
Health-based Investigation Levels (HIL) <sup>a</sup> B - Residential			500	150	500 <sup>c</sup>	30000	1200	30 <sup>d</sup>	1200	-	60000		
Ecological Investigation Levels (EIL) <sup>b</sup> - Urban residential			100 <sup>e</sup>	-	190 <sup>f</sup>	45	1100 <sup>g</sup>	-	7	-	140		

Notes:    a: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

          b: EIL of aged chromium (III), copper, nickel & zinc were derived from calculation spreadsheet developed by CSIRO for NEPC; Old Suburb with Low Traffic; the lowest CEC=1.5 cmol<sub>e</sub>/kg & pH=5.2; the assumed clay content=1 % were selected for derivation of EIL; a conservative approach.

          c: Chromium (VI)

          d: Methyl Mercury

          e: Generic EIL for aged arsenic

          f: Chromium (III)

          g: Generic added contaminant limit for aged lead .

**TABLE E3**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 20219/5-AA)**

			METAL (mg/kg)									CEC (cmol <sub>e</sub> /kg)	pH
			ARSENIC	CADMIUM	CHROMIUM (Total)	COPPER	LEAD	MERCURY	NICKEL	Titanium	ZINC		
Sample Location	Depth (m)												
BH118	0.0-0.15	Fill	4	<0.3	8.8	11	15	0.2	6.4	75	650	20	8.2
Limit of Reporting (LOR)			1	0.3	0.5	0.5	1	0.05	0.5	10	2	0.02	0.1
NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)													
Health-based Investigation Levels (HIL) <sup>a</sup> B - Residential B			500	150	500 <sup>c</sup>	30000	1200	30 <sup>d</sup>	1200	-	60000		
Ecological Investigation Levels (EIL) <sup>b</sup> - Urban residential			100 <sup>e</sup>	-	190 <sup>f</sup>	230	1100 <sup>g</sup>	-	270	-	770		

Notes: a: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

b: EIL of aged chromium (III), copper, nickel & zinc were derived from calculation spreadsheet developed by CSIRO for NEPC; Old Suburb with Low Traffic; the lowest CEC=20 cmolc/kg & pH=8.2; the assumed clay content=1 % were selected for derivation of EIL; a conservative approach.

c: Chromium (VI)

d: Methyl Mercury

e: Generic EIL for aged arsenic

f: Chromium (III)

g: Generic added contaminant limit for aged lead.

**TABLE E4**  
**METAL, CATION EXCHANGE CAPACITY (CEC) & pH TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 20219/5-AA)**

Sample Location	Depth (m)	METAL (mg/kg)									CEC (cmol <sub>e</sub> /kg)	pH
		ARSENIC	CADMIUM	CHROMIUM (Total)	COPPER	LEAD	MERCURY	NICKEL	Titanium	ZINC		
FCP1	0.0-0.15	6	0.3	8.5	12	34	0.07	4.6	36	550	13	7.2
Limit of Reporting (LOR)		1	0.3	0.5	0.5	1	0.05	0.5	10	2	0.02	0.1
<b>NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)</b>												
Health-based Investigation Levels (HIL) <sup>a</sup> B - Residential B		500	150	500 <sup>c</sup>	30000	1200	30 <sup>d</sup>	1200	-	60000		
Ecological Investigation Levels (EIL) <sup>b</sup> - Urban residential		100 <sup>e</sup>	-	190 <sup>f</sup>	220	1100 <sup>g</sup>	-	200	-	570		

Notes: a: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

b: EIL of aged chromium (III), copper, nickel & zinc were derived from calculation spreadsheet developed by CSIRO for NEPC; Old Suburb with Low Traffic; the lowest CEC=13 cmolc/kg & pH=7.2; the assumed clay content=1 % were selected for derivation of EIL; a conservative approach.

c: Chromium (VI)

d: Methyl Mercury

e: Generic EIL for aged arsenic

f: Chromium (III)

g: Generic added contaminant limit for aged lead .



**TABLE F**  
**TOTAL RECOVERABLE HYDROCARBONS (TRH) AND BTEX TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 20219/5-AA)**

Sample Location Depth (m) Soil type			NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)																															
			TRH (mg/kg)						BTEX (mg/kg)				Health Screening Levels (HSL) B High density residential						Ecological Screening Levels for fine-grained soil Urban residential						Ecological Screening Levels for coarse-grained soil Urban residential									
			F1	F2*	F2**	F3	F4		BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	F1	F2*	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	F1	F2**	F3	F4	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES	F1	F2**	F3	F4	BENZENE	TOLUENE	ETHYLBENZENE	XYLENES
BH101	0.0-0.15	Clay	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
BH103	0.15-0.25	Clay	Natural	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
BH104	0.04-0.08	Gravel	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH105	0.04-0.19	Sand	Fill	<25	<25	<25	230	280	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH106	0.0-0.15	Gravel	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH107	0.11-0.41	Clay	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
BH109	0.0-0.15	Sand	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH109	0.15-0.25	Sand	Fill	<25	40	40	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH111	0.12-0.3	Sand	Fill	<25	37	37	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH112	0.14-0.3	Sand	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH115	0.0-0.15	Sand	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH115	0.2-0.4	Sand	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH116	0.0-0.15	Sand	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH117	0.0-0.15	Gravel	Fill	<25	<25	<25	110	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH118	0.0-0.15	Gravel	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH119	0.07-0.17	Sand	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	45	110	0.5	160	55	40	-	-	-	-	-	-	-	-	180	120	300	2800	50	85	70	105
BH120	0.2-0.25	Clay	Fill	<25	<25	<25	<90	<120	<0.1	<0.1	<0.1	<0.3	50	280	0.7	480	NL	110	180	120	1300	5600	65	105	125	45	-	-	-	-	-	-	-	-
Limit of Reporting (LOR)				25	25	25	90	120	0.1	0.1	0.1	0.3																						

Notes:  
F1: C6-C10 less BTEX  
F2\*: >C10-C16 less Naphthalene  
F2\*\*: >C10-C16  
F3: >C16-C34  
F4: >C34-C40  
NL: Not Limiting

**TABLE G**  
**POLYCYCLIC AROMATIC HYDROCARBONS (PAH) TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 20219/5-AA)**

								NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)				
				PAH (mg/kg)				Health-based Investigation Levels (HIL) B - Residential B		Health Screening Level (HSL) B - High density residential	Generic Ecological Investigation Level (EIL) - Urban residential	Ecological Screening Level (ESL) - Urban residential
				BaP TEQ	TOTAL PAHs	NAPHTHALENE	BENZO(a)PYRENE (BaP)	BaP TEQ	TOTAL PAHs	NAPHTHALENE	NAPHTHALENE	BENZO(a)PYRENE (BaP)
Sample Location	Depth (m)	Soil type		BaP TEQ	TOTAL PAHs	NAPHTHALENE	BENZO(a)PYRENE (BaP)	BaP TEQ	TOTAL PAHs	NAPHTHALENE	NAPHTHALENE	BENZO(a)PYRENE (BaP)
BH101	0.0-0.15	Clay	Fill	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH103	0.15-0.25	Clay	Natural	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH104	0.04-0.08	Gravel	Fill	0.4	2.9	<0.1	0.2	4	400	3	170	0.7
BH105	0.04-0.19	Sand	Fill	1.3	7.4	<0.1	0.9	4	400	3	170	0.7
BH106	0.0-0.15	Gravel	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH107	0.11-0.41	Clay	Fill	<0.3	<0.8	<0.1	<0.1	4	400	5	170	0.7
BH109	0.0-0.15	Sand	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH109	0.15-0.25	Sand	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH111	0.12-0.3	Sand	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH112	0.14-0.3	Sand	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH115	0.0-0.15	Sand	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH115	0.2-0.4	Sand	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH116	0.0-0.15	Sand	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH117	0.0-0.15	Gravel	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH118	0.0-0.15	Gravel	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH119	0.07-0.17	Sand	Fill	<0.3	<0.8	<0.1	<0.1	4	400	3	170	0.7
BH120	0.2-0.25	Clay	Fill	0.4	2.2	<0.1	0.2	4	400	5	170	0.7
Limit of Reporting (LOR)				0.3	0.8	0.1	0.1					

Notes: a: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

NL: Not Limiting

**TABLE H**  
**ORGANOCHLORINE PESTICIDES (OCP), POLYCHLORINATED BIPHENYLS (PCB), CYANIDES & PHENOLS TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 20219/5-AA)**

			OCP (mg/kg)										(mg/kg)	(mg/kg)	(mg/kg)	
			HEXACHLOBENZENE (HCB)	HEPTACHLOR	ALDRIN+DIELDRIN	ENDRIN	METHOXYCHLOR	MIREX	ENDOSULFAN (alpha, beta & sulphate)	DDD+DDE+DDT	DDT	CHLORDANE (alpha & gamma)				
Sample Location	Depth (m)												PCB	Cyanides	Phenols	
BH101	0.0-0.15	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	0.6	<5	
BH104	0.04-0.08	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH105	0.04-0.19	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH106	0.0-0.15	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH107	0.11-0.41	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH109	0.0-0.15	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH109	0.15-0.25	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH111	0.12-0.3	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH112	0.14-0.3	Fill	<0.1	<0.1	1.0	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH115	0.0-0.15	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH115	0.2-0.4	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH116	0.0-0.15	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH117	0.0-0.15	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH118	0.0-0.15	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH119	0.07-0.17	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	<0.5	<5	
BH120	0.0-0.15	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-	-	
BH120	0.2-0.25	Fill	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	<1	-	-	
BH121	0.0-0.15	Topsoil	<0.1	<0.1	<0.15	<0.2	<0.1	<0.1	<0.5	<0.6	<0.2	<0.2	-	-	-	
Limit of Reporting (LOR)				0.1	0.1	0.15	0.2	0.1	0.1	0.5	0.6	0.2	0.2	1	0.5	5
NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)																
Health-based Investigation Levels (HIL) B <sup>a</sup> - Residential B				15	10	10	20	500	20	400	600		90	1	300	45000
Ecological Investigation Levels (EIL) - Urban residential				180 <sup>b</sup>												

Notes: a: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

b: Generic EIL for DDT

**TABLE I**  
**ASBESTOS TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 20219/5-AA)**

Sample Location	Depth (m)	ASBESTOS (% w/w)		
Soil Sample-Fill		Bonded ACM (>7mm)	AF	FA
BH101	0.0-0.15	<0.01	<0.001	<0.001
BH104	0.04-0.08	<0.01	<0.001	<0.001
BH105	0.04-0.19	<0.01	<0.001	<0.001
BH106	0.0-0.15	<0.01	<0.001	<0.001
BH109	0.0-0.15	<0.01	<0.001	<0.001
BH109	0.15-0.25	<0.01	<0.001	<0.001
BH115	0.0-0.15	<0.01	<0.001	0.0002
BH115	0.2-0.4	<0.01	<0.001	<0.001
BH116	0.0-0.15	<0.01	<0.001	<0.001
BH117	0.0-0.15	<0.01	<0.001	<0.001
BH120	0.0-0.15	<0.01	<0.001	<b>0.0034</b>
BH12a	0.14-0.3	<0.01	<0.001	<0.001
BH12-1	0.15-0.27	<0.01	<0.001	<0.001
BH12-2	0.15-0.3	<0.01	<0.001	<0.001
BH12-3	0.15-0.3	<0.01	<0.001	<0.001
BH12-4	0.18-0.3	<0.01	<0.001	<0.001
FCP1	0.0-0.15	<0.01	<0.001	<0.001
<b>NATIONAL ENVIRONMENT PROTECTION AMENDMENT MEASURE (2013)</b>				
Health Screening Levels <sup>a</sup> - Residential B		0.04	0.001	0.001
<b>Fibro-cement Piece</b>				
FCP1	Ground surface	<b>ACM</b>		
BH120FCP	0.0-0.15	<b>ACM</b>		

Notes:

ACM: Asbestos Containing Material

AF: Asbestos Fines

FA: Fibrous Asbestos

a: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.

**Table J**

**ASBESTOS IN-SITU SIEVING TEST RESULTS**

Ref. No. (20219/5-AA)

Location	Depth (m)	In-Situ 10L Sieve Test						
		Soil Mass (kg)	Weight of Bonded ACM <sup>a</sup> (g)	% ACM in Soil w/w <sup>b</sup>	Criterion <sup>c</sup>	Weight of FA <sup>a</sup> (g)	FA (% w/w)	Criterion <sup>d</sup>
BH12a	0.14-0.3	15.59	0.00	0.000	0.04	0.00	0.0000	0.001
BH12-1	0.15-0.27	14.2	0.00	0.000	0.04	0.00	0.0000	0.001
BH12-2	0.15-0.3	14.9	0.00	0.000	0.04	0.00	0.0000	0.001
BH12-3	0.15-0.3	15.23	0.00	0.000	0.04	0.00	0.0000	0.001
BH12-4	0.18-0.4	14.93	0.00	0.000	0.04	0.00	0.0000	0.001
BH120	0.0-0.15	15.02	<b>308.00</b>	<b>0.308</b>	0.04	0.00	0.0000	0.001

Notes a: Retained on 7mm sieve

b: NEPM 1999 (April 2013) (page 31): % Asbestos in Soil = % Asbestos Content x ACM (kg) / {Soil Volume (L) x Soil Density (kg/L)}, based on asbestos content of 15% and soil volume of 10L.

c: 0.04% w/w for land use setting HIL B (NEPM 1999 [April 2013])

d: 0.001 % w/w

**TABLE K**  
**FORMALDEHYDE TEST RESULTS**  
**DISCRETE SAMPLES**  
**(Ref No: 20219/5-AA)**

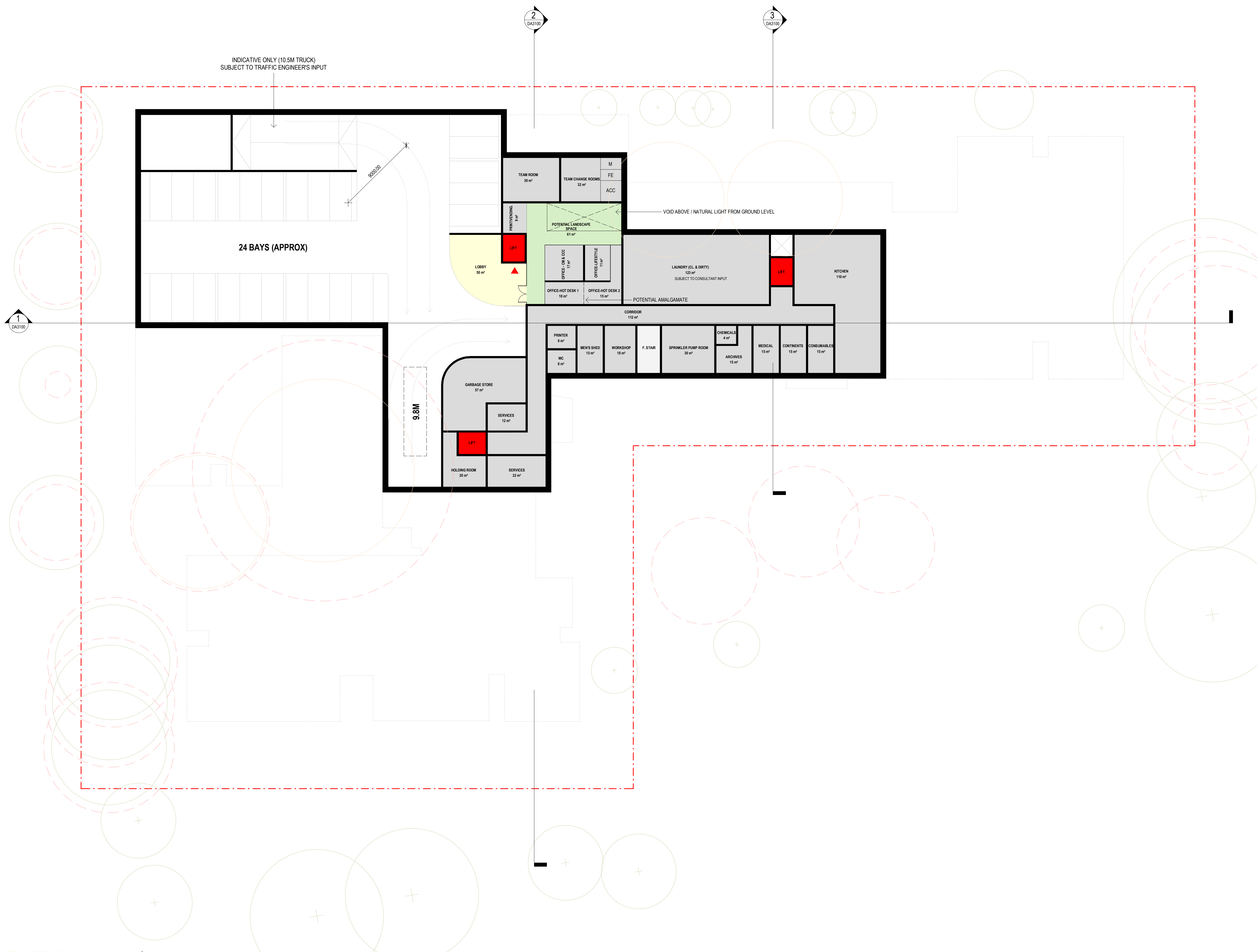
Sample Location	Depth (m)		FORMALDEHYDE mg/kg
BH103	0.15-0.25	Natural	<2
BH112	0.14-0.3	Fill	<2
BH114	0.15-0.25	Natural	<2
BH115	0.0-0.15	Fill	<2
BH117	0.0-0.15	Fill	<2
Limit of Reporting (LOR)			2

## APPENDIX A

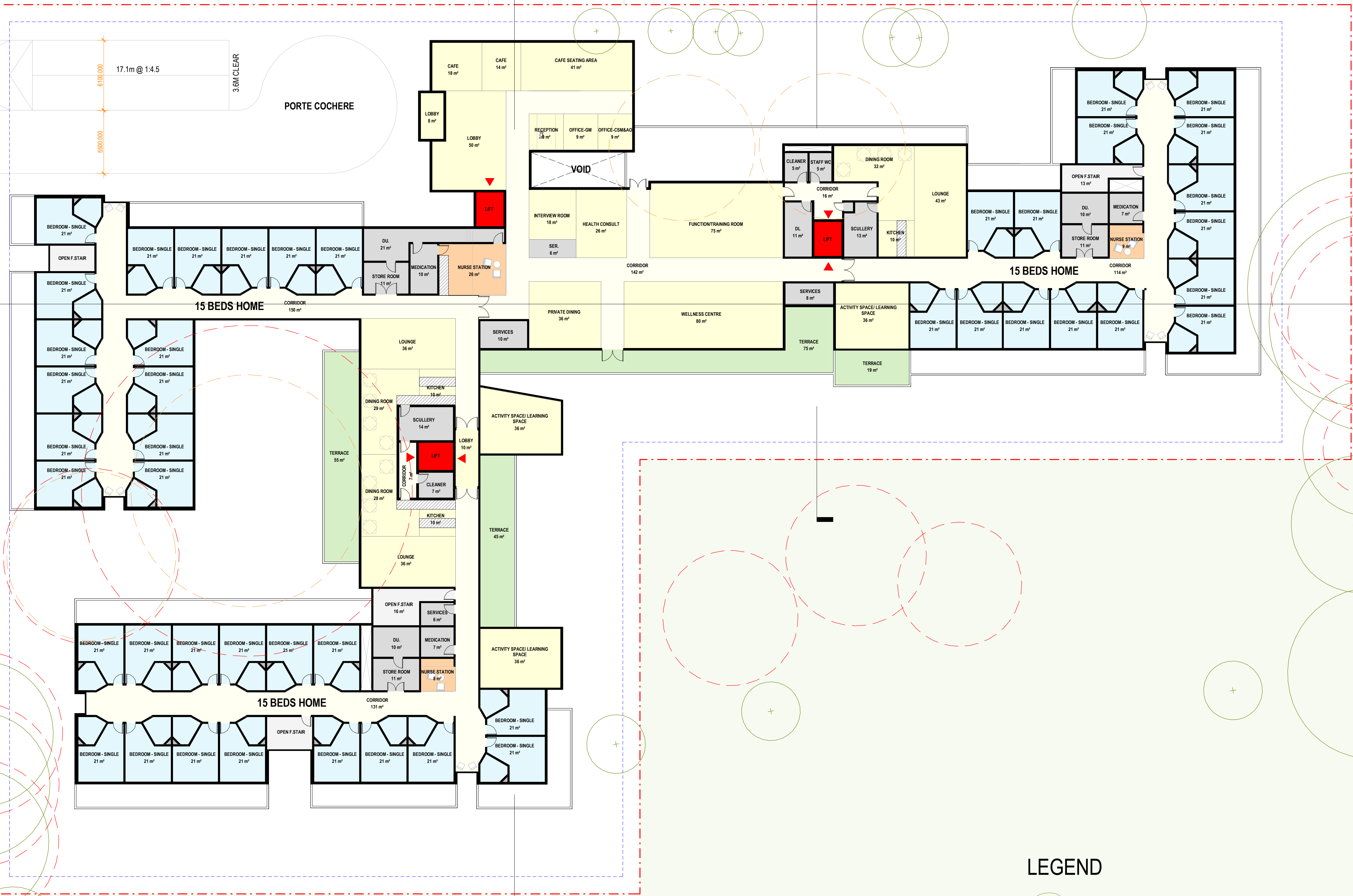
---

### PROPOSED DEVELOPMENT PLANS





KARNE STREET N



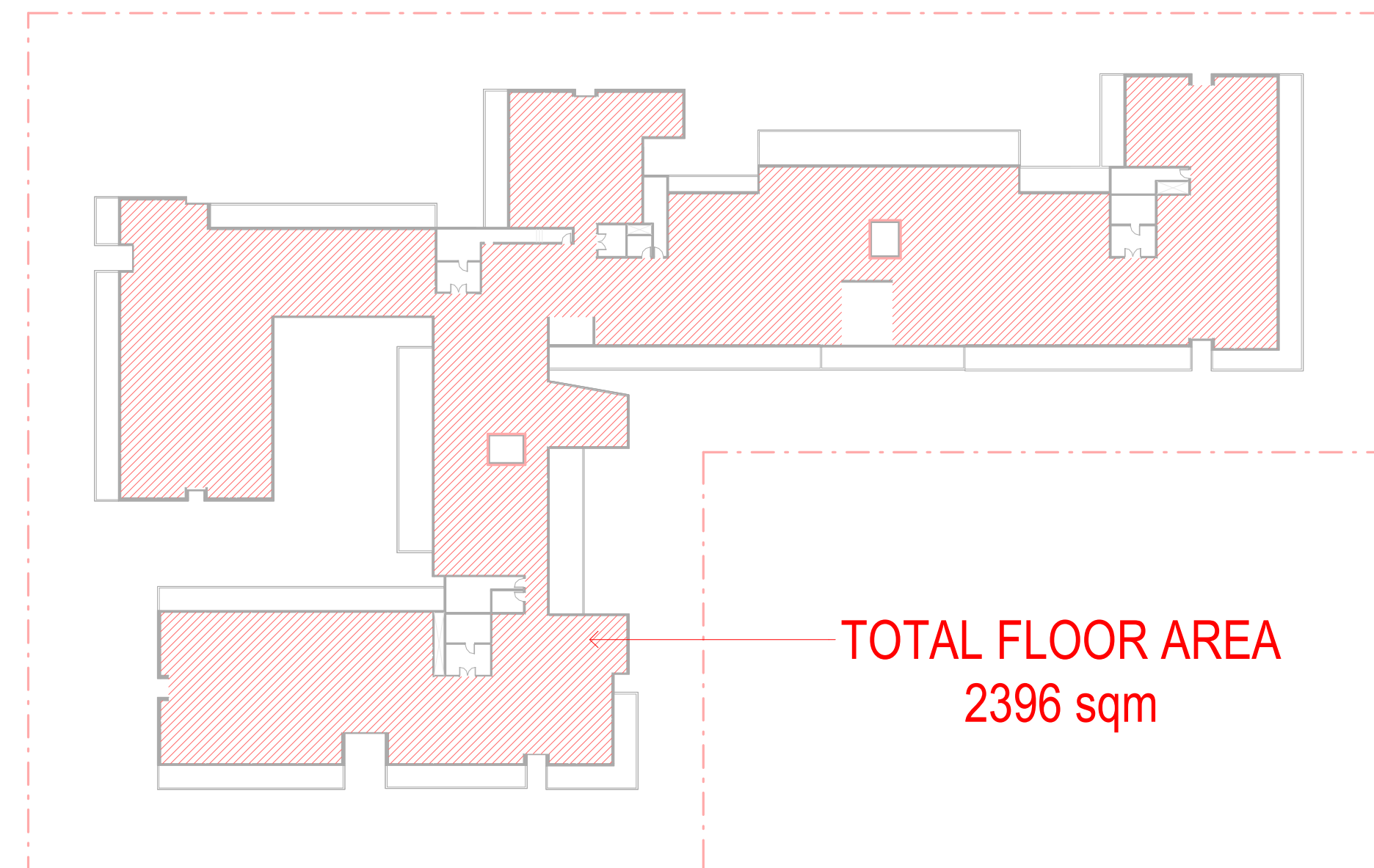
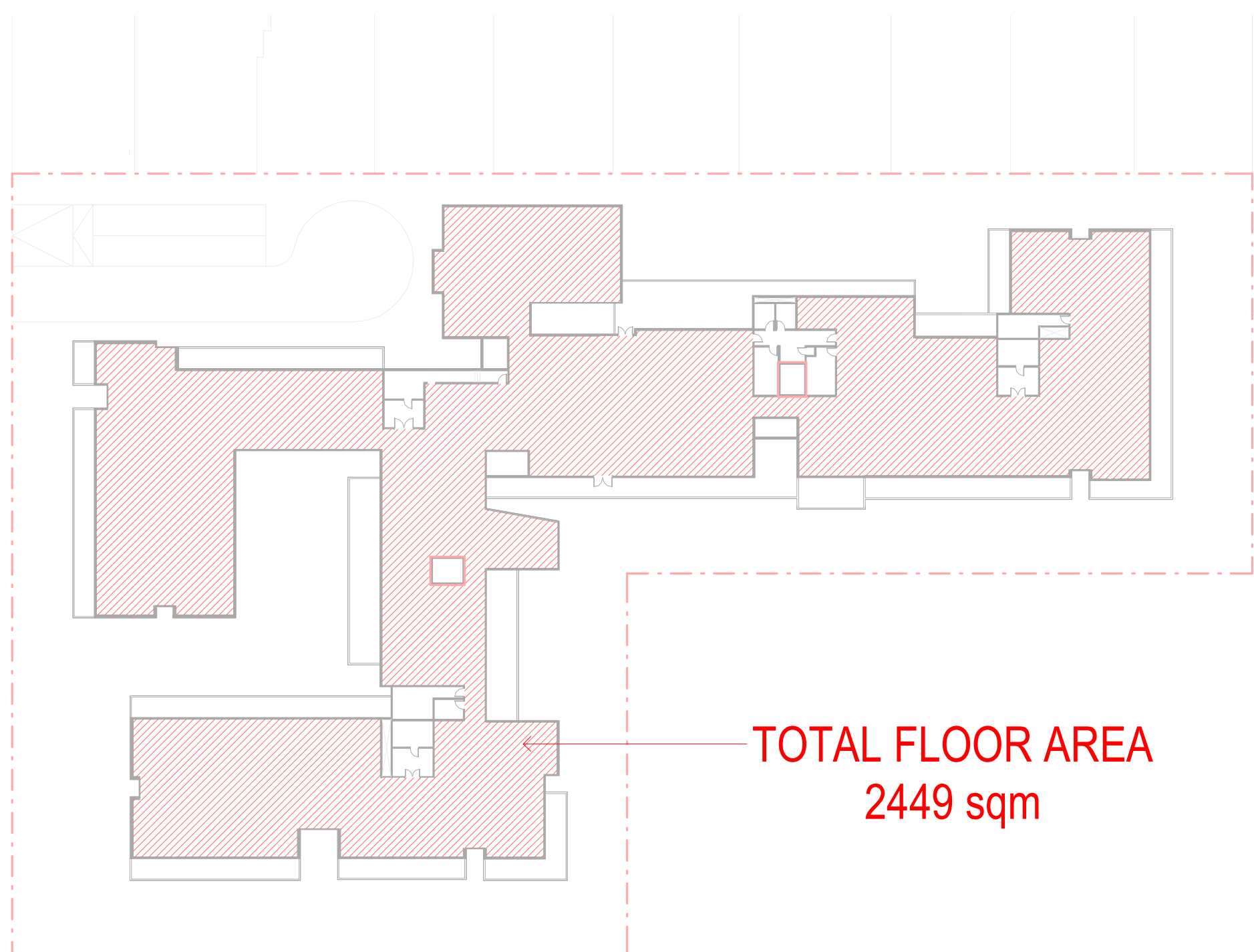
LEGEND

- EXISTING TREES
- TREES TO BE DEMOLISHED/RELOCATE
- TPZ - SUBJECT TO ABORIST



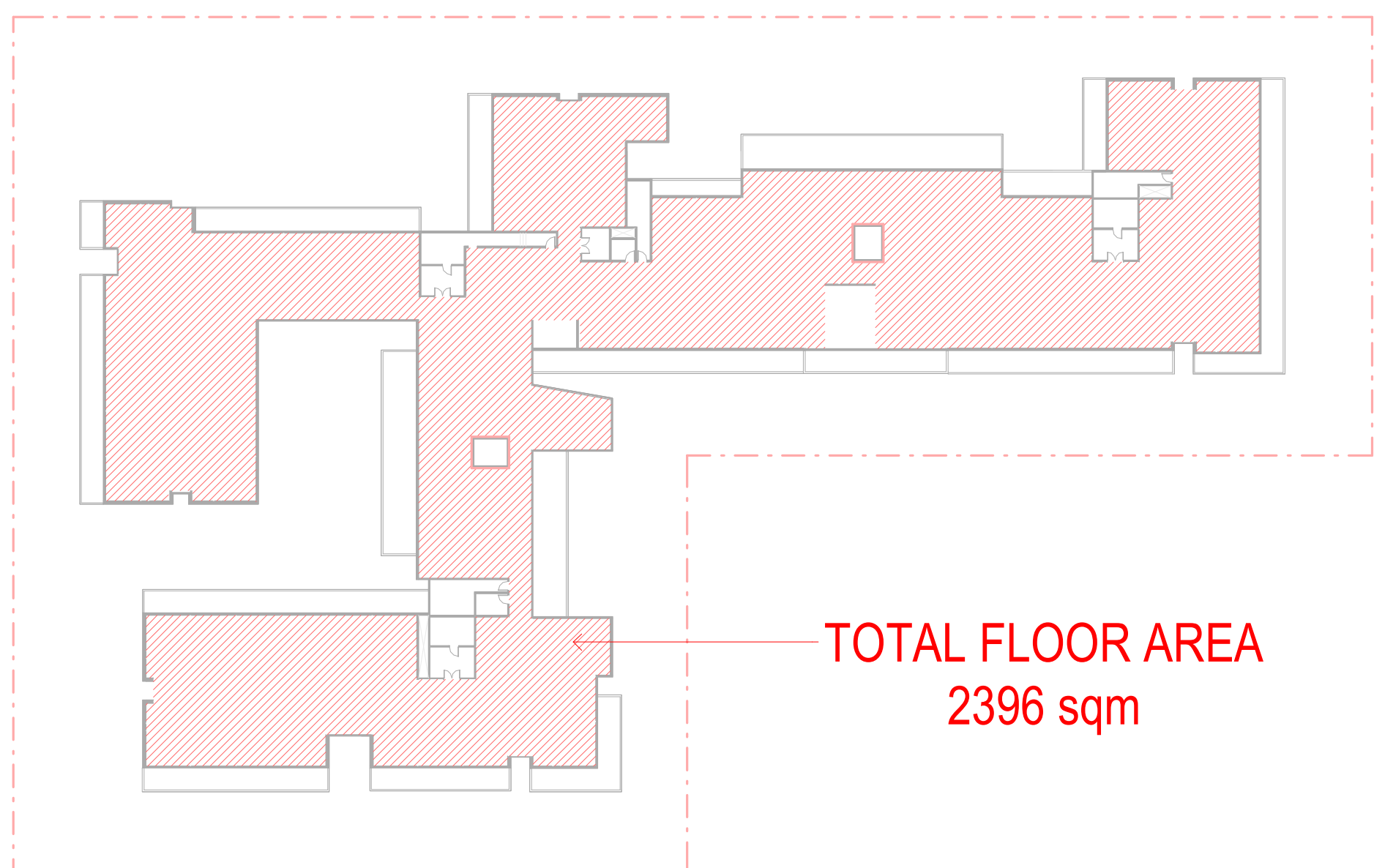






1 GROUND FLOOR  
1:500

2 LEVEL 1  
1:500



3 LEVEL 2  
1:500

SITE AREA: 7,159.6 sqm

GF: 2,449 sqm

L1: 2,396 sqm

L2: 2,396 sqm

GFA: 7,241 sqm

FSR: 1.01 : 1

gross floor area means the sum of the areas of each floor of a building, where the area of each floor is taken to be the area within the inner face of the external enclosing walls, as measured at a height of 1.4m above each floor level—

(a) excluding columns, fin walls, sun control devices and elements, projections or works outside the general lines of the inner face of the external wall, and

(b) excluding cooling towers, machinery and plant rooms, ancillary storage space and vertical air conditioning ducts, and

(c) excluding—

(i) car parking needed to meet the requirements of this Part or the council of the local government area in which the development is located, and

(ii) internal access to the car parking, and

(d) excluding space for the loading and unloading of goods, including access to the space, and

(e) for in-fill self-care housing—including car parking provided at ground level, other than for visitors, in excess of 1 per dwelling, and

(f) for a residential care facility—excluding floor space used for service activities provided by the facility below ground level

## **APPENDIX B**

---

### **AERIAL PHOTOGRAPHS**



20219/5



**June 2022**



**September 2012**



20219/5



2002



1994



20219/5



1986



1978



20219/5



1970



1951

## APPENDIX C

---

### NSW LAND REGISTRY SERVICES RECORDS

**20219/5**

**Summary of Proprietors  
Lot D DP403467**

<b>Year</b>	<b>Proprietor</b>
2022	Principal Healthcare Finance Pty Ltd
2002 - 2022	BUPA ANZ Property 1 and 2 Limited (previous names: Bupa Agedcare Funds Management Limited; DCA Funds Management Limited)
1999 - 2002	Pathwest Pty Limited
1985 - 1999	Royal Blind Society of New South Wales
1959 - 1985	John Henry (?) Jones, builders & labourer and Alana Mavis Jones, wife
1958 - 1959	Robert Baxter Henderson, builder and Nola Beryl Henderson, wife

**Lot C DP403467**

<b>Year</b>	<b>Proprietor</b>
2022	Principal Healthcare Finance Pty Ltd
2002 - 2022	BUPA ANZ Property 1 and 2 Limited (previous names: Bupa Agedcare Funds Management Limited; DCA Funds Management Limited)
1999 - 2002	Pathwest Pty Limited
1991 - 1999	Royal Blind Society of New South Wales
1969 - 1991	Roselands Convalescent Hospital Pty Limited
1964 - 1969	Frederick Thomas Arnold
1962 - 1964	Frederick Thomas Arnold, brass founders engineer and Gertrude Arnold, wife

**Lot 2 DP518877**

<b>Year</b>	<b>Proprietor</b>
2022	Principal Healthcare Finance Pty Ltd
2002 - 2022	BUPA ANZ Property 1 and 2 Limited (previous names: Bupa Agedcare Funds Management Limited; DCA Funds Management Limited)
1999 - 2002	Pathwest Pty Limited
1991 - 1999	Royal Blind Society of New South Wales
1968 - 1991	Roselands Convalescent Hospital Pty Limited
1966 - 1968	Walter John Charles Ball, Contractor
1966	Walter John Charles Ball, anodiser and Raymond Bruce Ewers, minister of religion and Donald Alan Ewers, Manager

### Part of Lot 2 DP518877

Year	Proprietor
1959 - 1966	Walter John Charles Ball, anodiser
1940 - 1959	William Leslie Fenton, carpenter and joiner

### Part of Lot 2 DP518877

Year	Proprietor
1964 - 1966	Raymond Bruce Ewers, minister of religion and Donald Alan Ewers, Manager
1950 - 1964	Muriel Barber
1947 - 1950	Thomas Desmond Tierney, member of the Royal Australian Navy

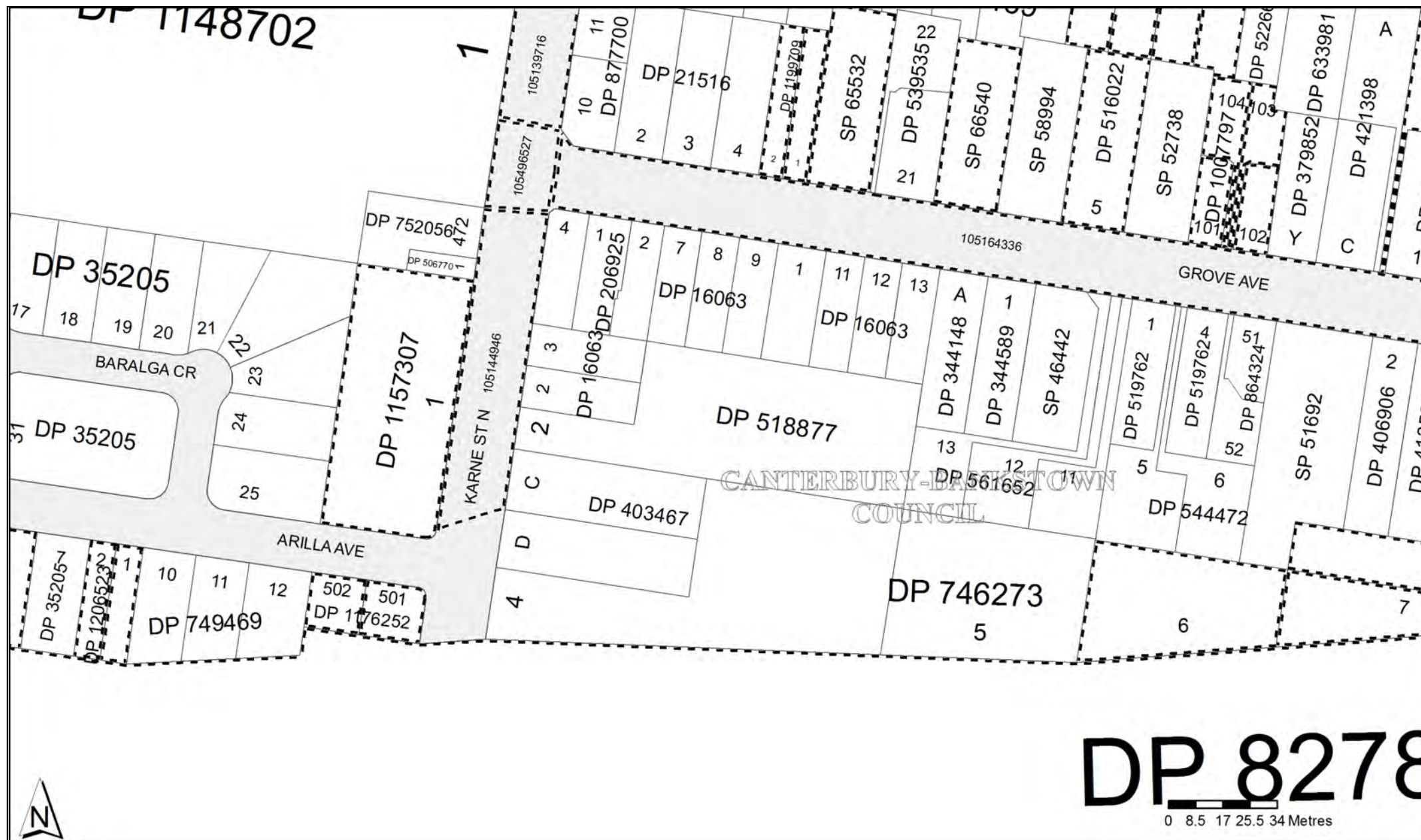
### Lot 2 DP16063

Year	Proprietor
2022	Principal Healthcare Finance Pty Ltd
2017 - 2022	BUPA ANZ Property 1 and 2 Limited
2007 - 2017	Miroslav Lukic and Ankica Lukic
2002 - 2007	Jose Oliveira and Olivia Oliveira
1998 - 2002	Ernest John Charles Poulter
1941 - 1998	Ernest John Charles Poulter, storeman and Lucy Agnes Poulter, wife
1940 - 1941	Frederick John Fenton, joiner

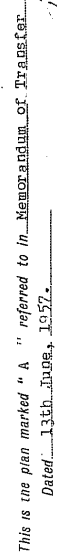
### Lot 3 DP16063

Year	Proprietor
2022	Principal Healthcare Finance Pty Ltd
2017 - 2022	BUPA ANZ Property 1 and 2 Limited
2001 - 2017	Jing Yi Lu and Qun Huang
1986 - 2001	Joan Valma Beazley
1974 - 1986	Jack Beazley, personnel officer and Joan Valma Beazley, wife
1951 - 1974	Neville Stuart White, jeweller and Amba Joyce White, wife
1950 - 1951	Charles Joseph Woodhouse, builder
1950	Herbert Albert Hines, builder
1949 - 1950	Peter Connell, electrical fitter and Catherine Connell, wife





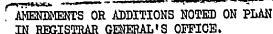
He



Insert date of Survey





1

I, Bruce Richard Davies, Registrar General for New South Wales, certify that this negative is a photograph made as a permanent record of a document in my custody this 2nd day of November, 1979

*Benjamin*



NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: D/403467

-----

SEARCH DATE	TIME	EDITION NO	DATE
-----	----	-----	----
7/7/2022	9:18 AM	8	31/3/2022

LAND

-----

LOT D IN DEPOSITED PLAN 403467  
AT NARWEE  
LOCAL GOVERNMENT AREA CANTERBURY-BANKSTOWN  
PARISH OF ST GEORGE COUNTY OF CUMBERLAND  
TITLE DIAGRAM DP403467

FIRST SCHEDULE

-----

PRINCIPAL HEALTHCARE FINANCE PTY LTD (T AS9039)

SECOND SCHEDULE (2 NOTIFICATIONS)

-----

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)  
2 AS9040 MORTGAGE TO ANZ FIDUCIARY SERVICES PTY LIMITED

NOTATIONS

-----

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

advlgeo

PRINTED ON 7/7/2022



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

7/7/2022 9:39AM

FOLIO: D/403467

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 7483 FOL 39

Recorded	Number	Type of Instrument	C.T. Issue
2/9/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
18/1/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
6/1/1999	5511158	APPLICATION FOR REPLACEMENT CERTIFICATE OF TITLE	EDITION 1
3/2/1999	5565262	TRANSFER	
3/2/1999	5565263	MORTGAGE	EDITION 2
4/7/2002	8741621	DISCHARGE OF MORTGAGE	
4/7/2002	8741622	TRANSFER	
4/7/2002	8741623	MORTGAGE	EDITION 3
23/10/2002	8905385	VARIATION OF MORTGAGE	EDITION 4
28/5/2003	9648882	DEPARTMENTAL DEALING	
6/4/2006	AC227427	DISCHARGE OF MORTGAGE	EDITION 5
5/3/2010	AF355373	CHANGE OF NAME	EDITION 6
14/9/2017	AM722246	CHANGE OF NAME	EDITION 7
31/3/2022	AS9039	TRANSFER	
31/3/2022	AS9040	MORTGAGE	EDITION 8

\*\*\* END OF SEARCH \*\*\*

advlgeo

PRINTED ON 7/7/2022

System Document Identification

Land Registry Document Identification

Form Number:01T-e  
Template Number:t\_nsw18  
ELN Document ID:1124344763  
ELN NOS ID: 1124344765

TRANSFER  
New South Wales  
Real Property Act 1900

AS9039

Stamp Duty: 10363260-001

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

LODGED BY:

Responsible Subscriber: ASHURST AUSTRALIA ABN 75304286095  
Address: 5 Martin PL  
Sydney 2000  
Email: PEXA.NSWLandRegistry@ashurst.com  
ELNO Subscriber Number: 7243  
Customer Account Number: 501410K  
Document Collection Box: 238N  
Client Reference: 81019988

LAND TITLE REFERENCE

C/403467  
3/16063  
2/16063  
2/518877  
D/403467

TRANSFEROR

BUPA ANZ PROPERTY 1 AND 2 LIMITED ACN 082931708  
Registered company

TRANSFeree

PRINCIPAL HEALTHCARE FINANCE PTY LTD ACN 069875476  
Registered company

Tenancy: Sole Proprietor

CONSIDERATION

The transferor acknowledges receipt of the consideration of \$10,000,000.00

ESTATE TRANSFERRED

FEE SIMPLE

The Transferor transfers to the Transferee the Estate specified in this Instrument and acknowledges receipt of any Consideration shown.

SIGNING FOR TRANSFEROR

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferor or his, her or its administrator or attorney.

Party Represented by Subscriber:

BUPA ANZ PROPERTY 1 AND 2 LIMITED

Signed By: Melinda Graham  
ELNO Signer Number: 16866

Signer Capacity: Practitioner Certifier  
Digital Signing Certificate Number:

**Signed for**  
**Subscriber:** PARTNERS OF THOMSON GEER ABN 21442367363  
THOMSON GEER

**Subscriber Capacity:**Representative Subscriber

**ELNO Subscriber Number:** 7217

**Customer Account Number:**501181

**Date:** 31/03/2022

## **SIGNING FOR TRANSFEREE**

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferee or his, her or its administrator or attorney.

### **Party Represented by Subscriber:**

PRINCIPAL HEALTHCARE FINANCE PTY LTD

**Signed By:** Kathy Santikos

**Signer Capacity:**Practitioner Certifier

**ELNO Signer Number:** 21659

**Digital Signing Certificate Number:**

**Signed for**  
**Subscriber:** PARTNERS OF CLAYTON UTZ ABN 35740217343  
CLAYTON UTZ

**Subscriber Capacity:**Representative Subscriber

**ELNO Subscriber Number:** 8398

**Customer Account Number:**501328

**Date:** 31/03/2022

Form: 01T  
Release: 2  
www.lpi.nsw.gov.au

# TRANSFER

New South Wales  
Real Property Act 1900



8741622C

PRIVACY NOTE: this information is legally required and wi

## STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY

28-06-2002

0001028411-001

SECTION 18(2)

DUTY

4 4233333333333 00

## (A) TORRENS TITLE

C/403467, D/403467, 2/518877

## (B) LODGED BY

Delivery  
Box

Name, Address or DX and Telephone

~~Gilbert + Tobin~~ *Allens Arthur Robinson*  
~~DX 10348 SSB~~ *DX 106 Sydney*

74S

Reference: ~~AAH, AYH, 212661 497448 pdf~~ *203294409 AKMS*

CODES

T

TW

(Sheriff)

## (C) TRANSFEROR

PATHWEST PTY LIMITED ACN 085 195 455

(D) CONSIDERATION The transferor acknowledges receipt of the consideration of \$ 3,822,000.00 and as regards

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

(F) SHARE  
TRANSFERRED Whole

(G) Encumbrances (if applicable):

## (H) TRANSFEREE

DCA FUNDS MANAGEMENT LIMITED ACN 082 931 708

(I)

TENANCY:

(J) DATE

1/7/2002.

Certified correct for the purposes of the Real Property Act 1900  
by the corporation named below the common seal of which  
was affixed pursuant to the authority specified and in the presence  
of the authorised person(s) whose signature(s) appear(s) below.  
Corporation: PATHWEST PTY LIMITED ACN 085 195 455  
Authority: section 127 of the Corporations Law

Signature of authorised person:

Name of authorised person:

Office held:

*[Signature]*  
*Sheriff*  
*Sole Director/Sec*

Signature of authorised person:

Name of authorised person:

Office held:



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

Signature:

*A Hempel*

Signatory's name:

Signatory's capacity:

Amanda Hempel

transferee's solicitor



Form number: 97-01T  
Licence Number: 599D/0366/96

3

**TRANSFER**  
Real Property Act 1901

5565262M



Office of State Revenue use only

00.2\$ 20/61688200 40 2054 662010  
N.S.W. STAMP DUTY 010299 4502 04 002383919/02

**(A) LAND TRANSFERRED**

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

**Folio Identifiers**

C/403467  
D/403467  
2/518877

**(B) LODGED BY**

L.T.O. BOX

985Y  
~~599D~~

Name, Address or DX and Telephone

MINTER ELLISON  
44 Martin Place, SYDNEY  
DX 117 Sydney  
Telephone: (02) 210 4444

SHAD

REFERENCE (max. 15 characters): CK10721658

H:SKERRITT

**(C) TRANSFEROR**

**ROYAL BLIND SOCIETY OF NEW SOUTH WALES** of 4 Mitchell  
Street, Enfield

**(D)** acknowledges receipt of the consideration of \$2,400,000.00

and as regards the land specified above transfers to the Transferee an estate in fee simple

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

**(F) TRANSFEE**

**T**  
**TS**  
(s713 LGA)  
**TW**  
(Sheriff)

**PATHWEST PTY LIMITED** ACN 085 195 455 of Suite 4, 13-15 Atchison  
Street, St Leonards

**(G)**

**TENANCY:**

**(H)** We certify this dealing correct for the purposes of the Real Property Act 1900

**DATE** 1 February 1999

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

**THE COMMON SEAL** of **ROYAL BLIND SOCIETY OF  
NEW SOUTH WALES** is fixed to this document in accordance  
with its constitution in the presence of

X

Signature of Councillor

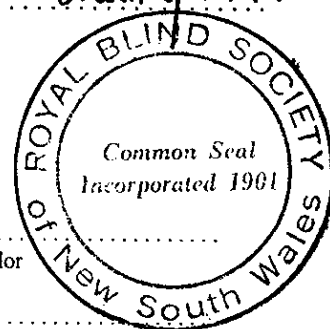
X **MICHAEL BROWN**

Name of Councillor (BLOCK LETTERS)

Signature of Councillor

**LINA JABBUR**

Name of Councillor (BLOCK LETTERS)



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

.....  
Signature of Witness

.....  
Name of Witness (BLOCK LETTERS)

.....  
Address of Witness

.....  
Signature of Craig Kelly  
Solicitor for the Transferee

NB: if applicable, indicate that the signatory is the transferee's solicitor  
and show the solicitor's full name

CHECKED BY (office use only)

202

Primary Appn. No. 6216  
Reference to Last Title  
Vol. 3265 Fol. 154  
Deposited Plan No. 6539

# New South Wales.

[CERTIFICATE OF TITLE.]



JOINT TENANCY  
REGISTER BOOK.  
VOL. 7483 Fol. 39  
DW Issued on Transfer No. G794265

S  
GRY

CANCELLED ☒  
ON ISSUE OF NEW PLAN D/403467

137 137 K 204-2 & B. Pettit, Government Printer

ROBERT BAXTER HENDERSON, of Beverly Hills, Builder and NOLA BERIL HENDERSON, his wife, are now the proprietors of an Estate in Fee Simple as Joint Tenants, subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests as are notified hereon, in that piece of land at Narwee in the Municipality of Canterbury Parish of St. George, and County of Cumberland shown in the plan hereon and therein edged red being Lot D in plan lodged with Transfer No. G794265 and being part of Portion 122 granted to Richard Podmore on 1st January 1810.

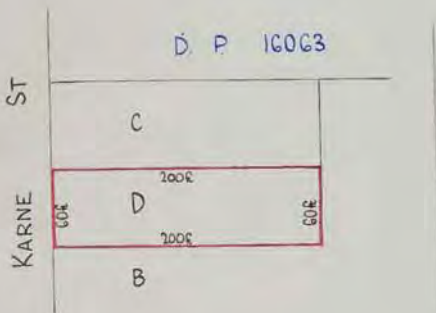
In witness whereof I have hereunto signed my name and affixed my Seal, this **Twenty-third** day of **April**, 1958

Signed in the presence of

*R. Shortimer*

*J. H. Ellis*

Registrar-General.



G794265

Area Ind 4per  
Scale 80 feet to one inch.

NOTICE

6941054 MORTGAGE No. 15th January 1958  
from the said Robert Baxter Henderson and  
Nola Beril Henderson  
to BANK OF NEW SOUTH WALES  
Building Bank Limited. Entered 6th June 1959  
*J. H. Ellis*  
REGISTRAR GENERAL

MORTGAGE No. 6941054  
from the said Henderson  
to Bank of New South Wales  
Building Bank Limited. Entered 27th July 1959  
*J. H. Ellis*  
REGISTRAR GENERAL


12 John Henry Brown Jones of Narwee, Builders  
Labourer and Alvin Mervin Jones his wife are  
as joint tenants  
H262313 27th July 1959  
27th July 59  
H262313 MORTGAGE No. 27th July 1959  
John Henry Brown Jones and Alvin  
Mervin Jones to Australia Co-operative Lending  
Savings and Investment Society Limited  
27th July 59  
*J. H. Ellis*  
REGISTRAR GENERAL

MORTGAGE No. H262313 has been discharged.  
see H583950 Entered 5th October 1960  
*J. H. Ellis*  
REGISTRAR GENERAL

No. H583950 MORTGAGE dated 10th August 1959  
to Lender of War Service Homes  
Entered 5th October 1960  
Discharged  
V637315  
*J. H. Ellis*  
REGISTRAR GENERAL

12  
10/10

REGISTERED PROPRIETOR <i>Royal Blind Society</i>
of New South Wales Registered <i>18-3-1985</i>
by Transfer <i>V623936</i> Registered
<i>18-3-1985</i>



NO FURTHER

50

*V623936 by  
6/1/88*



NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: C/403467

SEARCH DATE	TIME	EDITION NO	DATE
7/7/2022	9:18 AM	8	31/3/2022

LAND

LOT C IN DEPOSITED PLAN 403467  
AT NARWEE  
LOCAL GOVERNMENT AREA CANTERBURY-BANKSTOWN  
PARISH OF ST GEORGE COUNTY OF CUMBERLAND  
TITLE DIAGRAM DP403467

FIRST SCHEDULE

PRINCIPAL HEALTHCARE FINANCE PTY LTD (T AS9039)

SECOND SCHEDULE (2 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 AS9040 MORTGAGE TO ANZ FIDUCIARY SERVICES PTY LIMITED

NOTATIONS

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

advlgeo

PRINTED ON 7/7/2022

# Advance Legal Searchers

Advance Legal Searchers Pty Ltd hereby certifies that the information contained in this document has been provided electronically by the Registrar General.

Information provided through Tri-Search an approved LPINSW Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

14/3/2017 1:47PM

FOLIO: C/403467

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 8399 FOL 208

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
30/8/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
12/10/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
26/6/1991	Z722992	TRANSFER	EDITION 1
3/2/1999	5565262	TRANSFER	
3/2/1999	5565263	MORTGAGE	EDITION 2
4/7/2002	8741621	DISCHARGE OF MORTGAGE	
4/7/2002	8741622	TRANSFER	
4/7/2002	8741623	MORTGAGE	EDITION 3
23/10/2002	8905385	VARIATION OF MORTGAGE	EDITION 4
28/5/2003	9648882	DEPARTMENTAL DEALING	
6/4/2006	AC227427	DISCHARGE OF MORTGAGE	EDITION 5
5/3/2010	AF355373	CHANGE OF NAME	EDITION 6

\*\*\* END OF SEARCH \*\*\*

13977/1

PRINTED ON 14/3/2017

**\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.**

System Document Identification

Land Registry Document Identification

Form Number:01T-e  
Template Number:t\_nsw18  
ELN Document ID:1124344763  
ELN NOS ID: 1124344765

TRANSFER  
New South Wales  
Real Property Act 1900

AS9039

Stamp Duty: 10363260-001

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

LODGED BY:

Responsible Subscriber: ASHURST AUSTRALIA ABN 75304286095  
Address: 5 Martin PL  
Sydney 2000  
Email: PEXA.NSWLandRegistry@ashurst.com  
ELNO Subscriber Number: 7243  
Customer Account Number: 501410K  
Document Collection Box: 238N  
Client Reference: 81019988

LAND TITLE REFERENCE

C/403467  
3/16063  
2/16063  
2/518877  
D/403467

TRANSFEROR

BUPA ANZ PROPERTY 1 AND 2 LIMITED ACN 082931708  
Registered company

TRANSFeree

PRINCIPAL HEALTHCARE FINANCE PTY LTD ACN 069875476  
Registered company

Tenancy: Sole Proprietor

CONSIDERATION

The transferor acknowledges receipt of the consideration of \$10,000,000.00

ESTATE TRANSFERRED

FEE SIMPLE

The Transferor transfers to the Transferee the Estate specified in this Instrument and acknowledges receipt of any Consideration shown.

SIGNING FOR TRANSFEROR

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferor or his, her or its administrator or attorney.

Party Represented by Subscriber:

BUPA ANZ PROPERTY 1 AND 2 LIMITED

Signed By: Melinda Graham  
ELNO Signer Number: 16866

Signer Capacity: Practitioner Certifier  
Digital Signing Certificate Number:



**Signed for**  
**Subscriber:** PARTNERS OF THOMSON GEER ABN 21442367363  
THOMSON GEER

**Subscriber Capacity:**Representative Subscriber

**ELNO Subscriber Number:** 7217

**Customer Account Number:**501181

**Date:** 31/03/2022

## **SIGNING FOR TRANSFEREE**

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferee or his, her or its administrator or attorney.

### **Party Represented by Subscriber:**

PRINCIPAL HEALTHCARE FINANCE PTY LTD

**Signed By:** Kathy Santikos

**Signer Capacity:**Practitioner Certifier

**ELNO Signer Number:** 21659

**Digital Signing Certificate Number:**

**Signed for**  
**Subscriber:** PARTNERS OF CLAYTON UTZ ABN 35740217343  
CLAYTON UTZ

**Subscriber Capacity:**Representative Subscriber

**ELNO Subscriber Number:** 8398

**Customer Account Number:**501328

**Date:** 31/03/2022

RP 13

STAMP DUTY



OFFICE OF STATE  
(N.S.W. TREASURY)

1990/91 P45

STAMP

158740

DUTY

CHIEF COMMISSIONER

B

2  
722992 Y

## TRANSFER

REAL PROPERTY ACT, 1900

T

A 1 of 1 X

\$ 47

R.11

DESCRIPTION  
OF LAND  
Note (a)

Torrens Title Reference	If Part Only, Delete Whole and Give Details	Location
Volume 10280 Folio 69 Volume 8399 Folio 208 NOW C/403467 NOW 2/518877	WHOLE	At Beverly Hills
TRANSFEROR Note (b) <u>ROSELANDS CONVALESCENT HOSPITAL PTY. LIMITED</u>		

ESTATE  
Note (c)

(the abovenamed TRANSFEROR) hereby acknowledges receipt of the consideration of \$ 1.00  
and transfers an estate in fee simple  
in the land above described to the TRANSFEREE

TRANSFEREE  
Note (d)

<u>ROYAL BLIND SOCIETY OF NEW SOUTH WALES</u> <u>of 4 Mitchell Street, Enfield</u>	OFFICE USE ONLY S
TENANCY Note (e) <u>as joint tenants/tenants in common</u>	

PRIOR  
ENCUMBRANCES  
Note (f)

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

DATE 16th January 1991.

EXECUTION  
Note (g)

We hereby certify this dealing to be correct for the purposes of the Real Property Act, 1900.  
THE COMMON SEAL OF ROSELANDS CONVALESCENT HOSPITAL PTY. LIMITED  
Signed in my presence by the transferor who is personally known to me  
was hereunto affixed by the Liquidator in the presence of:

*K. Bruce*  
Signature of Witness

KAY BRUCE  
Name of Witness (BLOCK LETTERS)

38 Waverley Street  
Address and occupation of Witness

Hillara (Secretary)  
Signature of Witness

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address and occupation of Witness



Liquidator

The Common Seal of the Royal Blind Society of New South Wales was hereunto affixed by authority of the Council in the presence of:

*[Signatures]*  
Members of Council

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

LODGED BY		LOCATION OF DOCUMENTS	
25 JAN 1991 25 JAN 1991 DX 111111		CT	OTHER
Delivery Box Number		2	Herewith. BZ
			In L.T.O. with
			Produced by
Checked	Passed	Secondary Directions	
Signed	Extra Fee	Delivery Directions	CT 923W
REGISTERED - -19 26 JUN 1991			

OFFICE USE ONLY

EB18

177



26 JUN 1991

202

# New South Wales

[CERTIFICATE OF TITLE]

Primary Appn No. 6216

Reference to Last Title

Vol. 7483 Fol. 38

Deposited Plan No. 6539



JOINT TENANCY

REGISTER BOOK

Vol. 8399 Fol. 208

Issued on Transfer No. J110440

FREDERICK THOMAS ARNOLD of Narwee, Brass founders Engineer and GERTRUDE ARNOLD his wife are now the proprietors of an Estate in Fee Simple, as Joint Tenants,

subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances

liens, and interests as are notified hereon, in That piece of land at Narwee

in the Municipality of Canterbury Parish of St. George and County of Cumberland

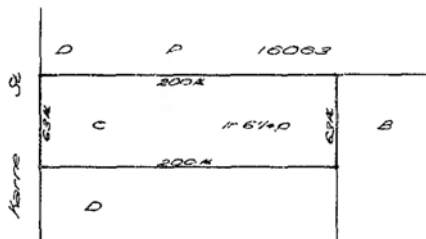
shown in the plan hereon being Lot C in plan lodged with Transfer No. G794265 and being part of Portion 122 granted to Richard Podmore on 1st January 1810.

In witness whereof I have hereunto signed my name and affixed my Seal, this

Fifth day of October, 1968

Signed in the presence of *Edwards*

*Jawatson*  
Registrar-General.



MORTGAGE No. 5110441 has been discharged.  
See L57136 Entered 24th June 1968  
*Jawatson*  
REGISTRAR GENERAL

*Roelands Convalescent Hospital Pty Limited*  
now the registered proprietor of the land within described  
See TRANSFER No. 446681 dated 17th June 1969  
Entered 23rd June 1969  
*Jawatson*  
REGISTRAR GENERAL

No. 110440  
24th June 1962  
to *Warwick Holdings Pty Limited*  
24th October 1962  
*Jawatson*  
REGISTRAR GENERAL

*Frederick Thomas Arnold*  
the surviving joint tenant, is  
now registered sole proprietor of the land within described.  
See Notice of Death (Section 101) No. J691087  
Entered 20th July 1964  
*Jawatson*  
REGISTRAR GENERAL

COMPUTER FOLIO NO FURTHER  
DEALINGS TO BE REGISTERED.

13415 243 42006 V.C.N. Black Commercial Printer

Persons are cautioned against altering or adding to this Certificate or any notification thereon.






NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 2/518877

-----

SEARCH DATE	TIME	EDITION NO	DATE
-----	----	-----	----
7/7/2022	9:18 AM	8	31/3/2022

LAND

-----

LOT 2 IN DEPOSITED PLAN 518877  
AT NARWEE  
LOCAL GOVERNMENT AREA CANTERBURY-BANKSTOWN  
PARISH OF ST GEORGE COUNTY OF CUMBERLAND  
TITLE DIAGRAM DP518877

FIRST SCHEDULE

-----

PRINCIPAL HEALTHCARE FINANCE PTY LTD (T AS9039)

SECOND SCHEDULE (2 NOTIFICATIONS)

-----

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)  
2 AS9040 MORTGAGE TO ANZ FIDUCIARY SERVICES PTY LIMITED

NOTATIONS

-----

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

advlgeo

PRINTED ON 7/7/2022

# Advance Legal Searchers

Advance Legal Searchers Pty Ltd hereby certifies that the information contained in this document has been provided electronically by the Registrar General.

Information provided through Tri-Search an approved LPINSW Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

14/3/2017 1:53PM

FOLIO: 2/518877

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 10280 FOL 69

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
28/3/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
27/6/1988		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
26/6/1991	Z722992	TRANSFER	EDITION 1
1/3/1994		AMENDMENT: LOCAL GOVT AREA	
3/2/1999	5565262	TRANSFER	
3/2/1999	5565263	MORTGAGE	EDITION 2
4/7/2002	8741621	DISCHARGE OF MORTGAGE	
4/7/2002	8741622	TRANSFER	
4/7/2002	8741623	MORTGAGE	EDITION 3
23/10/2002	8905385	VARIATION OF MORTGAGE	EDITION 4
28/5/2003	9648882	DEPARTMENTAL DEALING	
6/4/2006	AC227427	DISCHARGE OF MORTGAGE	EDITION 5
5/3/2010	AF355373	CHANGE OF NAME	EDITION 6

\*\*\* END OF SEARCH \*\*\*

13977/1

PRINTED ON 14/3/2017

**\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.**



System Document Identification

Land Registry Document Identification

Form Number:01T-e  
Template Number:t\_nsw18  
ELN Document ID:1124344763  
ELN NOS ID: 1124344765

TRANSFER  
New South Wales  
Real Property Act 1900

AS9039

Stamp Duty: 10363260-001

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

LODGED BY:

Responsible Subscriber: ASHURST AUSTRALIA ABN 75304286095  
Address: 5 Martin PL  
Sydney 2000  
Email: PEXA.NSWLandRegistry@ashurst.com  
ELNO Subscriber Number: 7243  
Customer Account Number: 501410K  
Document Collection Box: 238N  
Client Reference: 81019988

LAND TITLE REFERENCE

C/403467  
3/16063  
2/16063  
2/518877  
D/403467

TRANSFEROR

BUPA ANZ PROPERTY 1 AND 2 LIMITED ACN 082931708  
Registered company

TRANSFeree

PRINCIPAL HEALTHCARE FINANCE PTY LTD ACN 069875476  
Registered company

Tenancy: Sole Proprietor

CONSIDERATION

The transferor acknowledges receipt of the consideration of \$10,000,000.00

ESTATE TRANSFERRED

FEE SIMPLE

The Transferor transfers to the Transferee the Estate specified in this Instrument and acknowledges receipt of any Consideration shown.

SIGNING FOR TRANSFEROR

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferor or his, her or its administrator or attorney.

Party Represented by Subscriber:

BUPA ANZ PROPERTY 1 AND 2 LIMITED

Signed By: Melinda Graham  
ELNO Signer Number: 16866

Signer Capacity:Practitioner Certifier  
Digital Signing Certificate Number:

**Signed for**  
**Subscriber:** PARTNERS OF THOMSON GEER ABN 21442367363  
THOMSON GEER

**Subscriber Capacity:**Representative Subscriber

**ELNO Subscriber Number:** 7217

**Customer Account Number:**501181

**Date:** 31/03/2022

## **SIGNING FOR TRANSFEREE**

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferee or his, her or its administrator or attorney.

### **Party Represented by Subscriber:**

PRINCIPAL HEALTHCARE FINANCE PTY LTD

**Signed By:** Kathy Santikos

**Signer Capacity:**Practitioner Certifier

**ELNO Signer Number:** 21659

**Digital Signing Certificate Number:**

**Signed for**  
**Subscriber:** PARTNERS OF CLAYTON UTZ ABN 35740217343  
CLAYTON UTZ

**Subscriber Capacity:**Representative Subscriber

**ELNO Subscriber Number:** 8398

**Customer Account Number:**501328

**Date:** 31/03/2022

NEW SOUTH WALES

Application No.6216

Prior Titles Vol.5190 Fol. 27  
 Vol.5727 Fol. 98

CERTIFICATE OF TITLE  
 ACT, 1900, as amended.



Vol. 10280 Fol. 69

Edition issued 1-4-1966

I certify that the person described in the First Schedule is the registered proprietor of the undermentioned estate in the land within described subject nevertheless to such exceptions encumbrances and interests as are shown in the Second Schedule.

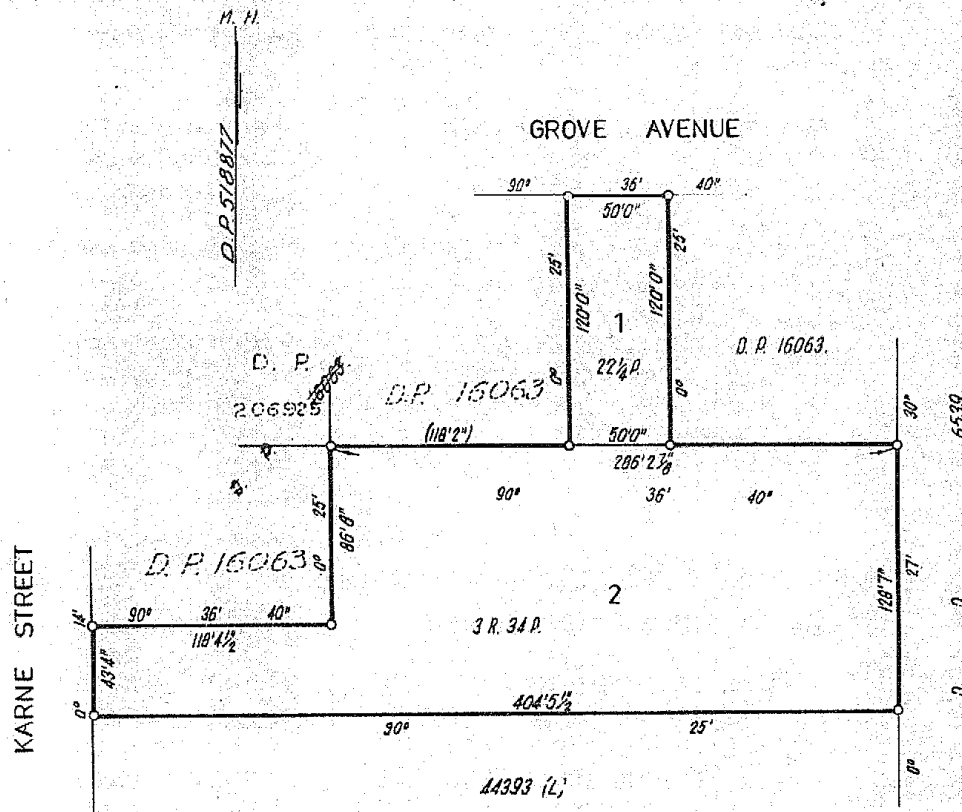
Witness

*J. Charles*

*Jawatson*  
 Registrar General.



PLAN SHOWING LOCATION OF LAND



ESTATE AND LAND REFERRED TO

Estate in Fee Simple in Lot 2 in Deposited Plan 518877 at Narwee in the Municipality of Canterbury Parish of St. George and County of Cumberland being part of Portion 122 granted to Richard Podmore on 1-1-1810.

FIRST SCHEDULE (continued overleaf)

~~WALTER JOHN CHARLES BALL, of Beverly Hills, Anodiser, as to that part of the land above described formerly comprised in Certificate of Title Volume 5190 Folio 27 and RAYMOND BRUCE EWERS, of Belmore Minister of Religion, and DONALD ALAN EWERS, of New Lambton, Manager, as Tenants in Common in equal shares, as to that part formerly comprised in Certificate of Title Volume 5727 Folio 98.~~

*Jawatson*  
 Registrar General.

SECOND SCHEDULE (continued overleaf)

1. Reservations and conditions, if any, contained in the Crown Grant above referred to.
2. Mortgage No. J820038 of that part of the land above described formerly comprised in Certificate of Title Volume 5727 Folio 98 to Thomas Hillas Rhodes, Mary Waud Rhodes and Kenneth Nethersole Rhodes. Entered 16-12-1964. Discharged K258048
3. Mortgage No. K252055 of that part of the land above described formerly comprised in Certificate of Title Volume 5190 Folio 27 to Commonwealth Trading Bank of Australia Entered 24-2-1966. Discharged L73089

*Jawatson*  
 Registrar General.

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

WARNING THIS DOCUMENT MUST NOT BE REMOVED FROM THE LAND TITLES OFFICE

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

(Page 1) Vol. 10280 Fol. 69

PT 1, 17 V.C.N. Blight, Government Printer

**FIRST SCHEDULE (continued)**

[illegible]**SECOND SCHEDULE (continued)**[illegible]

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

201.

Appn. No. 6216  
 Reference to last certificate  
 Vol. 2832 Fol. 89  
 Deposited Plan No. 16063

# New South Wales.



[CERTIFICATE OF TITLE.]

REGISTER BOOK.  
 Vol. 5190 Fol. 27

**CANCELLED**

WILLIAM LESLIE FENTON, of Earlwood, Carpenter and Joiner, Transferee under Instrument of Transfer No. C957069 is now the proprietor of an Estate in Fee Simple, subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests as are notified hereon, in that piece of land situated in the Municipality of Canterbury Parish of St. George, and County of Cumberland containing One rood thirty four and three quarters perches or therabouts as shown in the plan hereon and therein edged red being Lot A in plan annexed to the said Instrument of Transfer No. C957069 and being part of 100 acres (Portion 122 of Parish) originally granted to Richard Podmore by Crown Grant dated the 1st day of January 1810.

In witness whereof I have hereunto signed my name and affixed my Seal, this Twenty fifth day of November, 1940.

Signed in the presence of

*Whedgar*

*W. H. Wells*  
 Registrar General.



No. D15779 MORTGAGE dated 10th May 1941  
 from the said William Leslie Fenton to Industrial Building Society  
 Produced and entered 13th May 1941  
 at 11 o'clock in the fore noon  
*W. H. Wells*  
 REGISTRAR GENERAL



No. 2953608 DISCHARGE of which mortgage  
 No. 2950280 dated 14th September 1941  
 Produced and entered 25th November 1941  
 at 11 o'clock in the fore noon  
*J. H. Wells*  
 REGISTRAR GENERAL



No. 2953609 DISCHARGE of which mortgage  
 No. D15779 dated 14th September 1941  
 Produced and entered 12th November 1941  
 at 11 o'clock in the fore noon  
*J. H. Wells*  
 REGISTRAR GENERAL



No. 2953610 MORTGAGE dated 25th July 1941  
 from the said William Leslie Fenton to Industrial Building Society  
 Produced and entered 25th November 1941  
 at 11 o'clock in the fore noon  
*J. H. Wells*  
 REGISTRAR GENERAL



No. C 270280 MORTGAGE dated 11th December 1940  
 from the said William Leslie Fenton to Industrial Building Society  
 Produced and entered 12th December 1940  
 at 11 o'clock in the fore noon  
*W. H. Wells*  
 REGISTRAR GENERAL

*note change name*



No. F177393 DISCHARGE of MORTGAGE  
No. D753610 dated 7th March 1950  
Produced and entered 8th March 1950  
at 1st 11 o'clock in the forenoon,  
*J. Watson*  
REGISTRAR GENERAL

No. F177394 MORTGAGE dated 3rd March 1950  
from the said Jessie William Denton to  
Commonwealth Bank of Australia  
Produced and entered 8th March 1950  
at 1st 11 o'clock in the forenoon,  
*J. Watson*  
REGISTRAR GENERAL

MORTGAGE No. F177394 has been discharged.  
See H 278857 Entered 25th August 1959  
*J. Watson*  
REGISTRAR GENERAL

Walter John Charles Ball of Beverly Hills, Another  
now the registered proprietor of the land within described  
See TRANSFER No. H 278858 dated 6th August 1959  
Entered 25th August 1959  
*J. Watson*  
REGISTRAR GENERAL

No. K 252055 MORTGAGE dated 13th July 1960  
to Commonwealth Bank of Australia  
Entered 24th February 66  
*J. Watson*  
REGISTRAR GENERAL

*5/10/77*  
*to deal in the registered person*  
*without reference to S.B.*

This deed is cancelled as to .....  
New Certificates of Title have issued for lots in  
SP 518877 Plan No. 518877 as follows:-  
Lots 2, 3 & 4 Vol. 10580 Fol. 10580 respectively

*J. Watson*  
REGISTRAR GENERAL

*SP 518877 Vol 10580*  
*Proposed prepared*  
*by 5/10/77*  
*being whole*

201

Appn. No. 6216

Reference to last certificate

Vol. 2832 Fol. 88

Deposited Plan No. 16063

# New South Wales.



[CERTIFICATE OF TITLE.]

REGISTER BOOK.

Vol. 5227 Fol. 98

**CANCELLED**

THOMAS DESMOND TIERNEY, of Brighton-le-Sands, a member of the Royal Australian Navy, Transferee under Instrument of Transfer No. D607794 is now the proprietor of an Estate in Fee Simple, subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests as are notified hereon, in That piece of land situated in the Municipality of Canterbury Parish of St. George, and County of Cumberland containing Two rods twenty one and one half perches or thereabouts as shown in the plan hereon and therein edged red being Lot B in plan annexed to Instrument of Transfer No. D957069 and being part of 100 acres (Portion 122 of Parish) originally granted to Richard Podmore by Crown Grant dated the 1st day of January 1810.

In witness whereof I have hereunto signed my name and affixed my Seal, this *Twenty third* day of September, 19*17*.

Signed in the presence of

*J. Keeshaw*

*J. H. Wells*  
 REGISTRAR GENERAL



No. *F239817* DISCHARGE of *100 acres*  
 from the said *Thomas Desmond Tierney* to  
*Muriel Barber, wife of Thomas Barber*  
 Produced and entered *13th June* 19*17*  
 at *40 min pt 10* o'clock in the *fore* noon.

No. *F239818* TRANSFER of *25 1/2 acres*  
 from the said *Thomas Desmond Tierney* to  
*Muriel Barber, wife of Thomas Barber*  
 Produced and entered *13th June* 19*17*  
 at *40 min pt 10* o'clock in the *fore* noon.

No. *F239819* MORTGAGE dated *25th May* 19*17*  
 from the said *Muriel Barber* to *Commonwealth Bank of Australia*  
 Produced and entered *13th June* 19*17*  
 at *40 min pt 10* o'clock in the *fore* noon.

MORTGAGE No. *F239819* has been discharged.  
 See *D230036* Entered *16th January* 19*18*

No. *D230036* MORTGAGE dated *6th May* 19*18*  
 from the said *Thomas Desmond Tierney* to  
*RURAL BANK OF NEW SOUTH WALES*  
 Produced and entered *15th October* 19*18*  
 at *2 min pt 10* o'clock in the *fore* noon.



Raymond Bruce Owens of Palmer, Trustee  
of Religion and Gerald Helen Owens of New  
Hampshire, Managers are  
the registered proprietor of the land within described.  
as tenants in common in equal shares  
See TRANSFER No. T#20077 dated 30<sup>th</sup> October 1964  
DECEMBER  
Entered 16<sup>th</sup> December 1964  
Jawatson  
REGISTRAR GENERAL



N#1020008 MORTGAGE dated 30<sup>th</sup> October 1964  
Thomas Ellis Rhys, Henry Lewis Rhys  
and David Iwan Rhys  
Entered 16<sup>th</sup> December 1964  
Jawatson  
REGISTRAR GENERAL



Separate C.T. issuing for lots  
in DP 518277  
No dealings to be registered hereon  
without reference to S.O.B.

This deed is cancelled as to .....  
New Certificates of Title have issued for lots in  
..... Plan No. 518517 as follows:-  
Lots ..... Vol. 11356 Fol. 2222, 23 respectively

Jawatson  
REGISTRAR GENERAL



Approved by the Council of the County of Glamorgan  
08/12/64  
Jawatson  
10/12/64  
Jawatson  
10/12/64



NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 2/16063

-----

SEARCH DATE	TIME	EDITION NO	DATE
7/7/2022	9:18 AM	5	31/3/2022

LAND

-----

LOT 2 IN DEPOSITED PLAN 16063  
LOCAL GOVERNMENT AREA CANTERBURY-BANKSTOWN  
PARISH OF ST GEORGE COUNTY OF CUMBERLAND  
TITLE DIAGRAM DP16063

FIRST SCHEDULE

-----

PRINCIPAL HEALTHCARE FINANCE PTY LTD (T AS9039)

SECOND SCHEDULE (2 NOTIFICATIONS)

-----

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)  
2 AS9040 MORTGAGE TO ANZ FIDUCIARY SERVICES PTY LIMITED

NOTATIONS

-----

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

advlgeo

PRINTED ON 7/7/2022

# Advance Legal Searchers

Advance Legal Searchers Pty Ltd hereby certifies that the information contained in this document has been provided electronically by the Registrar General.

Information provided through Tri-Search an approved LPINSW Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

16/3/2017 10:59AM

FOLIO: 2/16063

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 5136 FOL 225

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
18/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
23/6/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
28/4/1998	3945053	NOTICE OF DEATH	EDITION 1
20/3/2002	8444542	TRANSFER	
20/3/2002	8444543	MORTGAGE	EDITION 2
3/12/2007	AD608276	DISCHARGE OF MORTGAGE	
3/12/2007	AD608277	TRANSFER	
3/12/2007	AD608278	MORTGAGE	EDITION 3
31/10/2016	AK885223	CAVEAT	
2/2/2017	AM124700	WITHDRAWAL OF CAVEAT	
6/2/2017	AM135532	DISCHARGE OF MORTGAGE	
6/2/2017	AM135533	TRANSFER	EDITION 4

\*\*\* END OF SEARCH \*\*\*

13977/1

PRINTED ON 16/3/2017

\*ANY ENTRIES PRECEDED BY AN ASTERISK DO NOT APPEAR ON THE CURRENT EDITION OF THE CERTIFICATE OF TITLE. WARNING: THE INFORMATION APPEARING UNDER NOTATIONS HAS NOT BEEN FORMALLY RECORDED IN THE REGISTER.



System Document Identification

Land Registry Document Identification

Form Number:01T-e  
Template Number:t\_nsw18  
ELN Document ID:1124344763  
ELN NOS ID: 1124344765

TRANSFER  
New South Wales  
Real Property Act 1900

AS9039

Stamp Duty: 10363260-001

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

LODGED BY:

Responsible Subscriber: ASHURST AUSTRALIA ABN 75304286095  
Address: 5 Martin PL  
Sydney 2000  
Email: PEXA.NSWLandRegistry@ashurst.com  
ELNO Subscriber Number: 7243  
Customer Account Number: 501410K  
Document Collection Box: 238N  
Client Reference: 81019988

LAND TITLE REFERENCE

C/403467  
3/16063  
2/16063  
2/518877  
D/403467

TRANSFEROR

BUPA ANZ PROPERTY 1 AND 2 LIMITED ACN 082931708  
Registered company

TRANSFeree

PRINCIPAL HEALTHCARE FINANCE PTY LTD ACN 069875476  
Registered company

Tenancy: Sole Proprietor

CONSIDERATION

The transferor acknowledges receipt of the consideration of \$10,000,000.00

ESTATE TRANSFERRED

FEE SIMPLE

The Transferor transfers to the Transferee the Estate specified in this Instrument and acknowledges receipt of any Consideration shown.

SIGNING FOR TRANSFEROR

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferor or his, her or its administrator or attorney.

Party Represented by Subscriber:

BUPA ANZ PROPERTY 1 AND 2 LIMITED

Signed By: Melinda Graham  
ELNO Signer Number: 16866

Signer Capacity: Practitioner Certifier  
Digital Signing Certificate Number:

**Signed for**  
**Subscriber:** PARTNERS OF THOMSON GEER ABN 21442367363  
THOMSON GEER

**Subscriber Capacity:**Representative Subscriber

**ELNO Subscriber Number:** 7217

**Customer Account Number:**501181

**Date:** 31/03/2022

## **SIGNING FOR TRANSFEREE**

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferee or his, her or its administrator or attorney.

### **Party Represented by Subscriber:**

PRINCIPAL HEALTHCARE FINANCE PTY LTD

**Signed By:** Kathy Santikos

**Signer Capacity:**Practitioner Certifier

**ELNO Signer Number:** 21659

**Digital Signing Certificate Number:**

**Signed for**  
**Subscriber:** PARTNERS OF CLAYTON UTZ ABN 35740217343  
CLAYTON UTZ

**Subscriber Capacity:**Representative Subscriber

**ELNO Subscriber Number:** 8398

**Customer Account Number:**501328

**Date:** 31/03/2022

Form: 01T  
Release: 3.4  
www.lands.nsw.gov.au



# TRANSFER

New South Wales  
Real Property Act 1900



## AD608277N

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

### STAMP DUTY

Office of State Revenue use only

23-10-2007

0004645583-001

SECTION 80(1)-TRANSFER FIRST HOME PLUS

NO DUTY PAYABLE

CONTRACT CONSIDERATION \$ \*\*\*\*404,000.00

PRIVATE DWELLING

(A) **FOLIO OF THE REGISTER**

Folio Identifier 2/16063

(B) **LODGED BY**

Document  
Collection  
Box

Name, Address or DX, Telephone, and LLPN if any

208X LLPN:123131V

ST GEORGE BANK

C/- ESPREON

DX 1494 SYDNEY

Reference:

02 9283 5111

CODES

T

TW

(Sheriff)

(C) **TRANSFEROR**

JOSE OLIVEIRA and OLIVIA OLIVEIRA

(D) **CONSIDERATION**

The transferor acknowledges receipt of the consideration of \$ 404,000.00

and as regards

(E) **ESTATE**

the above folio of the Register transfers to the transferee an estate in fee simple

(F) **SHARE TRANSFERRED**

(G) Encumbrances (if applicable):

(H) **TRANSFEE**

MIROSLAV LUKIC and ANKICA LUKIC

(I) **TENANCY:** Joint Tenants

**DATE**

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

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

Signature of witness:

Signature of transferor:

Name of witness:

Address of witness:

JOSEPH PINTO

B. COM. LL.B.

SOLICITOR

82. New Canterbury Rd  
Petersham. 2049

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

Signature:

Signatory's name:

Signatory's capacity:

George Traikovitch

transferee's solicitor

# TRANSFER

New South Wales  
 Real Property Act 1900

Leave this space clear. Affix additional  
 pages to the top left-hand corner.



8444542G

26-02-2002 0000902884-001  
 SECTION 18(2)  
 DUTY \$ \*\*\*\*\*2.00

Licence: 98M111  
 Edition: 0011

PRIVACY NOTE: this information is legally required and will

STAMP DUTY

Office of State Revenue use only

(A) TORRENS TITLE

If appropriate, specify the part transferred

2/16063

(B) LODGED BY

Delivery  
 Box

Name, Address or DX and Telephone

CODES

T

TW

(Sheriff)

23L

CSB

Reference (optional):

800332302

(C) TRANSFEROR

ERNEST JOHN CHARLES POULTER

(D) CONSIDERATION

The transferor acknowledges receipt of the consideration of \$ 290,000.00 and as regards

(E) ESTATE

the land specified above transfers to the transferee an estate in fee simple.

(F) SHARE  
 TRANSFERRED

(G)

Encumbrances (if applicable): 1. 2. 3.

(H) TRANSFEREE

JOSE OLIVEIRA & OLIVIA OLIVEIRA

(I)

TENANCY: JOINT

DATE

7 / 13 / 02  
 dd mm yyyy

(J) I certify that the transferor, with whom I am personally acquainted or as to  
 whose identity I am otherwise satisfied, signed this transfer in my presence.

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

Signature of witness:

*Robert Scott J.P.*

Signature of transferor:

*E. J. C. Poulter.*  
*By his attorney*  
*E. Pashalis.*

Name of witness:

*Robert Scott J.P.*

Address of witness:

*251 Victoria Rd*  
*Geelong*

*Power of Attorney*  
*Registered No*  
*830 BOOK 4198.*

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

I certify that the transferee, with whom I am personally acquainted or as to  
 whose identity I am otherwise satisfied, signed this transfer in my presence.

Signature of witness:

Signature of transferee:

*E. Pashalis*

Name of witness:

Address of witness:

If signed on the transferee's behalf by a solicitor  
 or licensed conveyancer, insert the signatory's  
 full name and capacity below:

*E. PASHALIS - SOLICITOR*

201.

Appn. No. 6216  
 Reference to *last Certificate*  
 Vol. 2832 Fol. 89

# New South Wales.



[CERTIFICATE OF TITLE]

REGISTER BOOK.  
 Vol. 5136 Fol. 225

**CANCELLED** W  
 2/16063

*GRY*  
Frederick John Fenton of Lakemba, Joiner Transfers under Indentment of Transfer No. C 894825 as owner  
 the proprietor of an estate in fee simple  
 subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such  
 encumbrances, liens, and interests as are notified hereon, in *that* piece of land situated  
 in the Municipality of Canterbury Parish of St George, and County of Cumberland  
 containing *Eighteen and three quarters perches or thereabouts as shown on the plan thereon and therein edged*  
*red being Lot 2 in Deposited Plan No. 10063 and being part of 100 acres (Parcel 122 of Parish) originally*  
*granted to Richard Rodmore by Crown Grant dated the 1st day of January 1840*

In witness whereof I have hereunto signed my name and affixed my Seal, this *Twenty* day of *May* 19*40*

Signed in the presence of *Whitford*

*Reg. W. Miles*  
 Registrar General.

S Kerne	3		
	2	18 3/4 per.	10
	1		

No. D50150 DISCHARGE of within mortgage  
 No. C 894825 dated 21<sup>st</sup> August 1941  
 Produced 21<sup>st</sup> August 1941 and entered 2<sup>nd</sup> September 1941  
 at 12 o'clock in the noon.  
*Reg. W. Miles*  
 REGISTRAR GENERAL

D50151  
 TRANSFER dated 21<sup>st</sup> August 1941  
 from the said Frederick John Fenton to Ernest John Charles Poulter of Eastwood  
Stemman and his wife Agnes Poulter his  
 wife as joint tenants of the land within described  
 Produced 21<sup>st</sup> August 1941 and entered 2<sup>nd</sup> September 1941  
 at 12 o'clock in the noon.  
*Reg. W. Miles*  
 REGISTRAR GENERAL

D50152 MORTGAGE dated 11<sup>th</sup> August 1941  
 from the said Ernest John Charles Poulter and his wife  
Agnes Poulter to John Henry Mervyn Stemman  
 wife of James Archibald Stemman of  
Strathfield Carpenter  
 Produced 21<sup>st</sup> August 1941 and entered 2<sup>nd</sup> September 1941  
 at 12 o'clock in the noon.  
*Reg. W. Miles*  
 REGISTRAR GENERAL

No. D27088 DISCHARGE of within mortgage  
 No. D50152 dated 25<sup>th</sup> March 1944  
 Produced and entered 27<sup>th</sup> March 1944  
 at 12 o'clock in the noon.  
*Reg. W. Miles*  
 REGISTRAR GENERAL

*Notification referred to*  
 No. C 894826 MORTGAGE dated 14<sup>th</sup> March 1940  
 from the said Frederick John Fenton to Industrial  
Building Society  
 Produced 19<sup>th</sup> April 1940 and entered 16<sup>th</sup> May 1940  
 at 12 o'clock in the noon.  
*Reg. W. Miles*  
 REGISTRAR GENERAL

COMPULSORY NO FURTHER  
 REGISTRATION REQUIRED





NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 3/16063

-----

SEARCH DATE	TIME	EDITION NO	DATE
7/7/2022	9:18 AM	4	31/3/2022

LAND

-----

LOT 3 IN DEPOSITED PLAN 16063  
LOCAL GOVERNMENT AREA CANTERBURY-BANKSTOWN  
PARISH OF ST GEORGE COUNTY OF CUMBERLAND  
TITLE DIAGRAM DP16063

FIRST SCHEDULE

-----

PRINCIPAL HEALTHCARE FINANCE PTY LTD (T AS9039)

SECOND SCHEDULE (2 NOTIFICATIONS)

-----

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)  
2 AS9040 MORTGAGE TO ANZ FIDUCIARY SERVICES PTY LIMITED

NOTATIONS

-----

UNREGISTERED DEALINGS: NIL

\*\*\* END OF SEARCH \*\*\*

advlgeo

PRINTED ON 7/7/2022



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

7/7/2022 10:23AM

FOLIO: 3/16063

First Title(s): SEE PRIOR TITLE(S)  
Prior Title(s): VOL 5996 FOL 74

Recorded	Number	Type of Instrument	C.T. Issue
17/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
23/8/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
27/1/1995	U969818	DISCHARGE OF MORTGAGE	
27/1/1995	U969819	DISCHARGE OF MORTGAGE	EDITION 1
3/8/2001	7827793	TRANSFER	
3/8/2001	7827794	MORTGAGE	EDITION 2
30/3/2017	AM271627	CAVEAT	
17/5/2017	AM395157	DISCHARGE OF MORTGAGE	
17/5/2017	AM395158	TRANSFER	EDITION 3
31/3/2022	AS9039	TRANSFER	
31/3/2022	AS9040	MORTGAGE	EDITION 4

\*\*\* END OF SEARCH \*\*\*

advlgeo

PRINTED ON 7/7/2022

# Advance Legal Searchers

Advance Legal Searchers Pty Ltd hereby certifies that the information contained in this document has been provided electronically by the Registrar General.

Information provided through Tri-Search an approved LPINSW Information Broker

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE

16/3/2017 11:05AM

FOLIO: 3/16063

First Title(s): SEE PRIOR TITLE(S)

Prior Title(s): VOL 5996 FOL 74

Recorded -----	Number -----	Type of Instrument -----	C.T. Issue -----
17/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
23/8/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
27/1/1995	U969818	DISCHARGE OF MORTGAGE	
27/1/1995	U969819	DISCHARGE OF MORTGAGE	EDITION 1
3/8/2001	7827793	TRANSFER	
3/8/2001	7827794	MORTGAGE	EDITION 2

\*\*\* END OF SEARCH \*\*\*

13977/1

PRINTED ON 16/3/2017

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NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

7/7/2022 10:23AM

FOLIO: 3/16063

First Title(s): SEE PRIOR TITLE(S)  
Prior Title(s): VOL 5996 FOL 74

Recorded	Number	Type of Instrument	C.T. Issue
17/12/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
23/8/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
27/1/1995	U969818	DISCHARGE OF MORTGAGE	
27/1/1995	U969819	DISCHARGE OF MORTGAGE	EDITION 1
3/8/2001	7827793	TRANSFER	
3/8/2001	7827794	MORTGAGE	EDITION 2
30/3/2017	AM271627	CAVEAT	
17/5/2017	AM395157	DISCHARGE OF MORTGAGE	
17/5/2017	AM395158	TRANSFER	EDITION 3
31/3/2022	AS9039	TRANSFER	
31/3/2022	AS9040	MORTGAGE	EDITION 4

\*\*\* END OF SEARCH \*\*\*

advlgeo

PRINTED ON 7/7/2022

System Document Identification

Land Registry Document Identification

Form Number:01T-e  
Template Number:t\_nsw18  
ELN Document ID:1124344763  
ELN NOS ID: 1124344765

TRANSFER  
New South Wales  
Real Property Act 1900

AS9039

Stamp Duty: 10363260-001

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

LODGED BY:

Responsible Subscriber: ASHURST AUSTRALIA ABN 75304286095  
Address: 5 Martin PL  
Sydney 2000  
Email: PEXA.NSWLandRegistry@ashurst.com  
ELNO Subscriber Number: 7243  
Customer Account Number: 501410K  
Document Collection Box: 238N  
Client Reference: 81019988

LAND TITLE REFERENCE

C/403467  
3/16063  
2/16063  
2/518877  
D/403467

TRANSFEROR

BUPA ANZ PROPERTY 1 AND 2 LIMITED ACN 082931708  
Registered company

TRANSFeree

PRINCIPAL HEALTHCARE FINANCE PTY LTD ACN 069875476  
Registered company

Tenancy: Sole Proprietor

CONSIDERATION

The transferor acknowledges receipt of the consideration of \$10,000,000.00

ESTATE TRANSFERRED

FEE SIMPLE

The Transferor transfers to the Transferee the Estate specified in this Instrument and acknowledges receipt of any Consideration shown.

SIGNING FOR TRANSFEROR

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferor or his, her or its administrator or attorney.

Party Represented by Subscriber:

BUPA ANZ PROPERTY 1 AND 2 LIMITED

Signed By: Melinda Graham  
ELNO Signer Number: 16866

Signer Capacity: Practitioner Certifier  
Digital Signing Certificate Number:



**Signed for**  
**Subscriber:** PARTNERS OF THOMSON GEER ABN 21442367363  
THOMSON GEER

**Subscriber Capacity:**Representative Subscriber

**ELNO Subscriber Number:** 7217

**Customer Account Number:**501181

**Date:** 31/03/2022

## **SIGNING FOR TRANSFEREE**

I certify that:

1. The Certifier has taken reasonable steps to ensure that this Registry Instrument or Document is correct and compliant with relevant legislation and any Prescribed Requirement.
2. The Certifier has retained the evidence supporting this Registry Instrument or Document.
3. The Certifier holds a properly completed Client Authorisation for the Conveyancing Transaction including this Registry Instrument or Document.
4. The Certifier has taken reasonable steps to verify the identity of the transferee or his, her or its administrator or attorney.

### **Party Represented by Subscriber:**

PRINCIPAL HEALTHCARE FINANCE PTY LTD

**Signed By:** Kathy Santikos

**Signer Capacity:**Practitioner Certifier

**ELNO Signer Number:** 21659

**Digital Signing Certificate Number:**

**Signed for**  
**Subscriber:** PARTNERS OF CLAYTON UTZ ABN 35740217343  
CLAYTON UTZ

**Subscriber Capacity:**Representative Subscriber

**ELNO Subscriber Number:** 8398

**Customer Account Number:**501328

**Date:** 31/03/2022

Form: 01T  
Licence: 05-11-638  
Licensee: Softdocs

①

# TRANSFER

New South Wales  
Real Property Act 1900



AM395158C

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

Section 96B RP Act requires that the Register is  
Office of State Revenue  
NSW Treasury  
Client No: 90083501 1933  
Duty: 10.00 Trans No: 9072761-001  
Asst details: SUB-MMR-4E  
PURCHASER DUTY PAID

## STAMP DUTY

Office of State Revenue use only

## (A) TORRENS TITLE

3/16063

## (B) LODGED BY

Document  
Collection  
Box

659M

Name, Address, or DX, Telephone, and Customer Account Number if any

A.C.N. 002 869 409

LEGAL SEARCHERS

GPO BOX 4103 SYDNEY 2001

Ph: 9099-7400 Fax: 9232-7141

DX 967 SYDNEY

Reference (optional) LPN: 123482P

CODES

T

TW

## (C) TRANSFEROR

JING YI LU & QUN HUANG

## (D) CONSIDERATION

The transferor acknowledges receipt of the consideration of \$ 1,455,000.00

and as regards the land

## (E) ESTATE

specified above transfers to the transferee an estate in fee simple.

## (F) SHARE

TRANSFERRED

## (G)

Encumbrances (if applicable):

## (H) TRANSFEE

BUPA ANZ PROPERTY 1 AND 2 LIMITED (ACN 082 931 708)

## (I)

TENANCY:

## DATE

..... / ..... / .....

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

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

Signature of witness:

Name of witness:

ALAN LUO

Address of witness:

2/101 BURWOOD RD  
BURWOOD, NSW 2134

Signature of transferor:

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

Signature:

Signatory's name: Brooke Glastonbury  
Capacity: Solicitor for the transferee

(K) The transferee's solicitor certifies that the eNOS data relevant to this dealing has been submitted and  
stored under eNOS ID No. 1283571 Full Name: Brooke Glastonbury Signature:

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

Form: 97-01T  
Licence: 10V/0096/95  
Printed: 0897LTO

# TRANSFER

New South Wales  
Real Property Act 1900

7827793V



Instructions for filling out  
this form are available  
from the Land Titles Office

Office of State Revenue use only

NEW SOUTH WALES DUTY  
06-07-2001 0000672571-001  
SECTION 18(2)  
DUTY \$ \*\*\*\*\*2.00

(A) LAND TRANSFERRED  
If appropriate, specify the  
share or part transferred.

FOLIO IDENTIFIER: 3/16063

(B) LODGED BY

LTO Box

Name, Address or DX and Telephone

208\*

St George Bank.  
982294

Reference (15 character maximum):

(C) TRANSFEROR ..... JOAN VALMA BEAZLEY.....

(D) acknowledges receipt of the consideration of ..... 313,500.00.....  
and as regards the land specified above transfers to the transferee an estate in fee simple.

(E) Encumbrances (if applicable): 1. .... 2. .... 3. ....

(F) TRANSFEE

T  
TS  
(s713 LGA)  
TW  
(Sheriff)

JING YI LU & QUN HUANG

(G)

TENANCY: JOINT TENANTS

(H) We certify this dealing correct for the purposes of the Real Property Act 1900. DATE Do NOT DATE

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

① Achiel.  
Signature of Witness

② Gabrielle Schiel  
Name of Witness (BLOCK LETTERS)

③ 2/6 Arcadia Street, Penhurst.  
Address of Witness

XJB J. V. Beazley.  
Signature of Transferor

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

Signature of Witness

Name of Witness (BLOCK LETTERS)

Address of Witness

MICHAEL LEE SOLICITOR

Signature of Transferee

If signed on the transferee's behalf by a solicitor or licensed conveyancer, show the signatory's full name in block letters.

201

Appn. No. 6216

Reference to Last Certificate

Vol. 5928 Fol. 90

# New South Wales



(CERTIFICATE OF TITLE)

JOINT TENANCY

REGISTER BOOK

Vol. 5996 Fol. 74

**CANCELLED** ☒

ON ISSUE OF 3/16063

PETER CONNELL, of Sans Souci, Electrical Fitter, and CAROLINE CONNELL, his wife, Transferees under Instrument of Transfer No. D982498 are now the proprietors of an Estate in Fee Simple as joint tenants, subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances, liens, and interests as are notified hereon, in That piece of land situated in the Municipality of Canterbury Parish of St. George, and County of Cumberland containing Eighteen and three quarters perches or thereabouts as shown in the plan hereon and therein edged red being Lot 3 in Deposited Plan No. 16063 and being part of 100 acres (Portion 122 of Parish) originally granted to Richard Podmore by Crown Grant dated the 1st day of January 1810.

In witness whereof I have hereunto signed my name and affixed my Seal, this Twenty-seventh day of July, 1959.

Signed in the presence of *G. Mc Kern*

*J. Wells*  
 Registrar-General



St	4	5	6	7
	436 ft.	18 <sup>3</sup> / <sub>4</sub> per.	436 ft.	
Karne	2			

Scale: 50 feet to one inch.

D982498

NOTIFICATION REFERRED TO

No. F345667 TRANSFER dated 2nd June 1950  
 from the said Peter Connell and Caroline Connell to Herbert Albert Jones of Penrith NSW

Produced and entered 16th June 1950 at 3.15 p.m. 3 o'clock in the afternoon.

*J. Wells*  
 REGISTRAR GENERAL

No. F257383 TRANSFER dated 23rd June 1950  
 from the said Herbert Albert Jones to Charles Joseph Woodhouse of Australia

Produced and entered 24th July 1950 at 12 o'clock in the noon.

*J. Wells*  
 REGISTRAR GENERAL

No. F459906 TRANSFER dated 25th May 1950  
 from the said Charles Joseph Woodhouse to Neville Stuart White of Kingsgrove NSW and Linda Joyce White his wife as joint tenants

Produced and entered 28th May 1950 at 10.10 o'clock in the fore noon.

*J. Wells*  
 REGISTRAR GENERAL

No. F459907 MORTGAGE dated 25th May 1950  
 from the said Neville Stuart White and Linda Joyce White to Commonwealth Bank of Australia

Produced and entered 28th May 1950 at 10.10 o'clock in the fore noon.

*J. Wells*  
 REGISTRAR GENERAL

No. F92926 DISCHARGE of within mortgage  
 F459907 dated 19th March 1953

Produced 26th March 1953 and entered 26th March 1953 at 10.10 o'clock in the fore noon.

*J. Wells*  
 REGISTRAR GENERAL



No. 829347 MORTGAGE dated 24th March 1953  
from the only Heir of the late White and Ambrose  
White to Commonwealth Savings Bank of Australia

Produced and entered 24th March 1953  
at 10 o'clock in the after noon.

J. H. Wells  
REGISTRAR GENERAL

MORTGAGE No. 829347 has been discharged.  
See M958200 Entered 3rd November 1972

J. H. Wells  
REGISTRAR GENERAL

Jack Beazley of Norway, Personnel Officer and  
John Valma Beazley his wife as joint tenants  
are  
now the registered proprietors of the land within described.

See TRANSFER No N744965 dated 1st March 1974

Entered 5th March 1974

J. H. Wells  
REGISTRAR GENERAL

No. N744966 MORTGAGE dated 1st March 1974  
to St George Permanent Building Society Ltd

Entered 15th March 1974

J. H. Wells  
REGISTRAR GENERAL

MORTGAGE No. Q621110 to Statewide Credit Union Limited

Registered 3-4-1978

Discharged  
X326363  
18-1-1980

J. H. Wells  
REGISTRAR GENERAL

REGISTERED PROPRIETOR Joan Valma Beazley by  
Notice of Death W663560 Registered 11-11-1980

X269198 Mortgage to Westpac Banking Corporation Registered 18-1-1980

COMPUTER FOLIO . NO FURTHER  
DEALINGS TO BE REGISTERED.

14 958200/1  
CT 3/12/78  
CT 6/3/78  
W663560 ND

X269198  
X269198



## **APPENDIX D**

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### **SECTION 10.7(2 & 5) PLANNING CERTIFICATES**

20219/5:94524

Geotechnique Pty Ltd  
PO Box 880  
PENRITH NSW 2751

## **PLANNING CERTIFICATE**

**Section 10.7(2)(5) of the Environmental Planning and Assessment Act,  
1979.**

**Certificate No:** 20225208  
30 June 2022

**Land which Certificate is issued for:**

**Lot D DP 403467**

**59 Karne Street North, NARWEE NSW 2209**

**INFORMATION PROVIDED UNDER SECTION 10.7 (2)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

Land which Certificate is issued for:

**Lot D DP 403467**

**59 Karne Street North, NARWEE NSW 2209**

**PART 1:  
ENVIRONMENTAL PLANNING INSTRUMENTS**

**1.1**      Principal Environmental Planning Instrument

**Canterbury Local Environmental Plan 2012**

Date effective from

**1 January 2013**

Land Use Zone

**ZONE R3      MEDIUM DENSITY RESIDENTIAL**

**1.      Permitted without consent**

Home occupations

**2.      Permitted with consent**

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Business premises; Car parks; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Home businesses; Home industries; Multi dwelling housing; Neighbourhood shops; Office premises; Oyster aquaculture; Places of public worship; Recreation areas; Respite day care centres; Restaurants or cafes; Roads; Semi-detached dwellings; Seniors housing; Shops; Tank-based aquaculture

**3.      Prohibited**

Any development not specified in item 1 or 2

*The above information will assist in determining how the subject land may be developed. It is recommended that you read this section in conjunction with a full copy of any relevant environmental planning instrument as there may be additional provisions that affect how the land may be developed.*

## 1.2 **State Environmental Planning Policies**

**Note:** The following information indicates those State Environmental Planning Policies (SEPP) which may apply to the subject land. A summary explanation of each SEPP can be sourced from the Department of Planning, Industry and Environment (DPIE) website at [www.planning.nsw.gov.au](http://www.planning.nsw.gov.au). The full wording of each SEPP can also be accessed via the DPIE website.

### **State Environmental Planning Policies:**

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

State Environmental Planning Policy (Housing) 2021

State Environmental Planning Policy (Industry and Employment) 2021

State Environmental Planning Policy (Planning Systems) 2021

State Environmental Planning Policy (Precincts - Central River City) 2021

State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021

State Environmental Planning Policy (Precincts - Regional) 2021

State Environmental Planning Policy (Precincts - Western Parkland City) 2021

State Environmental Planning Policy (Primary Production) 2021

State Environmental Planning Policy (Resilience and Hazards) 2021

State Environmental Planning Policy (Resources and Energy) 2021

State Environmental Planning Policy (Transport and Infrastructure) 2021

State Environmental Planning Policy (Biodiversity and Conservation) 2021

*Encompassed within the Biodiversity and Conservation SEPP is the former Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment which applies to the site. The SEPP aims to protect the water quality of the Georges River and its tributaries and the environmental quality of the whole catchment. The objectives of the plan are to be achieved through coordinated land use planning and development control. The plan establishes the framework within which local, State and Federal agencies will consult so that there is a consistent approach to planning and development within the catchment.*

### **Proposed State Environmental Planning Policies:**

Not applicable

## 1.3 **Proposed Environmental Planning Instruments (including any Planning Proposals) that are or have been the subject of community consultation or on public exhibition under the Act**

The land is affected by Planning Proposal (PP\_2019\_CBANK\_005) which has been placed on public exhibition. The Planning Proposal seeks to produce a single set of planning rules for the Canterbury Bankstown Local Government Area and to implement key actions of current land use strategies.

## 1.4 **Development Control Plans**

### **CANTERBURY DEVELOPMENT CONTROL PLAN 2012**

Contains detailed design guidelines and development standards for development in the former Canterbury City.

## 1.5 **Contribution Plans**

### **CANTERBURY DEVELOPMENT CONTRIBUTIONS PLAN 2013**

Development Contributions Plan prepared and adopted under the Environmental Planning and Assessment Act, 1979 and Environmental Planning and Assessment Regulation 2000.

## **PART 2: RESTRICTIONS ON DEVELOPMENT**

### **2.1 Heritage**

The land is not affected by a heritage item or within a heritage conservation area under the relevant Principal Environmental Planning Instrument.

### **2.2 Mine Subsidence**

The subject land is not within a mine subsidence district within the meaning of Section 20 of the *Coal Mine Subsidence Compensation Act 2017*.

### **2.3 Road Widening and Road Realignment**

*Whether or not the land is affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993 or an environmental planning instrument;*

The land is not affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993, or an environmental planning instrument.

*Whether or not the land is affected by a road widening or road realignment proposal under any resolution of Council.*

The land is not affected by a road widening or road realignment proposal under any resolution of Council.

### **2.4 Council and Other Public Authority Policies on Hazard Risk Restrictions**

*Whether or not the land is affected by a policy adopted by Council or adopted by any other public authority (and notified to the Council for the express purpose of its adoption by that authority being referred to) that restricts the development of the land because of the likelihood of:*

- **Land Slip**

The land is not affected by a policy restriction relating to landslip

- **Bushfire**

Not applicable

- **Tidal Inundation**

The land is not affected by a policy restriction relating to tidal inundation

- **Subsidence**

The land is not affected by a policy restriction relating to subsidence

- **Acid Sulfate Soils**

The land is not affected by a policy restriction relating to acid sulfate soils.

- **Unhealthy Building Land**

The land is not affected by a policy restriction relating to Unhealthy Building Land.

- **Any Other Risk**

Not applicable



**2.5 Flooding**

The land, or part of the land, **is within** the flood planning area (FPA) and consequently the probable maximum flood (PMF).

The land, or part of the land, **is subject to** flood related development controls.

Please note that a Stormwater Systems Report (SSR) will be required from Council (cost applies) to further understand constraints that may relate to development of the property. An SSR can be ordered online from Council's website.

You are advised to refer to the following:

- The relevant Development Control Plan (noted in Section 1.4 of this certificate) for further information on Council's approach to Flood Risk Management, and
- Frequently Asked Questions and details on the study relevant to your catchment area are available at Council's Floodplain Management webpage (<https://cb.city/flooding>).

**NB:** The FPA is the 1% Annual Exceedance Probability (AEP) plus generally a 0.5m freeboard or as outlined in relevant Development Control Plan.

**2.6 Matters arising under the Contaminated Land Management Act, 1997.**

Council is not aware of the land being affected by any matters as prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997*.

Please refer to the *NSW Environmental Protection Agency (EPA)* for more information.

**2.7 Land Reserved For Acquisition**

There is no environmental planning instrument, or proposed environmental planning instrument, applying to the land that makes provision for the acquisition of the land (or any part thereof) by a public authority, as referred to in Section 3.15 of the Environmental Planning and Assessment Act 1979.

**2.8 Property Vegetation Plans and Native vegetation clearing set asides**

Not applicable

**2.9 Orders under Trees (Disputes Between Neighbours) Act 2006**

Not applicable

**2.10 Directions under Part 3A**

Not applicable

**2.11 Conditions for Seniors Housing**

Not applicable

**2.12 Site Compatibility Certificates for Infrastructure, Schools or TAFE Establishments**

Not applicable

**2.13 Site Compatibility Certificates and Conditions for Affordable Rental Housing**

Not applicable

**2.14 Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works**

Not applicable

**2.15 Biodiversity Certified Land and Biodiversity Stewardship Sites**

Not applicable

**2.16 Paper Subdivision Information**

Not applicable

**2.17 Site Verification Certificates**

Not applicable

**2.18 Loose-Fill Asbestos Ceiling Insulation**

Not applicable

**2.19 Affected Building Notices and Building Product Rectification Orders**

Not applicable

**2.20 State Environmental Planning Policy (Western Sydney Aerotropolis) 2020**

Not applicable

**2.21 Complying Development**

*Whether or not the land is land on which complying development may be carried out under each of the Codes for complying development because of the provisions of clauses 1.17A(1) (c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and, if no complying development may be carried out on that land under that Policy, the reasons why complying development may not be carried out on that land. **Note that in order for complying development to be able to be carried out, it must be permissible in the relevant zone in the first place.***

<b>Housing Code (if in a residential zone)</b>	Yes
<b>Rural Housing Code (if in a rural residential zone)</b>	Not applicable
<b>Low Rise Housing Diversity Code</b>	Yes
<b>Housing Alterations Code</b>	Yes
<b>General Development Code</b>	Yes
<b>Greenfield Housing Code</b>	Not applicable
<b>Inland Code</b>	Not applicable
<b>Commercial and Industrial (New Building and Alterations) Code</b>	Yes
<b>Commercial and Industrial Alterations Code</b>	Yes
<b>Container Recycling Facilities Code</b>	Yes
<b>Demolition Code</b>	Yes
<b>Subdivision Code</b>	Yes
<b>Fire Safety Code</b>	Yes

**Important Disclaimer:** This clause of the Certificate only contains information in respect of that required by clause 3 of Schedule 4 of the Environmental Planning and Assessment Regulation 2000, in relation to Complying Development under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Other provisions contained in the SEPP, including but not limited to, minimum allotment size requirements, specified development standards or any other general exclusions, may preclude Complying Development under the SEPP from being able to be carried out. You will need to refer to the SEPP for complete details. It is your responsibility to ensure that you comply with all other general requirements of the SEPP. Failure to comply with these provisions may mean that any Complying Development Certificate issued under the provisions of the SEPP is invalid.

**PART 3:  
INFORMATION PROVIDED UNDER SECTION 10.7 (5)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

**Note:** When information pursuant to Section 10.7(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that Section. Council draws your attention to Section 10.7(6), which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

**3.1      Additional Flood Planning Advice**

In addition to Section 2.5 of this certificate, the following information may assist in interpreting the DCP:

Not applicable.

**3.2      Tree Preservation Order**

A tree preservation order applies to the whole of the City of Canterbury Bankstown.

**3.3      Additional Contaminated Land Advice**

On 22 August 2017 Council adopted a policy on contaminated land. This policy will restrict development of land:

- a) which is affected by contamination;
- b) which has been used for certain purposes;
- c) in respect of which there is not sufficient information about contamination;
- d) which is proposed to be used for certain purposes;
- e) in other circumstances contained in the policy.

**3.4      General Advice Regarding Use of Property**

Persons considering commencing a use of or purchasing a property are advised to seek confirmation that the current, or intended, use (as the case may be) has been approved by Council, or does not require Council approval. It is pointed out that the question of “existing use rights” within the meaning of the Environmental Planning and Assessment Act, 1979, is a complex matter, and that the commencement of a use without Council approval (where required) is unlawful and may be subject to enforcement action.

**3.5      Other Matters**

Not applicable.



**CAMILLE LATTOUF  
MANAGER SPATIAL PLANNING (ACTING)**

20219/5:94524

Geotechnique Pty Ltd  
PO Box 880  
PENRITH NSW 2751

## PLANNING CERTIFICATE

**Section 10.7(2)(5) of the Environmental Planning and Assessment Act,  
1979.**

**Certificate No:** 20225209  
30 June 2022

**Land which Certificate is issued for:**

**Lot C DP 403467**

**61-63 Karne Street North, NARWEE NSW 2209**

**INFORMATION PROVIDED UNDER SECTION 10.7 (2)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

Land which Certificate is issued for:

**Lot C DP 403467**

**61-63 Karne Street North, NARWEE NSW 2209**

**PART 1:  
ENVIRONMENTAL PLANNING INSTRUMENTS**

**1.1**      Principal Environmental Planning Instrument

**Canterbury Local Environmental Plan 2012**

Date effective from

**1 January 2013**

Land Use Zone

**ZONE R3      MEDIUM DENSITY RESIDENTIAL**

**1.      Permitted without consent**

Home occupations

**2.      Permitted with consent**

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Business premises; Car parks; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Home businesses; Home industries; Multi dwelling housing; Neighbourhood shops; Office premises; Oyster aquaculture; Places of public worship; Recreation areas; Respite day care centres; Restaurants or cafes; Roads; Semi-detached dwellings; Seniors housing; Shops; Tank-based aquaculture

**3.      Prohibited**

Any development not specified in item 1 or 2

*The above information will assist in determining how the subject land may be developed. It is recommended that you read this section in conjunction with a full copy of any relevant environmental planning instrument as there may be additional provisions that affect how the land may be developed.*



## 1.2 **State Environmental Planning Policies**

**Note:** The following information indicates those State Environmental Planning Policies (SEPP) which may apply to the subject land. A summary explanation of each SEPP can be sourced from the Department of Planning, Industry and Environment (DPIE) website at [www.planning.nsw.gov.au](http://www.planning.nsw.gov.au). The full wording of each SEPP can also be accessed via the DPIE website.

### **State Environmental Planning Policies:**

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

State Environmental Planning Policy (Housing) 2021

State Environmental Planning Policy (Industry and Employment) 2021

State Environmental Planning Policy (Planning Systems) 2021

State Environmental Planning Policy (Precincts - Central River City) 2021

State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021

State Environmental Planning Policy (Precincts - Regional) 2021

State Environmental Planning Policy (Precincts - Western Parkland City) 2021

State Environmental Planning Policy (Primary Production) 2021

State Environmental Planning Policy (Resilience and Hazards) 2021

State Environmental Planning Policy (Resources and Energy) 2021

State Environmental Planning Policy (Transport and Infrastructure) 2021

State Environmental Planning Policy (Biodiversity and Conservation) 2021

*Encompassed within the Biodiversity and Conservation SEPP is the former Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment which applies to the site. The SEPP aims to protect the water quality of the Georges River and its tributaries and the environmental quality of the whole catchment. The objectives of the plan are to be achieved through coordinated land use planning and development control. The plan establishes the framework within which local, State and Federal agencies will consult so that there is a consistent approach to planning and development within the catchment.*

### **Proposed State Environmental Planning Policies:**

Not applicable

## 1.3 **Proposed Environmental Planning Instruments (including any Planning Proposals) that are or have been the subject of community consultation or on public exhibition under the Act**

The land is affected by Planning Proposal (PP\_2019\_CBANK\_005) which has been placed on public exhibition. The Planning Proposal seeks to produce a single set of planning rules for the Canterbury Bankstown Local Government Area and to implement key actions of current land use strategies.

## 1.4 **Development Control Plans**

### **CANTERBURY DEVELOPMENT CONTROL PLAN 2012**

Contains detailed design guidelines and development standards for development in the former Canterbury City.

## 1.5 **Contribution Plans**

### **CANTERBURY DEVELOPMENT CONTRIBUTIONS PLAN 2013**

Development Contributions Plan prepared and adopted under the Environmental Planning and Assessment Act, 1979 and Environmental Planning and Assessment Regulation 2000.

## **PART 2: RESTRICTIONS ON DEVELOPMENT**

### **2.1 Heritage**

The land is not affected by a heritage item or within a heritage conservation area under the relevant Principal Environmental Planning Instrument.

### **2.2 Mine Subsidence**

The subject land is not within a mine subsidence district within the meaning of Section 20 of the *Coal Mine Subsidence Compensation Act 2017*.

### **2.3 Road Widening and Road Realignment**

*Whether or not the land is affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993 or an environmental planning instrument;*

The land is not affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993, or an environmental planning instrument.

*Whether or not the land is affected by a road widening or road realignment proposal under any resolution of Council.*

The land is not affected by a road widening or road realignment proposal under any resolution of Council.

### **2.4 Council and Other Public Authority Policies on Hazard Risk Restrictions**

*Whether or not the land is affected by a policy adopted by Council or adopted by any other public authority (and notified to the Council for the express purpose of its adoption by that authority being referred to) that restricts the development of the land because of the likelihood of:*

- **Land Slip**

The land is not affected by a policy restriction relating to landslip

- **Bushfire**

Not applicable

- **Tidal Inundation**

The land is not affected by a policy restriction relating to tidal inundation

- **Subsidence**

The land is not affected by a policy restriction relating to subsidence

- **Acid Sulfate Soils**

The land is not affected by a policy restriction relating to acid sulfate soils.

- **Unhealthy Building Land**

The land is not affected by a policy restriction relating to Unhealthy Building Land.

- **Any Other Risk**

Not applicable

**2.5 Flooding**

The land, or part of the land, **is within** the flood planning area (FPA) and consequently the probable maximum flood (PMF).

The land, or part of the land, **is subject to** flood related development controls.

Please note that a Stormwater Systems Report (SSR) will be required from Council (cost applies) to further understand constraints that may relate to development of the property. An SSR can be ordered online from Council's website.

You are advised to refer to the following:

- The relevant Development Control Plan (noted in Section 1.4 of this certificate) for further information on Council's approach to Flood Risk Management, and
- Frequently Asked Questions and details on the study relevant to your catchment area are available at Council's Floodplain Management webpage (<https://cb.city/flooding>).

**NB:** The FPA is the 1% Annual Exceedance Probability (AEP) plus generally a 0.5m freeboard or as outlined in relevant Development Control Plan.

**2.6 Matters arising under the Contaminated Land Management Act, 1997.**

Council is not aware of the land being affected by any matters as prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997*.

Please refer to the *NSW Environmental Protection Agency (EPA)* for more information.

**2.7 Land Reserved For Acquisition**

There is no environmental planning instrument, or proposed environmental planning instrument, applying to the land that makes provision for the acquisition of the land (or any part thereof) by a public authority, as referred to in Section 3.15 of the Environmental Planning and Assessment Act 1979.

**2.8 Property Vegetation Plans and Native vegetation clearing set asides**

Not applicable

**2.9 Orders under Trees (Disputes Between Neighbours) Act 2006**

Not applicable

**2.10 Directions under Part 3A**

Not applicable

**2.11 Conditions for Seniors Housing**

Not applicable

**2.12 Site Compatibility Certificates for Infrastructure, Schools or TAFE Establishments**

Not applicable

**2.13 Site Compatibility Certificates and Conditions for Affordable Rental Housing**

Not applicable

**2.14 Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works**

Not applicable

**2.15 Biodiversity Certified Land and Biodiversity Stewardship Sites**

Not applicable

**2.16 Paper Subdivision Information**

Not applicable

**2.17 Site Verification Certificates**

Not applicable

**2.18 Loose-Fill Asbestos Ceiling Insulation**

Not applicable

**2.19 Affected Building Notices and Building Product Rectification Orders**

Not applicable

**2.20 State Environmental Planning Policy (Western Sydney Aerotropolis) 2020**

Not applicable

**2.21 Complying Development**

*Whether or not the land is land on which complying development may be carried out under each of the Codes for complying development because of the provisions of clauses 1.17A(1) (c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and, if no complying development may be carried out on that land under that Policy, the reasons why complying development may not be carried out on that land. **Note that in order for complying development to be able to be carried out, it must be permissible in the relevant zone in the first place.***

<b>Housing Code (if in a residential zone)</b>	Yes
<b>Rural Housing Code (if in a rural residential zone)</b>	Not applicable
<b>Low Rise Housing Diversity Code</b>	Yes
<b>Housing Alterations Code</b>	Yes
<b>General Development Code</b>	Yes
<b>Greenfield Housing Code</b>	Not applicable
<b>Inland Code</b>	Not applicable
<b>Commercial and Industrial (New Building and Alterations) Code</b>	Yes
<b>Commercial and Industrial Alterations Code</b>	Yes
<b>Container Recycling Facilities Code</b>	Yes
<b>Demolition Code</b>	Yes
<b>Subdivision Code</b>	Yes
<b>Fire Safety Code</b>	Yes

**Important Disclaimer:** This clause of the Certificate only contains information in respect of that required by clause 3 of Schedule 4 of the Environmental Planning and Assessment Regulation 2000, in relation to Complying Development under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Other provisions contained in the SEPP, including but not limited to, minimum allotment size requirements, specified development standards or any other general exclusions, may preclude Complying Development under the SEPP from being able to be carried out. You will need to refer to the SEPP for complete details. It is your responsibility to ensure that you comply with all other general requirements of the SEPP. Failure to comply with these provisions may mean that any Complying Development Certificate issued under the provisions of the SEPP is invalid.

**PART 3:  
INFORMATION PROVIDED UNDER SECTION 10.7 (5)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

**Note:** When information pursuant to Section 10.7(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that Section. Council draws your attention to Section 10.7(6), which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

**3.1      Additional Flood Planning Advice**

In addition to Section 2.5 of this certificate, the following information may assist in interpreting the DCP:

Not applicable.

**3.2      Tree Preservation Order**

A tree preservation order applies to the whole of the City of Canterbury Bankstown.

**3.3      Additional Contaminated Land Advice**

On 22 August 2017 Council adopted a policy on contaminated land. This policy will restrict development of land:

- a) which is affected by contamination;
- b) which has been used for certain purposes;
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- d) which is proposed to be used for certain purposes;
- e) in other circumstances contained in the policy.

**3.4      General Advice Regarding Use of Property**

Persons considering commencing a use of or purchasing a property are advised to seek confirmation that the current, or intended, use (as the case may be) has been approved by Council, or does not require Council approval. It is pointed out that the question of “existing use rights” within the meaning of the Environmental Planning and Assessment Act, 1979, is a complex matter, and that the commencement of a use without Council approval (where required) is unlawful and may be subject to enforcement action.

**3.5      Other Matters**

Not applicable.



**CAMILLE LATTOUF  
MANAGER SPATIAL PLANNING (ACTING)**



20219/5:94524

Geotechnique Pty Ltd  
PO Box 880  
PENRITH NSW 2751

## **PLANNING CERTIFICATE**

**Section 10.7(2)(5) of the Environmental Planning and Assessment Act,  
1979.**

**Certificate No:** 20225210  
30 June 2022

**Land which Certificate is issued for:**

**Lot 2 DP 518877**

**61-63 Karne Street North, NARWEE NSW 2209**

**INFORMATION PROVIDED UNDER SECTION 10.7 (2)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

Land which Certificate is issued for:

**Lot 2 DP 518877**

**61-63 Karne Street North, NARWEE NSW 2209**

**PART 1:  
ENVIRONMENTAL PLANNING INSTRUMENTS**

**1.1**      Principal Environmental Planning Instrument

**Canterbury Local Environmental Plan 2012**

Date effective from

**1 January 2013**

Land Use Zone

**ZONE R3      MEDIUM DENSITY RESIDENTIAL**

**1.      Permitted without consent**

Home occupations

**2.      Permitted with consent**

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Business premises; Car parks; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Home businesses; Home industries; Multi dwelling housing; Neighbourhood shops; Office premises; Oyster aquaculture; Places of public worship; Recreation areas; Respite day care centres; Restaurants or cafes; Roads; Semi-detached dwellings; Seniors housing; Shops; Tank-based aquaculture

**3.      Prohibited**

Any development not specified in item 1 or 2

*The above information will assist in determining how the subject land may be developed. It is recommended that you read this section in conjunction with a full copy of any relevant environmental planning instrument as there may be additional provisions that affect how the land may be developed.*

## 1.2 **State Environmental Planning Policies**

**Note:** The following information indicates those State Environmental Planning Policies (SEPP) which may apply to the subject land. A summary explanation of each SEPP can be sourced from the Department of Planning, Industry and Environment (DPIE) website at [www.planning.nsw.gov.au](http://www.planning.nsw.gov.au). The full wording of each SEPP can also be accessed via the DPIE website.

### **State Environmental Planning Policies:**

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

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State Environmental Planning Policy (Planning Systems) 2021

State Environmental Planning Policy (Precincts - Central River City) 2021

State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021

State Environmental Planning Policy (Precincts - Regional) 2021

State Environmental Planning Policy (Precincts - Western Parkland City) 2021

State Environmental Planning Policy (Primary Production) 2021

State Environmental Planning Policy (Resilience and Hazards) 2021

State Environmental Planning Policy (Resources and Energy) 2021

State Environmental Planning Policy (Transport and Infrastructure) 2021

State Environmental Planning Policy (Biodiversity and Conservation) 2021

*Encompassed within the Biodiversity and Conservation SEPP is the former Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment which applies to the site. The SEPP aims to protect the water quality of the Georges River and its tributaries and the environmental quality of the whole catchment. The objectives of the plan are to be achieved through coordinated land use planning and development control. The plan establishes the framework within which local, State and Federal agencies will consult so that there is a consistent approach to planning and development within the catchment.*

### **Proposed State Environmental Planning Policies:**

Not applicable

## 1.3 **Proposed Environmental Planning Instruments (including any Planning Proposals) that are or have been the subject of community consultation or on public exhibition under the Act**

The land is affected by Planning Proposal (PP\_2019\_CBANK\_005) which has been placed on public exhibition. The Planning Proposal seeks to produce a single set of planning rules for the Canterbury Bankstown Local Government Area and to implement key actions of current land use strategies.

## 1.4 **Development Control Plans**

### **CANTERBURY DEVELOPMENT CONTROL PLAN 2012**

Contains detailed design guidelines and development standards for development in the former Canterbury City.

## 1.5 **Contribution Plans**

### **CANTERBURY DEVELOPMENT CONTRIBUTIONS PLAN 2013**

Development Contributions Plan prepared and adopted under the Environmental Planning and Assessment Act, 1979 and Environmental Planning and Assessment Regulation 2000.

## **PART 2: RESTRICTIONS ON DEVELOPMENT**

### **2.1 Heritage**

The land is not affected by a heritage item or within a heritage conservation area under the relevant Principal Environmental Planning Instrument.

### **2.2 Mine Subsidence**

The subject land is not within a mine subsidence district within the meaning of Section 20 of the *Coal Mine Subsidence Compensation Act 2017*.

### **2.3 Road Widening and Road Realignment**

*Whether or not the land is affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993 or an environmental planning instrument;*

The land is not affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993, or an environmental planning instrument.

*Whether or not the land is affected by a road widening or road realignment proposal under any resolution of Council.*

The land is not affected by a road widening or road realignment proposal under any resolution of Council.

### **2.4 Council and Other Public Authority Policies on Hazard Risk Restrictions**

*Whether or not the land is affected by a policy adopted by Council or adopted by any other public authority (and notified to the Council for the express purpose of its adoption by that authority being referred to) that restricts the development of the land because of the likelihood of:*

- **Land Slip**

The land is not affected by a policy restriction relating to landslip

- **Bushfire**

Not applicable

- **Tidal Inundation**

The land is not affected by a policy restriction relating to tidal inundation

- **Subsidence**

The land is not affected by a policy restriction relating to subsidence

- **Acid Sulfate Soils**

The land is not affected by a policy restriction relating to acid sulfate soils.

- **Unhealthy Building Land**

The land is not affected by a policy restriction relating to Unhealthy Building Land.

- **Any Other Risk**

Not applicable

**2.5 Flooding**

The land, or part of the land, **is within** the flood planning area (FPA) and consequently the probable maximum flood (PMF).

The land, or part of the land, **is subject to** flood related development controls.

Please note that a Stormwater Systems Report (SSR) will be required from Council (cost applies) to further understand constraints that may relate to development of the property. An SSR can be ordered online from Council's website.

You are advised to refer to the following:

- The relevant Development Control Plan (noted in Section 1.4 of this certificate) for further information on Council's approach to Flood Risk Management, and
- Frequently Asked Questions and details on the study relevant to your catchment area are available at Council's Floodplain Management webpage (<https://cb.city/flooding>).

**NB:** The FPA is the 1% Annual Exceedance Probability (AEP) plus generally a 0.5m freeboard or as outlined in relevant Development Control Plan.

**2.6 Matters arising under the Contaminated Land Management Act, 1997.**

Council is not aware of the land being affected by any matters as prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997*.

Please refer to the *NSW Environmental Protection Agency (EPA)* for more information.

**2.7 Land Reserved For Acquisition**

There is no environmental planning instrument, or proposed environmental planning instrument, applying to the land that makes provision for the acquisition of the land (or any part thereof) by a public authority, as referred to in Section 3.15 of the Environmental Planning and Assessment Act 1979.

**2.8 Property Vegetation Plans and Native vegetation clearing set asides**

Not applicable

**2.9 Orders under Trees (Disputes Between Neighbours) Act 2006**

Not applicable

**2.10 Directions under Part 3A**

Not applicable

**2.11 Conditions for Seniors Housing**

Not applicable

**2.12 Site Compatibility Certificates for Infrastructure, Schools or TAFE Establishments**

Not applicable

**2.13 Site Compatibility Certificates and Conditions for Affordable Rental Housing**

Not applicable

**2.14 Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works**

Not applicable

**2.15 Biodiversity Certified Land and Biodiversity Stewardship Sites**

Not applicable

**2.16 Paper Subdivision Information**

Not applicable



**2.17 Site Verification Certificates**

Not applicable

**2.18 Loose-Fill Asbestos Ceiling Insulation**

Not applicable

**2.19 Affected Building Notices and Building Product Rectification Orders**

Not applicable

**2.20 State Environmental Planning Policy (Western Sydney Aerotropolis) 2020**

Not applicable

**2.21 Complying Development**

*Whether or not the land is land on which complying development may be carried out under each of the Codes for complying development because of the provisions of clauses 1.17A(1) (c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and, if no complying development may be carried out on that land under that Policy, the reasons why complying development may not be carried out on that land. **Note that in order for complying development to be able to be carried out, it must be permissible in the relevant zone in the first place.***

<b>Housing Code (if in a residential zone)</b>	Yes
<b>Rural Housing Code (if in a rural residential zone)</b>	Not applicable
<b>Low Rise Housing Diversity Code</b>	Yes
<b>Housing Alterations Code</b>	Yes
<b>General Development Code</b>	Yes
<b>Greenfield Housing Code</b>	Not applicable
<b>Inland Code</b>	Not applicable
<b>Commercial and Industrial (New Building and Alterations) Code</b>	Yes
<b>Commercial and Industrial Alterations Code</b>	Yes
<b>Container Recycling Facilities Code</b>	Yes
<b>Demolition Code</b>	Yes
<b>Subdivision Code</b>	Yes
<b>Fire Safety Code</b>	Yes

**Important Disclaimer:** This clause of the Certificate only contains information in respect of that required by clause 3 of Schedule 4 of the Environmental Planning and Assessment Regulation 2000, in relation to Complying Development under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Other provisions contained in the SEPP, including but not limited to, minimum allotment size requirements, specified development standards or any other general exclusions, may preclude Complying Development under the SEPP from being able to be carried out. You will need to refer to the SEPP for complete details. It is your responsibility to ensure that you comply with all other general requirements of the SEPP. Failure to comply with these provisions may mean that any Complying Development Certificate issued under the provisions of the SEPP is invalid.

**PART 3:  
INFORMATION PROVIDED UNDER SECTION 10.7 (5)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

**Note:** When information pursuant to Section 10.7(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that Section. Council draws your attention to Section 10.7(6), which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

**3.1 Additional Flood Planning Advice**

In addition to Section 2.5 of this certificate, the following information may assist in interpreting the DCP:

Not applicable.

**3.2 Tree Preservation Order**

A tree preservation order applies to the whole of the City of Canterbury Bankstown.

**3.3 Additional Contaminated Land Advice**

On 22 August 2017 Council adopted a policy on contaminated land. This policy will restrict development of land:

- a) which is affected by contamination;
- b) which has been used for certain purposes;
- c) in respect of which there is not sufficient information about contamination;
- d) which is proposed to be used for certain purposes;
- e) in other circumstances contained in the policy.

**3.4 General Advice Regarding Use of Property**

Persons considering commencing a use of or purchasing a property are advised to seek confirmation that the current, or intended, use (as the case may be) has been approved by Council, or does not require Council approval. It is pointed out that the question of “existing use rights” within the meaning of the Environmental Planning and Assessment Act, 1979, is a complex matter, and that the commencement of a use without Council approval (where required) is unlawful and may be subject to enforcement action.

**3.5 Other Matters**

Not applicable.



**CAMILLE LATTOUF  
MANAGER SPATIAL PLANNING (ACTING)**

20219/5:94524

Geotechnique Pty Ltd  
PO Box 880  
PENRITH NSW 2751

## **PLANNING CERTIFICATE**

**Section 10.7(2)(5) of the Environmental Planning and Assessment Act,  
1979.**

**Certificate No:** 20225211  
30 June 2022

**Land which Certificate is issued for:**

**Lot 2 DP 16063**

**65 Karne Street North, NARWEE NSW 2209**

**INFORMATION PROVIDED UNDER SECTION 10.7 (2)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

Land which Certificate is issued for:

**Lot 2 DP 16063**

**65 Karne Street North, NARWEE NSW 2209**

**PART 1:  
ENVIRONMENTAL PLANNING INSTRUMENTS**

**1.1**      Principal Environmental Planning Instrument

**Canterbury Local Environmental Plan 2012**

Date effective from

**1 January 2013**

Land Use Zone

**ZONE R3      MEDIUM DENSITY RESIDENTIAL**

**1.      Permitted without consent**

Home occupations

**2.      Permitted with consent**

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Business premises; Car parks; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Home businesses; Home industries; Multi dwelling housing; Neighbourhood shops; Office premises; Oyster aquaculture; Places of public worship; Recreation areas; Respite day care centres; Restaurants or cafes; Roads; Semi-detached dwellings; Seniors housing; Shops; Tank-based aquaculture

**3.      Prohibited**

Any development not specified in item 1 or 2

*The above information will assist in determining how the subject land may be developed. It is recommended that you read this section in conjunction with a full copy of any relevant environmental planning instrument as there may be additional provisions that affect how the land may be developed.*

## 1.2 **State Environmental Planning Policies**

**Note:** The following information indicates those State Environmental Planning Policies (SEPP) which may apply to the subject land. A summary explanation of each SEPP can be sourced from the Department of Planning, Industry and Environment (DPIE) website at [www.planning.nsw.gov.au](http://www.planning.nsw.gov.au). The full wording of each SEPP can also be accessed via the DPIE website.

### **State Environmental Planning Policies:**

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

State Environmental Planning Policy (Housing) 2021

State Environmental Planning Policy (Industry and Employment) 2021

State Environmental Planning Policy (Planning Systems) 2021

State Environmental Planning Policy (Precincts - Central River City) 2021

State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021

State Environmental Planning Policy (Precincts - Regional) 2021

State Environmental Planning Policy (Precincts - Western Parkland City) 2021

State Environmental Planning Policy (Primary Production) 2021

State Environmental Planning Policy (Resilience and Hazards) 2021

State Environmental Planning Policy (Resources and Energy) 2021

State Environmental Planning Policy (Transport and Infrastructure) 2021

State Environmental Planning Policy (Biodiversity and Conservation) 2021

*Encompassed within the Biodiversity and Conservation SEPP is the former Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment which applies to the site. The SEPP aims to protect the water quality of the Georges River and its tributaries and the environmental quality of the whole catchment. The objectives of the plan are to be achieved through coordinated land use planning and development control. The plan establishes the framework within which local, State and Federal agencies will consult so that there is a consistent approach to planning and development within the catchment.*

### **Proposed State Environmental Planning Policies:**

Not applicable

## 1.3 **Proposed Environmental Planning Instruments (including any Planning Proposals) that are or have been the subject of community consultation or on public exhibition under the Act**

The land is affected by Planning Proposal (PP\_2019\_CBANK\_005) which has been placed on public exhibition. The Planning Proposal seeks to produce a single set of planning rules for the Canterbury Bankstown Local Government Area and to implement key actions of current land use strategies.

## 1.4 **Development Control Plans**

### **CANTERBURY DEVELOPMENT CONTROL PLAN 2012**

Contains detailed design guidelines and development standards for development in the former Canterbury City.

## 1.5 **Contribution Plans**

### **CANTERBURY DEVELOPMENT CONTRIBUTIONS PLAN 2013**

Development Contributions Plan prepared and adopted under the Environmental Planning and Assessment Act, 1979 and Environmental Planning and Assessment Regulation 2000.



## **PART 2: RESTRICTIONS ON DEVELOPMENT**

### **2.1 Heritage**

The land is not affected by a heritage item or within a heritage conservation area under the relevant Principal Environmental Planning Instrument.

### **2.2 Mine Subsidence**

The subject land is not within a mine subsidence district within the meaning of Section 20 of the *Coal Mine Subsidence Compensation Act 2017*.

### **2.3 Road Widening and Road Realignment**

*Whether or not the land is affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993 or an environmental planning instrument;*

The land is not affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993, or an environmental planning instrument.

*Whether or not the land is affected by a road widening or road realignment proposal under any resolution of Council.*

The land is not affected by a road widening or road realignment proposal under any resolution of Council.

### **2.4 Council and Other Public Authority Policies on Hazard Risk Restrictions**

*Whether or not the land is affected by a policy adopted by Council or adopted by any other public authority (and notified to the Council for the express purpose of its adoption by that authority being referred to) that restricts the development of the land because of the likelihood of:*

- **Land Slip**

The land is not affected by a policy restriction relating to landslip

- **Bushfire**

Not applicable

- **Tidal Inundation**

The land is not affected by a policy restriction relating to tidal inundation

- **Subsidence**

The land is not affected by a policy restriction relating to subsidence

- **Acid Sulfate Soils**

The land is not affected by a policy restriction relating to acid sulfate soils.

- **Unhealthy Building Land**

The land is not affected by a policy restriction relating to Unhealthy Building Land.

- **Any Other Risk**

Not applicable

**2.5 Flooding**

The land, or part of the land, **is within** the probable maximum flood (PMF) and **may be within** the flood planning area (FPA).

The land, or part of the land, **is subject** to flood related development controls.

You are advised to refer to the following:

- The relevant Development Control Plan (noted in Section 1.4 of this certificate) for further information on Council's approach to Flood Risk Management, and
- Frequently Asked Questions and details on the study relevant to your catchment area are available at Council's Floodplain Management webpage (<https://cb.city/flooding>).

**NB:** The FPA is the 1% Annual Exceedance Probability (AEP) plus generally a 0.5m freeboard or as outlined in relevant Development Control Plan. While your property is currently not identified within the 1% AEP flood extent mapping, it may fall within the FPA and need to accommodate freeboard to comply with the FPA requirements. Council is currently reviewing the extent of the FPA requirements in response to recent NSW Government changes.

**2.6 Matters arising under the Contaminated Land Management Act, 1997.**

Council is not aware of the land being affected by any matters as prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997*.

Please refer to the *NSW Environmental Protection Agency (EPA)* for more information.

**2.7 Land Reserved For Acquisition**

There is no environmental planning instrument, or proposed environmental planning instrument, applying to the land that makes provision for the acquisition of the land (or any part thereof) by a public authority, as referred to in Section 3.15 of the Environmental Planning and Assessment Act 1979.

**2.8 Property Vegetation Plans and Native vegetation clearing set asides**

Not applicable

**2.9 Orders under Trees (Disputes Between Neighbours) Act 2006**

Not applicable

**2.10 Directions under Part 3A**

Not applicable

**2.11 Conditions for Seniors Housing**

Not applicable

**2.12 Site Compatibility Certificates for Infrastructure, Schools or TAFE Establishments**

Not applicable

**2.13 Site Compatibility Certificates and Conditions for Affordable Rental Housing**

Not applicable

**2.14 Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works**

Not applicable

**2.15 Biodiversity Certified Land and Biodiversity Stewardship Sites**

Not applicable

**2.16 Paper Subdivision Information**

Not applicable

**2.17 Site Verification Certificates**

Not applicable

**2.18 Loose-Fill Asbestos Ceiling Insulation**

Not applicable

**2.19 Affected Building Notices and Building Product Rectification Orders**

Not applicable

**2.20 State Environmental Planning Policy (Western Sydney Aerotropolis) 2020**

Not applicable

**2.21 Complying Development**

*Whether or not the land is land on which complying development may be carried out under each of the Codes for complying development because of the provisions of clauses 1.17A(1) (c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and, if no complying development may be carried out on that land under that Policy, the reasons why complying development may not be carried out on that land. **Note that in order for complying development to be able to be carried out, it must be permissible in the relevant zone in the first place.***

<b>Housing Code (if in a residential zone)</b>	Yes
<b>Rural Housing Code (if in a rural residential zone)</b>	Not applicable
<b>Low Rise Housing Diversity Code</b>	Yes
<b>Housing Alterations Code</b>	Yes
<b>General Development Code</b>	Yes
<b>Greenfield Housing Code</b>	Not applicable
<b>Inland Code</b>	Not applicable
<b>Commercial and Industrial (New Building and Alterations) Code</b>	Yes
<b>Commercial and Industrial Alterations Code</b>	Yes
<b>Container Recycling Facilities Code</b>	Yes
<b>Demolition Code</b>	Yes
<b>Subdivision Code</b>	Yes
<b>Fire Safety Code</b>	Yes

**Important Disclaimer:** This clause of the Certificate only contains information in respect of that required by clause 3 of Schedule 4 of the Environmental Planning and Assessment Regulation 2000, in relation to Complying Development under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Other provisions contained in the SEPP, including but not limited to, minimum allotment size requirements, specified development standards or any other general exclusions, may preclude Complying Development under the SEPP from being able to be carried out. You will need to refer to the SEPP for complete details. It is your responsibility to ensure that you comply with all other general requirements of the SEPP. Failure to comply with these provisions may mean that any Complying Development Certificate issued under the provisions of the SEPP is invalid.

**PART 3:  
INFORMATION PROVIDED UNDER SECTION 10.7 (5)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

**Note:** When information pursuant to Section 10.7(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that Section. Council draws your attention to Section 10.7(6), which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

**3.1      Additional Flood Planning Advice**

In addition to Section 2.5 of this certificate, the following information may assist in interpreting the DCP:

Not applicable.

**3.2      Tree Preservation Order**

A tree preservation order applies to the whole of the City of Canterbury Bankstown.

**3.3      Additional Contaminated Land Advice**

On 22 August 2017 Council adopted a policy on contaminated land. This policy will restrict development of land:

- a) which is affected by contamination;
- b) which has been used for certain purposes;
- c) in respect of which there is not sufficient information about contamination;
- d) which is proposed to be used for certain purposes;
- e) in other circumstances contained in the policy.

**3.4      General Advice Regarding Use of Property**

Persons considering commencing a use of or purchasing a property are advised to seek confirmation that the current, or intended, use (as the case may be) has been approved by Council, or does not require Council approval. It is pointed out that the question of “existing use rights” within the meaning of the Environmental Planning and Assessment Act, 1979, is a complex matter, and that the commencement of a use without Council approval (where required) is unlawful and may be subject to enforcement action.

**3.5      Other Matters**

Not applicable.



**CAMILLE LATTOUF  
MANAGER SPATIAL PLANNING (ACTING)**

20219/5:94524

Geotechnique Pty Ltd  
PO Box 880  
PENRITH NSW 2751

## **PLANNING CERTIFICATE**

**Section 10.7(2)(5) of the Environmental Planning and Assessment Act,  
1979.**

**Certificate No:** 20225212  
30 June 2022

**Land which Certificate is issued for:**

**Lot 3 DP 16063**

**67 Karne Street North, NARWEE NSW 2209**



**INFORMATION PROVIDED UNDER SECTION 10.7 (2)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

Land which Certificate is issued for:

**Lot 3 DP 16063**

**67 Karne Street North, NARWEE NSW 2209**

**PART 1:  
ENVIRONMENTAL PLANNING INSTRUMENTS**

**1.1** Principal Environmental Planning Instrument

**Canterbury Local Environmental Plan 2012**

Date effective from

**1 January 2013**

Land Use Zone

**ZONE R3 MEDIUM DENSITY RESIDENTIAL**

**1. Permitted without consent**

Home occupations

**2. Permitted with consent**

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Business premises; Car parks; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Environmental protection works; Exhibition homes; Flood mitigation works; Group homes; Home businesses; Home industries; Multi dwelling housing; Neighbourhood shops; Office premises; Oyster aquaculture; Places of public worship; Recreation areas; Respite day care centres; Restaurants or cafes; Roads; Semi-detached dwellings; Seniors housing; Shops; Tank-based aquaculture

**3. Prohibited**

Any development not specified in item 1 or 2

*The above information will assist in determining how the subject land may be developed. It is recommended that you read this section in conjunction with a full copy of any relevant environmental planning instrument as there may be additional provisions that affect how the land may be developed.*

## 1.2 **State Environmental Planning Policies**

**Note:** The following information indicates those State Environmental Planning Policies (SEPP) which may apply to the subject land. A summary explanation of each SEPP can be sourced from the Department of Planning, Industry and Environment (DPIE) website at [www.planning.nsw.gov.au](http://www.planning.nsw.gov.au). The full wording of each SEPP can also be accessed via the DPIE website.

### **State Environmental Planning Policies:**

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

State Environmental Planning Policy (Housing) 2021

State Environmental Planning Policy (Industry and Employment) 2021

State Environmental Planning Policy (Planning Systems) 2021

State Environmental Planning Policy (Precincts - Central River City) 2021

State Environmental Planning Policy (Precincts - Eastern Harbour City) 2021

State Environmental Planning Policy (Precincts - Regional) 2021

State Environmental Planning Policy (Precincts - Western Parkland City) 2021

State Environmental Planning Policy (Primary Production) 2021

State Environmental Planning Policy (Resilience and Hazards) 2021

State Environmental Planning Policy (Resources and Energy) 2021

State Environmental Planning Policy (Transport and Infrastructure) 2021

State Environmental Planning Policy (Biodiversity and Conservation) 2021

*Encompassed within the Biodiversity and Conservation SEPP is the former Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment which applies to the site. The SEPP aims to protect the water quality of the Georges River and its tributaries and the environmental quality of the whole catchment. The objectives of the plan are to be achieved through coordinated land use planning and development control. The plan establishes the framework within which local, State and Federal agencies will consult so that there is a consistent approach to planning and development within the catchment.*

### **Proposed State Environmental Planning Policies:**

Not applicable

## 1.3 **Proposed Environmental Planning Instruments (including any Planning Proposals) that are or have been the subject of community consultation or on public exhibition under the Act**

The land is affected by Planning Proposal (PP\_2019\_CBANK\_005) which has been placed on public exhibition. The Planning Proposal seeks to produce a single set of planning rules for the Canterbury Bankstown Local Government Area and to implement key actions of current land use strategies.

## 1.4 **Development Control Plans**

### **CANTERBURY DEVELOPMENT CONTROL PLAN 2012**

Contains detailed design guidelines and development standards for development in the former Canterbury City.

## 1.5 **Contribution Plans**

### **CANTERBURY DEVELOPMENT CONTRIBUTIONS PLAN 2013**

Development Contributions Plan prepared and adopted under the Environmental Planning and Assessment Act, 1979 and Environmental Planning and Assessment Regulation 2000.

## **PART 2: RESTRICTIONS ON DEVELOPMENT**

### **2.1 Heritage**

The land is not affected by a heritage item or within a heritage conservation area under the relevant Principal Environmental Planning Instrument.

### **2.2 Mine Subsidence**

The subject land is not within a mine subsidence district within the meaning of Section 20 of the *Coal Mine Subsidence Compensation Act 2017*.

### **2.3 Road Widening and Road Realignment**

*Whether or not the land is affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993 or an environmental planning instrument;*

The land is not affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993, or an environmental planning instrument.

*Whether or not the land is affected by a road widening or road realignment proposal under any resolution of Council.*

The land is not affected by a road widening or road realignment proposal under any resolution of Council.

### **2.4 Council and Other Public Authority Policies on Hazard Risk Restrictions**

*Whether or not the land is affected by a policy adopted by Council or adopted by any other public authority (and notified to the Council for the express purpose of its adoption by that authority being referred to) that restricts the development of the land because of the likelihood of:*

- **Land Slip**

The land is not affected by a policy restriction relating to landslip

- **Bushfire**

Not applicable

- **Tidal Inundation**

The land is not affected by a policy restriction relating to tidal inundation

- **Subsidence**

The land is not affected by a policy restriction relating to subsidence

- **Acid Sulfate Soils**

The land is not affected by a policy restriction relating to acid sulfate soils.

- **Unhealthy Building Land**

The land is not affected by a policy restriction relating to Unhealthy Building Land.

- **Any Other Risk**

Not applicable

**2.5 Flooding**

The land, or part of the land, **is within** the probable maximum flood (PMF) and **may be within** the flood planning area (FPA).

The land, or part of the land, **is subject** to flood related development controls.

You are advised to refer to the following:

- The relevant Development Control Plan (noted in Section 1.4 of this certificate) for further information on Council's approach to Flood Risk Management, and
- Frequently Asked Questions and details on the study relevant to your catchment area are available at Council's Floodplain Management webpage (<https://cb.city/flooding>).

**NB:** The FPA is the 1% Annual Exceedance Probability (AEP) plus generally a 0.5m freeboard or as outlined in relevant Development Control Plan. While your property is currently not identified within the 1% AEP flood extent mapping, it may fall within the FPA and need to accommodate freeboard to comply with the FPA requirements. Council is currently reviewing the extent of the FPA requirements in response to recent NSW Government changes.

**2.6 Matters arising under the Contaminated Land Management Act, 1997.**

Council is not aware of the land being affected by any matters as prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997*.

Please refer to the *NSW Environmental Protection Agency (EPA)* for more information.

**2.7 Land Reserved For Acquisition**

There is no environmental planning instrument, or proposed environmental planning instrument, applying to the land that makes provision for the acquisition of the land (or any part thereof) by a public authority, as referred to in Section 3.15 of the Environmental Planning and Assessment Act 1979.

**2.8 Property Vegetation Plans and Native vegetation clearing set asides**

Not applicable

**2.9 Orders under Trees (Disputes Between Neighbours) Act 2006**

Not applicable

**2.10 Directions under Part 3A**

Not applicable

**2.11 Conditions for Seniors Housing**

Not applicable

**2.12 Site Compatibility Certificates for Infrastructure, Schools or TAFE Establishments**

Not applicable

**2.13 Site Compatibility Certificates and Conditions for Affordable Rental Housing**

Not applicable

**2.14 Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works**

Not applicable

**2.15 Biodiversity Certified Land and Biodiversity Stewardship Sites**

Not applicable

**2.16 Paper Subdivision Information**

Not applicable

**2.17 Site Verification Certificates**

Not applicable

**2.18 Loose-Fill Asbestos Ceiling Insulation**

Not applicable

**2.19 Affected Building Notices and Building Product Rectification Orders**

Not applicable

**2.20 State Environmental Planning Policy (Western Sydney Aerotropolis) 2020**

Not applicable

**2.21 Complying Development**

*Whether or not the land is land on which complying development may be carried out under each of the Codes for complying development because of the provisions of clauses 1.17A(1) (c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and, if no complying development may be carried out on that land under that Policy, the reasons why complying development may not be carried out on that land. **Note that in order for complying development to be able to be carried out, it must be permissible in the relevant zone in the first place.***

<b>Housing Code (if in a residential zone)</b>	Yes
<b>Rural Housing Code (if in a rural residential zone)</b>	Not applicable
<b>Low Rise Housing Diversity Code</b>	Yes
<b>Housing Alterations Code</b>	Yes
<b>General Development Code</b>	Yes
<b>Greenfield Housing Code</b>	Not applicable
<b>Inland Code</b>	Not applicable
<b>Commercial and Industrial (New Building and Alterations) Code</b>	Yes
<b>Commercial and Industrial Alterations Code</b>	Yes
<b>Container Recycling Facilities Code</b>	Yes
<b>Demolition Code</b>	Yes
<b>Subdivision Code</b>	Yes
<b>Fire Safety Code</b>	Yes

**Important Disclaimer:** This clause of the Certificate only contains information in respect of that required by clause 3 of Schedule 4 of the Environmental Planning and Assessment Regulation 2000, in relation to Complying Development under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Other provisions contained in the SEPP, including but not limited to, minimum allotment size requirements, specified development standards or any other general exclusions, may preclude Complying Development under the SEPP from being able to be carried out. You will need to refer to the SEPP for complete details. It is your responsibility to ensure that you comply with all other general requirements of the SEPP. Failure to comply with these provisions may mean that any Complying Development Certificate issued under the provisions of the SEPP is invalid.

**PART 3:  
INFORMATION PROVIDED UNDER SECTION 10.7 (5)  
OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.**

**Note:** When information pursuant to Section 10.7(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that Section. Council draws your attention to Section 10.7(6), which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.

**3.1      Additional Flood Planning Advice**

In addition to Section 2.5 of this certificate, the following information may assist in interpreting the DCP:

Not applicable.

**3.2      Tree Preservation Order**

A tree preservation order applies to the whole of the City of Canterbury Bankstown.

**3.3      Additional Contaminated Land Advice**

On 22 August 2017 Council adopted a policy on contaminated land. This policy will restrict development of land:

- a) which is affected by contamination;
- b) which has been used for certain purposes;
- c) in respect of which there is not sufficient information about contamination;
- d) which is proposed to be used for certain purposes;
- e) in other circumstances contained in the policy.

**3.4      General Advice Regarding Use of Property**

Persons considering commencing a use of or purchasing a property are advised to seek confirmation that the current, or intended, use (as the case may be) has been approved by Council, or does not require Council approval. It is pointed out that the question of “existing use rights” within the meaning of the Environmental Planning and Assessment Act, 1979, is a complex matter, and that the commencement of a use without Council approval (where required) is unlawful and may be subject to enforcement action.

**3.5      Other Matters**

Not applicable.



**CAMILLE LATTOUF  
MANAGER SPATIAL PLANNING (ACTING)**



## **APPENDIX E**

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### **NSW EPA RECORD OF NOTICES & ENVIRONMENT PROTECTION LICENCES**

## Contaminated land - record of notices

### Record under section 58 of the Contaminated Land Management Act 1997

This record is maintained by OEH in accordance with Part 5 of the [Contaminated Land Management Act 1997](#) (CLM Act).

The record **does** provide

- ✓ a record of written notices issued by OEH under the CLM Act, including preliminary investigation orders.
- ✓ the names of the sites, owners or occupiers **at the time of OEH action** in relation to the site
- ✓ copies of site audit statements (SAS) provided to OEH under section 52 of the CLM Act and relating to significantly contaminated land.

The record **does not** provide

- ✗ a record of all contaminated land in NSW. [See frequently asked questions](#)
- ✗ a list of [notifications of contamination](#) that OEH receives.
- ✗ the names of the sites, owners or occupiers if it changes **after OEH action** in relation to the site.
- ✗ some [personal information](#).

... [more about the CLM record of notices](#)

**From 1 July 2009 there were changes to the terminology of certain OEH actions under the CLM Act.** See the [list of these changes](#).

The record includes notices issued under sections 35 and 36 of the Environmentally Hazardous Chemicals Act 1985. These sections have been repealed. These notices are treated by the CLM Act as management orders.

Before using the record of notices see the [Disclaimer and terms of use](#).

As at Thursday, 7 July 2022 there are 1965 notices in the record relating to 415 sites.

[Show me the entire record](#) or [Search the record](#)

7 July 2022

131 555 (tel:131555)

Online (<https://yoursay.epa.nsw.gov.au/epa-website-feedback>)

[info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au) (<mailto:info@epa.nsw.gov.au>)

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## Search results

Your search for: LGA: CANTERBURY-BANKSTOWN COUNCIL

Matched 68 notices  
relating to 17 sites.

[Search Again](#)

[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
BASS HILL	862 Hume HIGHWAY	<a href="#">Woolworths Caltex Bass Hill</a>	1 former
CAMPSIE	403 Canterbury Road and 1 Una STREET	<a href="#">Budget Petroleum and adjacent property</a>	1 current
CAMPSIE	60 Charlotte STREET	<a href="#">Former Sunbeam factory</a>	4 former
CANTERBURY	13-19 Canterbury ROAD	<a href="#">Metro Petroleum Service Station</a>	2 current
CHESTER HILL	127 Orchard ROAD	<a href="#">Former Orica, Chester Hill</a>	4 former
EARLWOOD	3 Jackson PLACE	<a href="#">RTA Land</a>	6 current and 1 former
HURLSTONE PARK	610 - 618 New Canterbury ROAD	<a href="#">Former Speedway Petroleum Service Station</a>	3 former
PADSTOW	55 Bryant STREET	<a href="#">Former Exide Battery Manufacturing &amp; Recycling</a>	2 current and 1 former
PUNCHBOWL	42-44 Belmore ROAD	<a href="#">Punchbowl Laundry</a>	3 current
REVESBY	21 Marigold STREET	<a href="#">Mirotone Pty Ltd</a>	3 former
REVESBY	33-35 Violet STREET	<a href="#">Thetis Pty Ltd - Bituminous Products</a>	3 current and 6 former
VILLAWOOD	2A Birmingham AVENUE	<a href="#">Ettason Villawood Site</a>	3 former
VILLAWOOD	66 Christina ROAD	<a href="#">Former Electrical Component Manufacturer</a>	1 current and 6 former
VILLAWOOD	2 Christina ROAD	<a href="#">Former Orica Crop Care</a>	2 current and 5 former
VILLAWOOD	49 Miowera ROAD	<a href="#">Former Siemens/Westinghouse</a>	9 former
VILLAWOOD	110A Christina ROAD	<a href="#">Nepotian (Former Toll) Site</a>	1 current
YAGOONA	117-153 Rookwood ROAD	<a href="#">Galserv Galvanising Services</a>	1 current

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7 July 2022

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## Search results

Your search for: Suburb: NARWEE

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the [planning process](#).

More information about particular sites may be available from:

- The [POEO public register](#)
- The appropriate planning authority: for example, on a planning certificate issued by the local council under [section 149 of the Environmental Planning and Assessment Act](#).

See [What's in the record and What's not in the record](#).

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.

This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register: [POEO public register](#)

[Search Again](#)

[Refine Search](#)

### Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... [more search tips](#)

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## Search results

Your search for: FULL REGISTER

Matched 1965 notices  
relating to 415 sites.

[Search Again](#)

[Refine Search](#)

Suburb	Address	Site Name	Notices related to this site
NAROOMA	82 Princes HIGHWAY	<a href="#">Former Caltex - Narooma</a>	3 former
NARRABEEN	Wakehurst PARKWAY	<a href="#">Narrabeen Shotgun Range Sydney Academy of Sport</a>	1 current and 3 former
NARRABRI	Westport ROAD	<a href="#">Cargill Soapstock Disposal Site</a>	2 former
NELLIGEN	1398 Kings Highway and adjoining land on Old Bolaro Mountain ROAD	<a href="#">Former Clay Target Shooting Range</a>	2 current
NELLIGEN	Old Bolaro ROAD	<a href="#">Lot 2 Old Bolaro Road</a>	1 current and 4 former
NEWCASTLE	26-28 Honeysuckle DRIVE	<a href="#">Reclaimed Land</a>	1 former
NEWTOWN	79 Wilson STREET	<a href="#">Adjacent to Former Service Station</a>	3 former
NEWTOWN	81 Wilson STREET	<a href="#">Former Service Station</a>	4 former
NORTH ROTHBURY	Main ROAD	<a href="#">Ayrefield Colliery</a>	1 current
NORTH SYDNEY	Adjacent to Sub Base Platypus, High STREET	<a href="#">Neutral Bay Sediments</a>	2 former
NORTH SYDNEY	High STREET	<a href="#">Sub Base Platypus (previously HMAS Platypus)</a>	1 former
NOWRA	Lamonds LANE	<a href="#">Former gasworks</a>	1 current and 5 former
NOWRA EAST	Lot 3 Kalandar STREET	<a href="#">Mobil Service Station</a>	6 former
OBERON	Off Endeavour STREET	<a href="#">CSR Ltd Property and King's Stockyard Creek</a>	5 former
ORANGE	5-7 Edward STREET	<a href="#">5-7 Edward St Orange</a>	3 current and 1 former
ORANGE	24-28 Peisley STREET	<a href="#">Former Fuel Depot</a>	1 current
OYSTER BAY	20 Carvers ROAD	<a href="#">Shell Coles Express Service Station</a>	6 current and 1 former
PADDINGTON	59 Oxford STREET	<a href="#">7-Eleven Service Station</a>	2 current and 2 former
PADSTOW	55 Bryant STREET	<a href="#">Former Exide Battery Manufacturing &amp; Recycling</a>	2 current and 1 former
PAGEWOOD	Corner of Page Street and Holloway STREET	<a href="#">Former Email Site</a>	1 current and 10 former

[...](#) [11](#) [12](#) [13](#) [14](#) [15](#) [16](#) [17](#) [18](#) [19](#) [20](#) [...](#)

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## Search results

Your search for: **General Search** with the following criteria

**Suburb** - Narwee

returned 0 result

[Search Again](#)

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## Background

A strategy to systematically prioritise, assess and respond to notifications under Section 60 of the *Contaminated Land Management Act 1997* (CLM Act) has been developed by the EPA. This strategy acknowledges the EPA's obligations to make information available to the public under *Government Information (Public Access) Act 2009*.

When a site is notified to the EPA, it may be accompanied by detailed site reports where the owner has been proactive in addressing the contamination and its source. However, often there is minimal information on the nature or extent of the contamination.

After receiving a report, the first step is to confirm that the report does not relate to a pollution incident. The Protection of the Environment Operations Act 1997 (POEO Act) deals with pollution incidents, waste stockpiling or dumping. The EPA also has an incident management process to manage significant incidents (<https://www.epa.nsw.gov.au/reporting-and-incidents/incident-management>).

In many cases, the information indicates the contamination is securely immobilised within the site, such as under a building or carpark, and is not currently causing any significant risks for the community or environment. Such sites may still need to be cleaned up, but this can be done in conjunction with any subsequent building or redevelopment of the land. These sites do not require intervention under the CLM Act, and are dealt with through the planning and development consent process. In these cases, the EPA informs the local council or other planning authority, so that the information can be recorded and considered at the appropriate time (<https://www.epa.nsw.gov.au/your-environment/contaminated-land/managing-contaminated-land/role-of-planning-authorities>).

Where indications are that the contamination could cause actual harm to the environment or an unacceptable offsite impact (i.e. the land is 'significantly contaminated'), the EPA would apply the regulatory provisions of the CLM Act to have the responsible polluter and/or landowner investigate and remediate the site. If the reported contamination could present an immediate or long-term threat to human health NSW Health will be consulted. SafeWork NSW and Water NSW can also be consulted if there appear to be occupational health and safety risks or an impact on groundwater quality.

As such, the sites notified to the EPA and presented in the list of contaminated sites notified to the EPA are at various stages of the assessment and remediation process. Understanding the nature of the underlying contamination, its implications and implementing a remediation program where required, can take a considerable period of time. The list provides an indication, in relation to each nominated site, as to the management status of that particular site. Further detailed information may be available from the EPA or the person who notified the site.

The following questions and answers may assist those interested in this issue.

## Frequently asked questions

### Why does my land appear on the list of notified sites?

Your land may appear on the list because:

- the site owner and/or the polluter has notified the EPA under section 60 of the CLM Act
- the EPA has been notified via other means and is satisfied that the site is or was contaminated.

If a site is on the list, it does not necessarily mean the contamination is significant enough to regulate under the CLM Act.

**Does the list contain all contaminated sites in NSW?**

No. The list only contains contaminated sites that EPA is aware of. If a site is not on the list, it does not necessarily mean the site is not contaminated.

The EPA relies on responsible parties and the public to notify contaminated sites.

**How are notified contaminated sites managed by the EPA?**

There are different ways the EPA can manage notified contaminated sites. Options include:

- regulation under the CLM Act, POEO Act, or both
- notifying the relevant planning authority for management under the planning and development process
- managing the site under the Protection of the Environment Operation (Underground Petroleum Storage Systems) Regulation 2014.

There are specific cases where contamination is managed under a tailored program operated by another agency (for example, the Resources & Geoscience's Legacy Mines Program).

**What should I do if I am a potential buyer of a site that appears on the list?**

You should seek advice from the seller to understand the contamination issue. You may need to seek independent contamination or legal advice.

The information provided in the list is indicative only and a starting point for your own assessment. Land contamination from past site uses is common, mainly in urban environments. If the site is properly remediated or managed, it may not affect the intended future use of the site.

**Who can I contact if I need more information about a site?**

You can contact the Environment Line at any time by calling 131 555 or by emailing [info@environment.nsw.gov.au](mailto:info@environment.nsw.gov.au).

**List of NSW Contaminated Sites Notified to the EPA**

## Disclaimer

The EPA has taken all reasonable care to ensure that the information in the list of contaminated sites notified to the EPA (the list) is complete and correct. The EPA does not, however, warrant or represent that the list is free from errors or omissions or that it is exhaustive.

The EPA may, without notice, change any or all of the information in the list at any time.

You should obtain independent advice before you make any decision based on the information in the list.

The list is made available on the understanding that the EPA, its servants and agents, to the extent permitted by law, accept no responsibility for any damage, cost, loss or expense incurred by you as a result of:

1. any information in the list; or
2. any error, omission or misrepresentation in the list; or
3. any malfunction or failure to function of the list;
4. without limiting (2) or (3) above, any delay, failure or error in recording, displaying or updating information.

Site Status	Explanation
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 <i>Protection of the Environment Operations Act 1997</i> .
Under Preliminary Investigation Order	The EPA has issued a Preliminary Investigation Order under s10 of the <i>Contaminated Land Management Act 1997</i> , to obtain additional information needed to complete the assessment.
Regulation under CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the <i>Contaminated Land Management Act 1997</i> is not required.

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 <i>Contaminated Land Management Act 1997</i> . A regulatory approach is being finalised.
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.
Contamination currently regulated under POEO Act	Contamination is currently regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA as the appropriate regulatory authority reasonably suspects that a pollution incident is occurring/ has occurred and that it requires regulation under the POEO Act. The EPA may use environment protection notices, such as clean up notices, to require clean up action to be taken. Such regulatory notices are available on the POEO public register.
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 <i>Environmental Planning and Assessment Act 1979</i> (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 formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the <i>Contaminated Land Management Act 1997</i> (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 <i>Protection of the Environment Operations Act 1997</i> (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 <i>Environmental Planning and Assessment Act 1979</i> (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.

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
ABBOTSFORD	Former Gasworks	83 Wymston PARADE	Gasworks	Contamination formerly regulated under the CLM Act	-33.85288351	151.1265979
ABBOTSFORD	Former Gasworks	82, 83, 84 Wymston Pde, & 37, 39, 43, 45 St Albans STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.85288316	151.1267729
ABBOTSFORD	Former Gasworks	85 Wymston PARADE	Gasworks	Regulation under CLM Act not required	-33.85265214	151.1266277
ABBOTSFORD	Former Gasworks	80-81 Wymston Pde and 35 and 41 St Albans STREET	Gasworks	Regulation under CLM Act not required	-33.85306653	151.1268142
ABBOTSFORD	Former Gasworks	43 St Albans STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.85270604	151.126976
ABERDEEN	Former Transport Depot	87-89 St Andrew STREET	Other Industry	Regulation under CLM Act not required	-32.17160931	150.8972859
ALBION PARK	Caltex Albion Park Service Station	1 Calderwood ROAD	Service Station	Regulation under CLM Act not required	-34.57131362	150.7647971
ALBION PARK RAIL	Caltex Service Station	174 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.56134097	150.7953663
ALBION PARK RAIL	Caltex Service Station	31 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.55162786	150.7880626
ALBION PARK RAIL	Former Timber Storage Area	36 Rivulet CRESCENT	Other Industry	Regulation under CLM Act not required	-34.54872597	150.7899351
ALBURY	Mobil Depot, Railway Place Albury	1 Railway PLACE	Other Petroleum	Regulation under CLM Act not required	-36.08526805	146.9236999
ALBURY	Woolworths Petrol	515 Young STREET	Service Station	Regulation under CLM Act not required	-36.08073723	146.92351
ALBURY	Former Caltex Service Station	842 David STREET	Service Station	Regulation under CLM Act not required	-36.06398743	146.9252143
ALBURY	SRA Land, 514 to 526 Young Street	514 to 526 Young STREET	Other Petroleum	Regulation under CLM Act not required	-36.08084123	146.9241682
ALBURY	Former Gasworks and surrounding commercial land	441 Kiewa STREET	Gasworks	Contamination currently regulated under CLM Act	-36.08416926	146.9137704



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
ALBURY	Coles Express Albury	465 Guinea STREET	Service Station	Regulation under CLM Act not required	-36.07513665	146.9213077
ALBURY	Former Thales Australia site, Albury	161 Fallon STREET	Other Industry	Contamination formerly regulated under the CLM Act	-36.064966	146.9434831
ALBURY	Xpress Service Station	616-624 Young STREET	Service Station	Contamination formerly regulated under the CLM Act	-36.0755401	146.9255668
ALBURY	Albury Plaza	Cnr Smollett Street and Townsend STREET	Other Industry	Regulation under CLM Act not required	-36.08112933	146.9135719
ALBURY	Mobil Albury Aviation Fuel Depot	Hangar 8 (Albury Airport), Ogden PLACE	Other Petroleum	Regulation under CLM Act not required	-36.07178139	146.9530165
ALBURY	SRA Land	448 and 452 Young STREET	Unclassified	Regulation under CLM Act not required	-36.08438605	146.9235454
ALBURY	Caltex Service Station	Dean Street, Corner Creek STREET	Service Station	Regulation under CLM Act not required	-36.07978937	146.9110825
ALEXANDRIA	Former Mobil Service Station	20 O'Riordan STREET	Service Station	Regulation under CLM Act not required	-33.9075539	151.2014811
ALEXANDRIA	Caltex Alexandria Service Station	133 Wyndham St, cnr McEvoy STREET	Service Station	Regulation under CLM Act not required	-33.90220927	151.2000425
ALEXANDRIA	Former Cadbury Schweppes	49-59 O'Riordan STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.91406619	151.195067
ALEXANDRIA	Formerly Gas N Go Alexandria (fully redeveloped into residential apartment as of September 2016)	10-20 Botany ROAD	Service Station	Regulation under CLM Act not required	-33.89536227	151.1987818
ALEXANDRIA	Mascot Developments	494-504 Gardeners ROAD	Other Industry	Regulation under CLM Act not required	-33.9198218	151.191282
ALEXANDRIA	Alexandria GoGas	562 Botany ROAD	Service Station	Regulation under CLM Act not required	-33.91577222	151.2000753
ALEXANDRIA	Australian Refined Alloys	202-212 Euston ROAD	Metal Industry	Regulation under CLM Act not required	-33.91505136	151.185872
ALEXANDRIA	Alexandria Canal Sediments	Off Huntley STREET	Other Industry	Contamination currently regulated under CLM Act	-33.92204213	151.1770009

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
ALEXANDRIA	Australia Post	10-24 Ralph STREET	Other Industry	Contamination was addressed via the planning process (EP&A Act)	-33.91583041	151.197997
ALEXANDRIA	Perry Park	1B Maddox STREET	Landfill	Regulation under CLM Act not required	-33.90809949	151.1962945
ALEXANDRIA	Alexandria Gardens	146-156 Wyndham Street & 146-156 Botany ROAD	Unclassified	Regulation under CLM Act not required	-33.89956961	151.1997377
ALEXANDRIA	Sydney Park	Sydney Park ROAD	Landfill	Contamination currently regulated under CLM Act	-33.91031048	151.1844672
ALEXANDRIA	Former Industrial Site (now Value Suites)	16 O'Riordan STREET	Other Industry	Regulation under CLM Act not required	-33.9069796	151.201902
ALEXANDRIA	205-225 Euston Road, Alexandria	205-225 Euston ROAD	Other Industry	Regulation under CLM Act not required	-33.9127872	151.1855565
ALEXANDRIA	The Gentry Alexandria	31-41 William STREET	Unclassified	Regulation under CLM Act not required	-33.91258565	151.1981861
ALEXANDRIA	6 - 8 Huntley Street, Alexandria NSW 2004	6 - 8 Huntley STREET	Metal Industry	Under assessment	-33.90982985	151.1924567
ALEXANDRIA	566 Gardeners Road, Alexandria NSW	566 Gardeners ROAD	Unclassified	Under assessment	-33.91921186	151.1839188
ALSTONVILLE	Caltex Service Station Alstonville	73 Main STREET	Service Station	Regulation under CLM Act not required	-28.84115994	153.4388699
AMBARVALE	Caltex Service Station	37 Woodhouse DRIVE	Service Station	Regulation under CLM Act not required	-34.08438034	150.8019168
ANNANDALE	7-Eleven (former Mobil) Annandale Service Station	198 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.88706434	151.1741135
ANNANDALE	Shell Coles Express Service Station	124-126 Johnston STREET	Service Station	Regulation under CLM Act not required	-33.88085651	151.1704805
APPIN	Elladale Creek Aqueduct Upper Canal	Macquariedale ROAD	Unclassified	Regulation under CLM Act not required	-34.18867067	150.7539597
APPIN	West Cliff Colliery	Wedderburn ROAD	Other Petroleum	Regulation under CLM Act not required	-34.21970612	150.8217522

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
ARDLETHAN	Landmark Fertiliser Storage Facility	18 & 24-26 Arianh STREET	Chemical Industry	Regulation under CLM Act not required	-34.35696645	146.9007084
ARGENTON	NSW Mines Rescue Services - Argenton	533 Lake ROAD	Other Industry	Regulation under CLM Act not required	-32.93807208	151.6269664
ARMIDALE	Former Mobil Depot	132 Niagara STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-30.51115918	151.6490343
ARMIDALE	Caltex Service Station	146 Miller STREET	Service Station	Regulation under CLM Act not required	-30.51362759	151.6481123
ARMIDALE	RTA land adjoining Martin Street estate	Martin STREET	Other Industry	Contamination formerly regulated under the CLM Act	-30.50445941	151.6415415
ARMIDALE	Shell Service Station	93 Marsh STREET	Service Station	Regulation under CLM Act not required	-30.51299824	151.6697557
ARMIDALE	Parklands near the former gasworks	Beardy Street and Allingham STREET	Gasworks	Regulation under CLM Act not required	-30.51013465	151.6652722
ARMIDALE	Gasworks and portion of Harris Park	Corner of Beardy Street and Allingham STREET	Gasworks	Contamination currently regulated under CLM Act	-30.51157374	151.6623009
ARMIDALE	Former Lot 3 Martin Street	89 Martin STREET	Other Industry	Regulation under CLM Act not required	-30.50664682	151.64542
ARMIDALE	Martin Street Estate	Martin STREET	Other Industry	Regulation under CLM Act not required	-30.50559024	151.6431854
ARMIDALE	Caltex Armidale Girraween Service Station	6-8 Queen Elizabeth DRIVE	Service Station	Regulation under CLM Act not required	-30.50348872	151.6510748
ARMIDALE	Martin Street, Crown Land	Martin STREET	Other Industry	Contamination formerly regulated under the CLM Act	-30.50414076	151.6429516
ARMIDALE	Former Shell Depot	134 Niagara STREET	Other Petroleum	Regulation under CLM Act not required	-30.51180178	151.6488634
ARMIDALE	Caltex Service Station	144 Marsh STREET	Service Station	Regulation under CLM Act not required	-30.51709925	151.6675802
ARMIDALE	Caltex North Hill Service Station	2-4 Marsh STREET	Service Station	Regulation under CLM Act not required	-30.50320439	151.6727051

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
ARMIDALE	Mobil Armidale Service Station and Former Depot	10-12 McLennan STREET	Service Station	Regulation under CLM Act not required	-30.51107573	151.648242
ARMIDALE	Caltex Service Station	19/10541 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-30.53210764	151.6160492
ARMIDALE	Armidale Dumaresq Council Grafton Road Depot	15-25 Grafton ROAD	Other Petroleum	Regulation under CLM Act not required	-30.52058076	151.6815261
ARNCLIFFE	7-Eleven Arncliffe	28 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.93428397	151.1525438
ARNCLIFFE	Combined Projects Arncliffe	104-128 Princes HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.93783874	151.1494559
ARTARMON	7-Eleven (former Mobil) Artarmon Service Station	477 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.81053826	151.1774248
ASHBY	Ashby Dry Dock	via Clarence STREET	Other Industry	Contamination formerly regulated under the CLM Act	-29.44158377	153.1972304
ASHFIELD	7-Eleven Ashfield	132 Liverpool Road STREET	Service Station	Contamination currently regulated under CLM Act	-33.89057897	151.1295498
ASHFIELD	Vehicle Workshop	445-449 Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.88826829	151.1167477
ASQUITH	BP Service Station	462 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.68982678	151.106156
ATTUNGA	Attunga Limestone Mine (Waste Oil Site)	Garthowen ROAD	Other Industry	Regulation under CLM Act not required	-30.92920627	150.8579435
AUBURN	DIC Australia	323 Chisholm ROAD	Other Industry	Regulation under CLM Act not required	-33.87228962	151.0157032
AUBURN	Former Ajax Chemical Factory	9 Short STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.83671601	151.0292071
AUBURN	Janyon	Manchester ROAD	Other Industry	Regulation under CLM Act not required	-33.84467826	151.020745
AUBURN	Maintrain Facility - Sydney Trains Auburn	Manchester ROAD	Other Industry	Regulation under CLM Act not required	-33.84410947	151.0242502

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
AUBURN	Department of Corrective Services land adjacent to the former Auburn Landfill	Jamieson STREET	Landfill	Contamination formerly regulated under the CLM Act	-33.82928257	151.0590653
AUBURN	Commercial Premises	11-13 Percy STREET	Other Industry	Under assessment	-33.85021046	151.0410097
AWABA	Awaba Colliery	Wilton ROAD	Other Industry	Regulation under CLM Act not required	-33.02098186	151.5383612
BALGOWLAH	BP Service Station	Cnr Sydney Road and Maretimo STREET	Service Station	Regulation under CLM Act not required	-33.79546175	151.2559309
BALGOWLAH	Part of Manly Council Maintenance Depot	8-10 Roseberry STREET	Other Petroleum	Regulation under CLM Act not required	-33.78928907	151.2679557
BALGOWNIE	Fuel Power Plus	99 Balgownie ROAD	Service Station	Contamination currently regulated under POEO Act	-34.38925632	150.8808544
BALLINA	Former Mobil Service Station	37-41 Cherry STREET	Service Station	Regulation under CLM Act not required	-28.86952673	153.5624436
BALLINA	Ballina Shell	273 River STREET	Service Station	Regulation under CLM Act not required	-28.86809272	153.5552789
BALLINA	Woolworths Petrol	Kerr STREET	Service Station	Regulation under CLM Act not required	-28.85824461	153.5605439
BALLINA	Ballina Mays Motors	River STREET	Other Petroleum	Regulation under CLM Act not required	-28.86935402	153.5585931
BALRANALD	Caltex Service Station	Sturt HIGHWAY	Service Station	Regulation under CLM Act not required	-34.66747746	143.5662034
BANKSIA	Woolworths Petrol Service Station Banksia	314 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.94567308	151.1416884
BANKSIA	Cooks Cove Development	Cooks Cove PARK	Landfill	Regulation under CLM Act not required	-33.94492759	151.1549947
BANKSMEADOW	Orica Botany Groundwater Project	16-20 Beauchamp ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.95526361	151.2152005
BANKSMEADOW	Discovery Cove, Former Ampol Rail Terminal	1801 Botany ROAD	Other Petroleum	Regulation being finalised	-33.96162178	151.2184122

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
BANKSMEADOW	Caltex Terminal	1-3 Penrhyn ROAD	Other Petroleum	Contamination currently regulated under POEO Act	-33.96335328	151.2171062
BANKSMEADOW	Orica Botany (Pre-2003 Regulation)	Denison STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.9516159	151.2195804
BANKSMEADOW	Veolia Waste Transfer Terminal (former Keith Engineering site)	34-36 McPherson STREET	Other Industry	Regulation under CLM Act not required	-33.95811039	151.2195225
BANKSMEADOW	Orica Former Chlor Alkali Plant (same site as Orica Botany Groundwater Project)	Botany Industrial Park, off Denison STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.95664283	151.221685
BANKSMEADOW	Former Pipeline	Corish CIRCLE	Other Petroleum	Regulation being finalised	-33.94705787	151.2209919
BANKSMEADOW	Pacific National Rail Siding	1 Beauchamp ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.95757712	151.2204974
BANKSMEADOW	Former Mobil Banksmeadow Terminal	Coal Pier ROAD	Other Petroleum	Regulation under CLM Act not required	-33.95405624	151.2142048
BANKSMEADOW	Orica Car Park Waste Encapsulation	Corish CIRCLE	Landfill	Contamination formerly regulated under the POEO Act	-33.94703665	151.22083
BANKSTOWN	7-Eleven Service Station	689 Henry Lawson DRIVE	Service Station	Regulation under CLM Act not required	-33.92749953	150.9804784
BANORA POINT	Caltex Service Station	Corner Leisure Drive and Darlington DRIVE	Service Station	Regulation under CLM Act not required	-28.21390712	153.5417434
BARGO	Tahmoor Colliery	Remembrance DRIVE	Other Industry	Regulation under CLM Act not required	-34.25090795	150.5793631
BARMEDMAN	Caltex - Barmedman	Corner Watson Street and Star STREET	Other Petroleum	Regulation under CLM Act not required	-34.14351302	147.3824934
BARRACK HEIGHTS	Caltex Service Station	332-336 Shellharbour ROAD	Service Station	Regulation under CLM Act not required	-34.56489171	150.8597814
BASS HILL	Woolworths Caltex Bass Hill	862 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.9008648	150.9991181
BATEAU BAY	Former landfill	The Entrance ROAD	Landfill	Contamination currently regulated under CLM Act	-33.3938305	151.4699046



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
BATEAU BAY	Woolworths Service Station Bateau Bay	9 Bay Village ROAD	Service Station	Regulation under CLM Act not required	-33.37316432	151.4737125
BATEHAVEN	Caltex Service Station	264 Beach ROAD	Service Station	Regulation under CLM Act not required	-35.73255166	150.1997536
BATEHAVEN	Coles Express Service Station Batehaven	198 Beach ROAD	Service Station	Regulation under CLM Act not required	-35.72671807	150.1944931
BATEMANS BAY	Caltex Service Station	87-89 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.71940701	150.1762788
BATHURST	Shell Coles Express Service Station	(Cnr Stewart and Rocket Street) 298 Stewart STREET	Service Station	Regulation under CLM Act not required	-33.41910999	149.5677773
BATHURST	Former Shell Depot Bathurst	56 Bant STREET	Other Petroleum	Regulation under CLM Act not required	-33.43471575	149.5774595
BATHURST	Bathurst Rail Fabrication Centre	34 Alpha STREET	Other Industry	Regulation under CLM Act not required	-33.42805153	149.5829156
BATHURST	Bathurst - Former Caltex Depot	114 Howick STREET	Other Petroleum	Regulation under CLM Act not required	-33.42296963	149.5862574
BATHURST	Caltex Bathurst Service Station	53 Durham STREET	Service Station	Regulation under CLM Act not required	-33.41689545	149.5848527
BATHURST	Former Police Station	Corner of William Street and Durham STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.41592424	149.5842233
BATHURST	Former Mobil Depot	1 Lambert STREET	Other Petroleum	Regulation under CLM Act not required	-33.42875534	149.5806344
BATHURST	Crago Mill site	Piper STREET	Other Industry	Regulation under CLM Act not required	-33.42777602	149.5809428
BATHURST	Former Mobil Depot	Lower Russell STREET	Other Petroleum	Regulation under CLM Act not required	-33.42497876	149.585128
BATHURST	Shell Coles Express Bathurst Service Station	59 Durham STREET	Service Station	Regulation under CLM Act not required	-33.41639415	149.5843243
BATHURST	Former Gasworks	71 Russell STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.42420302	149.5864517

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
BATHURST	Former Devro Cattle Hide Processing Plant	46 Vale ROAD	Other Industry	Regulation under CLM Act not required	-33.43926137	149.5803563
BATLOW	Crown Reserves	Mill ROAD	Other Industry	Regulation under CLM Act not required	-35.52355132	148.1505729
BAULKHAM HILLS	Caltex Baulkham Hills Service Station	117 Seven Hills ROAD	Service Station	Regulation under CLM Act not required	-33.76139872	150.9750767
BAULKHAM HILLS	Caltex Service Station	130 Seven Hills ROAD	Service Station	Regulation under CLM Act not required	-33.76180431	150.9746297
BAULKHAM HILLS	Shell Coles Express Service Station	363 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.7601819	150.9916224
BAULKHAM HILLS	IBM Baulkham Hills Data Centre	3 Brookhollow AVENUE	Other Petroleum	Regulation under CLM Act not required	-33.73252699	150.9680221
BEACON HILL	Caltex Service Station	176 Warringah ROAD	Service Station	Contamination currently regulated under CLM Act	-33.75381485	151.2602617
BEACON HILL	Former 7-Eleven Service Station, Beacon Hill	312 Warringah ROAD	Service Station	Regulation under CLM Act not required	-33.75129647	151.2469656
BEACONSFIELD	63-85 Victoria St, Beaconsfield	63-85 Victoria STREET	Other Industry	Regulation under CLM Act not required	-33.9102929	151.2016275
BEGA	Coles Express (former Caltex) Service Station	2-6 Swan (Corner Carp) STREET	Service Station	Regulation under CLM Act not required	-36.67388263	149.838163
BEGA	Former BP Service Station	100 - 102 Gipps STREET	Service Station	Regulation under CLM Act not required	-36.67563094	149.8433291
BEGA	Former Bega Gasworks	19-29 Upper STREET	Gasworks	Under preliminary investigation order	-36.67710613	149.8480253
BEGA	Caltex Service Station	36-40 Lagoon STREET	Service Station	Regulation under CLM Act not required	-36.66832965	149.8289048
BEGA	Lands Adjoining the Former Bega Gasworks	Part of Upper, East, Gordon & Gloucester STREET	Gasworks	Under preliminary investigation order	-36.67704706	149.848425
BEGA	Spenco Site - owned by Bega Spotlight Property 2 Pty Ltd	53-65 Bega Street STREET	Other Industry	Regulation under CLM Act not required	-36.67135539	149.8450828

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BELMONT	Coles Express Belmont Service Station	502 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.03317155	151.6605194
BELMONT	Former Ampol Service Station	467-469 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.0299728	151.6613301
BELMONT NORTH	Woolworths Service Station Belmont North	399 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.02454211	151.6634893
BELMONT NORTH	Caltex Belmont North Service Station	406 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.02476876	151.6623655
BELMONT NORTH	Belmont Bus Depot	2 Floraville ROAD	Other Petroleum	Regulation under CLM Act not required	-33.02476269	151.6606657
BELMORE	SRA Land	348 Burwood ROAD	Unclassified	Regulation under CLM Act not required	-33.91753611	151.0859487
BELMORE	7-Eleven Service Station	792-794 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.92567992	151.0873469
BELROSE	Glenrose Shopping Centre	56-58 Glen STREET	Unclassified	Contamination currently regulated under CLM Act	-33.73917996	151.2101029
BELROSE	Woolworths Petrol	60 Glen STREET	Service Station	Regulation under CLM Act not required	-33.74009002	151.2091045
BELROSE	Caltex Service Station	157 Forest WAY	Service Station	Regulation under CLM Act not required	-33.7347675	151.2212004
BENNETTS GREEN	Former Windale Wastewater Treatment Works	8 Templar PLACE	Other Industry	Regulation under CLM Act not required	-33.00317523	151.6936636
BERESFIELD	BP Beresfield Truckstop	2 Kinta Drive, corner John Renshaw DRIVE	Service Station	Regulation under CLM Act not required	-32.81122768	151.6393427
BERESFIELD	Former Koppers Timber Treatment Site	53 Weakleys DRIVE	Other Industry	Regulation under CLM Act not required	-32.79902937	151.6358846
BERKELEY VALE	Former Berkeley Vale Service Station	121-123 Lakedge AVENUE	Service Station	Regulation under CLM Act not required	-33.34899186	151.4423109
BERKSHIRE PARK	Shell Coles Express Berkshire Park	746 - 752 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.66508654	150.7990243

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BEROWRA	Caltex Berowra Service Station	12-14 Berowra Waters ROAD	Service Station	Regulation under CLM Act not required	-33.6233827	151.1505554
BEROWRA	7-Eleven Berowra Service Station	965-969 Pacific (Cnr Waratah Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-33.62673163	151.1479171
BEROWRA	Shell Coles Express Berowra	955 Pacific (Cnr Yallambee Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-33.62818015	151.1475736
BEROWRA	42 Berowra Waters Road	42 Berowra Waters ROAD	Unclassified	Regulation under CLM Act not required	-33.6203823	151.1481246
BERRIGAN	Caltex Service Station Berrigan	155-165 Chanter STREET	Service Station	Regulation under CLM Act not required	-35.6557616	145.8015557
BERRY	Berry Service Centre - Shell Branded	88 Queen STREET	Service Station	Regulation under CLM Act not required	-34.77571634	150.6961713
BERRY	BP branded service station Berry (Formerly Shell)	75 Queen STREET	Service Station	Contamination currently regulated under POEO Act	-34.77500516	150.695167
BEXLEY	7-Eleven Bexley	474 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.95160096	151.1252355
BEXLEY	7-Eleven (former Mobil) Service Station Bexley	613 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.95539246	151.118447
BILAMBIL HEIGHTS	Former Banana Plantation Land	38 McAllisters ROAD	Other Industry	Regulation under CLM Act not required	-28.21218056	153.4778762
BILLINUDGEL	CSR Readymix	Mogo PLACE	Other Industry	Regulation under CLM Act not required	-28.50210255	153.5278161
BILLINUDGEL	Billinudgel General Store	2A Wilfred STREET	Service Station	Under assessment	-28.50210255	153.5278161
BLACKMANS FLAT	Mount Piper Extension Development Site	2847 Boulder ROAD	Other Industry	Regulation under CLM Act not required	-33.35619968	150.0279881
BLACKMANS FLAT	Western Coal Services (former Lamberts Gully Mine)	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.36713827	150.0483236
BLACKTOWN	Former Caltex Service Station	131 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.75866104	150.8962614

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
BLACKTOWN	Valspar Blacktown	4 Steel STREET	Chemical Industry	Regulation under CLM Act not required	-33.75425018	150.9127714
BLACKTOWN	Harpers Bush (Reserve 752)	Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.79119448	150.8967838
BLACKTOWN	7-Eleven Service Station	60 Walters ROAD	Service Station	Regulation under CLM Act not required	-33.77599783	150.8948926
BLAKEHURST	Woolworths Service Station Blakehurst	390 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.99019694	151.1135663
BLAKEHURST	The Bay Nursing Home	392 & 394 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.99030465	151.1140293
BLAXLAND	7-Eleven (former Mobil) Service Station	137 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.74627	150.6137669
BOAMBEE	Lindsay Bros transport depot site	542 Pacific HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-30.33106848	153.0802985
BOAMBEE	BP-branded (former Mobil) Boambee Service Station	601 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.33544287	153.0817266
BOBS FARM	Bob's Farm	15 Fenningham Island ROAD	Other Industry	Regulation under CLM Act not required	-32.74867207	152.0316217
BOGGABILLA	Former Caltex Service Station	90 Simpson Street, corner Newell HIGHWAY	Service Station	Regulation under CLM Act not required	-28.60654029	150.3571056
BOGGABILLA	Lowes (Former Mobil) Depot	Newell HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-28.61023985	150.3529156
BOMADERRY	Caltex Service Station	341 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.84561952	150.5946978
BOMADERRY	Caltex Service Station Bomaderry	246 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.83833824	150.5958799
BOMADERRY	Former Mobil Emoleum Depot	7 Victa WAY	Other Petroleum	Regulation under CLM Act not required	-34.84454618	150.6139462
BOMADERRY	Former Shell Depot	44 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-34.85193621	150.6117038

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
BOMADERRY	SRA Land	Lot 2 Meroo STREET	Unclassified	Regulation under CLM Act not required	-34.85314813	150.6099573
BOMADERRY	Bomaderry Works Depot	10 McIntyre WAY	Other Petroleum	Regulation under CLM Act not required	-34.84576748	150.6131411
BOMADERRY	Commercial Land	320 Princes HIGHWAY	Other Industry	Contamination currently regulated under CLM Act	-34.84424073	150.5958149
BOMBALA	Caltex Service Station Bombala	159-161 Maybe STREET	Service Station	Regulation under CLM Act not required	-36.91234945	149.2374622
BOMBALA	Former Bright Street Timber Mill	Bright STREET	Other Industry	Regulation under CLM Act not required	-36.91547645	149.2302454
BOMBALA	Caltex Bombala Service Station	High Street corner Stephen STREET	Service Station	Regulation under CLM Act not required	-36.90447935	149.241292
BOMBALA	Prime Pine site	Sandy LANE	Other Industry	Regulation under CLM Act not required	-36.9315425	149.2110959
BOMEN	Caltex Terminal	34 Lewington STREET	Other Petroleum	Regulation under CLM Act not required	-35.0700202	147.4121955
BOMEN	Enirgi Power Storage Recycling	509 Byrnes ROAD	Other Industry	Under assessment	-35.05985094	147.4283765
BONDI	BP-branded Service Station	185 Bondi ROAD	Service Station	Regulation under CLM Act not required	-33.89432208	151.2647671
BONDI	Caltex Service Station Bondi	51 Bondi ROAD	Service Station	Regulation under CLM Act not required	-33.8936307	151.260001
BONDI JUNCTION	Waverley Bus Depot	1-15 Oxford STREET	Other Industry	Regulation under CLM Act not required	-33.89165341	151.2421246
BONNY HILLS	Bonny View Store	923 Ocean DRIVE	Service Station	Regulation under CLM Act not required	-31.59075636	152.8392935
BONNYRIGG	Metro (Formerly United & AP SAVER) Service Station Bonnyrigg	709 Cabramatta (W) ROAD	Service Station	Regulation under CLM Act not required	-33.89297085	150.8925935
BONNYRIGG HEIGHTS	BP-Branded Service Station Bonnyrigg	451 North Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.89416327	150.8578378



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
BOOLAROO	Cardiff West Estate - Pasminco Cockle Creek	Adjacent to PCC Smelter at 13A Main ROAD	Metal Industry	Regulation under CLM Act not required	-32.93950137	151.6349183
BOOLAROO	Cockle Creek and Cockle Bay Sediments	Off Creek Reserve ROAD	Metal Industry	Contamination currently regulated under CLM Act	-32.96079541	151.6141327
BOOLAROO	Pasminco Cockle Creek Smelter	Lake ROAD	Metal Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-32.94434593	151.6307345
BOOLAROO	Incitec Pivot	13 Main STREET	Other Industry	Contamination formerly regulated under the CLM Act	-32.94803538	151.6302187
BOOLAROO	Bunnings Site - Pasminco Cockle Creek	13a Main ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-32.94364503	151.6252316
BOOLAROO	Part Lot 2 DP1127713 (proposed Lot G) - Pasminco Cockle Creek Smelter site	13a Main ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-32.94404392	151.6267695
BOOLAROO	Lot 600 DP1228699 (formerly Part Lot 2 DP1127713 & proposed 'Lot D') - Pasminco Cockle Creek Smelter site	Main ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-32.94440875	151.6264143
BOOROWA	Former Mobil Depot	14-16 Brial STREET	Other Petroleum	Regulation under CLM Act not required	-34.43673234	148.7300821
BOOROWA	Mobil Service Station	63-69 Marsden STREET	Service Station	Contamination formerly regulated under the CLM Act	-34.44157331	148.7162391
BOOROWA	Boorowa Service Station	84 Marsden STREET	Service Station	Under assessment	-34.44302227	148.7151026
BOTANY	Former Aerosols of Australia	1617 Botany ROAD	Chemical Industry	Regulation under CLM Act not required	-33.9529386	151.2037468
BOTANY	Allnex	49-61 Stephen ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.9524442	151.2106446
BOTANY	Former Tannery	2 Daniel STREET	Other Industry	Regulation under CLM Act not required	-33.94126194	151.1991087
BOTANY	Botany, Underwood	14a Underwood AVENUE	Unclassified	Contamination being managed via the planning process (EP&A Act)	-33.94508532	151.1947626
BOTANY	Roads and Maritime Service	5 - 9 Lord STREET	Other Industry	Regulation under CLM Act not required	-33.94100279	151.1968763

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
BOTANY	Former Industrial Site	28 Folkestone PARADE	Unclassified	Contamination being managed via the planning process (EP&A Act)	-33.95187539	151.1960537
BOURKE	Ampol Bourke Service Station	82-86 Anson STREET	Service Station	Under assessment	-30.09500388	145.9414388
BOURKE	Former Shell Bourke Depot	94-106 Anson STREET	Service Station	Regulation under CLM Act not required	-30.09548497	145.9436745
BOWENFELS	Bowenfels Field Support Centre	9-13 Coerwull ROAD	Other Petroleum	Regulation under CLM Act not required	-33.47514572	150.1323899
BOWRAL	Shell Coles Express Bowral Service Station	430 Bong Bong STREET	Service Station	Regulation under CLM Act not required	-34.48269596	150.417389
BOWRAL	Former Gasworks	Merrigang STREET	Gasworks	Contamination currently regulated under CLM Act	-34.4783957	150.4255053
BOX HILL	Former Waste Management Facility	25 Terry ROAD	Landfill	Regulation under CLM Act not required	-33.65559259	150.8977986
BOX HILL	Former Poultry Farm	27-33 Boundary ROAD	Other Industry	Regulation under CLM Act not required	-33.64866563	150.8815467
BOX HILL	Former Poultry Farm	19-25 Boundary ROAD	Other Industry	Regulation under CLM Act not required	-33.65038071	150.8813725
BRANXTON	Former Service Station Branxton	Part of 70 Maitland STREET	Service Station	Contamination currently regulated under CLM Act	-32.65631582	151.3516243
BRANXTON	Branxton Wastewater Treatment Works	2151 New England HIGHWAY	Other Industry	Regulation under CLM Act not required	-32.66069944	151.3625572
BREWARRINA	Dowell's Fuel	39 Doyle STREET	Service Station	Regulation under CLM Act not required	-29.96152786	146.8612561
BRIGHTON-LE-SANDS	Shell Service Station Brighton Le Sands & adjacent land	2 General Holmes DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-33.95791132	151.1576486
BRIGHTON-LE-SANDS	Cook Park	General Holmes DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-33.9581072	151.1579572
BROADMEADOW	Former Industrial Site	16 Broadmeadow ROAD	Service Station	Regulation under CLM Act not required	-32.91444096	151.7300112

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
BROADMEADOW	Nineways Broadmeadow Coles Express SS	Corner Brunker Road and Lambton ROAD	Service Station	Regulation under CLM Act not required	-32.92511185	151.7364247
BROADMEADOW	2 Georgetown Road, Broadmeadow NSW 2292	2 Georgetown ROAD	Metal Industry	Under assessment	-32.91229404	151.7322202
BROKEN HEAD	South Byron Sewage Treatment Works	Broken Head ROAD	Other Industry	Regulation under CLM Act not required	-28.67233626	153.6148974
BROKEN HILL	Former Caltex Depot	3 Kanandah ROAD	Service Station	Regulation under CLM Act not required	-31.98341823	141.4332211
BROKEN HILL	Former Caltex Service Station	167-173 Argent STREET	Service Station	Regulation under CLM Act not required	-31.96066663	141.4624175
BROKEN HILL	Caltex Service Station	535 Argent STREET	Service Station	Regulation under CLM Act not required	-31.95311924	141.4745274
BROKEN HILL	Tasco Petroleum (Former Mobil) Depot	5 Kanandah ROAD	Other Petroleum	Regulation under CLM Act not required	-31.9843986	141.4329127
BROKEN HILL	Former Mobil Aviation Refuelling Facility, Broken Hill Airport	Airport ROAD	Other Petroleum	Regulation under CLM Act not required	-31.99928312	141.4685759
BROKEN HILL	Caltex Service Station	73-87 Oxide STREET	Service Station	Contamination formerly regulated under the CLM Act	-31.95519591	141.4658647
BROKEN HILL	Former Mobil Depot	Corner Of Talc Street and Gossan STREET	Other Petroleum	Regulation under CLM Act not required	-31.96018102	141.4514752
BROKEN HILL	Former Gasworks	Cornish STREET	Gasworks	Contamination formerly regulated under the CLM Act	-31.96330562	141.4470611
BROKEN HILL	Broken Hill Gas Turbines	76A Pinnacles ROAD	Unclassified	Under assessment	-33.43673058	148.358727
BROKEN HILL	Broken Hill Railway Yard	Crystal STREET	Landfill	Under assessment	-31.9690434	141.4563004
BROOKLYN	Former Oyster Farm	139 Brooklyn (Off Government) ROAD	Unclassified	Regulation under CLM Act not required	-33.54716867	151.2229744
BROOKVALE	Coles Express Service Station Brookvale	198 Harbord ROAD	Service Station	Regulation under CLM Act not required	-33.76332299	151.2794028

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
BROOKVALE	Woolworths Petrol Brookvale	756 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.76170587	151.2762411
BROOKVALE	Caltex Service Station Brookvale	740-742 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.76146721	151.2745358
BROOKVALE	Harrison Manufacturing	75 Old Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.76497282	151.2637961
BROOKVALE	Brookvale Bus Depot	630-636 Pittwater ROAD	Other Petroleum	Regulation under CLM Act not required	-33.76641698	151.2705659
BROOKVALE	Warringah Mall	Cnr Condamine Street, Old Pittwater Rd & Cross STREET	Other Industry	Regulation under CLM Act not required	-33.76729923	151.2657272
BROOKVALE	Littles Dry Cleaning	123 Old Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.76759121	151.2625932
BROOMS HEAD	Former Brooms Head General Store and Service Station	92 Ocean ROAD	Service Station	Regulation under CLM Act not required	-29.60711599	153.3346312
BROWNSVILLE	Caltex Service Station	342 Kanahooka ROAD	Service Station	Regulation under CLM Act not required	-34.48591734	150.8064373
BRUNSWICK HEADS	Caltex Service Station	5 Tweed STREET	Service Station	Regulation under CLM Act not required	-28.5381619	153.5487135
BUDGEWOI	Colongra Power Station	Off Scenic DRIVE	Other Industry	Under assessment	-33.21463137	151.5529338
BULAHDELAH	Caltex Service Station	8 Red Gum Road, Corner Mahogany STREET	Service Station	Regulation under CLM Act not required	-32.39837094	152.2106015
BULAHDELAH	Former Caltex Service Station	53-59 Bulahdelah WAY	Service Station	Regulation under CLM Act not required	-32.40721638	152.2110291
BULAHDELAH	BP-branded (former Mobil) Service Station	73-75 Bulahdelah WAY	Service Station	Regulation under CLM Act not required	-32.40971018	152.2105785
BULLABURRA	Former Burmah Bullaburra Service Station	367 - 369 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.72482995	150.4124537
BULLI	Scrap Yard	7 Molloy STREET	Other Industry	Contamination formerly regulated under the CLM Act	-34.33663195	150.9131154

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BULLI	Bulli Brickworks	Quilkey PLACE	Other Industry	Regulation under CLM Act not required	-34.33263113	150.9086247
BUNGALORA	Former landfill area	Part of 840 Terranora ROAD	Other Industry	Regulation under CLM Act not required	-28.2424318	153.4789209
BUNGENDORE	Former Timber Treatment Plant	Corner King Street and Butmaroo STREET	Other Industry	Contamination formerly regulated under the CLM Act	-35.26151273	149.4434907
BUNGENDORE	Bungendore Railway Station and Rail Corridor	Bungendore STREET	Unclassified	Under assessment	-35.25397326	149.4470058
BUNGENDORE	Bungendore former Station Masters Cottage	16 Majara STREET	Unclassified	Under assessment	-35.254855	149.446366
BURONGA	Caltex Service Station	Sturt Hwy Cnr Silver City HIGHWAY	Service Station	Regulation under CLM Act not required	-34.17056496	142.1813847
BURWOOD	Burwood STA Depot	Cnr Shaftesbury and Parramatta ROADS	Other Industry	Contamination formerly regulated under the CLM Act	-33.86982934	151.1089057
BYRON BAY	Residential Development	Lot 15 Seaview STREET	Unclassified	Regulation under CLM Act not required	-28.65214464	153.6165573
BYRON BAY	Butler Street Reserve Byron Bay	Butler STREET	Landfill	Under assessment	-28.64340617	153.6099674
CABARITA	Dulux (Orica Australia)	Cabarita ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.84643972	151.1157115
CABARITA	Wellcome Soil Containment Cells Cabarita	47 and 48 Phillips STREET	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.85250251	151.1176366
CABRAMATTA	Caltex (former Mobil) Lansvale Service Station	141 Hume HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.89442261	150.9571507
CABRAMATTA	Caltex Service Station Cabramatta	168 John STREET	Service Station	Regulation under CLM Act not required	-33.89422314	150.9279279
CABRAMATTA	Cabramatta Creek	17 A and 19A Liverpool Street STREET	Unclassified	Regulation under CLM Act not required	-33.90284952	150.9415616
CABRAMATTA WEST	BP Lansvale	115-119 Hume HIGHWAY	Service Station	Regulation being finalised	-33.89373753	150.9587201

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CABRAMURRA	Selwyn Snowfields / Selwyn Snow Resort	213A Kings Cross ROAD	Other Industry	Regulation under CLM Act not required	-35.90869221	148.4565678
CALGA	Former service station	101 Peats Ridge ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.37592138	151.2254951
CALLALA BEACH	Callala Beach General Store	(formerly 1 Quay Rd) 114A Quay ROAD	Service Station	Regulation under CLM Act not required	-35.0101817	150.6964322
CAMBRIDGE GARDENS	Caltex Cambridge Park	1 Boomerang PLACE	Service Station	Regulation under CLM Act not required	-33.74068794	150.717174
CAMDEN	Camden High School (former)	John STREET	Gasworks	Regulation under CLM Act not required	-34.05114079	150.6951285
CAMDEN	Caltex Camden Service Station	21 Barsden STREET	Service Station	Regulation under CLM Act not required	-34.05808413	150.6914744
CAMDEN SOUTH	Coles Express Service Station Camden South	273 Old Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.08660995	150.6945444
CAMELLIA	Hymix Concrete	14 Grand AVENUE	Metal Industry	Contamination currently regulated under CLM Act	-33.82243454	151.044789
CAMELLIA	Mauri Foods	15 Grand AVENUE	Other Industry	Regulation being finalised	-33.81996985	151.0335725
CAMELLIA	James Hardie Factory (former, eastern portion)	1 Grand AVENUE	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.81822448	151.0260958
CAMELLIA	Bitumen Manufacturer	12 Grand AVENUE	Other Industry	Contamination currently regulated under CLM Act	-33.82189695	151.0429251
CAMELLIA	Hambeare	14 Thackeray STREET	Metal Industry	Regulation under CLM Act not required	-33.81920482	151.0419394
CAMELLIA	Former Asciano Properties	37A and 39 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.82056014	151.0443331
CAMELLIA	Railway Land	27 Grand AVENUE	Other Industry	Regulation under CLM Act not required	-33.81910822	151.0382483
CAMELLIA	Wrigg	13 Grand AVENUE	Metal Industry	Under preliminary investigation order	-33.81971361	151.0321525



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
CAMELLIA	Council Reserve	11B Grand AVENUE	Metal Industry	Regulation under CLM Act not required	-33.81850502	151.0302425
CAMELLIA	Veolia	37 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.81980027	151.0430689
CAMELLIA	Sydney Water	41 Grand AVENUE	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.8217493	151.0453367
CAMELLIA	Maritime Services Board	33A Grand AVENUE	Metal Industry	Regulation under CLM Act not required	-33.81836086	151.0401249
CAMMERAY	Tunks Park	Brothers AVENUE	Landfill	Contamination formerly regulated under the CLM Act	-33.81734704	151.2113338
CAMMERAY	Coles Express Cammeray	477-483 Miller STREET	Service Station	Regulation under CLM Act not required	-33.82141124	151.2108658
CAMPBELLTOWN	Mobil Service Station	96-98 Queen STREET	Service Station	Regulation under CLM Act not required	-34.06407588	150.8170082
CAMPBELLTOWN	BP Macarthur Service Station	Cnr Blaxland ROAD and Campbelltown ROAD	Service Station	Regulation under CLM Act not required	-34.05312872	150.8234349
CAMPBELLTOWN	Former vehicle wrecking yard	38 Blaxland ROAD	Other Industry	Regulation under CLM Act not required	-34.06055735	150.8130598
CAMPERDOWN	Former Gee Graphics	27 Church STREET	Other Industry	Regulation under CLM Act not required	-33.88737747	151.1773616
CAMPERDOWN	O'Dea Reserve	Salisbury LANE	Landfill	Contamination formerly regulated under the CLM Act	-33.89072786	151.1736948
CAMPERDOWN	The Spruce	12-14 Marsden STREET	Other Industry	Regulation under CLM Act not required	-33.88720632	151.1784514
CAMPSIE	Budget Petroleum and adjacent property	403 Canterbury Road and 1 Una STREET	Service Station	Contamination currently regulated under CLM Act	-33.91605617	151.1086596
CAMPSIE	Former Sunbeam factory	60 Charlotte STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.92254225	151.1025796
CANLEY HEIGHTS	Former Caltex Canley Heights	368 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88271081	150.9154176

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
CANLEY HEIGHTS	Caltex Canley Heights Service Station	280-286 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88393501	150.9241656
CANLEY VALE	Coles Express Lansvale	99 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.89295753	150.9606136
CANLEY VALE	Former Mobil Service Station	96 Canley Vale ROAD	Service Station	Regulation under CLM Act not required	-33.88591573	150.9369801
CANOWINDRA	BP-branded Jasbe Service Station	76 Rodd STREET	Service Station	Regulation under CLM Act not required	-33.56131773	148.6682805
CANTERBURY	Metro Petroleum Service Station	13-19 Canterbury ROAD	Service Station	Contamination currently regulated under CLM Act	-33.90783455	151.125207
CAPTAINS FLAT	Rail corridor adjacent to Lake George Mine	1 Copper Creek Road ROAD	Other Industry	Contamination currently regulated under CLM Act	-35.59038471	149.4382246
CAPTAINS FLAT	Captains Flat former Station Masters Cottage	2 Copper Creek ROAD	Other Industry	Under assessment	-35.59027127	149.4384122
CARDIFF	7-Eleven Service Station	399 Main ROAD	Service Station	Regulation under CLM Act not required	-32.93391137	151.6562111
CARDIFF	Former Caltex Service Station	367 Main ROAD	Service Station	Regulation under CLM Act not required	-32.93761223	151.6577781
CARDIFF	Maneela Oval	Main ROAD	Other Industry	Regulation under CLM Act not required	-32.93018443	151.6435559
CARDIFF	Former Mobil Depot	7 Ranton STREET	Other Petroleum	Regulation under CLM Act not required	-32.94516764	151.6470387
CARDIFF	BP Service Station (Reliance Petroleum)	Corner Sturt and Main ROADS	Service Station	Regulation under CLM Act not required	-32.93792229	151.6569905
CARDIFF	Woolworths (former Mobil) Cardiff Service Station	43 Macquarie ROAD	Service Station	Regulation under CLM Act not required	-32.94118246	151.6578195
CARINGBAH	Adjacent to Spirent Australia	101-103 Cawarra ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-34.03360747	151.1245577
CARINGBAH	Former Consumer Health Products Manufacturer	32-40 Cawarra ROAD	Other Industry	Regulation under CLM Act not required	-34.03024369	151.1277755

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
CARINGBAH	Caltex Lilli Pilli Service Station	477-481 Port Hacking ROAD	Service Station	Regulation under CLM Act not required	-34.05243807	151.1216353
CARINGBAH	7-Eleven Service Station	367 The KINGSWAY	Service Station	Regulation under CLM Act not required	-34.03948677	151.1203268
CARINGBAH	Spirent Australia	105 Cawarra ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-34.03425343	151.1245092
CARINGBAH	BP Service Station Caringbah	54 Captain Cook DRIVE	Service Station	Regulation under CLM Act not required	-34.032986	151.1250656
CARLINGFORD	Caltex Service Station Carlingford	131 Pennant Hills ROAD	Service Station	Regulation under CLM Act not required	-33.78762398	151.0279422
CARLINGFORD	Caltex Service Station	797 Pennant Hills ROAD	Service Station	Regulation under CLM Act not required	-33.7757819	151.0516532
CARLTON	Shell Coles Express Service Station	277 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.9748579	151.1272732
CARRINGTON	Commercial Metals Company (CMC) Australia Pty Ltd	117-121 Bourke STREET	Other Industry	Regulation under CLM Act not required	-32.9148832	151.7677193
CARRINGTON	Carrington redevelopment site	11 Howden STREET	Other Industry	Regulation under CLM Act not required	-32.91309509	151.7625341
CARRINGTON	Forgacs Dockyard	81 Denison STREET	Other Industry	Regulation under CLM Act not required	-32.9207441	151.764816
CARRINGTON	NAT vacant land	Bourke STREET	Unclassified	Regulation under CLM Act not required	-32.91276029	151.7685894
CARRINGTON	Dyke Point Containment Cell	Dyke ROAD	Other Industry	Regulation under CLM Act not required	-32.91763422	151.7727101
CARRINGTON	Carrington Coal Tar Pavements	Bourke Street to Dyke ROAD	Other Industry	Regulation under CLM Act not required	-32.91441348	151.770271
CARRINGTON	Pasminco Ship Loader	Dyke Berth 2 (off Bourke Street) OTHER	Metal Industry	Regulation under CLM Act not required	-32.9148698	151.7716837
CARSS PARK	Vacant Property	334 Princes HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.98628486	151.1133908

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
CARSS PARK	Kogarah War Memorial Pool	78 Carwar AVENUE	Other Industry	Under assessment	-33.9889195	151.1178227
CARWELL	Cement Australia Carwell Creek Quarries	Quarry ROAD	Other Industry	Regulation under CLM Act not required	-32.85570277	149.9170908
CASINO	Caltex Service Station and Depot Casino	28 & 32 Dyraaba STREET	Service Station	Regulation under CLM Act not required	-28.85488567	153.044806
CASINO	Caltex Service Station	96 Centre STREET	Service Station	Regulation under CLM Act not required	-28.86539567	153.0450654
CASINO	Former Gasworks	134-136 North STREET	Gasworks	Regulation under CLM Act not required	-28.86080712	153.0526043
CASINO	Woolworths Service Station Casino	130 Canterbury STREET	Service Station	Regulation under CLM Act not required	-28.86231341	153.0464642
CASINO	18 Beith Street, Casino	18 Beith STREET	Unclassified	Regulation under CLM Act not required	-28.84951426	153.0446585
CASINO	Corner Store	30 Barker STREET	Service Station	Regulation under CLM Act not required	-28.86316792	153.0389124
CASINO	Casino Roadhouse	86 Johnston STREET	Service Station	Contamination currently regulated under CLM Act	-28.85960698	153.0562429
CASULA	Caltex Casula Service Station	646 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.95641262	150.8934783
CATHERINE HILL BAY	Catherine Hill Bay Coal Handling and Preparation Plant	1A Keene STREET	Other Industry	Regulation under CLM Act not required	-33.16120556	151.6302456
CESSNOCK	Caltex Cessnock Service Station	103-105 Wollombi (Cnr James Street) ROAD	Service Station	Regulation under CLM Act not required	-32.83936243	151.3430078
CESSNOCK	Former Mobil Service Station	102 Wollombi ROAD	Service Station	Regulation under CLM Act not required	-32.83844074	151.3436022
CESSNOCK	Former Service Station	2-4 Allandale ROAD	Service Station	Regulation under CLM Act not required	-32.83118911	151.3560677
CESSNOCK	Lot 340 DP 755215	Old Maitland ROAD	Landfill	Under assessment	-32.821828	151.380127

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
CHARBON	Charbon Colliery	Clarence ROAD	Other Industry	Regulation under CLM Act not required	-32.92390131	149.9839098
CHARLESTOWN	7-Eleven Charlestown	273 Charlestown ROAD	Service Station	Regulation under CLM Act not required	-32.95797076	151.6896275
CHARLESTOWN	Caltex Service Station	81 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-32.96715274	151.6955462
CHARLESTOWN	Caltex Woolworths (Former BP)	91-93 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-32.96631255	151.6959086
CHARLESTOWN	Ausgrid Powell Street Depot	8 Powell STREET	Other Industry	Regulation under CLM Act not required	-32.95912375	151.6944136
CHARMHAVEN	Caltex Charmhaven Service Station	13-15 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.21655768	151.5091452
CHATSWOOD	Former Caltex Chatswood Service Station	607 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.80396472	151.1795766
CHATSWOOD	Woolworths Chatswood	364-366 Eastern Valley WAY	Service Station	Regulation under CLM Act not required	-33.78667419	151.2010828
CHATSWOOD	Caltex Service Station Chatswood	572 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.80381271	151.1789656
CHATSWOOD	Auto Repairs	2 Devonshire STREET	Service Station	Regulation under CLM Act not required	-33.8015482	151.1859632
CHATSWOOD	Coles Express Service Station Chatswood	877-879 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.79182176	151.1804867
CHATSWOOD	Chatswood Toyota	728 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.79654247	151.1776136
CHERRYBROOK	Caltex Service Station	67 Shepherds DRIVE	Service Station	Regulation under CLM Act not required	-33.72069183	151.0451415
CHESTER HILL	Former Orica, Chester Hill	127 Orchard ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.8869823	150.9952873
CHESTER HILL	Various industrial premises	191 Miller ROAD	Chemical Industry	Under assessment	-33.88412112	150.9947587

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
CHESTER HILL	Integrated Packaging	141 Miller STREET	Other Industry	Under assessment	-33.88471858	150.9948992
CHESTER HILL	CMA RECYCLING AUSTRALIA PTY LIMITED 191 Miller St Chester Hill	191 Miller STREET	Chemical Industry	Under assessment	-33.884037	150.995104
CHIPPENDALE	Cnr Regent Street & Wellington Street, Chippendale	Wellington STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.88668912	151.2015246
CHIPPING NORTON	Former Solchem (Mobil) Depot Chipping Norton	49-51 Riverside ROAD	Other Petroleum	Regulation under CLM Act not required	-33.91621314	150.9696948
CHIPPING NORTON	Former ACR	85-107 Alfred STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.92226795	150.9586496
CHISWICK	Former Sydney Wiremills (BHP) site	Blackwall Point ROAD	Other Industry	Regulation under CLM Act not required	-33.85131849	151.1369131
CHITTAWAY BAY	Former Caltex Chittaway Point	100 Chittaway ROAD	Service Station	Regulation under CLM Act not required	-33.32707555	151.4293546
CHULLORA	Chullora Railway Workshops	Worth STREET	Other Industry	Regulation under CLM Act not required	-33.88639388	151.0598201
CLANDULLA	Brogans Creek Quarry	Brogans Creek ROAD	Other Industry	Under assessment	-32.9851278	149.9587005
CLARENCE	Clarence Colliery	Chifley ROAD	Other Industry	Regulation under CLM Act not required	-33.46450217	150.2522729
CLARENDON	Coles Express Clarendon Service Station	244 Hawkesbury Valley WAY	Service Station	Regulation under CLM Act not required	-33.6083729	150.7890956
CLEARFIELD	Former Pamplings Dip Site	Off Clearfield ROAD	Cattle Dip	Regulation under CLM Act not required	-29.16287185	152.882974
CLYBUCCA	BP Service Station	2171 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.93845014	152.9422791
CLYDE	7-Eleven Clyde	3 Parramatta Road, corner Harbord STREET	Service Station	Regulation under CLM Act not required	-33.83494433	151.0222628
CLYDE	4 Tennyson Street, Clyde NSW 2142	4 Tennyson STREET	Other Industry	Regulation under CLM Act not required	-33.83268843	151.0267361



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
COBAR	Former Caltex (Bogas) Service Station Cobar	56-58 Marshall STREET	Service Station	Regulation under CLM Act not required	-31.49793339	145.8346684
COBAR	Mckinnons Gold Mine	Cobar ROAD	Metal Industry	Regulation under CLM Act not required	-31.78179755	145.693
COBAR	Caltex Service Station Cobar	99 Marshall (formerly Cnr Barrier Highway and Bathurst Street) STREET	Service Station	Regulation under CLM Act not required	-31.49631924	145.8275727
COBAR	Caltex Service Station	Lot 10 Railway PARADE	Service Station	Regulation under CLM Act not required	-31.49350124	145.8442372
COFFS HARBOUR	BP Service Station	134-136 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-30.29187037	153.1182106
COFFS HARBOUR	Dan Murphy's Coffs Harbour	10 Elbow STREET	Service Station	Regulation under CLM Act not required	-30.29439262	153.115069
COFFS HARBOUR	Mobil Service Station	314-316 Harbour DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-30.3056983	153.131966
COFFS HARBOUR	Mobil Coffs Harbour Airport	Aviation DRIVE	Other Petroleum	Contamination formerly regulated under the CLM Act	-30.313385	153.1175018
COFFS HARBOUR	Woolworths Petrol	Park Beach Plaza, Arthur STREET	Service Station	Regulation under CLM Act not required	-30.28101154	153.132027
COFFS HARBOUR	Caltex Service Station	157 Orlando STREET	Service Station	Regulation under CLM Act not required	-30.28975334	153.1306354
COFFS HARBOUR	Coffs Harbour Slipway	38 Marina DRIVE	Other Industry	Regulation under CLM Act not required	-30.30325637	153.1441437
COFFS HARBOUR	Aussitel Backpackers Hostel	312 Harbour DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-30.30585731	153.131645
COLEAMBALLY	Former Mobil Coleambally Depot	19 Bencubbin AVENUE	Other Petroleum	Regulation under CLM Act not required	-34.80279552	145.8945239
COLLARENEBRI	Former Shell Depot	Corner Narran Street and Queen STREET	Other Petroleum	Regulation under CLM Act not required	-29.54114772	148.5789365
COLONGRA	Munmorah Colliery	Scenic DRIVE	Other Industry	Regulation under CLM Act not required	-33.21297737	151.5416882

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
COLONGRA	Endeavour Colliery	Scenic DRIVE	Other Industry	Regulation under CLM Act not required	-33.21297737	151.5416882
COLYTON	Coles Express (former Ampol) Service Station	86-88 Great Western HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.77552363	150.7953105
CONCORD	Caltex Service Station	89 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.86785624	151.0993769
CONCORD WEST	Caltex Service Station - 369 -375 Concord Road, Concord West	369-375 Concord ROAD	Service Station	Regulation under CLM Act not required	-33.84113835	151.0888843
CONDOBOLIN	BP-Branded Service Station	38 Denison Street, corner Molong STREET	Service Station	Regulation under CLM Act not required	-33.08520378	147.1524976
CONDOBOLIN	Former Mobil Depot	6 Burnett STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.08010515	147.1642972
CONDOBOLIN	Former Ampol Depot	Cnr Parkes Road and Goobang STREET	Service Station	Regulation under CLM Act not required	-33.08034753	147.1642436
CONDOBOLIN	Former Caltex Depot	Parkes ROAD	Service Station	Regulation under CLM Act not required	-33.08255593	147.1585922
CONDOBOLIN	Mobil Condobolin Depot Railway Siding	Railway Siding behind 6 Burnett STREET	Other Petroleum	Regulation under CLM Act not required	-33.08058612	147.164225
CONSTITUTION HILL	Sydney Water Land	Caloola ROAD	Unclassified	Regulation under CLM Act not required	-33.79781738	150.9697436
COOGEE	Caltex Coogee Service Station	146-148 Coogee Bay Road, corner Mount STREET	Service Station	Regulation under CLM Act not required	-33.91989232	151.2517454
COOKS HILL	Former Council Depot Cooks Hill	152 Bruce Street and 115 Corlette STREET	Other Industry	Regulation under CLM Act not required	-32.93525537	151.7641074
COOLAC	Coolac Service Station	Corner Hume Highway and Coleman STREET	Service Station	Regulation under CLM Act not required	-34.95435052	148.1595525
COOLAH	BP Depot (Reliance Petroleum)	72 (formerly 17-23) Cunningham STREET	Other Petroleum	Regulation under CLM Act not required	-31.82275896	149.7243171
COOLONGLOOK	Caltex Service Station	Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-32.21648325	152.322813

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
COOMA	Caltex Cooma Service Station	44 Sharp Street, corner Baron STREET	Service Station	Regulation under CLM Act not required	-36.23323489	149.1304134
COOMA	Former Mobil Cooma Depot	2 Commissioner STREET	Other Petroleum	Regulation under CLM Act not required	-36.23266081	149.1346674
COOMA	Former Caltex Cooma Depot	2 Short STREET	Service Station	Regulation under CLM Act not required	-36.2338672	149.1348862
COOMA	Lowes Petroleum Cooma Depot and Service Station (Former BP Reliance Petroleum)	2-4 Sharp STREET	Other Petroleum	Regulation under CLM Act not required	-36.22819468	149.1357696
COOMA	Woolworths Caltex Cooma Service Station	Bombala Street Cnr Massie STREET	Service Station	Regulation under CLM Act not required	-36.23364626	149.1267469
COOMA	Former Shell Depot	48-50 Bradley STREET	Other Petroleum	Regulation under CLM Act not required	-36.23448955	149.1347987
COOMA	Former Shell Service Station	48-52 Sharp STREET	Service Station	Contamination formerly regulated under the CLM Act	-36.23350402	149.1299514
COONABARABRAN	Former Mobil Depot	49 Cowper STREET	Other Petroleum	Regulation under CLM Act not required	-31.27096226	149.2818461
COONABARABRAN	Shell Coles Express Service Station	2-6 John STREET	Service Station	Regulation under CLM Act not required	-31.27706775	149.27836
COONABARABRAN	Former Shell Coonabarabran CVRO	Corner Cowper St and Dawson St, formerly 51 Cowper STREET	Other Petroleum	Regulation under CLM Act not required	-31.27003745	149.281788
COONABARABRAN	Caltex Service Station	Cnr Dawson & Drummond STREET	Service Station	Regulation under CLM Act not required	-31.26994941	149.28183
COONABARABRAN	Caltex Service Station	85-87 John STREET	Service Station	Regulation under CLM Act not required	-31.27231215	149.2771297
COONAMBLE	Former Shell Coonamble Depot	Corner Aberford Street and Quambone ROAD	Other Petroleum	Regulation under CLM Act not required	-30.95349182	148.3793432
COONAMBLE	Caltex Service Station	Quambone ROAD	Service Station	Regulation under CLM Act not required	-30.95410067	148.3792167
COORANBONG	Former Poultry Farm - 91 Alton Road, Cooranbong	64 - 98 Alton ROAD	Unclassified	Regulation under CLM Act not required	-33.06860138	151.4512156

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
COORANBONG	Avondale Auto Centre	679 Freemans DRIVE	Service Station	Regulation under CLM Act not required	-33.06968809	151.4636293
COOTAMUNDRA	Former BP Depot	1-5 Murray STREET	Other Petroleum	Regulation under CLM Act not required	-34.62915841	148.0306962
COOTAMUNDRA	Caltex Service Station	26-34 Hovell STREET	Service Station	Regulation under CLM Act not required	-34.63624703	148.0347479
COOTAMUNDRA	Former Caltex Depot	219 Sutton STREET	Other Petroleum	Regulation under CLM Act not required	-34.65126548	148.0145283
COOTAMUNDRA	Former Ampol Service Station	72 Parker STREET	Service Station	Regulation under CLM Act not required	-34.63471008	148.0296112
COOTAMUNDRA	Cootamundra Gasworks	140-146 Hovell STREET	Gasworks	Contamination currently regulated under CLM Act	-34.64572841	148.0255049
COOTAMUNDRA	Former Amoco Depot	68-72 Hovell STREET	Other Petroleum	Contamination currently regulated under CLM Act	-34.63871124	148.0321134
COOTAMUNDRA	Former Ampol Cootamundra Rail Siding	Back Brawlin ROAD	Other Petroleum	Regulation under CLM Act not required	-34.65326425	148.0143068
CORAMBA	Martin Street	End of Martin Street and adjacent car park OTHER	Service Station	Ongoing maintenance required to manage residual contamination (CLM Act)	-30.22125208	153.0156997
CORNWALLIS	532 Cornwallis Road, Cornwallis	532 Cornwallis ROAD	Other Industry	Regulation under CLM Act not required	-33.57473895	150.7792839
COROWA	Corowa Shire Council Works Depot	24 Poseidon ROAD	Other Petroleum	Regulation under CLM Act not required	-35.98807923	146.3652266
COROWA	Former Ampol Corowa	10 Bow STREET	Service Station	Regulation under CLM Act not required	-35.99364786	146.3901259
COROWA	Cignall Corowa	280 Hume STREET	Service Station	Under preliminary investigation order	-36.00996015	146.3760437
CORRIMAL	Woolworths Petrol - Corrimal	275 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.37527426	150.8962637
CORRIMAL	7-Eleven Corrimal	138-146 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.36986818	150.8978241

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
COWRA	Landmark Fertiliser Storage Facility	Corner Young Road & Waratah STREET	Chemical Industry	Regulation under CLM Act not required	-33.84321832	148.6722578
COWRA	Lowes Petroleum (former BP Cowra Depot)	12 Campbell STREET	Other Petroleum	Regulation under CLM Act not required	-33.83803706	148.6977873
COWRA	Former Gasworks	30 Brougham STREET	Gasworks	Contamination currently regulated under CLM Act	-33.8389659	148.6963482
COWRA	Shell Depot	34 Brougham STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.83913341	148.6973491
COWRA	Cowra Residential Site	32 Brougham STREET	Landfill	Under assessment	-33.8389659	148.6963482
CRANGAN BAY	Big T Roadhouse	555 and 565 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.17306517	151.6084446
CREMORNE	Shell Coles Express Service Station	225 Military ROAD	Service Station	Regulation under CLM Act not required	-33.83063306	151.226223
CRESTWOOD	Former Caltex Depot Queanbeyan	36 Kendall (Cnr Stephens Rd) AVENUE	Other Petroleum	Regulation under CLM Act not required	-35.34615546	149.207807
CRESTWOOD	Former BP Queanbeyan	64 Uriarra ROAD	Service Station	Regulation under CLM Act not required	-35.34646177	149.2246263
CROMER	Former Roche Products Dee Why Facility	100 South Creek ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.73893118	151.2870389
CRONULLA	Breen Holdings	Bate Bay ROAD	Other Industry	Regulation under CLM Act not required	-34.03861737	151.1614114
CROWS NEST	Caltex Service Station	111-121 Falcon STREET	Service Station	Regulation under CLM Act not required	-33.82868236	151.2060317
CROYDON	Caltex Service Station	404-410 Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.88853994	151.115879
CROYDON	BP Ashfield	584 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.87399409	151.1267296
CROYDON PARK	Mobil Service Station	334 Georges River ROAD	Service Station	Regulation under CLM Act not required	-33.89771626	151.0999194

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
CULCAIRN	Caltex Service Station	2883 Olympic HIGHWAY	Service Station	Regulation under CLM Act not required	-35.67441635	147.0356845
CULLEN BULLEN	Baal Bone Colliery	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.27193875	150.0587194
CUNDLETOWN	Caltex Service Station (1 Manning River Drive)	Old Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-31.89329598	152.5068225
CURL CURL	John Fisher Park	Corner Harbord and Abbott ROADS	Landfill	Regulation under CLM Act not required	-33.76622613	151.2860705
DACEYVILLE	Astrolabe Park	Cook AVENUE	Landfill	Regulation under CLM Act not required	-33.92963704	151.221773
DAPTO	7-Eleven Dapto	125 Princes HIGHWAY	Service Station	Under assessment	-34.4983106	150.7912911
DAPTO	RailCorp Dapto	(Rear of property) 12-14 Hamilton STREET	Other Industry	Regulation under CLM Act not required	-34.50045405	150.787353
DAPTO	Nicheinvest Pty Ltd (Former service station)	133-139 Lakelands DRIVE	Service Station	Regulation under CLM Act not required	-34.503453	150.80323
DARLINGHURST	Proposed Retail Unit	139-155 Palmer STREET	Unclassified	Regulation under CLM Act not required	-33.87504688	151.2168106
DARLINGHURST	Cross City Tunnel	Riley Street and William STREET	Service Station	Contamination was addressed via the planning process (EP&A Act)	-33.87424636	151.2158305
DARLINGHURST	18-28 Neild Avenue, Darlinghurst	18-28 Neild AVENUE	Landfill	Regulation under CLM Act not required	-33.87876581	151.2276546
DEE WHY	United Dee Why	148 Pacific Parade STREET	Service Station	Contamination currently regulated under CLM Act	-33.75569536	151.295963
DEE WHY	United Dee Why Pittwater	625 Pittwater (Cnr Mooramba Road) ROAD	Service Station	Under assessment	-33.7559565	151.2826053
DEE WHY	Caltex Service Station	793-797 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.74566596	151.2920719
DEE WHY	Dee Why Town Centre	Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.753169	151.2875805



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
DENHAM COURT	Denham Court Caravan Park and Service Station	505 Campbelltown ROAD	Service Station	Contamination currently regulated under CLM Act	-33.98208395	150.8459471
DENILIQUIN	Shell Coles Express Service Station	336 Victoria STREET	Service Station	Contamination formerly regulated under the CLM Act	-35.52373613	144.9807345
DENILIQUIN	Former Deniliquin Gasworks	365, 369 and 329-331 George and 380 and 386 Charlotte STREET	Gasworks	Under assessment	-35.52670898	144.9634996
DENILIQUIN	Landmark Fertiliser Storage Facility	99-101 Davidson STREET	Chemical Industry	Regulation under CLM Act not required	-35.52534735	144.975142
DENILIQUIN	Former Deniliquin Caltex Depot	116-118 Hardinge (Cnr Wood St) STREET	Service Station	Regulation under CLM Act not required	-35.53196985	144.9544597
DENILIQUIN	BP Depot (Reliance Petroleum)	125 - 127 Hardinge STREET	Service Station	Regulation under CLM Act not required	-35.53222124	144.9517397
DENILIQUIN	Former Shell Depot	143-147 Napier STREET	Other Petroleum	Regulation under CLM Act not required	-35.5342355	144.953169
DENILIQUIN	Previous Council depot site	392 - 394 Hay ROAD	Unclassified	Under preliminary investigation order	-35.51888562	144.977968
DENMAN	Former Industrial Site	10 Fontana WAY	Metal Industry	Regulation under CLM Act not required	-32.37945456	150.6868239
DENMAN	Former Industrial Site	9 Fontana WAY	Metal Industry	Regulation under CLM Act not required	-32.37911159	150.6869866
DORA CREEK	Former Service Station	4 Doree PLACE	Service Station	Regulation under CLM Act not required	-33.08452746	151.502415
DOUBLE BAY	64 Suttie Road, Double Bay NSW 2028	64 Suttie ROAD	Other Industry	Regulation under CLM Act not required	-33.88449649	151.2472734
DOYALSON	Part Lot 3 DP 259306	Off David STREET	Other Industry	Regulation under CLM Act not required	-33.20436131	151.5232558
DOYALSON	Munmorah Power Station	(Central Coast Highway) Scenic DRIVE	Other Industry	Under assessment	-33.20678347	151.540795
DOYALSON	Mannering Colliery (formerly Wyee)	Rutleys ROAD	Other Industry	Regulation under CLM Act not required	-33.17179576	151.5419248

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
DOYALSON NORTH	Caltex Service Station	235 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.18501024	151.5526114
DOYALSON NORTH	Shell Coles Express Service Station	260-270 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.18636608	151.5482399
DRUMMOYNE	Coles Express Service Station Drummoyne (Eastbound)	36-46 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.85576628	151.1593519
DRUMMOYNE	Former Dry Cleaners	225 Victoria ROAD	Chemical Industry	Regulation under CLM Act not required	-33.8507152	151.1537113
DRUMMOYNE	Coles Express Service Station Drummoyne South (Westbound)	39-45 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.85606575	151.1589061
DRUMMOYNE	Caltex Service Station	191-195 Lyons ROAD	Service Station	Regulation under CLM Act not required	-33.85699216	151.1460356
DUBBO	BP Reliance Petroleum Service Station (Former Mobil Depot)	107 Erskine STREET	Other Petroleum	Regulation under CLM Act not required	-32.24441287	148.6111704
DUBBO	Dubbo Police Station	143 Brisbane STREET	Other Petroleum	Regulation under CLM Act not required	-32.24652288	148.6034702
DUBBO	Shell Coles Express Service Station	131-133 Cobra STREET	Service Station	Regulation under CLM Act not required	-32.25511317	148.6126147
DUBBO	Shell Coles Express Service Station	45-49 Whylandra STREET	Service Station	Regulation under CLM Act not required	-32.2474598	148.5932769
DUBBO	Former Mobil depot	40-44 Morgan STREET	Other Petroleum	Regulation under CLM Act not required	-32.23912277	148.6182711
DUBBO	Caltex Service Station, Dubbo	60 Windsor PARADE	Service Station	Regulation under CLM Act not required	-32.25459322	148.6318
DUBBO	BP-Branded Service Station Dubbo West	51-63 Whylandra STREET	Service Station	Regulation under CLM Act not required	-32.24827657	148.5927084
DUBBO	Lowes Petroleum (BP-Branded) Depot, Dubbo	105 Erskine STREET	Service Station	Regulation under CLM Act not required	-32.24423247	148.6101676
DUBBO	Inland Petroleum (Former Shell) Depot	109 Erskine STREET	Other Petroleum	Regulation under CLM Act not required	-32.24470512	148.6124108

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
DUBBO	Former Caltex Depot	Phillip (corner Fitzroy) STREET	Service Station	Regulation under CLM Act not required	-32.24534863	148.6150144
DUBBO	Caltex Service Station	119 Bourke STREET	Service Station	Regulation under CLM Act not required	-32.24336464	148.6091931
DUBBO	Former Ambulance Station	165 Brisbane STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-32.24850755	148.6031749
DUBBO	United (former Volume Plus) Service Station	219-223 Cobra STREET	Service Station	Regulation under CLM Act not required	-32.2565155	148.6228586
DUBBO	Ampol Service Station, Dubbo	Cnr Brisbane Street and Cobra STREET	Service Station	Contamination currently regulated under CLM Act	-32.25322183	148.603164
DULWICH HILL	Former Tyre Recapping	115-117 Constitution ROAD	Other Industry	Regulation under CLM Act not required	-33.90300876	151.1387724
DULWICH HILL	Denison Road Playground	194 Denison ROAD	Landfill	Regulation under CLM Act not required	-33.90121956	151.1404637
DUNEDOO	Former Shell Depot Dunedoo	Cnr Bolaro and Redbank STREET	Other Petroleum	Regulation under CLM Act not required	-32.01565761	149.3922418
DUNGOG	Lot 54 Common Rd	54 Common ROAD	Unclassified	Regulation under CLM Act not required	-32.39490989	151.739821
DUNGOG	Former HWC Maintenance Depot for Civil Engineering Works	86 Abelard STREET	Other Industry	Regulation under CLM Act not required	-32.40429396	151.7514073
DUNMORE	Equestrian Centre	71 Fig Hill LANE	Unclassified	Regulation under CLM Act not required	-34.62313393	150.8421544
DURAL	Caltex Dural Service Station	917-923 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.68312075	151.0287519
DURAL	BP Dural Service Station	580 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.69569985	151.0283357
DURAL	Caltex Service Station	530 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.69348472	151.0202716
DURAL	Woolworths Service Station	532 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.69348472	151.0202716

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
DURAL	21 John Radley Avenue, Dural	21 John Radley AVENUE	Landfill	Under assessment	-33.71718718	151.0331317
DURI	Duri Store	13 Railway AVENUE	Service Station	Contamination currently regulated under CLM Act	-31.21710021	150.8183675
EAGLE VALE	BP Service Station	Corner Eagle Vale Drive and Gould ROAD	Service Station	Regulation under CLM Act not required	-34.03128043	150.816363
EARLWOOD	RTA Land	3 Jackson PLACE	Unclassified	Contamination currently regulated under CLM Act	-33.92724512	151.1433382
EARLWOOD	Wolli Creek Aqueduct	Unwin STREET	Unclassified	Regulation under CLM Act not required	-33.92788788	151.1480807
EARLWOOD	2, 4 & 6 Unwin Street Earlwood	2, 4 & 6 Unwin STREET	Landfill	Regulation under CLM Act not required	-33.92683761	151.149505
EAST BALLINA	Caltex East Ballina Service Station	34 Links AVENUE	Service Station	Regulation under CLM Act not required	-28.85009113	153.5829246
EAST GOSFORD	Presbyterian Aged Care Facility	8-18 Enid CRESCENT	Landfill	Regulation under CLM Act not required	-33.4376675	151.3577947
EAST GOSFORD	Mobil Service Station	44 Victoria STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.43804781	151.353303
EAST GOSFORD	Hylton Moore Park	Althrop STREET	Landfill	Contamination currently regulated under CLM Act	-33.4352203	151.3601193
EAST MAITLAND	United Service Station East Maitland	164 (also known as 250) Newcastle STREET	Service Station	Regulation under CLM Act not required	-32.75245246	151.5869136
EAST MAITLAND	Woolworths Caltex Green Hills	14 Mitchell DRIVE	Service Station	Regulation under CLM Act not required	-32.76182386	151.5927863
EAST MAITLAND	Former Gasworks Site	Corner Melbourne Street and Brisbane STREET	Gasworks	Regulation under CLM Act not required	-32.74939199	151.5788783
EAST MAITLAND	Caltex East Maitland Service Station	Newcastle Road, Corner William STREET	Service Station	Regulation under CLM Act not required	-32.74883712	151.5829296
EAST TAMWORTH	Caltex Service Station	350-362 Armidale ROAD	Service Station	Regulation under CLM Act not required	-31.11401974	150.9613327

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
EASTERN CREEK	Caltex Service Station	M4 (Eastbound) MOTORWAY	Service Station	Regulation under CLM Act not required	-33.801607	150.8857989
EASTERN CREEK	Caltex Service Station M4 Motorway Westbound	M4 (Westbound) MOTORWAY	Service Station	Regulation under CLM Act not required	-33.80255701	150.8829211
EASTERN CREEK	Fulton Hogan Industries (formerly Pioneer Road Services)	Honeycomb DRIVE	Other Industry	Regulation under CLM Act not required	-33.80231274	150.8288299
EASTGARDENS	130-150 Bunnerong Road Eastgardens	130 - 150 Bunnerong ROAD	Other Industry	Regulation under CLM Act not required	-33.94230414	151.2248138
EASTLAKES	Former Shell Rosebery service station and adjacent land	275-279 Gardeners ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.92471289	151.2100772
EASTLAKES	Eastlakes Reserve	Evans AVENUE	Service Station	Contamination formerly regulated under the CLM Act	-33.92497291	151.2102725
EASTLAKES	Budget Petroleum Eastlakes	102 Maloney STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.93120382	151.2054267
EASTLAKES	73 Gardeners Road	73 Gardeners ROAD	Unclassified	Regulation under CLM Act not required	-33.92541594	151.2182856
EASTWOOD	Former Mobil Service Station Eastwood	3-5 Trelawney (Cnr Rutledge St) STREET	Service Station	Regulation under CLM Act not required	-33.79273381	151.079584
EDEN	Caltex Service Station	159 Imlay STREET	Service Station	Regulation under CLM Act not required	-37.06324099	149.9044022
EDEN	Former Caltex Eden Depot	80-82 Imlay STREET	Service Station	Contamination currently regulated under CLM Act	-37.0570984	149.9038538
EDENSOR PARK	Caltex Bonnyrigg Service Station, Edensor Park	549 Elizabeth DRIVE	Service Station	Regulation under CLM Act not required	-33.88840816	150.8822609
EDENSOR PARK	7-Eleven (former Mobil) Service Station	615-621 Cowpasture Road, corner Elizabeth DRIVE	Service Station	Regulation under CLM Act not required	-33.88326139	150.865591
EDGECLIFF	BP-branded (former Coles Express) Service Station	73-85A New South Head ROAD	Service Station	Regulation under CLM Act not required	-33.8769602	151.2311617
EDGEWORTH	Caltex Service Station	662 Main ROAD	Service Station	Regulation under CLM Act not required	-32.92566329	151.6278888

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
EDGEWORTH	Caltex-Woolworths Branded Service Station Edgeworth	738-742 Main ROAD	Service Station	Regulation under CLM Act not required	-32.92455492	151.6202897
EMERALD BEACH	Shell Coles Express Woolgoolga Service Station	1850 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-30.16450856	153.1826673
EMERTON	7-Eleven Emerton	135-137 Popondetta ROAD	Service Station	Regulation under CLM Act not required	-33.74463908	150.8102251
EMPIRE BAY	Empire Bay Marina	16B Sorrento ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.49305196	151.3643119
EMU HEIGHTS	7-Eleven Service Station	126 Old Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.74299098	150.6547098
EMU HEIGHTS	Woolworths Service Station	132 Old Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.7429739	150.6559655
EMU PLAINS	Woolworths Service Station	283 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.75371349	150.6530165
ENGADINE	Former Caltex Service Station	995 Old Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.06413459	151.0155734
ENGADINE	BP Service Station	1234 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.07735416	151.01121
ENGADINE	BP Branded Service Station	963 Old Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.06428454	151.0167121
EPPING	7-Eleven (former Mobil) Service Station	246 Beecroft ROAD	Service Station	Regulation under CLM Act not required	-33.77073552	151.080581
ERINA	Coles Express Service Station Erina	211 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43547804	151.3850522
ERINA	7-Eleven Erina	214 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43494257	151.3879511
ERINA	7-Eleven Service Station	96 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43786868	151.3729331
ERINA	Jaycar Electronics Store	1 Aston ROAD	Other Petroleum	Contamination currently regulated under CLM Act	-33.434878	151.3845431



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
ERINA	Caltex Service Station	155 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.43824871	151.3801096
ERMINGTON	Blue Star Ermington	700 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.80859566	151.0660133
ERMINGTON	Caltex Service Station	562 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.81392814	151.0547543
ERSKINE PARK	Western Sydney Service Centre	25-55 Templar ROAD	Other Industry	Regulation under CLM Act not required	-33.81897822	150.7937394
ERSKINEVILLE	Redevelopment Site (Former Industrial Park) Erskineville	36/1A Coulson STREET	Other Industry	Regulation under CLM Act not required	-33.90325501	151.1855668
ERSKINEVILLE	Department of Housing	52 John STREET	Other Industry	Regulation under CLM Act not required	-33.8982925	151.1840284
ERSKINEVILLE	RailCorp land	Coulson STREET	Other Industry	Regulation under CLM Act not required	-33.90483899	151.1838804
ERSKINEVILLE	Lot 4/1A Coulson Street	Coulson STREET	Other Industry	Regulation under CLM Act not required	-33.90316549	151.1867963
ERSKINEVILLE	Area B - Public Domain / The Roadway	1A Coulson STREET	Other Petroleum	Regulation under CLM Act not required	-33.90499999	151.1873028
EUABALONG WEST	BP Euabalong West Depot (Reliance Petroleum)	12 Illewong STREET	Other Petroleum	Regulation under CLM Act not required	-33.05720426	146.3946386
EVANS HEAD	Evans Head Aerodrome	Memorial Airport DRIVE	Other Industry	Regulation under CLM Act not required	-29.10389976	153.4216791
EVANS HEAD	Bundjalung National Park	The Gap ROAD	Unclassified	Regulation under CLM Act not required	-29.24433977	153.3626472
EVANS HEAD	Evans Head Residential subdivision	Bounded by Currajong, Woodburn, Carrabeen Streets and Tuckeroo CRESCENT	Unclassified	Regulation under CLM Act not required	-29.1080969	153.4243577
EVELEIGH	Macdonaldtown Triangle	Burren STREET	Gasworks	Contamination being managed via the planning process (EP&A Act)	-33.89803492	151.186059
EVELEIGH	Australian Technology Park	Henderson ROAD	Other Industry	Regulation under CLM Act not required	-33.89634136	151.1944915

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
FAIRFIELD	Endeavour Energy Fairfield Zone Substation	22 Hedges STREET	Other Industry	Regulation under CLM Act not required	-33.86133019	150.9555899
FAIRFIELD EAST	Speedway-Branded Service Station Fairfield	251 The Horsley DRIVE	Service Station	Regulation under CLM Act not required	-33.8711661	150.9630077
FAIRFIELD HEIGHTS	7-Eleven Fairfield Heights	234 Hamilton (Cnr The Boulevard) ROAD	Service Station	Regulation under CLM Act not required	-33.87208474	150.9373134
FAIRY MEADOW	Woolworths Petrol Service Station	47 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.39399705	150.8925369
FAIRY MEADOW	Caltex Fuel Depot and adjoining land	46 Montague STREET	Service Station	Contamination formerly regulated under the CLM Act	-34.40050499	150.8953125
FAIRY MEADOW	Deynal (Seeman)	51-59 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.39437085	150.8924666
FARLEY	Farley Wastewater Treatment Works	Owlpn LANE	Other Industry	Regulation under CLM Act not required	-32.74431314	151.5194217
FASSIFERN	Newstan Colliery	Fassifern ROAD	Other Industry	Regulation under CLM Act not required	-32.97942521	151.5660046
FASSIFERN	Former Arsenic Smelter	Fassifern ROAD	Other Industry	Regulation under CLM Act not required	-32.99649819	151.5618283
FEDERAL	Federal General Store	3-6 Federal DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-28.65190728	153.4552976
FENNELL BAY	Fennell Bay Public School	2 Bay ROAD	Unclassified	Under assessment	-32.99152231	151.6014923
FERN BAY	Former service station	37 Fullerton (1006 Nelson Bay Road) STREET	Service Station	Regulation under CLM Act not required	-32.87245004	151.7939904
FIVE DOCK	7-Eleven Five Dock Service Station	231-235 Great North ROAD	Service Station	Regulation under CLM Act not required	-33.86488376	151.130002
FIVE DOCK	Caltex Five Dock Service Station	47 Ramsay Road, corner Fairlight STREET	Service Station	Regulation under CLM Act not required	-33.87002804	151.1301835
FORBES	BP (Former Mobil) Depot Forbes	3-15 Union STREET	Other Petroleum	Regulation under CLM Act not required	-33.37751977	148.0101422

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
FORBES	Former Gasworks	24-26 Union STREET	Gasworks	Contamination currently regulated under CLM Act	-33.37752036	148.0090064
FORBES	Woolworths (Former Save on Fuel) Service Station	26 Dowling STREET	Service Station	Regulation under CLM Act not required	-33.38148764	148.0109845
FORBES	BP Service Station Forbes	29 Dowling STREET	Service Station	Regulation under CLM Act not required	-33.38121776	148.0100351
FORBES	Former Shell Depot	Stephen STREET	Other Petroleum	Regulation under CLM Act not required	-33.37704755	148.0103001
FORBES	Caltex Service Station Forbes	Parkes ROAD	Service Station	Regulation under CLM Act not required	-33.36333714	148.0223727
FORESTVILLE	BP Service Station, Forestville	632 Warringah ROAD	Service Station	Contamination currently regulated under CLM Act	-33.75997969	151.2142944
FORESTVILLE	Shell Service Station	667 Warringah ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.76035336	151.2184929
FORRESTERS BEACH	Caltex Service Station	The Entrance Rd Cnr Bellevue ROAD	Service Station	Regulation under CLM Act not required	-33.40057818	151.4687631
FORSTER	Caltex Service Station	16-18 Lake STREET	Service Station	Regulation under CLM Act not required	-32.18306967	152.5162492
FORSTER	Shell (Kneebone's) Service Station	2-6 The Lakes WAY	Service Station	Regulation under CLM Act not required	-32.1946108	152.5145662
FORSTER	Enhance (Former Mobil) Service Station	86-88 Macintosh STREET	Service Station	Regulation under CLM Act not required	-32.19079468	152.5154847
FREDERICKTON	Former Service station	2-4 Great North ROAD	Service Station	Regulation under CLM Act not required	-31.03513998	152.8794105
FRENCHS FOREST	Former BP Service Station	Russell AVENUE	Service Station	Regulation under CLM Act not required	-33.75018093	151.2245005
FRENCHS FOREST	Former 7-Eleven / Mobil Beacon Hill Service Station, Frenchs Forest	312 Warringah ROAD	Service Station	Regulation under CLM Act not required	-33.75129647	151.2469656
FRESHWATER	Prime Service Station Freshwater	117 Harbord ROAD	Service Station	Regulation under CLM Act not required	-33.77286748	151.2794354

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
FRESHWATER	Former Dry Cleaners	121 Wyndora AVENUE	Other Industry	Regulation under CLM Act not required	-33.77425321	151.2821553
GATESHEAD	7-Eleven Gateshead	13-15 Pacific HIGHWAY	Service Station	Under assessment	-32.98743366	151.6923984
GEORGETOWN	Former Caltex Service Station	4 Georgetown ROAD	Service Station	Regulation under CLM Act not required	-32.91121105	151.7319693
GERRINGONG	Gerringong Cooperative	18 Belinda STREET	Other Petroleum	Regulation under CLM Act not required	-34.74518835	150.8181054
GILGANDRA	United (Former Mobil) Service Station	13 Castlereagh STREET	Service Station	Regulation under CLM Act not required	-31.71715641	148.6581574
GILGANDRA	Former Mobil Depot	2 Federation STREET	Other Petroleum	Regulation under CLM Act not required	-31.70937362	148.6522102
GILGANDRA	Former Mobil Depot	20 Federation STREET	Other Petroleum	Regulation under CLM Act not required	-31.70771744	148.6514198
GILGANDRA	Caltex Service Station Gilgandra	6425 Newell HIGHWAY	Service Station	Regulation under CLM Act not required	-31.72545524	148.65281
GILLENBAH	Caltex (Former Mobil) Narrandera Service Station	16321 - 16335 Newell HIGHWAY	Service Station	Regulation under CLM Act not required	-34.76124219	146.5398604
GIRRAWEE	Industrial Galvanizers Girraween	20-22 Amax AVENUE	Metal Industry	Regulation being finalised	-33.80500693	150.9396743
GIRRAWEE	Caltex Pendle Hill Service Station Girraween	602 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.80827518	150.9421511
GLADESVILLE	Caltex Service Station	287-295 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.8285374	151.1268639
GLADESVILLE	Road Reserve	Pittwater ROAD	Other Industry	Regulation under CLM Act not required	-33.81603924	151.1355085
GLADESVILLE	Caltex Service Station	116 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.83575319	151.1277863
GLADESVILLE	Glade View Business Park	436-484 Victoria ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.82382382	151.1223941

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
GLADSTONE	Barbers Auto Port	52-53 Barnard STREET	Service Station	Under assessment	-31.02313668	152.9481617
GLEBE	The Hill and Jubilee Embankment	12 Maxwell ROAD	Other Industry	Regulation under CLM Act not required	-33.87573032	151.1776027
GLEN INNES	Ambulance Station	106 Bourke STREET	Unclassified	Regulation under CLM Act not required	-29.73805854	151.7313138
GLEN INNES	Telstra Depot Glen Innes	126 Lambeth STREET	Unclassified	Regulation under CLM Act not required	-29.73565341	151.7278271
GLEN INNES	Caltex Glen Innes Service Station	Meade Street, corner Church STREET	Service Station	Regulation under CLM Act not required	-29.73699014	151.7379335
GLEN INNES	Former Shell Depot	Lambeth STREET	Other Petroleum	Regulation under CLM Act not required	-29.7376309	151.7276309
GLEN INNES	Former Caltex Depot, Glen Innes	Lot 1 DP785636 Lambeth STREET	Other Petroleum	Regulation under CLM Act not required	-29.73525485	151.7279167
GLEN INNES	Council-owned Laneway	Lot 2 Lang STREET	Gasworks	Regulation under CLM Act not required	-29.74385432	151.7323049
GLEN INNES	Caltex Service Station	Cnr Taylor Street & Church STREET	Service Station	Regulation under CLM Act not required	-29.73289036	151.739653
GLEN INNES	Caltex Glen Innes Paddock	9979 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-29.75608853	151.7344106
GLENBROOK	Caltex Service Station Glenbrook	78 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.76545234	150.6215447
GLENDALE	Coles Express Glendale	593 Main ROAD	Service Station	Regulation under CLM Act not required	-32.92709242	151.637946
GLENDALE	Settlement Pond	65 Glendale DRIVE	Unclassified	Regulation under CLM Act not required	-32.93411399	151.6483695
GLENDALE	Former Service Station	334-342 Lake ROAD	Unclassified	Regulation under CLM Act not required	-32.92775076	151.6433463
GLENDALE	Woolworths Service Station	Stockland DRIVE	Service Station	Regulation under CLM Act not required	-32.93250548	151.6404097

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
GLENDENNING	7-Eleven Plumpton Service Station Glendenning	1 Dublin Street, corner Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.73988232	150.8603323
GLENORIE	Caltex Glenorie Service Station	912 Old Northern ROAD	Service Station	Regulation under CLM Act not required	-33.60550946	151.0126731
GLENTHORNE	Caltex Taree Service Station	Manning River DRIVE	Service Station	Regulation under CLM Act not required	-31.94415251	152.4703511
GLOUCESTER	Caltex Service Station	141 Church STREET	Service Station	Regulation under CLM Act not required	-32.01222514	151.9579521
GOOLMANGAR	Goolmangar General Store	851 Nimbin ROAD	Service Station	Regulation under CLM Act not required	-28.74694441	153.225401
GOONELLABAH	Former Invercauld Road Cattle Dip	161 Invercauld ROAD	Cattle Dip	Contamination formerly regulated under the CLM Act	-28.83098216	153.3097337
GOSFORD	United (former Mobil) Depot	Corner Merinee Road and Bowen CRESCENT	Other Petroleum	Regulation under CLM Act not required	-33.41523225	151.3257069
GOULBURN	Former Goulburn Gasworks	1 Blackshaw ROAD	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-34.75313166	149.725032
GOULBURN	Goulburn Tannery	13 Gibson STREET	Other Industry	Regulation under CLM Act not required	-34.73756525	149.72059
GOULBURN	Caltex Depot	13 Sloane STREET	Other Petroleum	Regulation under CLM Act not required	-34.77423152	149.7088626
GOULBURN	Metro Goulburn Depot	23 Braidwood ROAD	Other Petroleum	Regulation under CLM Act not required	-34.76217302	149.7170897
GOULBURN	Caltex Service Station	72-74 Clinton STREET	Service Station	Regulation under CLM Act not required	-34.75728157	149.7135824
GOULBURN	Caltex Service Station	68 Goldsmith STREET	Service Station	Regulation under CLM Act not required	-34.75054432	149.7192098
GOULBURN	Former Shell Autoport Service Station	Corner Bruce Street and Lagoon STREET	Service Station	Regulation under CLM Act not required	-34.74807885	149.7266246
GOULBURN	Coles Express Service Station	90 Cowper (Corner Clinton Street) STREET	Service Station	Regulation under CLM Act not required	-34.75566648	149.7107831

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
GOULBURN	Mobil Service Station	129 Lagoon STREET	Service Station	Contamination formerly regulated under the CLM Act	-34.74618793	149.7330484
GOULBURN	Caltex Service Station	315 Auburn, corner Bradley STREET	Service Station	Regulation under CLM Act not required	-34.74942293	149.7232692
GOULBURN	Former Mobil Service Station Goulburn	422-426 Auburn STREET	Service Station	Regulation under CLM Act not required	-34.74869879	149.7229392
GOULBURN	Goulburn Roundhouse	12 Braidwood ROAD	Other Industry	Under assessment	-34.77409903	149.7106462
GOULBURN	Goulburn JS Hollingworth & Wheat Siding Yards	Goulburn STREET	Other Industry	Under assessment	-34.7692435	149.7116195
GOULBURN	Broken Hill Kanandah Road Refuelling Depot	Kanandah ROAD	Service Station	Under assessment	-31.98543706	141.4196
GRAFTON	Former General Store and Service Station Grafton	161 Turf STREET	Service Station	Regulation under CLM Act not required	-29.67412811	152.9336609
GRAFTON	Lowes Petroleum (BP-Branded) Depot, Grafton	13 Orara STREET	Other Petroleum	Regulation under CLM Act not required	-29.67016421	152.918161
GRAFTON	Former Shell Depot	2 Milton STREET	Other Petroleum	Regulation under CLM Act not required	-29.67723019	152.9205374
GRAFTON	Grafton Works Depot	26-28 Bruce STREET	Other Petroleum	Regulation under CLM Act not required	-29.67975507	152.9249357
GRAFTON	Former BP Service Station (Reliance Petroleum)	202 Queen STREET	Service Station	Regulation under CLM Act not required	-29.67645469	152.9423977
GRAFTON	Woolworths Petrol	75 - 77 Fitzroy Street Cnr of Duke STREET	Service Station	Regulation under CLM Act not required	-29.69221713	152.9343562
GRAFTON	Caltex Service Station	Corner Villiers St and Fitzroy STREET	Service Station	Regulation under CLM Act not required	-29.69296308	152.9366431
GRAFTON	BP Service Station (Reliance Petroleum)	14 Villiers (Cnr Fitzroy) STREET	Service Station	Regulation under CLM Act not required	-29.69345456	152.9373123
GRAFTON	Former Mobil Depot Grafton	2-16 Bruce STREET	Other Petroleum	Regulation under CLM Act not required	-29.68093591	152.9231289



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
GRAFTON	Caltex Service Station	179 Prince STREET	Service Station	Regulation under CLM Act not required	-29.68600117	152.9371093
GRANVILLE	Caltex Service Station	144 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.83039605	151.0109216
GRANVILLE	Australand	15-17 Berry STREET	Other Industry	Regulation under CLM Act not required	-33.83600073	151.0211988
GRANVILLE	Woolworths Service Station Granville	158 Clyde STREET	Service Station	Regulation under CLM Act not required	-33.84623338	151.0124885
GRANVILLE	Commercial Property	2B Factory STREET	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.84173556	151.0165687
GRANVILLE	Old Granville Depot	23 Elizabeth STREET	Unclassified	Regulation under CLM Act not required	-33.83765925	151.008528
GRANVILLE	7-Eleven Service Station	154-160 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.83022685	151.0101322
GRANVILLE	A'Becketts Creek	Albert STREET	Unclassified	Contamination currently regulated under POEO Act	-33.82735776	151.0112255
GREEN POINT	7-Eleven Green Point	388-390 Avoca DRIVE	Service Station	Under assessment	-33.46259832	151.3639376
GREENACRE	Former Plating Works	12 Claremont STREET	Unclassified	Regulation under CLM Act not required	-33.89992254	151.0386128
GREENACRE	7-Eleven (former Mobil) Service Station	301-305 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.90524488	151.0419971
GREENACRE	Caltex Service Station	87 - 91 Roberts ROAD	Service Station	Regulation under CLM Act not required	-33.90461089	151.0648581
GREENACRE	Coles Greenacre	13-19 Boronia ROAD	Other Industry	Regulation under CLM Act not required	-33.9061123	151.0561759
GREENWICH	Gore Creek Reserve - Drainage Line	St Vincents ROAD	Other Industry	Regulation under CLM Act not required	-33.82888693	151.1819101
GRENFELL	Former SRA Fuel Depot	Grafton STREET	Other Petroleum	Regulation under CLM Act not required	-33.89351237	148.1560188

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
GRENFELL	Grenfell Gasworks	Corner Gooloogong Road & Bourke STREET	Gasworks	Regulation under CLM Act not required	-33.8906016	148.1615443
GRETA	Coles Express Greta	122 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-32.67656357	151.3872818
GRETA	redevelopment site	112-114 High STREET	Other Industry	Regulation under CLM Act not required	-32.67706709	151.3876682
GRETA	Former landfill	Hollingshed ROAD	Landfill	Regulation under CLM Act not required	-32.66705287	151.3923474
GREYSTANES	Metro Branded (former Mobil) Service Station	73 Ettalong ROAD	Service Station	Regulation under CLM Act not required	-33.81822648	150.9513946
GRIFFITH	Liberty Depot (former Shell CVRO) Griffith	6-10 Mackay AVENUE	Other Petroleum	Regulation under CLM Act not required	-34.2910045	146.063824
GRIFFITH	Former Murrumbidgee Irrigation Depot	55-77 Banna AVENUE	Other Industry	Regulation under CLM Act not required	-34.28858242	146.0567509
GRIFFITH	Mobil Depot - Griffith Airport	Off Remembrance DRIVE	Other Petroleum	Regulation under CLM Act not required	-34.25618872	146.0620449
GRIFFITH	Former Ampol Depot	32-34 Mackay AVENUE	Other Petroleum	Regulation under CLM Act not required	-34.2933331	146.0679503
GRIFFITH	Caltex Service Station and Depot	2-4 Mackay AVENUE	Service Station	Regulation under CLM Act not required	-34.2908766	146.0630815
GRIFFITH	Former Landmark Fertiliser Storage Facility	2-8 Jensen ROAD	Chemical Industry	Regulation under CLM Act not required	-34.29365599	146.0536413
GRIFFITH	Belford Petroleum (former Mobil) Depot	30 Banna AVENUE	Service Station	Regulation under CLM Act not required	-34.29042827	146.0595497
GRIFFITH	Former BP Service Station (Reliance Petroleum)	81 Banna AVENUE	Service Station	Regulation under CLM Act not required	-34.28851251	146.0540815
GUILDFORD	7-Eleven Service Station Guildford West	176 Fowler ROAD	Service Station	Regulation under CLM Act not required	-33.85149493	150.9722491
GULGONG	Lowes Petroleum (former BP) Depot Gulgong	6 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-32.35950625	149.5461499

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
GULGONG	The Oval Site	Queen STREET	Unclassified	Regulation under CLM Act not required	-32.36169815	149.531075
GULMARRAD	BP Service Station Maclean	3976 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-29.48537407	153.2004311
GUMLY GUMLY	Caltex Service Station	3723 Sturt HIGHWAY	Service Station	Regulation under CLM Act not required	-35.13590309	147.4424551
GUMLY GUMLY	Brick Kiln Reserve	Eunony Bridge ROAD	Landfill	Regulation under CLM Act not required	-35.12098411	147.4196309
GUNDAGAI	Former Mobil Depot	98 Mount STREET	Other Petroleum	Regulation under CLM Act not required	-35.08206783	148.096221
GUNNEDAH	Ampol Australia Petroleum Pty Ltd (previously Caltex Australia)	21 Abbott STREET	Service Station	Regulation under CLM Act not required	-30.98021001	150.2561856
GUNNEDAH	Former Shell Depot Gunnedah	85-89 Barber STREET	Other Petroleum	Regulation under CLM Act not required	-30.97949284	150.2507401
GUNNEDAH	Mobil Gunnedah Depot	16-24 Wentworth STREET	Other Petroleum	Regulation under CLM Act not required	-30.98428725	150.260609
GUNNEDAH	BP Depot Gunnedah	103 Mathias ROAD	Other Petroleum	Contamination currently regulated under CLM Act	-30.96665001	150.2326526
GUNNEDAH	BP Service Station	Corner Conadilly Street & Henry STREET	Service Station	Contamination formerly regulated under the CLM Act	-30.98116266	150.2583066
GUNNEDAH	Mobil Service Station	341 Conadilly STREET	Service Station	Contamination formerly regulated under the CLM Act	-30.9807394	150.2578428
GUNNEDAH	Property NSW Site	35-37 Abbott STREET	Other Petroleum	Regulation under CLM Act not required	-30.9789841	150.25737
GUNNEDAH	Former Telstra Line Depot	81 Barber STREET	Other Petroleum	Regulation under CLM Act not required	-30.97933809	150.2503121
GUNNEDAH	Adjacent to Service Station	Intersection of Henry Street and Conadilly STREET	Service Station	Contamination formerly regulated under the CLM Act	-30.98072588	150.2582802
GUNNEDAH	Former Caltex Depot	61 Railway AVENUE	Other Petroleum	Contamination formerly regulated under the CLM Act	-30.97953242	150.2494457

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
GUNNING	Gunning Motors	56 Yass STREET	Service Station	Regulation under CLM Act not required	-34.78159326	149.2684791
GUYRA	Guyra Fourways Service Centre	87-89 Bradley STREET	Service Station	Regulation under CLM Act not required	-30.21728173	151.6722825
GUYRA	Caltex-branded Service Station	4352 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-30.20601937	151.6757291
GUYRA	StateRail land leased to Incitec	Starr ROAD	Other Industry	Regulation under CLM Act not required	-30.23157011	151.6707135
GWANDALAN	Metro Petroleum Gwandalan (Formerly Gwandalan Auto Care)	47 Orana ROAD	Service Station	Regulation under CLM Act not required	-33.13632941	151.5813396
GWANDALAN	Former Gwandalan Landfill	Kanangra DRIVE	Landfill	Regulation under CLM Act not required	-33.17497722	151.5917107
GYMEA	7-Eleven (former Mobil) GyMEA Service Station	110 GyMEA Bay ROAD	Service Station	Regulation under CLM Act not required	-34.03745848	151.0848547
GYMEA	Coles Express Kirrawee	470 Princes (Cnr The Boulevard) HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.02735302	151.0845079
GYMEA	Former Shell Service Station GyMEA	GyMEA Bay ROAD	Service Station	Regulation under CLM Act not required	-34.04129676	151.0841328
HABERFIELD	7-Eleven Haberfield	25-35 Parramatta ROAD	Service Station	Contamination currently regulated under CLM Act	-33.88794591	151.14287
HALEKULANI	Former Halekulani Landfill	Macleay DRIVE	Landfill	Regulation under CLM Act not required	-33.21446301	151.5527625
HAMILTON	SRA Land	10 Maitland ROAD	Unclassified	Regulation under CLM Act not required	-32.91994358	151.7512417
HAMILTON	Taxi Services	116 Tudor STREET	Service Station	Contamination formerly regulated under the CLM Act	-32.92351606	151.7454742
HAMILTON	Caltex Hamilton	59-63 Tudor STREET	Service Station	Regulation under CLM Act not required	-32.92498593	151.7509313
HAMILTON	Newcastle Toyota	65 Tudor STREET	Other Petroleum	Regulation under CLM Act not required	-32.925171	151.7504048

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
HAMILTON	Hamilton Bus Depot	Cnr Denison Street and Gordon AVENUE	Other Petroleum	Regulation under CLM Act not required	-32.92687413	151.7501743
HAMILTON NORTH	Shell Newcastle Terminal	5 Chatham ROAD	Other Petroleum	Contamination currently regulated under CLM Act	-32.91630469	151.7408712
HAMILTON NORTH	Former Black and Decker Site	56 Clyde STREET	Metal Industry	Contamination currently regulated under CLM Act	-32.91080413	151.7358236
HAMILTON NORTH	Hamilton Gasworks	1 Chatham ROAD	Gasworks	Contamination currently regulated under CLM Act	-32.91362741	151.7406241
HAMILTON NORTH	Former ELMA Site	54 Clyde STREET	Other Industry	Contamination currently regulated under CLM Act	-32.91145768	151.7367691
HARDEN	SRA Site	31 Aurvill ROAD	Unclassified	Regulation under CLM Act not required	-34.54998656	148.3689577
HARDEN	SRA Site	51 Whitton LANE	Unclassified	Contamination formerly regulated under the CLM Act	-34.55396035	148.3713349
HARDEN	South West Fuel Harden	294 Albury STREET	Service Station	Regulation under CLM Act not required	-34.55007021	148.3513821
HAROLDS CROSS	Lot 59, Vernelly Road, Harolds Cross NSW 2622	Lot 59, Vernelly ROAD	Other Industry	Regulation under CLM Act not required	-35.55528436	149.5560649
HARRIS PARK	Dalley Street Reserve	2A Dalley STREET	Other Industry	Regulation under CLM Act not required	-33.82749123	151.0097539
HARTLEY VALE	Former Shale Oil Refinery	Lot 52 Hartley Vale ROAD	Unclassified	Contamination currently regulated under CLM Act	-33.52766912	150.2417878
HASTINGS POINT	Coles Express Hastings Point	99 Tweed Coast ROAD	Service Station	Regulation under CLM Act not required	-28.36914103	153.5725676
HAY	SRA Land	429, 431, 435, 437 & 439 Murray STREET	Other Industry	Regulation under CLM Act not required	-34.49965611	144.840976
HAY	SRA Land	443 Murray STREET	Other Industry	Contamination formerly regulated under the CLM Act	-34.49966753	144.8410778
HAY	Former Shell Hay Depot	391 Murray STREET	Other Petroleum	Regulation under CLM Act not required	-34.50028195	144.8463999

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
HAY	Former Mobil Depot Hay	397-399 Murray STREET	Other Petroleum	Regulation under CLM Act not required	-34.50019184	144.8456578
HAY SOUTH	Caltex Service Station	429-431 Moama STREET	Service Station	Regulation under CLM Act not required	-34.52001427	144.8380121
HAZELBROOK	Caltex Service Station Hazelbrook	198 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.72106175	150.4520976
HEATHCOTE	Caltex Service Station	1344 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.08841066	151.0072048
HEATHCOTE	Caltex Service Station	1403 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.09059834	151.003752
HEATHCOTE	Shell Coles Express Service Station	1355 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.08780042	151.0069741
HEATHERBRAE	Bogas (Former Caltex) Service Station	3 Speedy Lock LANE	Service Station	Regulation under CLM Act not required	-32.78057822	151.7372135
HEATHERBRAE	Shell Coles Express Motto Farm Service Station	2137 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-32.79835449	151.7176284
HEXHAM	QR National - Hexham Precinct	179 & 3/67 Maitland ROAD	Other Industry	Regulation under CLM Act not required	-32.83474038	151.6821895
HEXHAM	Caltex Diesel Stop	360 Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.82844873	151.6851063
HEXHAM	Cummins Newcastle Facility Hexham	21 Galleghan STREET	Other Industry	Regulation under CLM Act not required	-32.83186739	151.686709
HEXHAM	BP Service Station (Reliance Petroleum)	Corner Pacific Highway and Old Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.82756403	151.6846929
HEXHAM	Former Forgacs Site	21 Sparke STREET	Chemical Industry	Contamination currently regulated under CLM Act	-32.85464558	151.6988053
HEXHAM	Caltex-Bogas Warehouse	239 Old Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.82899942	151.6861849
HEXHAM	Industrial Galvanizers	312 Pacific HIGHWAY	Metal Industry	Contamination currently regulated under POEO Act	-32.83457186	151.6884941

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
HEXHAM	14 Sparke St Hexham	14 Sparke STREET	Metal Industry	Under assessment	-32.85394328	151.6960863
HILLSTON	Former BP Depot Hillston	141-143 Cowper STREET	Other Petroleum	Regulation under CLM Act not required	-33.48823546	145.5381623
HOLBROOK	Caltex Truckstop	Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-35.71332625	147.3207237
HOME BUSH	Ausgrid Mason Park Substation	1 Underwood ROAD	Other Industry	Regulation under CLM Act not required	-33.85674677	151.0747044
HOME BUSH BAY	SUEZ Waste Recycling Centre (WRC) and Cleanaway Liquid Waste Treatment Plant (LWTP)	Corner Pondage Link and Hill ROAD	Landfill	Regulation under CLM Act not required	-33.84359299	151.0593656
HOME BUSH WEST	Caltex Service Station Homebush West	334-336 Parramatta ROAD	Service Station	Regulation under CLM Act not required	-33.8581543	151.0681261
HOME BUSH WEST	Former Ford Landfill and Adjacent Land	22 Mandemar AVENUE	Landfill	Regulation under CLM Act not required	-33.86142424	151.0625556
HORNSBY	Midas Car Care Centre Hornsby	2A Linda STREET	Other Industry	Regulation under CLM Act not required	-33.70052215	151.1004786
HORNSBY	Coles Express Hornsby	194- 206 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.7071993	151.0991452
HORNSBY	Hornsby Train Maintenance Centre	1B Stephen STREET	Other Industry	Regulation under CLM Act not required	-33.69370022	151.1035939
HOXTON PARK	Endeavour Energy Hoxton Park	490 Hoxton Park ROAD	Other Industry	Regulation under CLM Act not required	-33.92766437	150.8689069
HUNTERS HILL	Coles Express Hunters Hill	4 Ryde ROAD	Service Station	Regulation under CLM Act not required	-33.8317985	151.141655
HUNTERS HILL	Foreshore Land	Rear of 7, 9 & 11 Nelson PARADE	Other Industry	Contamination currently regulated under CLM Act	-33.84248362	151.1649249
HUNTERS HILL	7, 9 and 11 Nelson Parade Hunters Hill	7, 9 and 11 Nelson PARADE	Other Industry	Regulation under CLM Act not required	-33.84220148	151.1649724
HURLSTONE PARK	Former Telstra Depot	82 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.90803171	151.1258121



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
HURLSTONE PARK	Former Speedway Petroleum Service Station	610 - 618 New Canterbury ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.90541228	151.1322009
HURLSTONE PARK	7-Eleven Hurlstone Park	670 New Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.90510388	151.1299825
HURSTVILLE GROVE	Moore Reserve	Morshead DRIVE	Landfill	Contamination currently regulated under CLM Act	-33.97920603	151.0873578
INGLEBURN	7-Eleven Ingleburn	72 Cumberland Road, corner Oxford ROAD	Service Station	Regulation under CLM Act not required	-34.00041505	150.8679742
INVERELL	Former Shell Depot	25 Edward STREET	Other Petroleum	Regulation under CLM Act not required	-29.76151684	151.1182033
INVERELL	Former Service Station	20 Oliver STREET	Service Station	Regulation under CLM Act not required	-29.77229743	151.1152692
INVERELL	Former Caltex Depot Inverell	4 Edward STREET	Service Station	Regulation under CLM Act not required	-29.76123104	151.1147983
INVERELL	Former Mobil Inverell Depot	29-33 Edward STREET	Other Petroleum	Regulation under CLM Act not required	-29.76135322	151.1171412
INVERELL	Caltex Service Station	55-59 Ring STREET	Service Station	Regulation under CLM Act not required	-29.76204512	151.1141737
INVERELL	Former Mobil Service Station	Corner Otho Street and Henderson STREET	Service Station	Regulation under CLM Act not required	-29.7786926	151.1149921
INVERELL	Former Caltex Service Station	141 Otho STREET	Service Station	Regulation under CLM Act not required	-29.77819403	151.1145699
ISLINGTON	Caltex Service Station	240 Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.91138644	151.7457701
ISLINGTON	Shell Pipeline Easement (vacant land)	24 Fern STREET	Other Petroleum	Regulation under CLM Act not required	-32.91706254	151.7473809
JAMISONTOWN	BP Service Station Jamisontown	124 - 128 Mulgoa ROAD	Service Station	Regulation under CLM Act not required	-33.76978323	150.6764977
JAMISONTOWN	Former Caltex Jamisontown	229-231 Mulgoa ROAD	Service Station	Regulation under CLM Act not required	-33.76661447	150.6784735

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
JAMISONTOWN	7-Eleven Service Station	92 Mulgoa ROAD	Service Station	Contamination currently regulated under CLM Act	-33.7667231	150.6796488
JANNALI	Former Mobil Service Station	121 Georges River ROAD	Service Station	Regulation under CLM Act not required	-34.01614613	151.0681921
JANNALI	Former IGA	541 Box ROAD	Other Industry	Regulation under CLM Act not required	-34.01602134	151.0660384
JENNINGS	Jennings Former Arsenic Poison Factory	Duke Street, Manor Street, and Ballandean STREET	Chemical Industry	Contamination currently regulated under CLM Act	-28.929342	151.9298622
JENNINGS	United Jennings Service Station	1823 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-28.9323235	151.9260334
JESMOND	Caltex Service Station	27 Bluegum ROAD	Service Station	Regulation under CLM Act not required	-32.9029287	151.691164
JINDABYNE	BP Service Station (Reliance Petroleum)	8 Kosciuszko ROAD	Service Station	Regulation under CLM Act not required	-36.41478692	148.6178882
JINDABYNE	Caltex Service Station	50 Kosciuszko ROAD	Service Station	Regulation under CLM Act not required	-36.41395847	148.6225113
JINGELLIC	Former Jingellic School	3179 River ROAD	Other Industry	Regulation under CLM Act not required	-35.92649487	147.7010655
JUNEE	Subdivision Proposal	5858 Gundagai ROAD	Unclassified	Regulation under CLM Act not required	-34.87783587	147.6067578
JUNEE	United Junee Service Station	No. 118-134 BROADWAY	Service Station	Regulation under CLM Act not required	-34.86808328	147.5834883
JUNEE	Junee Railway Workshops	92 Harold STREET	Other Industry	Under assessment	-34.88398375	147.5795301
KANAHOOKA	Former Dapto Smelter Site, Kanahooka (redeveloped)	Off Kanahooka ROAD	Metal Industry	Regulation under CLM Act not required	-34.4941348	150.8224482
KANDOS	Cement Australia Kandos Cement Works	1 Jamison STREET	Other Industry	Regulation under CLM Act not required	-32.86399912	149.9779259
KANWAL	Kanwal General Store and Fuel Supplies and Adjacent Land	68 and part of 70 Craigie AVENUE	Service Station	Contamination currently regulated under CLM Act	-33.26310031	151.4817395

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
KANWAL	Former Bus and Truck Rental Yard	645-647 Pacific Highway HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-33.26233802	151.4825469
KARIONG	Coles Express Kariong	6 Central Coast HIGHWAY	Service Station	Regulation under CLM Act not required	-33.43443192	151.2963401
KARIONG	Caltex Service Station	Lot 2 Langford DRIVE	Service Station	Regulation under CLM Act not required	-33.43934827	151.2935447
KARUAH	BP Roadhouse Karuah	403 Tarean ROAD	Service Station	Regulation under CLM Act not required	-32.65371781	151.9629963
KATOOMBA	Aldi Stores	201 Katoomba STREET	Service Station	Regulation under CLM Act not required	-33.71756625	150.3101649
KATOOMBA	Former Katoomba/Leura Gasworks	Megalong STREET	Gasworks	Contamination currently regulated under CLM Act	-33.71304308	150.3194624
KELLYVILLE	Caltex Service Station	3-5 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.71436125	150.9602175
KELLYVILLE	BP Service Station Kellyville	19-23 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.71280997	150.9590756
KELSO	Caltex Service Station Kelso	19 Sydney ROAD	Service Station	Regulation under CLM Act not required	-33.41904247	149.6023985
KELSO	BP Service Station (Reliance Petroleum)	63 Sydney ROAD	Service Station	Regulation under CLM Act not required	-33.41925328	149.6076677
KELSO	23 Zagreb Street, Kelso NSW	23 Zagreb STREET	Other Industry	Regulation under CLM Act not required	-33.42724599	149.609825
KEMBLA GRANGE	ShawCor Australia	66 West Dapto ROAD	Other Petroleum	Regulation under CLM Act not required	-34.46875328	150.8106326
KEMBLAWARRA	Griffins Bay, Lake Illawarra	Shellharbour ROAD	Landfill	Regulation under CLM Act not required	-34.49653984	150.8943776
KEMPS CREEK	Caltex-branded Service Station	1163 Mamre ROAD	Service Station	Regulation under CLM Act not required	-33.86972102	150.7966074
KEMPSEY	Kempsey Showground	19 Sea STREET	Unclassified	Contamination being managed via the planning process (EP&A Act)	-31.07334836	152.8308795

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KEMPSEY	Former Shell Depot	43-51 Gladstone STREET	Other Petroleum	Regulation under CLM Act not required	-31.07500944	152.8346699
KEMPSEY	Former Mobil Depot	14 Hopetoun STREET	Other Petroleum	Regulation under CLM Act not required	-31.07603107	152.8350132
KEMPSEY	Shell Coles Express Service Station Kempsey	165 Smith STREET	Service Station	Regulation under CLM Act not required	-31.07036743	152.8461571
KEMPSEY	Mobil Depot	154 Belgrave STREET	Service Station	Regulation under CLM Act not required	-31.07965043	152.8326303
KEMPSEY	Liberty (Former Mobil) Service Station	108-112 Smith STREET	Service Station	Regulation under CLM Act not required	-31.07492508	152.8431945
KENSINGTON	7-Eleven Kensington	135 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.91035885	151.2228537
KENSINGTON	Former Ampol Service Station	76-82 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.9059246	151.2242891
KENSINGTON	Footpath adjacent to 10-20 Anzac Parade	10-20 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.9032124	151.2237836
KENSINGTON	Caltex Service Station	211-213 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.91460752	151.2251266
KENTHURST	Vacant Land	259 McCylmonts ROAD	Unclassified	Regulation under CLM Act not required	-33.61283529	150.9425303
KHANCOBAN	Khancoban Tip	Alpine WAY	Landfill	Regulation under CLM Act not required	-36.21994191	148.1542718
KIAMA	Former Gasworks	105 to 109 and 113 Shoalhaven STREET	Gasworks	Regulation under CLM Act not required	-34.67416881	150.8504143
KIAMA HEIGHTS	Former Mobil Service Station Kiama	7-9 South Kiama DRIVE	Service Station	Regulation under CLM Act not required	-34.69553931	150.8437977
KILLARA	7-Eleven Service Station (Former Mobil)	496 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.77146554	151.1606903
KILLARA	Former Caltex Service Station	692B-694 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.76306802	151.1550109

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
KILLARA	Killara Garage	544 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.76974164	151.1599696
KILLARA	Former BP Service Station Lindfield	478 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.7719298	151.1613874
KILLARA	Land Adjacent to Former Service Station Site	684-684a, 690, 692 and 696 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.7631019	151.1548963
KINCUMBER	Frost Reserve	Avoca DRIVE	Landfill	Contamination currently regulated under CLM Act	-33.47065695	151.3909044
KINGS PARK	Multi-Fill	14 Garling ROAD	Chemical Industry	Under assessment	-33.74478046	150.9111964
KINGS PARK	Former Dow Corning Factory	21 Tattersall ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.75012653	150.9138477
KINGSFORD	Caltex Service Station	603-611 Anzac PARADE	Service Station	Regulation under CLM Act not required	-33.93435787	151.2371198
KINGSFORD	Coles Express Service Station Kingsford	58 Gardeners ROAD	Service Station	Regulation under CLM Act not required	-33.9250054	151.2257601
KINGSGROVE	Shell Coles Express Service Station	137 Kingsgrove ROAD	Service Station	Regulation under CLM Act not required	-33.93276948	151.099026
KINGSGROVE	Caltex Kingsgrove	351-357 Stoney Creek ROAD	Service Station	Regulation under CLM Act not required	-33.95132175	151.0926872
KINGSGROVE	State Transit Authority Depot	17-23 Richland STREET	Other Petroleum	Regulation under CLM Act not required	-33.93646086	151.0973617
KIRRAWEE	Ingal Civil Products	127-141 Bath ROAD	Metal Industry	Regulation under CLM Act not required	-34.03029516	151.0754469
KIRRAWEE	7-Eleven (former Mobil) Service Station	542-546 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.03238179	151.0758071
KIRRAWEE	Caltex-branded Kirrawee Service Station	(1-3 Waratah Street) 487 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.02915971	151.0808279
KOGARAH	Scarborough Park South	184R Production AVENUE	Landfill	Regulation being finalised	-33.97922253	151.140276

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
KOGARAH	Caltex Service Station	29 President AVENUE	Service Station	Regulation under CLM Act not required	-33.96516866	151.141145
KOGARAH	Former 7-Eleven Kogarah	734 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.96406472	151.1376011
KOGARAH	Woolworths Petrol Service Station	69 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.96330397	151.1371182
KOOLKHAN	Former Koolkhan Power Station	Summerland WAY	Other Industry	Regulation under CLM Act not required	-29.61688704	152.9300645
KOORAGANG	NPC, berths 2 and 3	Heron ROAD	Metal Industry	Regulation under CLM Act not required	-32.89260063	151.7742527
KOORAGANG	Kooragang Island Waste Facility	Off Cormorant ROAD	Metal Industry	Contamination currently regulated under POEO Act	-32.86901125	151.7377773
KOORAGANG	Orica Kooragang Island	15 Greenleaf ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-32.89654619	151.7771372
KOORAGANG	Former Boral Timber Export Facility	16 Heron ROAD	Other Industry	Regulation under CLM Act not required	-32.89710295	151.7739966
KOORAGANG	Cleanaway Technical Services	19 Egret STREET	Other Industry	Regulation under CLM Act not required	-32.8812145	151.766282
KOORAGANG	Industrial Facility	39 Heron ROAD	Chemical Industry	Under assessment	-32.89106439	151.7784064
KOORAGANG	Vacant Land	Raven Street and Cormorant ROAD	Unclassified	Regulation under CLM Act not required	-32.88410199	151.7701334
KOORAGANG	240 Cormorant Road, Kooragang	240 Cormorant ROAD	Other Industry	Regulation being finalised	-32.87480951	151.7757352
KOORINGAL	Former Shell Wagga Depot	11-15 Lake Albert ROAD	Other Petroleum	Regulation under CLM Act not required	-35.12273113	147.3786005
KOORINGAL	Caltex Service Station	265-267 Lake Albert ROAD	Service Station	Regulation under CLM Act not required	-35.14078443	147.3755442
KOORINGAL	Caltex-branded (former Mobil) Service Station	24 Lake Albert ROAD	Service Station	Regulation under CLM Act not required	-35.12239591	147.3769936

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
KOSCIUSZKO	Smiggin Holes Snow Clearing Shed	Link ROAD	Landfill	Regulation under CLM Act not required	-36.39098211	148.4304981
KOSCIUSZKO	Khancoban Spoil Dump	Alpine WAY	Landfill	Regulation under CLM Act not required	-36.21982803	148.1527401
KOSCIUSZKO	Sawpit Creek landfill	13km from Jindabyne, off Kosciuszko ROAD	Landfill	Regulation under CLM Act not required	-36.34858097	148.5673374
KURMOND	BP Service Station	501 Bells Line of road ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.55099195	150.6912536
KURNELL	Former Phillips Imperial Chemicals site	260 Captain Cook DRIVE	Chemical Industry	Regulation under CLM Act not required	-34.02493837	151.1952149
KURNELL	Caltex Kurnell Terminal (refer also to ID23868)	2 Solander STREET	Other Petroleum	Contamination currently regulated under POEO Act	-34.0175214	151.2159572
KURNELL	Abbott Australasia	Captain Cook DRIVE	Chemical Industry	Contamination formerly regulated under the CLM Act	-34.02339937	151.19921
KURNELL	Former Caltex Kurnell Service Station	Corner Captain Cook Drive and Solander STREET	Service Station	Regulation under CLM Act not required	-34.01269846	151.2094347
KURRI KURRI	United Petroleum Service Station Kurri Kurri	279-281 Lang STREET	Service Station	Contamination formerly regulated under the CLM Act	-32.82047175	151.477646
KURRI KURRI	Kurri Kurri Smelter	Hart ROAD	Metal Industry	Regulation under CLM Act not required	-32.7873063	151.4828827
KYOGLE	Caltex Service Station	22-24 Summerland WAY	Service Station	Regulation under CLM Act not required	-28.61806766	153.003862
LAKE HAVEN	Caltex Service Station	Goobarabah Ave Cnr Gorokan DRIVE	Service Station	Regulation under CLM Act not required	-33.24337276	151.5065335
LAKEMBA	Former Lakemba Police Station	59 Quigg STREET	Unclassified	Regulation under CLM Act not required	-33.92199239	151.079412
LAKEMBA	Caltex Service Station - Corner Punchbowl Rd and Wangee Rd	81 Wangee ROAD	Service Station	Regulation under CLM Act not required	-33.91153044	151.073306
LAKEMBA	Caltex Service Station	961-967 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.92671102	151.0814905



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
LAMBTON	Caltex Service Station	422 Newcastle ROAD	Service Station	Regulation under CLM Act not required	-32.9095592	151.7109684
LAMBTON	4-26 Verulam Road, Lambton NSW 2299	4-26 Verulam ROAD	Metal Industry	Under assessment	-32.91130954	151.7170534
LANE COVE	7-Eleven Service Station	203 Burns Bay ROAD	Service Station	Regulation under CLM Act not required	-33.81458334	151.1543844
LANE COVE	BP-branded Jasbe Service Station	62-70 Epping ROAD	Service Station	Regulation under CLM Act not required	-33.81108427	151.1641531
LANE COVE	Pacific Power	Sirius ROAD	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.80701776	151.1449658
LANE COVE	Coles Express Service Station Burns Bay	254 Burns Bay ROAD	Service Station	Regulation under CLM Act not required	-33.81719214	151.1518774
LANE COVE	331-335 Burns Bay Road, Lane Cove NSW 2066	331 and 333 - 335 Burns Bay ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.8211575	151.1493074
LANE COVE NORTH	Former Caltex Service Station	428-432 Mowbray ROAD	Service Station	Regulation under CLM Act not required	-33.80804563	151.1721538
LANE COVE NORTH	BP Artamon Service Station, Lane Cove North	432 Pacific HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.8112038	151.175547
LANE COVE WEST	Caltex Lane Cove West	235-245 Burns Bay ROAD	Service Station	Regulation under CLM Act not required	-33.81719214	151.1518774
LANE COVE WEST	Ventemans Reach Bushland	Off Mars ROAD	Unclassified	Regulation under CLM Act not required	-33.80499552	151.1450719
LANE COVE WEST	Lovetts Reserve Walking Track	301B Burns Bay ROAD	Unclassified	Contamination currently regulated under CLM Act	-33.82044223	151.1492125
LANE COVE WEST	315-317 Burns Bay Road, Lane Cove West	315-317 Burns Bay ROAD	Unclassified	Under preliminary investigation order	-33.82065224	151.1496027
LANSVALE	Mobil Service Station	44 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.89172416	150.9656537
LAURIETON	Camden Haven Tyre and Brake Centre (Former Caltex Service Station)	461 Ocean DRIVE	Service Station	Regulation under CLM Act not required	-31.64367775	152.7977735

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
LAVENDER BAY	SRA Land	French STREET	Unclassified	Regulation under CLM Act not required	-33.84560621	151.2030148
LAVINGTON	Former Caltex Service Station	373-375 Wagga ROAD	Service Station	Regulation under CLM Act not required	-36.04797551	146.9385325
LAVINGTON	Caltex Service Station	436 Wagga (corner Dick Road) ROAD	Service Station	Regulation under CLM Act not required	-36.04500034	146.9444932
LAVINGTON	Former ERS liquid waste treatment and storage facility	819 Knights ROAD	Other Industry	Regulation under CLM Act not required	-36.06763885	146.942143
LEETON	Former Mobil Depot	108 Calrose STREET	Other Petroleum	Regulation under CLM Act not required	-34.55813326	146.3921296
LEETON	Caltex Service Station	1 Belah STREET	Service Station	Regulation under CLM Act not required	-34.55421752	146.3998431
LEETON	Yenda Producers (formerly Incitec) Leeton	1 - 2 Canal STREET	Other Petroleum	Regulation under CLM Act not required	-34.55184684	146.3862573
LEETON	Former Fuel Depot, Leeton	1-3 Short STREET	Other Petroleum	Regulation under CLM Act not required	-34.55253237	146.3864507
LEETON	United Leeton Service Station	110 Kurrajong AVENUE	Service Station	Regulation under CLM Act not required	-34.55573364	146.4099077
LEICHHARDT	SRA Land	10-11 Balmain ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.8776803	151.1591041
LEICHHARDT	Former Kolotex site	22 George STREET	Other Industry	Contamination currently regulated under CLM Act	-33.88855307	151.1482106
LEICHHARDT	Former Labelcraft Site	30-40 George STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.88778798	151.1484773
LEICHHARDT	Leichhardt Bus Depot Area E	240 Balmain Road, corner City West LINK	Other Industry	Regulation under CLM Act not required	-33.87589727	151.1598073
LEICHHARDT	RailCorp Leichhardt	7 Darley ROAD	Other Industry	Regulation under CLM Act not required	-33.87520846	151.1539012
LENNOX HEAD	Former Caltex Lennox Head	Byron STREET	Service Station	Regulation under CLM Act not required	-28.79189328	153.5883225

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
LENNOX HEAD	Spors Dip	13 Fig Tree Hill DRIVE	Cattle Dip	Contamination formerly regulated under the CLM Act	-28.78258175	153.5752527
LEPPINGTON	Coles Express Leppington	1443 Camden Valley WAY	Service Station	Regulation under CLM Act not required	-33.96631609	150.8154793
LEUMEAH	Caltex Service Station	6 Rudd ROAD	Service Station	Regulation under CLM Act not required	-34.05398325	150.8299209
LEURA	Former Leura Garage	126-128 Leura MALL	Service Station	Regulation under CLM Act not required	-33.7125311	150.3315386
LIDCOMBE	Metro Lidcombe (former Liberty)	134 John STREET	Service Station	Contamination currently regulated under POEO Act	-33.85456019	151.0468136
LIDDELL	Liddell Power Station	New England HIGHWAY	Other Industry	Regulation under CLM Act not required	-32.37393962	150.9756283
LIDSDALE	Angus Place Colliery	Wolgan ROAD	Other Industry	Regulation under CLM Act not required	-33.35274573	150.0996773
LIDSDALE	Kerosene Vale Colliery	Wolgan ROAD	Other Industry	Regulation under CLM Act not required	-33.38232515	150.0943561
LIDSDALE	Kerosene Vale Ash Repository	110 Skelly ROAD	Other Industry	Under assessment	-33.39095144	150.1049798
LIGHTNING RIDGE	Former Ambulance Station	18 - 42 Pandora STREET	Other Industry	Regulation under CLM Act not required	-29.43133877	147.9812981
LIGHTNING RIDGE	Caltex Service Station	Onyx Street, corner Morilla STREET	Service Station	Regulation under CLM Act not required	-29.42922885	147.9747954
LILLIAN ROCK	Former 'Peters Dip' Cattle Tick Dip Site	427 Lillian Rock ROAD	Cattle Dip	Regulation under CLM Act not required	-28.5314327	153.1556392
LINDFIELD	7-Eleven (former Mobil) Service Station	238 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.7788603	151.1689594
LISAROW	OneSteel Recycling	902A Pacific HIGHWAY	Metal Industry	Regulation under CLM Act not required	-33.38420179	151.3655856
LISMORE	Caltex Lismore Service Station	136 Woodlark STREET	Service Station	Regulation under CLM Act not required	-28.80807597	153.2807591

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
LISMORE	Shell Coles Express Service Station	100 Dawson STREET	Service Station	Regulation under CLM Act not required	-28.81140865	153.2800472
LISMORE	Former Shell Depot	116 Wilson STREET	Other Petroleum	Regulation under CLM Act not required	-28.81070081	153.2621577
LISMORE	Caltex Service Station	73-75 Dawson STREET	Service Station	Regulation under CLM Act not required	-28.80894415	153.2809619
LISMORE	Lismore Gasworks	Cnr John Street & Keen STREET	Gasworks	Contamination formerly regulated under the CLM Act	-28.81764489	153.2710196
LISMORE	SRA Land	Norco LANE	Unclassified	Regulation under CLM Act not required	-28.810742	153.2702306
LISMORE HEIGHTS	Coles Express Lismore Heights	426 Ballina ROAD	Service Station	Contamination currently regulated under CLM Act	-28.81068067	153.3053065
LISMORE HEIGHTS	Impacted land, below Beardow Street landslide	22 New Ballina ROAD	Unclassified	Regulation under CLM Act not required	-28.80410458	153.2939349
LISMORE HEIGHTS	Roadside Embankment (Beardow Street)	Between Beardow and 22 New Ballina ROAD	Unclassified	Regulation under CLM Act not required	-28.80374297	153.2942495
LITHGOW	Former Shell CVRO and Depot	77 Bridge Street and 6 Gas Works LANE	Other Petroleum	Regulation under CLM Act not required	-33.47995091	150.162216
LITHGOW	Lithgow Thales	4 Martini PARADE	Metal Industry	Contamination formerly regulated under the CLM Act	-33.48988084	150.141366
LITHGOW	Former Mobil Depot	353 Main STREET	Other Petroleum	Regulation under CLM Act not required	-33.48235166	150.1383012
LITHGOW	Former Gasworks	Mort STREET	Gasworks	Regulation under CLM Act not required	-33.47995167	150.1635401
LITHGOW	Jasbe BP-branded Service Station (Former Reliance Petroleum)	1106 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.48426647	150.134992
LITHGOW	Caltex Lithgow (Quota Park)	Adjacent to 1131 Great Western HIGHWAY	Unclassified	Regulation under CLM Act not required	-33.47927554	150.1366238
LIVERPOOL	AC McGrath (Wholesale) Pty Ltd	20 Shepherd Street and 6A & 6B Atkinson STREET	Other Industry	Regulation under CLM Act not required	-33.9320192	150.9236862

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LIVERPOOL	Former Car Park	4 - 6 Rose STREET	Unclassified	Regulation under CLM Act not required	-33.93258955	150.9157936
LIVERPOOL	Woolworths Service Station	59-67 Orange Grove ROAD	Service Station	Regulation under CLM Act not required	-33.90711248	150.9178855
LIVERPOOL	68 Speed Street (former gasworks)	2A Mill ROAD	Gasworks	Regulation under CLM Act not required	-33.92992649	150.9224472
LIVERPOOL	Woodward Park	84 Memorial AVENUE	Other Industry	Regulation under CLM Act not required	-33.92477836	150.9169229
LOFTUS	BP Freedom Fuel Service Station Loftus	127 Loftus AVENUE	Service Station	Regulation under CLM Act not required	-34.04570765	151.0508004
LONG JETTY	Metro Petroleum Service Station Long Jetty	326 The Entrance ROAD	Service Station	Under assessment	-33.35897356	151.4847709
LONG JETTY	Caltex Service Station	431 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.36022468	151.4826553
LONG JETTY	Westside Petroleum Service Station	290-294 The Entrance ROAD	Service Station	Contamination currently regulated under CLM Act	-33.35686757	151.4861479
LONG JETTY	7-Eleven (former Mobil) Service Station	184-186 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.35089363	151.4924904
LONGUEVILLE	Caltex Service Station	5 Northwood ROAD	Service Station	Regulation under CLM Act not required	-33.82427366	151.1724497
LOXFORD	Kurri Kurri Wastewater Treatment Plant	McLeod ROAD	Other Industry	Regulation under CLM Act not required	-32.80593657	151.4843665
LUCAS HEIGHTS	Harringtons Quarry	access from Little Forest ROAD	Landfill	Contamination currently regulated under CLM Act	-34.03555347	150.9751826
LUCAS HEIGHTS	IWC landfill	Little Forest ROAD	Landfill	Contamination formerly regulated under the CLM Act	-34.03214889	150.9753474
LUDDENHAM	Caltex Service Station	3019-3035 The Northern ROAD	Service Station	Regulation under CLM Act not required	-33.87536093	150.6888872
MACKSVILLE	Caltex Service Station	Pacific (22-24 Cooper Street) HIGHWAY	Service Station	Regulation under CLM Act not required	-30.70977455	152.9198448

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MACLEAN	MacLean Outdoors	255 River STREET	Service Station	Regulation under CLM Act not required	-29.45782683	153.1970725
MACQUARIE FIELDS	Caltex Service Station	68 Harold STREET	Service Station	Regulation under CLM Act not required	-33.98557276	150.8933681
MACQUARIE PARK	Caltex North Ryde Service Station	41-43 Epping ROAD	Service Station	Regulation under CLM Act not required	-33.79138236	151.1312248
MACQUARIE PARK	1-7 Waterloo Road, Macquarie Park	1-7 Waterloo ROAD	Other Petroleum	Regulation under CLM Act not required	-33.78806877	151.1332148
MACQUARIE PARK	Porters Creek Depot - Proposed Operations Centre Site	160 Wicks ROAD	Landfill	Regulation under CLM Act not required	-33.78581579	151.1367075
MACQUARIE PARK	De Burghs Cycleway - Lane Cove National Park	Riverside DRIVE	Other Petroleum	Regulation under CLM Act not required	-33.77668985	151.136542
MAITLAND	Maitland Gasworks	Charles STREET	Gasworks	Contamination currently regulated under CLM Act	-32.73603658	151.5578926
MAITLAND	Hannan and High Street	Hannan Street and High STREET	Service Station	Regulation under CLM Act not required	-32.72731682	151.5515673
MAITLAND	Coles Express Service Station	235 High STREET	Service Station	Regulation under CLM Act not required	-32.73923807	151.5620399
MALABAR	ANZAC Rifle Range former landfill	Franklin STREET	Landfill	Regulation being finalised	-33.95792671	151.2566373
MANDALONG	Mandalong Mine	Mandalong ROAD	Other Industry	Regulation under CLM Act not required	-33.11725583	151.4616452
MANGROVE MOUNTAIN	Poultry Litter Containment Pit site	258 Waratah ROAD	Unclassified	Regulation under CLM Act not required	-33.28917947	151.1672284
MANILLA	Tamworth Regional Council Works Depot - Manilla	73 River STREET	Other Petroleum	Regulation under CLM Act not required	-30.74879943	150.7181011
MANLY	Caltex Service Station	86 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.79306889	151.2858638
MANLY	Open Space at end of Stuart Street (Lot 1 DP544297)	End of Stuart STREET	Gasworks	Regulation under CLM Act not required	-33.8078063	151.2898273

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MANLY	St Patrick's Estate	151 Darley ROAD	Unclassified	Regulation under CLM Act not required	-33.8044568	151.2938595
MANLY	Former Little Manly Point Gasworks	Stuart STREET	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.8081596	151.287697
MANLY VALE	Caltex Service Station Manly Vale	236-238 Condamine STREET	Service Station	Regulation under CLM Act not required	-33.78508231	151.2674386
MANLY VALE	Former Landfill Addiscombe Road	Addiscombe ROAD	Landfill	Contamination currently regulated under CLM Act	-33.78307439	151.2747846
MANNERING PARK	Parkview General Store (a former service station)	2 Vales ROAD	Service Station	Regulation under CLM Act not required	-33.14753814	151.5387832
MANNERING PARK	Mannerling Park Mini Mart	70 Vales ROAD	Service Station	Regulation under CLM Act not required	-33.15236501	151.5371767
MARAYONG	7-Eleven (former Mobil Blacktown West) Service Station Marayong	173 Richmond ROAD	Service Station	Regulation under CLM Act not required	-33.75472796	150.8913605
MARAYONG	Woolworths Petrol Service Station Marayong	Corner Vardys Road and Turbo ROAD	Service Station	Regulation under CLM Act not required	-33.7452356	150.9041601
MARDI	Former Mardi Landfill	70-90 McPherson ROAD	Landfill	Regulation under CLM Act not required	-33.29273289	151.4100941
MARKS POINT	Former Mobil Service Station (now 7-Eleven)	770-772 Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-33.05646268	151.6533795
MARKS POINT	Former Mobil Aviation Depot Belmont Airport	864 Pacific HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-33.06657244	151.6497674
MAROUBRA	Coles Express Pagewood Service Station, Maroubra	299 Bunnerong PARADE	Service Station	Regulation under CLM Act not required	-33.94071282	151.2285063
MARRANGAROO	United (Former Mobil) Service Station Marrangaroo	394-398 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.45253322	150.1181023
MARRICKVILLE	Former Mobil Service Station	384 Illawarra ROAD	Service Station	Regulation under CLM Act not required	-33.91534969	151.1506717
MARRICKVILLE	TRW Steering and Suspension	22-28 Carrington ROAD	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.92012667	151.1566181



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MARRICKVILLE	Woolworths Petrol Service Station Marrickville	490 Illawarra ROAD	Service Station	Regulation under CLM Act not required	-33.91845177	151.1459951
MARRICKVILLE	RailCorp	361 Victoria ROAD	Other Industry	Regulation under CLM Act not required	-33.91404835	151.1557132
MARRICKVILLE	Mackey Park	Cnr Richardsons Crescent and Carrington ROAD	Landfill	Regulation under CLM Act not required	-33.9220263	151.1547903
MARRICKVILLE	Cooks River Aqueduct	Thornley STREET	Unclassified	Contamination formerly regulated under the CLM Act	-33.92224311	151.1479744
MARRICKVILLE	2 Carrington Road	2 Carrington ROAD	Unclassified	Regulation under CLM Act not required	-33.91567088	151.1589931
MARRICKVILLE	Former Dry Cleaners and Loading Dock	Smidmore STREET	Other Industry	Contamination currently regulated under CLM Act	-33.90752498	151.1717761
MARSDEN PARK	226 Grange Avenue	226 Grange AVENUE	Unclassified	Regulation under CLM Act not required	-33.70259609	150.83825
MARSFIELD	Coles Express Service Station Marsfield	189 Epping ROAD	Service Station	Regulation under CLM Act not required	-33.77519246	151.1053691
MARULAN	BP Express Marulan (Northbound)	(Northbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.7188332	149.9949547
MARULAN	BP Service Station	(Southbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.71932066	150.0014827
MARYVILLE	7-Eleven Service Station	184-188 Hannell STREET	Service Station	Contamination formerly regulated under the CLM Act	-32.91336028	151.7579315
MASCOT	Former Zinc Smelter and Paint Manufacturing Facility	163 O'Riordan STREET	Metal Industry	Regulation under CLM Act not required	-33.92526513	151.1892582
MASCOT	Caltex Service Station	125 O'Riordan STREET	Service Station	Regulation under CLM Act not required	-33.92309169	151.1911539
MASCOT	Mascot Pioneer Plating	25-29 Ricketty STREET	Metal Industry	Contamination currently regulated under CLM Act	-33.92075288	151.1824801
MASCOT	Heritage Business Centre	5-9 Ricketty STREET	Unclassified	Regulation under CLM Act not required	-33.92029202	151.1816656

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MASCOT	Telstra Exchange	904-922 Botany ROAD	Other Industry	Regulation under CLM Act not required	-33.9293166	151.1942777
MASCOT	Former Shell Service Station Mascot	746 Botany ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.92352295	151.1955852
MASCOT	Former Freight Distribution Facility (now High-Density Residential / Commercial)	19-33 Kent ROAD	Unclassified	Regulation under CLM Act not required	-33.9227711	151.1854202
MASCOT	Former Mascot Galvanising	336-348 King STREET	Metal Industry	Contamination currently regulated under CLM Act	-33.92902126	151.185874
MASCOT	Sokol Corporation	50-56 Robey STREET	Other Industry	Regulation under CLM Act not required	-33.93162265	151.1904955
MASCOT	Linear Park	Off O'Riordan STREET	Landfill	Regulation under CLM Act not required	-33.92278693	151.1904751
MATRAVILLE	Port Botany Bus Depot	7 Bumborah Point ROAD	Other Petroleum	Regulation under CLM Act not required	-33.96880413	151.2255889
MATRAVILLE	Former Golden Fleece Terminal No2	151 Beauchamp ROAD	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.95719404	151.2259884
MATRAVILLE	Former Rieco Incinerator	Kain AVENUE	Other Industry	Contamination being managed via the planning process (EP&A Act)	-33.95980534	151.2423679
MATRAVILLE	7-Eleven Service Station Matraville	515 Bunnerong ROAD	Service Station	Contamination currently regulated under CLM Act	-33.95943536	151.2317598
MATRAVILLE	Former Golden Fleece Terminal No1	133 -149 Beauchamp ROAD	Other Petroleum	Contamination formerly regulated under the CLM Act	-33.95759006	151.2252023
MATRAVILLE	Vacant Lot	3 Wilkes AVENUE	Other Industry	Regulation under CLM Act not required	-33.96006406	151.2431087
MATRAVILLE	Eastern Suburbs Memorial Park	12 Military ROAD	Chemical Industry	Regulation under CLM Act not required	-33.9719906	151.2274386
MAYFIELD	7-Eleven (Former Mobil) Service Station	412-416 Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.89292005	151.7300948
MAYFIELD	Shell Coles Express Service Station	63-69 Maud STREET	Service Station	Regulation under CLM Act not required	-32.89358962	151.7221298

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MAYFIELD	Hunter River Sediments	Bed Sediments of the Hunter adjacent to Lot 221 DP1013964 RIVER	Metal Industry	Contamination formerly regulated under the CLM Act	-32.89203741	151.7646702
MAYFIELD	Australian Tube Mills Newcastle Site	Industrial DRIVE	Metal Industry	Under assessment	-32.88835767	151.7450751
MAYFIELD	BHP Steel River	The Buffer Zone' extending directly adjacent to the Hunter River; near the Tourle Street Bridge STREET	Metal Industry	Contamination currently regulated under CLM Act	-32.8773556	151.7252427
MAYFIELD	Waratah Steel Mill	23 Frith STREET	Metal Industry	Regulation under CLM Act not required	-32.89426592	151.7257429
MAYFIELD	OneSteel (BHP)	Industrial DRIVE	Metal Industry	Contamination currently regulated under CLM Act	-32.88365878	151.7448793
MAYFIELD NORTH	BHPB Closure site and bed sediments of the Hunter River	Bound by Hunter River, Selwyn Street & Industrial DRIVE	Metal Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-32.89436064	151.7590762
MAYFIELD NORTH	OneSteel - Newcastle Wire, Rod and Bar Mills	141 & 151 Ingall STREET	Metal Industry	Under assessment	-32.89008485	151.752949
MAYFIELD NORTH	Former BHPB Supply site	Industrial DRIVE	Metal Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-32.88583061	151.7386157
MAYFIELD WEST	Stevenson Park landfill	2/559 Maitland ROAD	Landfill	Regulation under CLM Act not required	-32.88472556	151.7224791
MAYFIELD WEST	Koppers Coal Tar	East of Woodstock Street and Tourle STREET	Other Industry	Contamination currently regulated under POEO Act	-32.88592437	151.7361839
MAYFIELD WEST	Tourle Street Bridge Project	Tourle STREET	Landfill	Regulation under CLM Act not required	-32.88075518	151.7330073
MCDougalls Hill	Caltex Service Station	4949 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-32.54484714	151.1490757
MEADOWBANK	Former Council Works Depot	2 Parsonage STREET	Unclassified	Regulation under CLM Act not required	-33.82191421	151.0951974
MENAI	7-Eleven (Former Mobil) Service Station Menai	289 Menai ROAD	Service Station	Contamination currently regulated under CLM Act	-34.01579095	151.0131737
MENAI	Caltex Service Station Menai	1 Carter Road ROAD	Service Station	Regulation under CLM Act not required	-34.01654043	151.0124133

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MENANGLE	285 Finns Road, Menangle NSW	285 Finns ROAD	Unclassified	Regulation under CLM Act not required	-34.1291386	150.7010393
MEREWETHER	Merewether Childcare Centre	2/23 Caldwell STREET	Unclassified	Regulation under CLM Act not required	-32.94249653	151.7504279
MEREWETHER HEIGHTS	Burwood Beach Wastewater Treatment Works	Lot 1, Scenic DRIVE	Other Industry	Regulation under CLM Act not required	-32.95401348	151.7412468
MERIMBULA	Caltex Service Station	19-25 Merimbula DRIVE	Service Station	Regulation under CLM Act not required	-36.88757881	149.9089159
MERIMBULA	Former Mobil Service Station	27 Market STREET	Service Station	Regulation under CLM Act not required	-36.88941693	149.9103485
MERRYLANDS	Former Timber Yard and Hardware	11-19 Centenary ROAD	Other Petroleum	Regulation under CLM Act not required	-33.83083025	150.9698915
MERRYLANDS	Caltex Service Station	229 Woodville ROAD	Service Station	Regulation under CLM Act not required	-33.84547463	150.9983413
MERRYLANDS	Caltex Service Station Merrylands	148 Woodville ROAD	Service Station	Regulation under CLM Act not required	-33.83818499	150.9997199
MERRYLANDS	Stockland Merrylands Court	249-259 Merrylands ROAD	Service Station	Regulation under CLM Act not required	-33.83560037	150.9869735
MERRYLANDS	7-Eleven Merrylands Service Station	295-297 Merrylands Road, corner Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.83533205	150.9851801
MERRYLANDS	Former Stockfeed Manufacturing Site	1-7 & 9-11 Neil STREET	Other Petroleum	Regulation under CLM Act not required	-33.83390257	150.9947449
MERRYLANDS WEST	Former Mobil Service Station	3 Centenary ROAD	Service Station	Regulation under CLM Act not required	-33.83214226	150.9698958
MILLER	Caltex Service Station	86 Cartwright AVENUE	Service Station	Regulation under CLM Act not required	-33.91878146	150.8827514
MILLERS FOREST	Chichester Trunk Gravity Main	water pipeline ACCESS	Other Industry	Contamination currently regulated under POEO Act	-32.772877	151.6826841
MILLERS POINT	Former AGL Gasworks	30 - 34 Hickson ROAD	Gasworks	Regulation under CLM Act not required	-33.86179594	151.2031726

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MILLERS POINT	Moores Wharf UPSS	4 Towns PLACE	Other Petroleum	Regulation under CLM Act not required	-33.85581123	151.2024759
MILLERS POINT	Former AGL Gasworks	38 Hickson and road reserve ROAD	Gasworks	Contamination being managed via the planning process (EP&A Act)	-33.86280104	151.2032452
MILLERS POINT	Former AGL Gasworks	Berths 5, 6 and 7 (already demolished) and part Hickson ROAD	Gasworks	Contamination formerly regulated under the CLM Act	-33.86239771	151.2024819
MILLERS POINT	Former AGL Gasworks 36 Hickson Road	36 Hickson ROAD	Gasworks	Contamination formerly regulated under the CLM Act	-33.86243824	151.2032514
MILPERRA	Heatcraft Australia Pty Ltd	286 Horsley ROAD	Other Industry	Regulation under CLM Act not required	-33.94031556	150.9958606
MILPERRA	United Group Rail Pty Limited	373 Horsley ROAD	Landfill	Regulation under CLM Act not required	-33.93286283	150.9934071
MILPERRA	Caltex Service Station	264 Milperra ROAD	Service Station	Regulation under CLM Act not required	-33.93018101	150.9910964
MILPERRA	Former Landfill	479 Henry Lawson DRIVE	Landfill	Regulation under CLM Act not required	-33.93394617	150.9776715
MILTON	Former Sanitary Depot	Slaughterhouse ROAD	Other Industry	Regulation under CLM Act not required	-35.33819825	150.4471917
MILTON	Caltex Milton Service Station and Depot	331 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.33154474	150.4492852
MINCHINBURY	7-Eleven (former Mobil) Service Station	815 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.78812909	150.8495992
MINCHINBURY	BP Service Station	1055 Great Western Highway corner Archbold ROAD	Service Station	Regulation under CLM Act not required	-33.78211857	150.8244185
MINTO	Land adjacent to Former Shell depot	Airds Road and Essex STREET	Other Petroleum	Regulation under CLM Act not required	-34.02140447	150.8415134
MINTO	Shell Coles Express Service Station	73 Pembroke STREET	Service Station	Regulation under CLM Act not required	-34.02316454	150.8503118
MINTO	Former Endeavour Energy Depot	Pembroke ROAD	Other Petroleum	Regulation under CLM Act not required	-34.0408973	150.8451837

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MINTO	Logistics Hub - Culverston Road, Minto	Culverston ROAD	Other Petroleum	Regulation under CLM Act not required	-34.0421711	150.833825
MIRANDA	Woolworths Service Station	455 Kingsway OTHER	Service Station	Contamination currently regulated under CLM Act	-34.03492814	151.1124681
MITTAGONG	Enhance (former Coles Express) Service Station	224 Old Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.44746118	150.4326183
MITTAGONG	Lots 1 and 2 Alfred St.	Alfred STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-34.44738105	150.4565159
MITTAGONG	Caltex Mittagong Service Station	65 Bowral ROAD	Service Station	Regulation under CLM Act not required	-34.45245915	150.4381291
MOAMA	Caltex Moama Service Station	73 Meninya (Cnr Regent St) STREET	Service Station	Regulation under CLM Act not required	-36.10815134	144.752849
MOLONG	Cabonne BP Service Station	2 Gidley STREET	Service Station	Contamination currently regulated under CLM Act	-33.09026307	148.8695809
MOLONG	Former Gasworks	Hill STREET	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.09074595	148.8703262
MONA VALE	Mona Vale Bus Depot	58 Darley STREET	Other Petroleum	Contamination currently regulated under CLM Act	-33.67452414	151.3074246
MONA VALE	Former Caltex service station and adjacent properties	79 Barrenjoey Road, 2 Polo Avenue, 6 Polo Avenue, 45 Bassett STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.6743659	151.3096932
MONA VALE	7-Eleven (former Mobil) Service Station	24 Barrenjoey ROAD	Service Station	Regulation under CLM Act not required	-33.676909	151.3082515
MONA VALE	BP Peninsula Express Service Station	Corner Barrenjoey Road and Darley Street East STREET	Service Station	Regulation under CLM Act not required	-33.67670799	151.3090068
MONA VALE	BP Service Station Mona Vale	1721 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.68043443	151.3023553
MONA VALE	Caltex Investigation Area	Polo Ave, Perak STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.67431333	151.3091148
MONA VALE	Taronga Place Mona Vale properties	Taronga PLACE	Other Petroleum	Contamination currently regulated under CLM Act	-33.67422848	151.3066972

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MOOBALL	Mooball General Store	5913 Tweed Valley WAY	Service Station	Regulation under CLM Act not required	-28.44204594	153.4887648
MOONBI	Caltex Moonbi Service Station	New England HIGHWAY	Service Station	Regulation under CLM Act not required	-31.02264369	151.069094
MOORE PARK	Area 2, Moore Park	Driver AVENUE	Unclassified	Regulation under CLM Act not required	-33.89426868	151.2226839
MOOREBANK	Caltex Service Station	216 Newbridge ROAD	Service Station	Regulation under CLM Act not required	-33.92930835	150.9551469
MOOREBANK	Joyce Foam Products	5-9 Bridges ROAD	Chemical Industry	Regulation under CLM Act not required	-33.92596302	150.9335273
MOOREBANK	ABB Australia Pty Ltd	(a) 1 Bapaume ROAD	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.94143741	150.9208754
MOOREBANK	Caltex Service Station Moorebank	2 Bridges ROAD	Service Station	Regulation under CLM Act not required	-33.92839682	150.9327012
MOOREBANK	Former Concrete Recyclers property, Newbridge Road, Moorebank	Newbridge ROAD	Landfill	Contamination being managed via the planning process (EP&A Act)	-33.9390295	150.9653979
MOOREBANK	Helles Park	Helles AVENUE	Landfill	Under assessment	-33.93633126	150.9221424
MOORLAND	Caltex Service Station	99 Jericho ROAD	Service Station	Regulation under CLM Act not required	-31.79436622	152.6514849
MOREE	Former Freedom Service Station Site Moree	1 Dover STREET	Service Station	Contamination formerly regulated under the CLM Act	-29.4715814	149.8440279
MOREE	Caltex Depot	101 Gosport STREET	Other Petroleum	Regulation under CLM Act not required	-29.47603684	149.8476728
MOREE	Former Golden Fleece Depot	Gosport STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-29.47698315	149.8477108
MOREE	Former Mobil Depot	Gosport STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-29.47764104	149.8478284
MOREE	Moree Airport Evaporation Pond	Newell HIGHWAY	Unclassified	Regulation under CLM Act not required	-29.50289837	149.8411301



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MOREE	Caltex Service Station	54 Alice STREET	Service Station	Contamination currently regulated under CLM Act	-29.47158492	149.8433182
MOREE	Former Shell Depot	Adelaide STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-29.47655335	149.8465698
MOREE	Shell Coles Express Service Station	Corner Gwydir and Ballo STREET	Service Station	Regulation under CLM Act not required	-29.46081826	149.8419975
MOREE	BP Truckstop and Depot Moree	Newell Highway - 423 Frome STREET	Service Station	Regulation under CLM Act not required	-29.48223274	149.8463679
MOREE	Sunnyside Road	Sunnyside ROAD	Unclassified	Regulation under CLM Act not required	-29.45652718	149.8226682
MORISSET	Railcorp Station Masters Cottage	24 Dora STREET	Unclassified	Regulation under CLM Act not required	-33.10849681	151.4880317
MORISSET	Morisset High School	Bridge STREET	Unclassified	Regulation under CLM Act not required	-33.10475221	151.4866482
MORISSET	Sanyog Holdings Pty Ltd	57 Dora STREET	Service Station	Under assessment	-33.10732744	151.4900584
MORPETH	Telstra Cable Installation and RTA Bridge work	Northumberland STREET	Other Petroleum	Regulation under CLM Act not required	-32.72489729	151.6266795
MORPETH	Former Service Station	Swan STREET	Service Station	Regulation under CLM Act not required	-32.72477413	151.6250642
MORTLAKE	Former Petroleum Storage Site	108-116 Tennyson ROAD	Other Petroleum	Regulation under CLM Act not required	-33.83979033	151.1064889
MORTLAKE	Kendall Bay Sediments	Kendall BAY	Gasworks	Contamination currently regulated under CLM Act	-33.83905999	151.1120458
MORTLAKE	Former AGL site	Tennyson ROAD	Gasworks	Contamination formerly regulated under the CLM Act	-33.84287407	151.1109313
MORTLAKE	Majors Bay Redevelopment	14-22 Hilly STREET	Other Industry	Regulation under CLM Act not required	-33.83954617	151.1054674
MORUYA	Former Fuel Depot Moruya	11 to 13 Ford STREET	Other Petroleum	Regulation under CLM Act not required	-35.9112243	150.0826475

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MORUYA	Caltex Service Station Moruya	80-84 Campbell STREET	Service Station	Regulation under CLM Act not required	-35.91195596	150.0824213
MORUYA	Caltex Service Station	26 Campbell STREET	Service Station	Regulation under CLM Act not required	-35.9104985	150.0711419
MOSMAN	7-Eleven Mosman	162A Spit Road Corner Mitchell ROAD	Service Station	Regulation under CLM Act not required	-33.81747016	151.2433633
MOSMAN	BP Service Station	175 Ourimbah ROAD	Service Station	Regulation under CLM Act not required	-33.82106757	151.233291
MOSMAN	BP Express Mosman	175 Ourimbah ROAD	Service Station	Regulation under CLM Act not required	-33.82106459	151.2332921
MOSMAN	7-Eleven Service Station Mosman	45 Spit ROAD	Service Station	Regulation under CLM Act not required	-33.82302718	151.2435627
MOSMAN	Allan Border Oval	Myahgah ROAD	Landfill	Regulation under CLM Act not required	-33.82681534	151.2417712
MOSS VALE	Woolworths Service Station Moss Vale	609 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.55409411	150.3609797
MOSS VALE	Coles Express Service Station	579 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.55313422	150.364684
MOSS VALE	Moss Vale Refuelling Facility	Lackey ROAD	Other Petroleum	Regulation under CLM Act not required	-34.54662421	150.3721525
MOUNT ANNAN	Woolworths Caltex Mount Annan	157 Narellan (Corner Smeaton Grange Road) ROAD	Service Station	Regulation under CLM Act not required	-34.04685527	150.7610434
MOUNT ANNAN	Great Southern Railways Aqueduct	Off Narellan ROAD	Unclassified	Regulation under CLM Act not required	-34.07308479	150.7707436
MOUNT COLAH	Caltex Service Station Mount Colah	603 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.67034662	151.1151861
MOUNT COLAH	Foxglove Oval	Foxglove ROAD	Landfill	Contamination currently regulated under CLM Act	-33.65829855	151.1229638
MOUNT DRUITT	Caltex (former Mobil) Service Station, 17 Mount Street, Mount Druitt	17 Mount STREET	Service Station	Regulation under CLM Act not required	-33.76567994	150.8244544

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MOUNT DRUITT	7-Eleven Mount Druitt	Lot 6 Luxford ROAD	Other Petroleum	Regulation under CLM Act not required	-33.76483839	150.8254157
MOUNT HUTTON	Woolworths Service Station	46 Wilsons ROAD	Service Station	Regulation under CLM Act not required	-32.9836378	151.67309
MOUNT PRITCHARD	7-Eleven Service Station	352 Elizabeth DRIVE	Service Station	Regulation under CLM Act not required	-33.90260656	150.8963326
MOUNT THORLEY	Bulga Surface Operations	Broke ROAD	Other Industry	Regulation under CLM Act not required	-32.68325751	151.1206158
MOUNT THORLEY	Lowes Petroleum (Former BP) Depot Mount Thorley	74 Mount Thorley ROAD	Other Petroleum	Regulation under CLM Act not required	-32.62443074	151.1025122
MOUNT VICTORIA	Former Mobil Service Station	81 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.5889727	150.2511783
MOUNT VICTORIA	Caltex Service Station	36a Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.58436517	150.2465528
MUDGEE	Caltex Service Station	114-116 Church STREET	Service Station	Regulation under CLM Act not required	-32.59428029	149.5876199
MUDGEE	Shell Coles Express Service Station	47 Church STREET	Service Station	Regulation under CLM Act not required	-32.59347493	149.5884623
MUDGEE	BP Service Station Mudgee	77 Church STREET	Service Station	Regulation under CLM Act not required	-32.59545872	149.588123
MUDGEE	Mobil Depot	47 Douro STREET	Other Petroleum	Contamination currently regulated under CLM Act	-32.60023979	149.5823448
MUDGEE	Mudgee Gasworks	Mortimer Street and Court STREET	Gasworks	Regulation under CLM Act not required	-32.59168859	149.5817705
MUDGEE	Former Essential Energy Depot	27-31 Inglis STREET	Other Industry	Regulation under CLM Act not required	-32.60076552	149.5858905
MUDGEE	Former Caltex Depot Mudgee	cnr Nicholson Street & Atkinson STREET	Other Petroleum	Regulation under CLM Act not required	-32.60125298	149.5851398
MULGRAVE	7-Eleven (former Mobil) Service Station	Corner Windsor Road and Mulgrave ROAD	Service Station	Regulation under CLM Act not required	-33.61687781	150.8341809

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MULLUMBIMBY	Station Street, Mullumbimby NSW 2482	Station STREET	Other Industry	Regulation being finalised	-28.55211357	153.5035218
MULWALA	Mulwala ADI Explosives Factory	Bayly STREET	Other Industry	Regulation under CLM Act not required	-35.97572689	145.9809786
MURWILLUMBAH	Murwillumbah Ambulance Depot	27 Queen STREET	Other Petroleum	Regulation under CLM Act not required	-28.32552576	153.4000182
MURWILLUMBAH SOUTH	Caltex Murwillumbah (formerly Puma)	182 Tweed Valley WAY	Service Station	Contamination currently regulated under CLM Act	-28.3263681	153.4103824
MURWILLUMBAH SOUTH	Former Norco Butter Factory (Eastern Portion)	230 Tweed Valley WAY	Other Petroleum	Regulation under CLM Act not required	-28.32791359	153.4073052
MUSWELLBROOK	Former Caltex Depot	1 Lower William STREET	Other Petroleum	Regulation under CLM Act not required	-32.26614257	150.8865136
MUSWELLBROOK	Vacant Rail Land	27 Brook STREET	Unclassified	Regulation under CLM Act not required	-32.26346086	150.8873181
MUSWELLBROOK	United Branded (Former Mobil) Service Station Muswellbrook	49-51 Maitland STREET	Service Station	Regulation under CLM Act not required	-32.27218162	150.8900206
MUSWELLBROOK	Former Mobil Depot Muswellbrook	43-51 Ford STREET	Other Petroleum	Regulation under CLM Act not required	-32.2599725	150.887573
MUSWELLBROOK	Woolworths Petrol	72 Brook STREET	Service Station	Regulation under CLM Act not required	-32.26325377	150.8905966
MUSWELLBROOK	Caltex Muswellbrook Service Station	84-86 Maitland STREET	Service Station	Regulation under CLM Act not required	-32.27793094	150.8980938
MUSWELLBROOK	Former Gasworks	Corner Carl Street and Foley STREET	Gasworks	Regulation under CLM Act not required	-32.26672337	150.8935982
MUSWELLBROOK	Bayswater Power Station	New England HIGHWAY	Other Industry	Regulation under CLM Act not required	-32.3954046	150.9502683
MUSWELLBROOK	Former Industrial Site	Lot 89 Rathmore STREET	Other Industry	Regulation under CLM Act not required	-32.30544071	150.8823657
MUSWELLBROOK	Caltex Service Station	12-16 Sydney STREET	Service Station	Regulation under CLM Act not required	-32.26785559	150.8879601

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
MUSWELLBROOK	Former Caltex Depot	47-50 Victoria STREET	Service Station	Regulation under CLM Act not required	-32.26788823	150.8930609
MUSWELLBROOK	Former Pit Top No. 1 Colliery Muswellbrook Coal	Corner Clendinning Street and Victoria STREET	Other Industry	Regulation under CLM Act not required	-32.27031992	150.9009981
NABIAC	Caltex Service Station NABIAC	3964 Wallanbah (Cnr Wallanbah Rd and Pacific Hwy) ROAD	Service Station	Regulation under CLM Act not required	-32.09864883	152.3754346
NAMBUCCA HEADS	Former Mobil Service Station	6 Bowra STREET	Service Station	Regulation under CLM Act not required	-30.64282127	153.0035884
NARELLAN	Caltex Service Station Narellan	1 George Hunter DRIVE	Service Station	Regulation under CLM Act not required	-34.03963992	150.7432386
NARELLAN	Former Landfill	1 Elyard STREET	Landfill	Regulation under CLM Act not required	-34.043474	150.7393256
NAROOMA	Narooma Service Station	60 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-36.21617955	150.126261
NAROOMA	Former Caltex - Narooma	82 Princes HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-36.21711766	150.1279305
NARRABEEN	Caltex Service Station	1509-1511 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.70455756	151.2969352
NARRABEEN	Shell Coles Express Service Station	1418 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.70013931	151.3002782
NARRABEEN	Narrabeen Shotgun Range Sydney Academy of Sport	Wakehurst PARKWAY	Unclassified	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.72138423	151.2642798
NARRABEEN	7-Eleven Service Station	1234 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.71958892	151.298272
NARRABEEN	7-Eleven Narrabeen North	1501-1505 Pittwater Road, corner Gondola ROAD	Service Station	Regulation being finalised	-33.70749859	151.296351
NARRABRI	Caltex Service Station	13 Doyle STREET	Service Station	Regulation under CLM Act not required	-30.3239182	149.7843052
NARRABRI	Lowes Petroleum (Former Mobil) Narrabri Depot	3 Old Gunnedah ROAD	Other Petroleum	Regulation under CLM Act not required	-30.33473586	149.789587

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
NARRABRI	Caltex Service Station	31-35 Cooma ROAD	Service Station	Regulation under CLM Act not required	-30.33968576	149.7657241
NARRABRI	Caltex Narrabri Service Station	31 Dangar (Cnr Anne and Dangar) STREET	Service Station	Regulation under CLM Act not required	-30.32989667	149.7756598
NARRABRI	Caltex Service Station	12 Reid STREET	Other Petroleum	Regulation under CLM Act not required	-30.32282764	149.7901182
NARRABRI	Cargill Soapstock Disposal Site	Westport ROAD	Unclassified	Contamination formerly regulated under the CLM Act	-30.4698458	149.6981931
NARRABRI	Caltex Service Station	7-13 James STREET	Service Station	Regulation under CLM Act not required	-30.33016168	149.7940732
NARRANDERA	Former Mobil Narrandera Depot	24 Whitton STREET	Other Petroleum	Regulation under CLM Act not required	-34.7410523	146.5620667
NARRANDERA	Former Mobil Emoleum Narrandera Depot	5-7 Margaret STREET	Other Petroleum	Regulation under CLM Act not required	-34.74105391	146.5628144
NARROMINE	Narromine Fuel (Former Caltex) Service Station	Cnr Burraway Street and Algalah STREET	Service Station	Regulation under CLM Act not required	-32.23565321	148.2454259
NELLIGEN	Former Clay Target Shooting Range	1398 Kings Highway and adjoining land on Old Bolaro Mountain ROAD	Unclassified	Contamination currently regulated under CLM Act	-35.64392469	150.0955224
NELLIGEN	Lot 2 Old Bolaro Road	Old Bolaro ROAD	Unclassified	Contamination formerly regulated under the CLM Act	-35.64485609	150.0937341
NELSON BAY	Shell Coles Express Service Station	25 Stockton STREET	Service Station	Regulation under CLM Act not required	-32.72265762	152.1437317
NELSON BAY	Former Caltex Service Station Nelson Bay	38 Stockton STREET	Service Station	Regulation under CLM Act not required	-32.72335662	152.1429384
NEMINGHA	Caltex Service Station and Depot Nemingha	428 Armidale (previously 16 New England Highway) ROAD	Service Station	Regulation under CLM Act not required	-31.12425169	150.9909054
NEUTRAL BAY	Caltex Service Station	16-38 Military ROAD	Service Station	Regulation under CLM Act not required	-33.82907162	151.2163342
NEUTRAL BAY	Shell Coles Express Service Station	200-204 Ben Boyd ROAD	Service Station	Regulation under CLM Act not required	-33.82915781	151.219437

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
NEW LAMBTON	Caltex Service Station New Lambton	144 Bridges ROAD	Service Station	Regulation under CLM Act not required	-32.93283668	151.7141748
NEW LAMBTON	BP Service Station	105 St James ROAD	Service Station	Regulation under CLM Act not required	-32.92910325	151.7155801
NEW LAMBTON	7-Eleven (former Mobil) Service Station	291 Turton ROAD	Service Station	Regulation under CLM Act not required	-32.91773864	151.7243096
NEWCASTLE	Reclaimed Land	26-28 Honeysuckle DRIVE	Unclassified	Contamination formerly regulated under the CLM Act	-32.92604705	151.7649508
NEWCASTLE	Wharf Road Newcastle Car Park	313-317 Wharf ROAD	Unclassified	Regulation under CLM Act not required	-32.92570385	151.7744076
NEWCASTLE	Newcastle Foreshore	40 Stevenson Place STREET	Other Industry	Regulation under CLM Act not required	-32.92556503	151.7876742
NEWCASTLE	SRA Land	Scott STREET	Gasworks	Regulation under CLM Act not required	-32.92641425	151.7837817
NEWCASTLE WEST	Former Mobil Service Station	113 Parry STREET	Service Station	Regulation under CLM Act not required	-32.92560628	151.7558542
NEWPORT	7-Eleven (former Mobil) Service Station	307 Barrenjoey ROAD	Service Station	Regulation under CLM Act not required	-33.65632902	151.3182089
NEWPORT	Former Caltex Service Station Newport	316-324 Barrenjoey ROAD	Service Station	Regulation under CLM Act not required	-33.65634516	151.3191571
NEWTOWN	Caltex Service Station Newtown	26 - 36 Enmore ROAD	Service Station	Regulation under CLM Act not required	-33.89851331	151.17714
NEWTOWN	Former Service Station	81 Wilson STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.89626791	151.1827556
NEWTOWN	Aluminium Enterprises	66 Brocks LANE	Metal Industry	Contamination was addressed via the planning process (EP&A Act)	-33.89467126	151.1847528
NEWTOWN	Adjacent to Former Service Station	79 Wilson STREET	Service Station	Contamination formerly regulated under the CLM Act	-33.89630155	151.1826567
NORAVILLE	Former Toukley Landfill	Wilfred Barrett DRIVE	Landfill	Regulation under CLM Act not required	-33.27734185	151.5537784



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
NORTH ALBURY	Caltex Service Station and Diesel Stop	79 Union ROAD	Service Station	Regulation under CLM Act not required	-36.05496713	146.9487635
NORTH BOAMBEE VALLEY	Caltex Service Station	Cnr Pacific Hwy & Halls ROAD	Service Station	Regulation under CLM Act not required	-30.30639482	153.1007996
NORTH BONDI	Caltex Service Station North Bondi	321 Old South Head ROAD	Service Station	Regulation under CLM Act not required	-33.88463526	151.268551
NORTH NARRABEEN	7-Eleven Service Station	1501-1503 Pittwater ROAD	Service Station	Regulation under CLM Act not required	-33.70749859	151.296351
NORTH RICHMOND	Caltex Service Station	50 Bells Line Of ROAD	Service Station	Regulation under CLM Act not required	-33.57991338	150.7202346
NORTH ROCKS	7-Eleven Service Station North Rocks	340 North Rocks ROAD	Service Station	Regulation under CLM Act not required	-33.76895144	151.0305952
NORTH ST MARYS	BP Service Station	76 Glossop STREET	Service Station	Regulation under CLM Act not required	-33.76020183	150.7818149
NORTH ST MARYS	Mt Druitt Transmission Substation	69 Kurrajong AVENUE	Other Industry	Under assessment	-33.76376093	150.7921691
NORTH STRATHFIELD	Budget Service Station	143 Concord ROAD	Service Station	Regulation under CLM Act not required	-33.85945248	151.0927853
NORTH STRATHFIELD	Former Caltex Service Station	92a Concord ROAD	Service Station	Regulation under CLM Act not required	-33.86244297	151.0932434
NORTH SYDNEY	Iora Complex	1 Kiara PLACE	Gasworks	Regulation under CLM Act not required	-33.843145	151.2161142
NORTH SYDNEY	Neutral Bay Sediments	Adjacent to Sub Base Platypus, High STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.8417682	151.2158756
NORTH SYDNEY	Sub Base Platypus (previously HMAS Platypus)	High STREET	Gasworks	Contamination formerly regulated under the CLM Act	-33.84325935	151.2170347
NORTH WOLLONGONG	Former Mobil Depot	122-126 Montague STREET	Other Petroleum	Regulation under CLM Act not required	-34.40988259	150.8939374
NORTHMEAD	Former Prestige Plastics	1C Redbank ROAD	Other Industry	Regulation under CLM Act not required	-33.79716925	150.989926

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
NORTHMEAD	Coles Express Service Station Northmead	197 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.77741733	151.0001719
NORTHMEAD	Sydney Water Land	51c Hammers ROAD	Landfill	Regulation under CLM Act not required	-33.7887535	150.9858088
NORTHMEAD	Caltex Service Station	98-100 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.78786563	150.9945909
NORTHMEAD	7-Eleven Service Station Northmead	56 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.79090731	150.9967332
NOWRA	Former Gasworks Managers Residence	24 Osborne STREET	Gasworks	Regulation under CLM Act not required	-34.8708875	150.5992586
NOWRA	Fire Station	69 Bridge ROAD	Gasworks	Regulation under CLM Act not required	-34.87081582	150.6004881
NOWRA	Historically Filled Land	70 Bridge ROAD	Unclassified	Regulation under CLM Act not required	-34.87081809	150.6013231
NOWRA	Shell Coles Express Service Station	55 Kinghorne STREET	Service Station	Regulation under CLM Act not required	-34.87633757	150.6023481
NOWRA	Former gasworks	Lamonds LANE	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-34.87111182	150.6000803
NOWRA	Former Hollingworth Scrap Yard	72-74 Jervis and 117 East STREET	Other Industry	Regulation under CLM Act not required	-34.88324216	150.6034361
NOWRA	Woolworths Service Station	60 North Street STREET	Service Station	Regulation under CLM Act not required	-34.87266278	150.6014052
NOWRA	Harry Sawkins Park	Bounded by Princes Hwy, Graham St & McGrath AVENUE	Gasworks	Regulation under CLM Act not required	-34.87093993	150.6037157
NOWRA EAST	Mobil Service Station	Lot 3 Kalandar STREET	Service Station	Contamination formerly regulated under the CLM Act	-34.88850535	150.6093504
NYNGAN	Caltex Service Station	39-41 Pangee STREET	Service Station	Regulation under CLM Act not required	-31.56101006	147.1914997
NYNGAN	Caltex Service Station	126 Pangee STREET	Service Station	Regulation under CLM Act not required	-31.56482841	147.2002892

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
NYNGAN	Main West Rail Line	Mitchell HIGHWAY	Other Industry	Regulation under CLM Act not required	-31.6411651	147.344176
OAK FLATS	Shellharbour City Works Depot	132 Industrial ROAD	Other Industry	Regulation under CLM Act not required	-34.56546013	150.8087225
OBERON	Caltex Service Station and Depot	Lowes Mount ROAD	Service Station	Regulation under CLM Act not required	-33.69509055	149.8570553
OBERON	Oberon Timber Complex	Lowes Mount ROAD	Other Industry	Regulation under CLM Act not required	-33.69264862	149.8564588
OBERON	Former Shell Depot	32 O'Connell ROAD	Other Petroleum	Regulation under CLM Act not required	-33.6997172	149.8450057
OBERON	CSR Ltd Property and King's Stockyard Creek	Off Endeavour STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.6922152	149.8686909
OCEAN SHORES	Former Ocean Shores Service Station	Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-28.51270299	153.5301496
OLD GUILDFORD	Caltex Service Station	636-644 Woodville ROAD	Service Station	Regulation under CLM Act not required	-33.86670857	150.9879189
OLD TOONGABBIE	Baulkham Hills Transmission Substation	191z Old Windsor ROAD	Other Industry	Under assessment	-33.78166777	150.9689625
ORANGE	Former Fuel Depot	24-28 Peisley STREET	Other Petroleum	Contamination currently regulated under CLM Act	-33.29624293	149.1017277
ORANGE	Caltex Orange Depot	184 Byng STREET	Service Station	Regulation under CLM Act not required	-33.28285589	149.1050273
ORANGE	Woolworths Orange Service Station	357-361 Summer Street, corner William STREET	Service Station	Regulation under CLM Act not required	-33.28445811	149.1053604
ORANGE	BP Orange Service Station (Reliance Petroleum)	81 Summer STREET	Service Station	Regulation under CLM Act not required	-33.2825884	149.0951535
ORANGE	BP-Branded Lowes Petroleum Depot	197 - 201 Margaret STREET	Other Petroleum	Regulation under CLM Act not required	-33.27145977	149.1078103
ORANGE	Caltex Summer Street Service Station Orange	70-74 Summer Street, corner Hill STREET	Service Station	Regulation under CLM Act not required	-33.28311722	149.0940712

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
ORANGE	Lowes Petroleum (BP-branded) Service Station	76 Peisley STREET	Service Station	Regulation under CLM Act not required	-33.29025034	149.1027194
ORANGE	Former Mobil Service Station	24-28 Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.2866912	149.1066505
ORANGE	BP (Reliance Petroleum) Service Station Orange	56-60 Bathurst ROAD	Service Station	Regulation under CLM Act not required	-33.28980053	149.1086212
ORANGE	Former Mobil Service Station	168 Peisley STREET	Service Station	Regulation under CLM Act not required	-33.28525478	149.1037259
ORANGE	5-7 Edward St Orange	5-7 Edward STREET	Other Industry	Contamination currently regulated under CLM Act	-33.2991077	149.1034092
OURIMBAH	Palmdale Service Centre Pty Ltd	3130 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.3381336	151.374586
OURIMBAH	United Ourimbah	51 Pacific HIGHWAY	Service Station	Under assessment	-33.36025941	151.3694483
OURIMBAH	Shell Coles Express Service Station	78-80 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.3468202	151.3710098
OXLEY VALE	Hayes Transport Services	10 Manilla ROAD	Other Petroleum	Regulation under CLM Act not required	-31.06991417	150.9101381
OYSTER BAY	Shell Coles Express Service Station	20 Carvers ROAD	Service Station	Contamination currently regulated under CLM Act	-34.00934475	151.0758626
OYSTER COVE	Cove Marine Pty Ltd	60 Frederick STREET	Unclassified	Contamination currently regulated under POEO Act	-32.73549959	151.952446
PADDINGTON	7-Eleven Service Station	59 Oxford STREET	Service Station	Contamination currently regulated under CLM Act	-33.88322921	151.2205024
PADDINGTON	Former Workshop	52 Hopewell STREET	Other Industry	Regulation under CLM Act not required	-33.88195798	151.2220744
PADSTOW	Caltex Padstow	115 Fairford ROAD	Service Station	Regulation under CLM Act not required	-33.9434571	151.0345671
PADSTOW	Selleys / Dulux	1-29 Gow STREET	Chemical Industry	Regulation under CLM Act not required	-33.93904125	151.0381725

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
PADSTOW	Former Exide Battery Manufacturing & Recycling	55 Bryant STREET	Other Industry	Contamination currently regulated under CLM Act	-33.94265241	151.0378986
PADSTOW	Galvatech	49 Gow STREET	Metal Industry	Contamination currently regulated under POEO Act	-33.93808679	151.0346862
PADSTOW	Foseco Australia	7 Stuart STREET	Chemical Industry	Regulation under CLM Act not required	-33.94342957	151.0377316
PADSTOW	Sebel Furniture	Parts 64 and 92 Gow STREET	Other Industry	Regulation under CLM Act not required	-33.93606752	151.0322057
PAGEWOOD	Former Email Site	Corner of Page Street and Holloway STREET	Metal Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.94302462	151.2132036
PAMBULA	Offsite area (roadways) adjacent to United Service Station Pambula (former Shell)	Corner Quondola Street and Bullara STREET	Service Station	Regulation under CLM Act not required	-36.93104481	149.8746763
PARKES	Caltex Service Station Parkes	352-360 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.13317454	148.173643
PARKES	Former Caltex Parkes (Mugincoble) Depot - Eugowra Rd, Mugincoble	Eugowra ROAD	Service Station	Regulation under CLM Act not required	-33.19007031	148.224822
PARKES	BP Truckstop	(Newell Highway) 1 Forbes ROAD	Other Petroleum	Regulation under CLM Act not required	-33.14309226	148.1710282
PARKES	Former BP Telescope Service Station	339-341 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.13216152	148.1743239
PARKES	BP Reliance East End Service Station Parkes	46 Clarinda STREET	Service Station	Regulation under CLM Act not required	-33.14243539	148.1846227
PARKES	Former Parkes Gas Works (including Rail Corridor and offsite land)	129 Woodward Street and land within the Parkes railway CORRIDOR	Gasworks	Contamination currently regulated under CLM Act	-33.14480316	148.1844397
PARKLEA	Caltex Parklea Service Station	Old Windsor (north of Miami Street) ROAD	Service Station	Regulation under CLM Act not required	-33.72427108	150.9388531
PARRAMATTA	BP Service Station	435 Church STREET	Service Station	Regulation under CLM Act not required	-33.80498714	151.0056151
PARRAMATTA	Coleman Oval Embankment	Cnr of Pitt STREET and Maquarie STREET	Unclassified	Regulation under CLM Act not required	-33.80441625	150.9954841

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
PARRAMATTA	7-Eleven (former Mobil) Service Station	81 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.80919769	151.0142894
PARRAMATTA	Parramatta Park Toilet Block Demolition	The Cresnet Toilet Block Parramatta PARK	Unclassified	Regulation under CLM Act not required	-33.81054034	150.9961968
PAUPONG	Former Timber Treatment Plant	Off Paupong ROAD	Other Industry	Regulation under CLM Act not required	-36.57657408	148.6624998
PENDLE HILL	7-Eleven Service Station	217 Wentworth AVENUE	Service Station	Regulation under CLM Act not required	-33.8017814	150.9577994
PENNANT HILLS	Shell Coles Express Pennant Hills West	386 Pennant Hills ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.73928611	151.0679704
PENRITH	Mirvac Industrial Site	2101 Castlereagh ROAD	Other Industry	Regulation under CLM Act not required	-33.73497514	150.6954097
PENRITH	7-Eleven (former Mobil) Service Station	212-222 Andrews ROAD	Service Station	Regulation under CLM Act not required	-33.73059678	150.6952571
PENRITH	Lowes Petroleum (Former Mobil) Depot Penrith	174 Coreen AVENUE	Other Petroleum	Regulation under CLM Act not required	-33.74484268	150.6980504
PENRITH	Caltex Service Station	Castlereagh Rd Cnr Lugard STREET	Service Station	Regulation under CLM Act not required	-33.73426843	150.6933382
PENRITH	BP Express Service Station	Corner Coreen Avenue and Castlereagh ROAD	Service Station	Regulation under CLM Act not required	-33.74385498	150.6925743
PENRITH	Crane Enfield Metals	2115-2131 Castlereagh ROAD	Metal Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.73734959	150.696442
PENRITH	7-Eleven Service Station Penrith	30 Henry STREET	Service Station	Regulation under CLM Act not required	-33.75408799	150.7045594
PENRITH	Caltex Penrith Service Station	153 Coreen AVENUE	Service Station	Regulation under CLM Act not required	-33.74287244	150.6927071
PENRITH	Jet 60 Dry Cleaners	Shop 3 134-138 Henry STREET	Unclassified	Regulation under CLM Act not required	-33.75231953	150.6964541
PENRITH	Former Dry Cleaners	Shop 3, 134-138 Henry STREET	Other Industry	Regulation under CLM Act not required	-33.75231953	150.6964541

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PENSHURST	7-Eleven Service Station	612 Forest ROAD	Service Station	Regulation under CLM Act not required	-33.96153533	151.0793525
PENSHURST	Caltex Service Station	641 King Georges ROAD	Service Station	Regulation under CLM Act not required	-33.95985335	151.0891118
PERISHER VALLEY	Perisher Centre Loading Dock	Kosciuszko ROAD	Other Petroleum	Regulation under CLM Act not required	-36.40392862	148.4111593
PERISHER VALLEY	Perisher Ski Resort	Kosciuszko ROAD	Other Petroleum	Regulation under CLM Act not required	-36.41106374	148.4005469
PETERSHAM	Fanny Durack Aquatic Centre	Station STREET	Unclassified	Regulation under CLM Act not required	-33.89194583	151.151824
PETERSHAM	7-Eleven Petersham	8-10 Crystal STREET	Service Station	Under assessment	-33.88867433	151.1585716
PHEASANTS NEST	7-Eleven Service Station	(Southbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.28291571	150.6394606
PHEASANTS NEST	7-Eleven (former Mobil) Service Station	(Northbound) Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.28303112	150.6363145
PICTON	Coles Express Picton	93-99 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.16844337	150.6114236
PICTON	McDonalds	69 -71 Argyle STREET	Service Station	Regulation under CLM Act not required	-34.16711877	150.6121524
PITT TOWN	Whites Water Service	1 Canning PLACE	Other Industry	Regulation under CLM Act not required	-33.57418268	150.8811385
PLUMPTON	Woolworths Service Station Plumpton (Plumpton Marketplace Shops)	260 Jersey ROAD	Service Station	Regulation under CLM Act not required	-33.74478874	150.8369408
POINT PIPER	5 Wunulla Road, Point Piper	5 Wunulla ROAD	Other Industry	Under assessment	-33.8683426	151.2532699
PORT BOTANY	Vopak B	20 Friendship ROAD	Chemical Industry	Regulation under CLM Act not required	-33.97946548	151.2121752
PORT BOTANY	Vopak A	49 Friendship ROAD	Chemical Industry	Regulation under CLM Act not required	-33.97426175	151.2206228



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
PORT BOTANY	Terminals	45 Friendship ROAD	Chemical Industry	Regulation under CLM Act not required	-33.97609287	151.2174402
PORT BOTANY	Bunnerong Canal	Between Brotherson Dock and Bumborah Point ROAD	Unclassified	Regulation under CLM Act not required	-33.96798227	151.2230052
PORT BOTANY	Bulk Liquids Berth UPSS, Port Botany	Charlotte ROAD	Other Petroleum	Regulation under CLM Act not required	-33.97386329	151.2120157
PORT BOTANY	Port Operations Centre UPSS, Port Botany	Penrhyn ROAD	Other Petroleum	Regulation under CLM Act not required	-33.96803686	151.2205968
PORT BOTANY	Port Botany Railway Corridors	Friendship ROAD	Other Industry	Regulation under CLM Act not required	-33.95467008	151.2178012
PORT BOTANY	Smith Bros	4 Bumborah Point ROAD	Other Petroleum	Regulation under CLM Act not required	-33.9681757	151.2239505
PORT BOTANY	Vopak Terminals	21 Fishburn ROAD	Other Industry	Under assessment	-33.97946548	151.2121752
PORT KEMBLA	Coates Hire Facility (Eastern Portion)	1 Flinders STREET	Other Industry	Regulation under CLM Act not required	-34.47104817	150.89162
PORT KEMBLA	Shell Port Kembla CVRO	87-89 Flinders STREET	Other Petroleum	Regulation under CLM Act not required	-34.46964995	150.8953859
PORT KEMBLA	Darcy Road Rail Sidings	Darcy ROAD	Other Industry	Regulation under CLM Act not required	-34.47792834	150.9105503
PORT KEMBLA	No 2 Steelworks	Five Islands ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-34.45965024	150.8844432
PORT KEMBLA	Port Kembla Orica	Foreshore Road and Darcy ROAD	Other Industry	Contamination currently regulated under CLM Act	-34.47773583	150.9054545
PORT KEMBLA	Port Kembla, Auszinc Metals and Alloys	Lot 2 Shellharbour ROAD	Metal Industry	Regulation under CLM Act not required	-34.49335414	150.8961205
PORT KEMBLA	South Yard Rail Sidings	Lot 3 Old Port ROAD	Unclassified	Regulation under CLM Act not required	-34.47500551	150.8951759
PORT KEMBLA	Manildra Park	Flinders STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-34.46946878	150.8935731

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
PORT KEMBLA	Port Kembla Copper Smelter	Military ROAD	Metal Industry	Contamination currently regulated under POEO Act	-34.4810006	150.9063426
PORT KEMBLA	Caltex Service Station	16 Flinders STREET	Service Station	Regulation under CLM Act not required	-34.47058088	150.8945864
PORT KEMBLA	BHP Area 21	Springhill ROAD	Metal Industry	Contamination formerly regulated under the CLM Act	-34.45243931	150.8676495
PORT KEMBLA	Port Kembla Steelworks Recycling Area	Springhill ROAD	Unclassified	Regulation under CLM Act not required	-34.45271181	150.8677127
PORT KEMBLA	Commonwealth Rolling Mills (CRM)	Old Port ROAD	Metal Industry	Regulation under CLM Act not required	-34.47476117	150.8974746
PORT KEMBLA	Port Kembla, Former Electricity Commission Site	Old Port Road/Christie Drive ROAD	Other Industry	Regulation under CLM Act not required	-34.46899143	150.8982854
PORT KEMBLA	Port Kembla Steelworks - Steelhaven	Five Islands ROAD	Other Industry	Regulation under CLM Act not required	-34.47605247	150.891144
PORT KEMBLA	Port Kembla Steelworks - No.1 Works Site	Five Islands ROAD	Metal Industry	Regulation under CLM Act not required	-34.47386606	150.8794912
PORT KEMBLA	Port Kembla Springhill Works	Springhill ROAD	Metal Industry	Regulation under CLM Act not required	-34.45574479	150.875052
PORT MACQUARIE	Former Mobil Depot	211 Lake ROAD	Other Petroleum	Regulation under CLM Act not required	-31.44688513	152.8864499
PORT MACQUARIE	Caltex Service Station	112-114 Gordon STREET	Service Station	Regulation under CLM Act not required	-31.43491709	152.9047618
PORT MACQUARIE	Caltex Port Macquarie Service Station	29 Lord STREET	Service Station	Regulation under CLM Act not required	-31.43326436	152.9169873
PORT MACQUARIE	Coles Myer	43 John Oxley DRIVE	Service Station	Regulation under CLM Act not required	-31.45741442	152.8739626
PORT MACQUARIE	Air BP Avgas Facility	Oliver DRIVE	Other Petroleum	Regulation under CLM Act not required	-31.43227222	152.8681083
PORT MACQUARIE	Former Mobil Service Station	Corner Oxley Highway and Major Innes DRIVE	Service Station	Regulation under CLM Act not required	-31.45738931	152.873956

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
PORT MACQUARIE	Port Macquarie Council Depot	Koala STREET	Unclassified	Regulation under CLM Act not required	-31.45341586	152.9032764
PORT MACQUARIE	Shell Coles Express Port Macquarie Service Station	121 Gordon STREET	Service Station	Regulation under CLM Act not required	-31.4343131	152.9046869
PORT MACQUARIE	Caltex Service Station	92 Hastings River DRIVE	Service Station	Regulation under CLM Act not required	-31.42934052	152.8830188
PORT MACQUARIE	Caltex Service Station	12-14 Bolwarra ROAD	Service Station	Regulation under CLM Act not required	-31.45015286	152.8854769
PORT MACQUARIE	Car park	28 Hayward STREET	Other Industry	Regulation under CLM Act not required	-31.43385131	152.9072399
PORTLAND	Ivanhoe Colliery	Pipers Flat ROAD	Other Industry	Regulation under CLM Act not required	-33.36595748	150.0099577
PORTLAND	Mt Piper Power Station	350 Boulder ROAD	Other Petroleum	Regulation under CLM Act not required	-33.35581541	150.0350801
PRAIRIEWOOD	7-Eleven (former Caltex) Service Station	485-487 Smithfield ROAD	Service Station	Regulation under CLM Act not required	-33.87102509	150.9031383
PRESTONS	Jalco Automotive Pty Ltd	238 Hoxton Park ROAD	Unclassified	Under assessment	-33.92820345	150.8928415
PROSPECT	7-Eleven (former Mobil) Service Station Prospect	354 Flushcombe ROAD	Service Station	Regulation under CLM Act not required	-33.79541624	150.9049417
PROSPECT	Pincott's Cottage, Gate C1	Off Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.81589773	150.9144343
PROSPECT	Gatehouse, 544 Reservoir Road	544 Reservoir ROAD	Unclassified	Regulation under CLM Act not required	-33.81026272	150.9160605
PROSPECT	Cottage 3, William Lawson Drive	William Lawson DRIVE	Unclassified	Regulation under CLM Act not required	-33.81490331	150.9149885
PUNCHBOWL	Former BP Service Station	1375 Canterbury Road, corner Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.93170424	151.0537302
PUNCHBOWL	Punchbowl Laundry	42-44 Belmore ROAD	Chemical Industry	Contamination currently regulated under CLM Act	-33.93582701	151.0562638

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
PUNCHBOWL	Caltex Service Station Punchbowl	1285-1289 Canterbury ROAD	Service Station	Regulation under CLM Act not required	-33.93146308	151.0596348
PUTNEY	Putney Marina	20 Waterview STREET	Other Industry	Regulation under CLM Act not required	-33.82608091	151.1003966
PYMBLE	Caltex Service Station	1089 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.74102977	151.1385257
PYMBLE	Shell Coles Express Service Station	21 Ryde ROAD	Service Station	Regulation under CLM Act not required	-33.75198512	151.1438115
PYMBLE	Former 3M site	950 Pacific HIGHWAY	Gasworks	Regulation under CLM Act not required	-33.75050288	151.1460578
PYMBLE	Pymble West Dry Cleaners	6 Philip MALL	Other Industry	Under preliminary investigation order	-33.76109009	151.1284329
PYRMONT	Former Council Works Depot (Fig and Wattle Depot)	14-26 Wattle STREET	Other Industry	Regulation under CLM Act not required	-33.8752655	151.1942645
QUAKERS HILL	7-Eleven (former Mobil) Service Station	83 Lalor ROAD	Service Station	Regulation under CLM Act not required	-33.72759077	150.8966764
QUAKERS HILL	BP Branded Parkway (Former Caltex) Service Station Quakers Hill	450 Quakers Hill PARKWAY	Service Station	Regulation under CLM Act not required	-33.72998613	150.9023617
QUEANBEYAN	Former Mobil Service Station	153 Uriarra ROAD	Service Station	Regulation under CLM Act not required	-35.34425514	149.2148687
QUEANBEYAN	Bill Lilley Automotive	169 Crawford STREET	Service Station	Regulation under CLM Act not required	-35.35138121	149.232486
QUEANBEYAN	Woolworths Queanbeyan Service Station	196 Crawford (Cnr Morisset St) STREET	Service Station	Regulation under CLM Act not required	-35.35163055	149.2335759
QUEANBEYAN	Caltex Queanbeyan Service Station	88 Macquoid (also known as Bungendore Rd) STREET	Service Station	Regulation under CLM Act not required	-35.34930535	149.2438607
QUEANBEYAN	Former Mobil Emoleum Depot	109-111 High STREET	Other Petroleum	Regulation under CLM Act not required	-35.3396115	149.237556
QUEANBEYAN	Former Caltex Depot	20-30 Railway STREET	Other Petroleum	Regulation under CLM Act not required	-35.34218326	149.2253753

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
QUEANBEYAN EAST	BP-Branded Service Station Queanbeyan	50 Yass ROAD	Service Station	Regulation under CLM Act not required	-35.34126641	149.2445103
QUEANBEYAN WEST	Caltex Service Station	Lanyon Dr Cnr Mccrae St (1 Suraci Place) STREET	Service Station	Regulation under CLM Act not required	-35.36372923	149.2067531
QUIRINDI	Former Mobil Depot Quirindi	4-6 Cross STREET	Other Petroleum	Regulation under CLM Act not required	-31.49903355	150.681972
QUIRINDI	Tamarang ServiCentre Quirindi	113-117 Station (also known as 119-121 Nowland) STREET	Service Station	Under assessment	-31.50179204	150.6814611
QUIRINDI	Caltex Service Station, Quirindi	199-201 George STREET	Service Station	Regulation under CLM Act not required	-31.5068778	150.6805874
RAMSGATE	Shell Coles Express Service Station	Grand Parade cnr Ramsgate ROAD	Service Station	Regulation under CLM Act not required	-33.98537988	151.1471234
RANDWICK	7-Eleven Service Station	126-130 Barker STREET	Service Station	Contamination currently regulated under CLM Act	-33.92096152	151.2355927
RANDWICK	Caltex Service Station	2 Alison ROAD	Service Station	Regulation under CLM Act not required	-33.9065752	151.2320697
RANDWICK	Metro Petroleum	345 Avoca STREET	Service Station	Regulation under CLM Act not required	-33.92544832	151.2396799
RANDWICK	Service Station, Randwick	33-37 Carrington ROAD	Service Station	Contamination currently regulated under CLM Act	-33.90655015	151.2525065
RAVENSWORTH	Ravensthorpe Operations Narama Mine	Lemington ROAD	Other Industry	Regulation under CLM Act not required	-32.47115903	151.0359579
RAVENSWORTH	Cumnock Colliery	Pikes Gully ROAD	Other Industry	Regulation under CLM Act not required	-32.40218281	150.9960082
RAYMOND TERRACE	Shell Coles Express Raymond Terrace	107 Adelaide (formerly Pacific Highway) STREET	Service Station	Regulation under CLM Act not required	-32.76110922	151.7492847
RAYMOND TERRACE	Caltex Service Station Raymond Terrace	136 Adelaide Street, corner Glenelg STREET	Service Station	Regulation under CLM Act not required	-32.76503842	151.7425264
RAYMOND TERRACE	Former Motor Registry	53 William STREET	Other Petroleum	Regulation under CLM Act not required	-32.76286473	151.7445839

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
RAYMOND TERRACE	Raymond Terrace Wastewater Treatment Works	22 Elizabeth AVENUE	Other Industry	Regulation under CLM Act not required	-32.7745339	151.7498871
RAYMOND TERRACE	Former Service Station	82 Benjamin Lee DRIVE	Service Station	Under preliminary investigation order	-32.76079457	151.7738493
RAZORBACK	Muscat Developments Pty Ltd	115 Mount View CLOSE	Unclassified	Under assessment	-34.15859952	150.6328008
REDFERN	BP Service Station	116 Regent STREET	Service Station	Regulation under CLM Act not required	-33.89367876	151.1995256
REDFERN	Former Printing Works	101a Marriott STREET	Other Industry	Regulation under CLM Act not required	-33.89512556	151.2113422
REDFERN	BP-branded Jasbe Surry Hills	411 Cleveland STREET	Service Station	Regulation under CLM Act not required	-33.89183974	151.2132466
REDFERN	Surry Hills Shopping Village	397-399 Cleveland & 2-38 Baptist STREET	Other Industry	Regulation under CLM Act not required	-33.89229521	151.2119397
REVESBY	Dorf Clark Industries	184-194 Milperra ROAD	Metal Industry	Regulation under CLM Act not required	-33.93387149	151.000553
REVESBY	Thetis Pty Ltd - Bituminous Products	33-35 Violet STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.93702092	151.0067896
REVESBY	Mirotone Pty Ltd	21 Marigold STREET	Chemical Industry	Contamination currently regulated under POEO Act	-33.93559608	151.0002207
REVESBY	Caltex Service Station Revesby	181 The River ROAD	Service Station	Regulation under CLM Act not required	-33.95573605	151.0171779
REVESBY	Not Applicable - various tenancies	40 Marigold STREET	Unclassified	Under assessment	-33.936788	150.998238
RHODES	Homebush Bay Sediments adjoining the former UCAL and Allied Feeds sites	Homebush BAY	Chemical Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.8263749	151.0839216
RHODES	Former Glad factory site	10-16 Marquet STREET	Chemical Industry	Regulation under CLM Act not required	-33.82884048	151.0848716
RHODES	Former Allied Feeds site	Walker STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.82465376	151.0870401

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
RHODES	Former UCAL site	Walker STREET	Chemical Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82727505	151.0853195
RHODES	Homebush Bay sediments adjoining former Berger Paint factory	Oulton AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.83535308	151.083238
RICHMOND	Caltex Richmond Service Station	98 March (Cnr East Market St) STREET	Service Station	Regulation under CLM Act not required	-33.59937996	150.7514483
RIVERSTONE	Axalta Coating Systems	15-23 Melbourne ROAD	Other Industry	Regulation under CLM Act not required	-33.6636649	150.8557519
RIVERSTONE	7-Eleven Riverstone	55 Garfield ROAD	Service Station	Regulation under CLM Act not required	-33.67802232	150.8635246
RIVERSTONE	Woolworths Vineyard Service Station, Riverstone	1 Woodland Street, corner of Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.65607641	150.8724067
RIVERSTONE	Vacant Commercial Land	88-94 Junction ROAD	Unclassified	Regulation under CLM Act not required	-33.66226398	150.8789967
RIVERWOOD	7-Eleven Riverwood	30 Bonds ROAD	Service Station	Regulation under CLM Act not required	-33.9523701	151.0583887
ROCKDALE	7-Eleven (former Mobil) Service Station	293 West Botany STREET	Service Station	Regulation under CLM Act not required	-33.9495672	151.1484667
ROCKDALE	7-Eleven Service Station	99 Railway STREET	Service Station	Regulation under CLM Act not required	-33.95247322	151.1356785
ROCKDALE	Lindsay St, Rockdale	7 Lindsay STREET	Other Industry	Under assessment	-33.95900867	151.1436466
ROOTY HILL	7-Eleven (former Mobil) Service Station	106 Rooty Hill Road South ROAD	Service Station	Regulation under CLM Act not required	-33.78036181	150.8501998
ROOTY HILL	7-Eleven (former Mobil) Service Station	1042 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.78214955	150.8287656
ROOTY HILL	Infrabuild NSW Pty Ltd (formerly OneSteel NSW Pty Ltd)	22 Kellogg ROAD	Other Industry	Regulation under CLM Act not required	-33.76664143	150.8493465
ROSE BAY	Caltex Rose Bay Service Station	488 Old South Head ROAD	Service Station	Regulation under CLM Act not required	-33.87475145	151.2723847



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
ROSE BAY	Rose Bay Budget Service station	638-646 New South Head ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.87062149	151.2677617
ROSEBERY	Autofoil P/L	2 Mentmore AVENUE	Other Industry	Regulation under CLM Act not required	-33.91121318	151.2054882
ROSEBERY	Caltex Rosebery Service Station	321 Gardeners (Cnr Macquarie St) ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.92302898	151.2059541
ROSEBERY	Former Industrial Site (Former Electroplating Facility)	108 Dunning AVENUE	Other Industry	Regulation under CLM Act not required	-33.91630811	151.201557
ROSEBERY	Rosebery Service Station	395 Gardeners ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.92246784	151.2024589
ROSEHILL	Former Akzo Nobel site	4 Grand AVENUE	Chemical Industry	Contamination currently regulated under CLM Act	-33.82238826	151.0319264
ROSEHILL	James Hardie Australia and former James Hardie lands	8 and 10 Colquhoun Street and 5 Devon STREET	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82539019	151.0339466
ROSEHILL	2 Ritchie Street, Rosehill	2 Ritchie STREET	Unclassified	Contamination formerly regulated under the CLM Act	-33.82691192	151.0154948
ROSEHILL	James Hardie Factory (former, western portion)	181 James Ruse DRIVE	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.81605834	151.0238145
ROSEHILL	Viva Clyde Western Area	Durham Street, Rosehill (Camellia Peninsula) STREET	Other Petroleum	Under assessment	-33.82757	151.038752
ROSELANDS	Roselands Shopping Centre	24 Roseland AVENUE	Service Station	Regulation under CLM Act not required	-33.93499281	151.0691284
ROSELANDS	Woolworths Caltex Petrol Service Station Roselands	218 King Georges ROAD	Service Station	Regulation under CLM Act not required	-33.93303118	151.0735036
ROSELANDS	7-Eleven (former Mobil) Service Station	91 Canary's ROAD	Service Station	Regulation under CLM Act not required	-33.93356078	151.0736274
ROSEVILLE	Mobil Service Station	2 Boundary STREET	Service Station	Regulation under CLM Act not required	-33.78769177	151.1796011
ROSEVILLE CHASE	Coles Express Roseville Chase	388 Eastern Valley WAY	Service Station	Regulation under CLM Act not required	-33.78337722	151.1973901

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ROZELLE	Caltex Service Station	121 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.86252996	151.168497
ROZELLE	7-Eleven (former Mobil) Service Station	178-180 (176-184) Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.8630268	151.1680857
ROZELLE	Kennards Rozelle	15-39 Wellington STREET	Other Petroleum	Regulation under CLM Act not required	-33.86176757	151.1686519
ROZELLE	White Bay Power Station	Robert STREET	Other Industry	Regulation under CLM Act not required	-33.86674636	151.1772204
ROZELLE	BP Service Station	Corner Darling Street and Thornton STREET	Service Station	Regulation under CLM Act not required	-33.8591647	151.1716591
RUFUS RIVER	SA Water Depot - Rufus River	Old Wentworth STREET	Other Petroleum	Regulation under CLM Act not required	-34.04191512	141.2679475
RUSHCUTTERS BAY	d'Albora Marinas	1b New Beach ROAD	Other Industry	Contamination currently regulated under POEO Act	-33.87351297	151.2345082
RUTHERFORD	Rutherford Transpacific	11 Kyle STREET	Other Industry	Regulation under CLM Act not required	-32.71105203	151.500311
RUTHERFORD	Shell Coles Express Service Station Rutherford	118 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-32.7208703	151.5394595
RUTHERFORD	Caltex Service Station	134-138 New England HIGHWAY	Service Station	Regulation under CLM Act not required	-32.7202589	151.5381526
RUTHERFORD	Transpacific Industrial Services/Nationwide Oil Pty Ltd	99 Kyle STREET	Chemical Industry	Regulation under CLM Act not required	-32.71262159	151.5013865
RUTHERFORD	Former Anambah Landfill	Anambah ROAD	Landfill	Under assessment	-32.70493978	151.512629
RYDALMERE	Caltex Service Station	309 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.81196193	151.0371185
RYDALMERE	Mitsubishi Electric	348 Victoria ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.81040138	151.0392812
RYDALMERE	Rheem Australia	1 Alan STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.81545013	151.0295476

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
RYDALMERE	BP Service Station	265 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.8109483	151.0328101
RYDALMERE	Hunter Douglas	Victoria ROAD	Chemical Industry	Regulation under CLM Act not required	-33.81009112	151.0384732
RYDALMERE	United Petroleum (former 7-Eleven) Service Station Rydalmere	262-272 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.81006724	151.032377
RYDE	Shell Coles Express Ryde	45 Lane Cove ROAD	Service Station	Regulation under CLM Act not required	-33.80726028	151.109981
RYDE	Caltex Service Station	110 Lane Cove ROAD	Service Station	Regulation under CLM Act not required	-33.80142973	151.1137925
RYDE	7-Eleven (former Mobil) Service Station	326-328 Blaxland ROAD	Service Station	Regulation under CLM Act not required	-33.80242183	151.1004278
RYDE	Ryde Bus Depot	51 - 75 Buffalo ROAD	Other Petroleum	Regulation under CLM Act not required	-33.81679771	151.1225255
SANCTUARY POINT	United Service Station, Sanctuary Point	147 Larmer AVENUE	Service Station	Regulation under CLM Act not required	-35.09918861	150.6329537
SANDGATE	Caltex Service Station Sandgate	162 Maitland ROAD	Service Station	Regulation under CLM Act not required	-32.86501596	151.706161
SANDGATE	North Limited Storage Handling facility	Maitland ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-32.86598453	151.7012866
SANS SOUCI	7-Eleven (Former Mobil) Service Station	474 Rocky Point ROAD	Service Station	Regulation under CLM Act not required	-33.99088939	151.1333779
SANS SOUCI	BP Sans Souci	520 Rocky Point ROAD	Service Station	Contamination currently regulated under CLM Act	-33.99245122	151.1323571
SANS SOUCI	Kendall Street Reserve	Lawson Street and Kendall STREET	Landfill	Regulation under CLM Act not required	-33.99966431	151.13005
SANS SOUCI	Former Service Station	542-544 Rocky Point ROAD	Service Station	Contamination was addressed via the planning process (EP&A Act)	-33.99376148	151.1316131
SANS SOUCI	Former 7-Eleven Ramsgate	368 Rocky Point ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.98615125	151.1359961

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SCHOFIELDS	Reserve 478, Grange Avenue, Schofields	Reserve 478, Grange AVENUE	Landfill	Regulation under CLM Act not required	-33.70228736	150.8518591
SCONE	Shell Coles Express Service Station	91- 93 Kelly STREET	Service Station	Contamination currently regulated under CLM Act	-32.04715941	150.8676346
SCONE	Scone Works Depot	220 Susan STREET	Other Petroleum	Regulation under CLM Act not required	-32.04444892	150.879152
SCONE	Mobil Scone Airport Elt	8 Walter Pye AVENUE	Other Petroleum	Regulation under CLM Act not required	-32.03596733	150.8323698
SCONE	BP - Former Depot	Scone St, Guernsey St & Susan STREET	Service Station	Contamination formerly regulated under the CLM Act	-32.04599284	150.8662046
SCONE	BP Scone	26 Kelly STREET	Service Station	Regulation under CLM Act not required	-32.04033034	150.86549
SCONE	BP Scone Service Station	58 Kelly STREET	Service Station	Contamination currently regulated under CLM Act	-32.0437827	150.8662754
SEVEN HILLS	7-Eleven (Former Mobil) Service Station Seven Hills	151 Prospect HIGHWAY	Service Station	Regulation under CLM Act not required	-33.76894646	150.9427004
SEVEN HILLS	Australia Post	3 Powers ROAD	Unclassified	Regulation under CLM Act not required	-33.77434009	150.9395495
SEVEN HILLS	Car Park (Former Brickworks / Warehouse)	1 Powers ROAD	Other Industry	Regulation under CLM Act not required	-33.77387442	150.9379787
SEVEN HILLS	BP-branded Jasbe Petroleum Service Station	156 Prospect HIGHWAY	Service Station	Regulation under CLM Act not required	-33.76906502	150.9414821
SEVEN HILLS	Caltex Service Station	38 Abbott ROAD	Service Station	Regulation under CLM Act not required	-33.76692649	150.9548271
SEVEN HILLS	Caltex Service Station Seven Hills	105 Station ROAD	Service Station	Regulation under CLM Act not required	-33.77435881	150.9448733
SEVEN HILLS	Former Australian Waste Oil Refineries Site	27 Powers ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.77536127	150.9511122
SHELLY BEACH	Former Shelly Beach Landfill	Oaks AVENUE	Landfill	Regulation under CLM Act not required	-33.36700551	151.4913631

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SHORTLAND	Former Astra Street Landfill	2 (part) & 28 (part) Astra STREET	Landfill	Contamination currently regulated under CLM Act	-32.8689426	151.6974685
SHORTLAND	Tuxford Park landfill	10 King STREET	Landfill	Regulation under CLM Act not required	-32.87721139	151.6936837
SHORTLAND	Former Lorna St landfill	8/475 Sandgate ROAD	Landfill	Regulation under CLM Act not required	-32.87888726	151.7023245
SHORTLAND	7-Eleven (Former BP) Service Station	298-302 Sandgate ROAD	Service Station	Regulation under CLM Act not required	-32.8861645	151.6953912
SHORTLAND	Shortland Wastewater Treatment Works	Aden STREET	Other Industry	Under assessment	-32.88228564	151.6819137
SHORTLAND	Shortland Wastewater Treatment Works - duplicate entry	Aden STREET	Other Industry	Under assessment	-32.88228564	151.6819137
SILVERWATER	Former Silverwater Landfill	Carnarvon ROAD	Landfill	Contamination currently regulated under CLM Act	-33.83506394	151.033214
SILVERWATER	Vacant property	103-105 Silverwater ROAD	Other Industry	Regulation under CLM Act not required	-33.83831374	151.0472576
SILVERWATER	Storage Facility	54-58 Derby STREET	Unclassified	Under assessment	-33.83855869	151.0478649
SILVERWATER	Former Printing Facility	46-58 Derby STREET	Other Industry	Under assessment	-33.83866058	151.0482675
SILVERWATER	Silverwater Correctional Complex	Holker STREET	Landfill	Regulation under CLM Act not required	-33.83123611	151.0585298
SINGLETON	BP Service Station Singleton	53 George (Cnr Macquarie St) STREET	Other Petroleum	Regulation under CLM Act not required	-32.56182325	151.1748054
SINGLETON	Singleton Gasworks	55-57 John STREET	Gasworks	Contamination formerly regulated under the CLM Act	-32.56774715	151.1658188
SINGLETON	Shell Coles Express Service Station	69-73 George STREET	Service Station	Regulation under CLM Act not required	-32.56297156	151.1755215
SINGLETON	Mobil Singleton Airport Elt	74B Range ROAD	Other Petroleum	Regulation under CLM Act not required	-32.60270846	151.1944828

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SINGLETON	Putty Saw Mill	(via Singleton) Putty ROAD	Other Industry	Contamination currently regulated under CLM Act	-32.99958725	150.7111684
SINGLETON	NSW Mines Rescue Services - Singleton	6 Lachlan AVENUE	Other Industry	Regulation under CLM Act not required	-32.54537821	151.156584
SMITHFIELD	Caltex Smithfield	16-18 Tait STREET	Service Station	Regulation under CLM Act not required	-33.84596441	150.9435497
SMITHFIELD	Freestones	1 Hume ROAD	Other Petroleum	Regulation under CLM Act not required	-33.83577694	150.9310112
SMITHFIELD	Liquip International	13 Hume ROAD	Other Industry	Regulation under CLM Act not required	-33.83802635	150.9319034
SMITHFIELD	Coles Express (former Mobil) Service Station	678 The Horsley Drive, corner Smithfield ROAD	Service Station	Regulation under CLM Act not required	-33.85376154	150.9400104
SMITHFIELD	Former Landfill	Little STREET	Landfill	Contamination being managed via the planning process (EP&A Act)	-33.85025253	150.9411561
SOUTH ALBURY	BP Border Service Station	Corner Ebdon Street and Wodonga PLACE	Service Station	Contamination formerly regulated under the CLM Act	-36.08875942	146.9093882
SOUTH BOWENFELS	Shell Coles Express Service Station	Lot 1 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.50589001	150.1238487
SOUTH COOGEE	Caltex South Coogee Service Station	169-173 Malabar ROAD	Service Station	Regulation under CLM Act not required	-33.93233184	151.2574377
SOUTH GRAFTON	Shell Coles Express Service Station	91 Bent STREET	Service Station	Regulation under CLM Act not required	-29.70605829	152.9400329
SOUTH GRAFTON	Former United (former Mobil) Service Station	Corner Pacific Highway and Charles STREET	Service Station	Regulation under CLM Act not required	-29.70814828	152.9412928
SOUTH GRAFTON	Former Caltex Service Station	46-58 Schwinghammer STREET	Service Station	Regulation under CLM Act not required	-29.71149672	152.9453337
SOUTH GRAFTON	Former Caltex Depot South Grafton	72-82 Swallow ROAD	Other Petroleum	Regulation under CLM Act not required	-29.73168549	152.944024
SOUTH GRAFTON	Caltex Service Station	Pacific Hwy Cnr Gwyder HIGHWAY	Service Station	Regulation under CLM Act not required	-29.70739015	152.9425508

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SOUTH GRANVILLE	Enhance Service Station South Granville	2 Rawson ROAD	Service Station	Regulation under CLM Act not required	-33.86366193	151.0088768
SOUTH KEMPSEY	Caltex Service Station	52 Lachlan STREET	Service Station	Regulation under CLM Act not required	-31.09361084	152.8370796
SOUTH LISMORE	North Coast Petroleum (Former Mobil) Depot Lismore	19-21 Elliot ROAD	Other Petroleum	Regulation under CLM Act not required	-28.81212046	153.2661935
SOUTH LISMORE	Former Mobil Service Station	126 - 128 Union STREET	Service Station	Regulation under CLM Act not required	-28.81242175	153.267541
SOUTH LISMORE	Caltex Service Station	237 Union STREET	Service Station	Regulation under CLM Act not required	-28.82052708	153.2648111
SOUTH LISMORE	Former Mobil Depot	26-32 Phyllis STREET	Other Petroleum	Regulation under CLM Act not required	-28.81005206	153.2660073
SOUTH MURWILLUMBAH	Former Caltex Depot	39 Lundberg DRIVE	Service Station	Regulation under CLM Act not required	-28.332622	153.4212884
SOUTH MURWILLUMBAH	Caltex Service Station	1-7 Buchanan (Cnr Tweed Valley Way) STREET	Service Station	Regulation under CLM Act not required	-28.32687988	153.4093274
SOUTH MURWILLUMBAH	Former Mobil Depot	45 Wardrop STREET	Other Petroleum	Regulation under CLM Act not required	-28.33421395	153.3993772
SOUTH NOWRA	Caltex South Nowra	100 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.90516081	150.6029621
SOUTH PENRITH	7-Eleven Service Station	45 Aspen STREET	Service Station	Regulation under CLM Act not required	-33.77727694	150.7107228
SOUTH TAMWORTH	Coles Express Tamworth	251 - 253 Goonoo Goonoo ROAD	Service Station	Contamination currently regulated under CLM Act	-31.1118945	150.9228523
SOUTH TAMWORTH	Caltex Service Station	2 Kathleen Street, corner Kent STREET	Service Station	Regulation under CLM Act not required	-31.10361712	150.9186343
SOUTH WENTWORTHVILLE	Aldi Stores Development	331-339 Great Western HIGHWAY	Metal Industry	Regulation under CLM Act not required	-33.81605854	150.9697429
SOUTH WENTWORTHVILLE	Caltex Service Station	313 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.81643692	150.9718802

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SOUTH WEST ROCKS	Former Trial Bay Caltex Depot	Phillip DRIVE	Other Petroleum	Under assessment	-30.89190078	153.0573056
SOUTH WEST ROCKS	Former Shell Trial Bay Depot	Phillip DRIVE	Other Petroleum	Regulation under CLM Act not required	-30.89273836	153.0612772
SOUTH WEST ROCKS	Residential area and Reserve opposite Former Caltex terminal	Phillip DRIVE	Other Petroleum	Regulation under CLM Act not required	-30.89172594	153.0573164
SPRINGVALE	Springvale Colliery	Castlereagh HIGHWAY	Other Industry	Regulation under CLM Act not required	-33.40334736	150.1070462
ST CLAIR	7-Eleven (former Mobil) Service Station	4 Endeavour AVENUE	Service Station	Regulation under CLM Act not required	-33.79430926	150.7885793
ST IVES	7-Eleven (former Mobil) St Ives Service Station	157-159 Mona Vale Road, corner Putarri AVENUE	Service Station	Regulation under CLM Act not required	-33.73265301	151.1563899
ST IVES	Caltex Service Station	452 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.70752272	151.187545
ST IVES	Caltex Service Station	164 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.7307595	151.1570462
ST IVES	Caltex Service Station St Ives	363 Mona Vale ROAD	Service Station	Regulation under CLM Act not required	-33.7168971	151.1735263
ST IVES	Shell Service Station	179-181 Mona Vale ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.73124859	151.1575827
ST LEONARDS	Telstra Data Centre	4A Herbert STREET	Other Petroleum	Regulation under CLM Act not required	-33.81873741	151.1914222
ST MARYS	Former Woolworths Service Station	120-128 Forrester ROAD	Service Station	Regulation under CLM Act not required	-33.75525115	150.7752897
ST MARYS	7-Eleven (former Mobil) Service Station	2 Christie STREET	Service Station	Regulation under CLM Act not required	-33.74790843	150.7767667
ST MARYS	7-Eleven (former Mobil) Service Station	2 Wilson STREET	Service Station	Regulation under CLM Act not required	-33.77790415	150.771689
ST MARYS	Solveco	38 LINKS ROAD	Other Industry	Contamination currently regulated under CLM Act	-33.73875413	150.7716457



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
ST MARYS	Integral Energy Mt Druitt Transmission Substation	69 Kurrajong North ROAD	Other Industry	Regulation under CLM Act not required	-33.76376093	150.7921691
ST MARYS	Caltex St Marys Service Station	Wordoo St Cnr Forrester ROAD	Service Station	Regulation under CLM Act not required	-33.75334263	150.7755489
ST MARYS	Chemcolour Industries	19-25 Anne STREET	Chemical Industry	Regulation under CLM Act not required	-33.75027071	150.7725397
ST MARYS	Old Drycleaning location	1-7 Queen STREET	Other Industry	Under assessment	-33.76223376	150.774412
ST MARYS	St Mary's Shopping Village	10 Charles Hackett DRIVE	Other Industry	Regulation under CLM Act not required	-33.76647672	150.7710143
ST PETERS	Cooks River Rail Terminal	20 Canal ROAD	Unclassified	Regulation under CLM Act not required	-33.91943986	151.1726689
ST PETERS	Camdenville Park	May STREET	Other Industry	Regulation under CLM Act not required	-33.90911815	151.176951
ST PETERS	Former Tidyburn Facility	53 Barwon Park ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.9130091	151.1809912
ST PETERS	BP Express Service Station	2 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-33.90982281	151.1809936
ST PETERS	Former Industrial Manufacturing Facility (Taubman's Paints)	75 Mary STREET	Other Industry	Regulation under CLM Act not required	-33.91307297	151.1731383
ST PETERS	Burrows Industrial Estate	1-3 Burrows ROAD	Landfill	Regulation under CLM Act not required	-33.91814763	151.1789035
STANMORE	125 Corunna Road	125 Corunna ROAD	Unclassified	Regulation under CLM Act not required	-33.88937382	151.1644589
STOCKTON	Former Coroba Landfill	310 Fullerton STREET	Landfill	Regulation under CLM Act not required	-32.89578751	151.7898857
STRATHFIELD	7-Eleven (former Mobil) Service Station	577 Liverpool ROAD	Service Station	Regulation under CLM Act not required	-33.88736091	151.0743474
STRATHFIELD	Lot 1 DP603465	7-15 Water STREET	Landfill	Under assessment	-33.895947	151.082013

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
STRATHFIELD SOUTH	Former Landfill Site	7-9 Dunlop STREET	Landfill	Regulation under CLM Act not required	-33.89509698	151.0796751
STRATHFIELD SOUTH	7-23 Water Street, Strathfield South	7-23 Water STREET	Landfill	Under assessment	-33.895947	151.082013
STRATHFIELD SOUTH	Lot 2 DP603465	17 Water STREET	Unclassified	Under assessment	-33.896377	151.081873
STROUD	Stroud Fuel Supplies (Former Caltex) Service Station	1 Cowper STREET	Service Station	Regulation under CLM Act not required	-32.39092749	151.9563089
SUFFOLK PARK	BP Service Station	207-209 Broken Head ROAD	Service Station	Regulation under CLM Act not required	-28.68800088	153.6083821
SUFFOLK PARK	Suffolk Park dip site	Cnr Broken Head Road & Beech DRIVE	Cattle Dip	Regulation under CLM Act not required	-28.6874242	153.6072824
SUMMER HILL	Maurice Dry Cleaners	150 Smith STREET	Other Industry	Under assessment	-33.89191012	151.1372942
SURRY HILLS	Woolworths Petrol Surry Hills	475 Cleveland STREET	Service Station	Regulation under CLM Act not required	-33.89223271	151.2161434
SURRY HILLS	Former Legion Cabs (Trading) Cooperative	81 & 81A (Formerly 69 - 81) Foveaux STREET	Service Station	Regulation under CLM Act not required	-33.88470082	151.2107944
SURRY HILLS	Ausgrid Road Reserve	Mary STREET	Other Industry	Regulation under CLM Act not required	-33.88292195	151.2095176
SUTHERLAND	United Service Station and Sutherland Reservoir	1 to 3 Oxford STREET	Service Station	Contamination currently regulated under CLM Act	-34.029532	151.0579906
SUTHERLAND	7-Eleven Service Station	693 Old Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.02976735	151.0588789
SUTTON FOREST	Coles Express Sutton Forest West	Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-34.60808989	150.2250592
SWANSEA	Caltex Service Station	126 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.08811841	151.6381764
SWANSEA	Swansea 1 - Wastewater Pumping Station	137 and 137a Northcote AVENUE	Other Industry	Regulation under CLM Act not required	-33.09733813	151.6473669

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
SYDENHAM	SRA Land	117 Railway PARADE	Other Industry	Regulation under CLM Act not required	-33.91560723	151.1656846
SYDENHAM	Sydenham XPT Maintenance Facility	Way STREET	Other Industry	Regulation under CLM Act not required	-33.91698468	151.1614089
SYDNEY	Interpro House (OSP 46581)	447 Kent STREET	Other Petroleum	Regulation under CLM Act not required	-33.87225413	151.204761
SYDNEY	Eurostar Dry Cleaners	100 Oxford STREET	Chemical Industry	Regulation under CLM Act not required	-33.8792987	151.2156647
SYDNEY	Chifley Tower (basement fuel storage area)	2 Chifley SQUARE	Other Petroleum	Under assessment	-33.8659151	151.2117496
SYDNEY OLYMPIC PARK	RMS Western Precinct	14A-14E and 16 Hill ROAD	Other Petroleum	Regulation under CLM Act not required	-33.82239777	151.0758664
SYDNEY OLYMPIC PARK	Haslams Creek South Area 3	At Kronos Hill, Kevin Coombes AVENUE	Landfill	Contamination formerly regulated under the CLM Act	-33.84113059	151.0602966
SYDNEY OLYMPIC PARK	Bicentennial Park	Bicentennial DRIVE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.84456248	151.0788116
SYDNEY OLYMPIC PARK	Former Golf Driving Range Landfill	Sarah Durack AVENUE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.85358517	151.0713987
SYDNEY OLYMPIC PARK	Kronos Hill Landfill	Kevin Coombes AVENUE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.84014442	151.0649521
SYDNEY OLYMPIC PARK	Wilson Park (Former oil gas plant site)	Newington ROAD	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82623982	151.0536833
SYDNEY OLYMPIC PARK	Woo-la-ra Landfill	Hill ROAD	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82695807	151.07282
SYDNEY OLYMPIC PARK	Aquatic Centre Carpark Landfill	Shane Gould AVENUE	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.85153457	151.0678127
SYDNEY OLYMPIC PARK	Blaxland Common Landfill	Jamieson STREET	Landfill	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.82638382	151.05972
SYLVANIA	Caltex Service Station	61 Port Hacking ROAD	Service Station	Regulation under CLM Act not required	-34.0140089	151.104212

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
SYLVANIA HEIGHTS	Ampol Service Station (former Caltex) - Sylvania Heights	414-416 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-34.02361051	151.0895394
TALBINGO	Old Town Landfill	Bridle STREET	Landfill	Regulation under CLM Act not required	-35.59018237	148.3041771
TALBINGO	T3 Spoil dump and adjoining river sediments	Off Snowy Mountains HIGHWAY	Landfill	Contamination formerly regulated under the CLM Act	-35.6177268	148.2926158
TALBINGO	Former grit blasting site	Old Damsite ROAD	Other Industry	Regulation under CLM Act not required	-35.60894551	148.3030165
TALLAWANG	Rail Corridor at Tallawang	Whistons LANE	Other Industry	Under assessment	-32.201009	149.45324
TAMINDA	Taminda Depots and Adjacent Areas	27-29 Gunnedah ROAD	Other Petroleum	Under assessment	-31.09642128	150.9058193
TAMINDA	Mobil Depot	9 Hinkler ROAD	Other Petroleum	Regulation under CLM Act not required	-31.09584286	150.9040493
TAMINDA	Cleanaway Operations Pty Ltd	31 Gunnedah ROAD	Other Industry	Under assessment	-31.09621029	150.9051567
TAMINDA	Cummins South Pacific Pty Ltd	141 Gunnedah ROAD	Other Petroleum	Under assessment	-31.096677	150.891745
TAMWORTH	Caltex Tamworth Service Station	109 Gunnedah ROAD	Service Station	Regulation under CLM Act not required	-31.09723226	150.8955299
TAMWORTH	Curlew Crescent	19-29 Curlew CRESCENT	Metal Industry	Regulation under CLM Act not required	-31.06963607	150.9069306
TAMWORTH	Former Service Station, Fitzpatrick Super Fund, Tamworth	210 Goonoo Goonoo ROAD	Service Station	Regulation under CLM Act not required	-31.10613594	150.9234143
TAMWORTH	Gunnedah Road Site	49 GUNNEDAH ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-31.09574904	150.9021583
TAMWORTH	Elovera Former Sheep Dip	730 Ascot Calala ROAD	Cattle Dip	Regulation under CLM Act not required	-31.1801846	150.962897
TAMWORTH	Housing NSW	29 -33 White STREET	Other Petroleum	Regulation under CLM Act not required	-31.0915651	150.9357811

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
TAMWORTH	Former Mobil Service Station	373-375 Armidale ROAD	Service Station	Regulation under CLM Act not required	-31.10122679	150.9441341
TAMWORTH	Kensell's Mitsubishi	11-14 Kable AVENUE	Other Petroleum	Regulation under CLM Act not required	-31.08921565	150.9273063
TAMWORTH	Caltex Star Tamworth	21 White STREET	Service Station	Regulation under CLM Act not required	-31.09255137	150.9341709
TAMWORTH	Former Service Station Tamworth	(Cnr Scott Rd) 254-256 Goonoo Goonoo ROAD	Service Station	Regulation under CLM Act not required	-31.1118945	150.9228523
TAMWORTH	Elgas Depot (former gasworks)	115 Marius STREET	Gasworks	Under preliminary investigation order	-31.08546191	150.926437
TAMWORTH	Proposed ALDI Store Tamworth	194-196 Peel STREET	Other Industry	Under assessment	-31.08522053	150.9260054
TARAGO	Tarago Railway Siding	Goulburn STREET	Other Industry	Contamination currently regulated under CLM Act	-35.0695949	149.6516166
TARAGO	Tarago former Station Masters Cottage	106 Goulburn STREET	Landfill	Under assessment	-35.06938653	149.6521178
TARCUTTA	Mobil Service Station	(Hume Highway) 32 Sydney STREET	Service Station	Contamination formerly regulated under the CLM Act	-35.2772942	147.73574
TAREE	Caltex Taree	12 Pitt STREET	Service Station	Regulation under CLM Act not required	-31.90551738	152.4783334
TAREE	Former Caltex Depot	44 Stevenson STREET	Other Petroleum	Regulation under CLM Act not required	-31.90563595	152.4640848
TAREE	Former BP Service Station (Reliance Petroleum)	150 Manning River DRIVE	Service Station	Regulation under CLM Act not required	-31.93842026	152.4682056
TAREE	Former Shell Depot	53-55 Stevenson STREET	Other Petroleum	Regulation under CLM Act not required	-31.90514622	152.4649706
TAREE	United Service Station and Former Mobil Depot	85 Muldoon Street, corner Grey Gum ROAD	Service Station	Regulation under CLM Act not required	-31.89744109	152.4508569
TAREE	Caltex Service Station	104-106 Commerce STREET	Service Station	Regulation under CLM Act not required	-31.90720519	152.4500926

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
TAREE	Footpath in front of the former BP service station	53-55 Victoria STREET	Service Station	Regulation under CLM Act not required	-31.91015653	152.4659073
TAREE	20 Pitt Street, Taree	20 Pitt STREET	Other Petroleum	Under assessment	-31.904003	152.482089
TAREN POINT	Former Oyster Farm	Part 2R Alexander Avenue and part 98 Woodlands ROAD	Other Industry	Contamination was addressed via the planning process (EP&A Act)	-34.01714802	151.1252694
TAREN POINT	Former Oyster Farmer	1A Atkinson ROAD	Other Industry	Regulation under CLM Act not required	-34.02081803	151.1283282
TAREN POINT	Former manufacturing site	46-50 Bay ROAD	Other Industry	Regulation under CLM Act not required	-34.0236184	151.1231649
TAREN POINT	Mangrove Lane Cycle pathway	Mangrove LANE	Unclassified	Regulation under CLM Act not required	-34.02404025	151.1324783
TAREN POINT	Caltex Service Station	114 Taren Point ROAD	Service Station	Regulation under CLM Act not required	-34.02065958	151.1218938
TAREN POINT	Shell Coles Express Service Station	99-103 Parraweena ROAD	Service Station	Regulation under CLM Act not required	-34.02630233	151.1200897
TAREN POINT	Redevelopment Site	25 Bay ROAD	Landfill	Regulation under CLM Act not required	-34.02119591	151.1274727
TELARAH	Former Ausgrid Depot	Green STREET	Other Industry	Regulation under CLM Act not required	-32.7276446	151.5269745
TELARAH	ACIRL	5 Junction STREET	Other Industry	Regulation under CLM Act not required	-32.73457183	151.5400128
TEMORA	Woolworths Caltex Temora	98-100 Hoskins STREET	Service Station	Regulation under CLM Act not required	-34.44324584	147.5318667
TEMORA	Former Temora Roundhouse	Corner Victoria and Camp STREET	Unclassified	Regulation under CLM Act not required	-34.45074538	147.5295383
TEMPE	Tempe Depot	1a Gannon STREET	Other Petroleum	Regulation under CLM Act not required	-33.92408255	151.1596469
TEMPE	Caltex Service Station	775 Princes HIGHWAY	Service Station	Contamination currently regulated under CLM Act	-33.9253681	151.1596532

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TEMPE	Former Tempe Tip	South STREET	Landfill	Contamination currently regulated under CLM Act	-33.92558642	151.1667178
TEMPE	Railcorp Site Renwick Street	Renwick STREET	Other Industry	Regulation under CLM Act not required	-33.91997709	151.1576058
TENTERFIELD	United Tenterfield Service Station	94 Rouse STREET	Service Station	Under assessment	-29.06260969	152.0168305
TERALBA	Lake Macquarie Teralba Sanitary Depot	Griffen ROAD	Landfill	Regulation under CLM Act not required	-32.9372059	151.6214528
TERALBA	Lucky's Scrap Metal Yard	21 Racecourse ROAD	Metal Industry	Contamination currently regulated under CLM Act	-32.946854	151.617083
TERANIA CREEK	Former Izzards Cattle Tick Dip	Wallace ROAD	Cattle Dip	Contamination formerly regulated under the CLM Act	-28.64999469	153.2788615
THE ENTRANCE NORTH	The Entrance North Beach (Crown Reserve)	25CR Hargraves STREET	Landfill	Under assessment	-33.33770829	151.5050033
THE ROCKS	Dawes Point Park	Hickson ROAD	Other Industry	Regulation under CLM Act not required	-33.85518053	151.2089319
THIRLMERE	Thirlmere Rail Heritage Museum	10 Barbour ROAD	Other Industry	Regulation under CLM Act not required	-34.20689245	150.5693902
THORNLEIGH	Caltex Thornleigh Service Station	192-198 Pennant Hills (Cnr Duffy Ave) ROAD	Service Station	Regulation under CLM Act not required	-33.72660793	151.08364
THORNLEIGH	Coles Express Service Station Thornleigh	188 - 190 Pennant Hills ROAD	Service Station	Regulation under CLM Act not required	-33.72502184	151.0850569
THORNTON	Energy Australia Thornton Pole Yard	55 Weakleys DRIVE	Other Industry	Regulation under CLM Act not required	-32.79973875	151.6374998
TIGHES HILL	Holcim Australia Cement Batching Plant	340 Industrial DRIVE	Other Industry	Regulation under CLM Act not required	-32.90532418	151.7574857
TIGHES HILL	SRA Land	73 Elizabeth STREET	Unclassified	Regulation under CLM Act not required	-32.90795794	151.754631
TIGHES HILL	Former Ampol Depot	94 Elizabeth STREET	Other Petroleum	Regulation under CLM Act not required	-32.90658137	151.757239

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TIGHES HILL	Former Mobil Terminal	110 Elizabeth STREET	Other Petroleum	Contamination formerly regulated under the CLM Act	-32.90600406	151.7586907
TOCUMWAL	Former Mobil Depot	250 Murray STREET	Other Petroleum	Regulation under CLM Act not required	-35.79180653	145.5648214
TOCUMWAL	Former Mobil Depot	79-83 Deniliquin ROAD	Other Petroleum	Regulation under CLM Act not required	-35.80914914	145.5585528
TOMAGO	Balcombe Sweat Furnace	26 Laverick AVENUE	Metal Industry	Regulation under CLM Act not required	-32.82557395	151.7056416
TOMAGO	Former Hydromet Site	25 School DRIVE	Metal Industry	Under assessment	-32.8301553	151.7300603
TOMAGO	RZM Site - Tomago	1877 Pacific HIGHWAY	Other Industry	Regulation under CLM Act not required	-32.81419433	151.6985159
TOMERONG	Log Cabin Service Station (United Petroleum)	D1300 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.01820959	150.5779687
TOONGABBIE	7-Eleven (Former Mobil) Service Station Toongabbie	3 Metella ROAD	Service Station	Regulation under CLM Act not required	-33.78692357	150.9462837
TOORMINA	Caltex Service Station	2 Minorca PLACE	Service Station	Regulation under CLM Act not required	-30.35229568	153.0906606
TORONTO	Coles XP (Former Mobil) Toronto Service Station	133 - 137 Cary (Cnr Thorne St) STREET	Service Station	Regulation under CLM Act not required	-33.01187681	151.5930879
TORONTO	BP Toronto Service Station	132 Cary (Cnr Donnelly Ave) STREET	Service Station	Regulation under CLM Act not required	-33.01144673	151.5937863
TORONTO	Toronto Hotel	74 Victory PARADE	Unclassified	Regulation under CLM Act not required	-33.01214835	151.5958127
TORONTO	Caltex Service Station	147 Cary STREET	Service Station	Regulation under CLM Act not required	-33.01288007	151.5928388
TORONTO	155B Brighton Avenue, Toronto NSW 2283	155B Brighton AVENUE	Other Industry	Under assessment	-33.0149011	151.5997613
TOUKLEY	Former Shell Toukley Autoport	211 Main ROAD	Service Station	Regulation under CLM Act not required	-33.26383791	151.5386268



Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
TOUKLEY	7-Eleven Australia	287 Main ROAD	Service Station	Regulation under CLM Act not required	-33.26469166	151.5462414
TRANGIE	Caltex Service Station	(Mitchell Hwy) 76 Narromine STREET	Service Station	Regulation under CLM Act not required	-32.03234676	147.985164
TUGGERAH	BP Tuggerah	100 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.30578167	151.4198083
TUMBARUMBA	Former Caltex Depot	150 Albury STREET	Other Petroleum	Regulation under CLM Act not required	-35.77024081	147.9927182
TUMBI UMBI	Former Tumbi Landfill	140 Bellevue ROAD	Landfill	Regulation under CLM Act not required	-33.3993472	151.456471
TUMUT	CSR Blue Dam	Jepsen AVENUE	Other Industry	Regulation under CLM Act not required	-35.30098337	148.1958308
TUMUT	CSR Railway cutting	Jepsen AVENUE	Unclassified	Regulation under CLM Act not required	-35.30422002	148.1942579
TUMUT	Former Telstra Depot	22-26 Carey STREET	Other Industry	Regulation under CLM Act not required	-35.29873079	148.2191122
TUNCESTER	Asbestos Waste Burial Site	13 Rifle Range ROAD	Other Industry	Contamination currently regulated under CLM Act	-28.79939255	153.2193708
TUROSS HEAD	Tern Inn Restaurant (abandoned UPSS)	2 Trafalgar ROAD	Service Station	Regulation under CLM Act not required	-36.05871059	150.1308443
TURRAMURRA	7-Eleven (former Mobil) Service Station Turramurra	1408 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.73326389	151.1264194
TURRAMURRA	Woolworths Service Station	1233 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.73317594	151.1313195
TURRELLA	Tulloch Australia Pty Ltd	61 Turrella STREET	Chemical Industry	Contamination currently regulated under CLM Act	-33.92857213	151.1475387
TWEED HEADS	Former Mobil Quix Service Station	60 MINJUNGBAL DRIVE	Service Station	Contamination formerly regulated under the CLM Act	-28.20143775	153.5445381
TWEED HEADS	Francis Street Road Reserve adjacent to 79-81 Wharf Street, Tweed Heads	79-81 Wharf STREET	Other Petroleum	Regulation under CLM Act not required	-28.17351959	153.542262

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
TWEED HEADS	Tweed Heads Slipway	8 Terranora TERRACE	Landfill	Under assessment	-28.18052246	153.5416407
TWEED HEADS SOUTH	Former BP Depot	142 Minjungbal DRIVE	Other Petroleum	Regulation under CLM Act not required	-28.20860702	153.5455932
TWEED HEADS SOUTH	Coles Express Service Station	Corner Minjungbal Drive and Heffron STREET	Service Station	Regulation under CLM Act not required	-28.19459987	153.5419978
TWEED HEADS SOUTH	Woolworths Plus Petrol	98-102 Pacific (100 Minjungbal Drive) HIGHWAY	Service Station	Regulation under CLM Act not required	-28.20488521	153.5448675
TWEED HEADS WEST	Caltex Service Station	96 to 98 Kennedy DRIVE	Service Station	Regulation under CLM Act not required	-28.1871486	153.5229866
TYAGARAH	Tyagarah Airstrip	25 Staceys WAY	Other Petroleum	Regulation under CLM Act not required	-28.59511995	153.546834
ULAN	Ulan Coal Mine	4505 Ulan ROAD	Other Industry	Regulation under CLM Act not required	-32.25620603	149.7558075
ULLADULLA	Coles Express Ulladulla	153 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.36288274	150.47272
ULLADULLA	Woolworths Petrol Station	155-157 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.36316263	150.4725668
ULLADULLA	Caltex Service Station	62A Deering Street, corner Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-35.36276828	150.473578
ULTIMO	Shell Coles Express Service Station	387-429 Wattle STREET	Service Station	Regulation under CLM Act not required	-33.88138825	151.1966791
UNANDERRA	Endeavour Energy Springhill Field Service Centre	195 Five Island ROAD	Other Industry	Regulation under CLM Act not required	-34.45837706	150.8598825
UNANDERRA	BlueScope Stainless Steel	13 Marley PLACE	Metal Industry	Contamination currently regulated under CLM Act	-34.44959798	150.8571632
UNANDERRA	Unanderra Weekend Detention Centre	34-40 Lady Penryhn DRIVE	Landfill	Regulation under CLM Act not required	-34.4620226	150.8473821
UNANDERRA	Veolia Environmental Services	9 Waynote PLACE	Other Industry	Regulation under CLM Act not required	-34.46042393	150.863232

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
UNANDERRA	Caltex Service Station	86-98 Princes HIGHWAY	Service Station	Regulation under CLM Act not required	-34.45414951	150.845165
UNANDERRA	Former Prime Service Station and adjoining lands	41-49 Princes HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-34.45056105	150.8490833
UNANDERRA	DGL Environmental Pty Ltd	201 Five Islands ROAD	Metal Industry	Under assessment	-34.45384578	150.8552253
URALLA	Caltex Service Station	103 Bridge STREET	Service Station	Regulation under CLM Act not required	-30.64524911	151.4934484
URALLA	Phoenix Foundry	44 Duke STREET	Metal Industry	Regulation under CLM Act not required	-30.65093272	151.5004479
URANQUINTY	Former Caltex Depot Kapooka (Wagga Wagga)	6876 Olympic (Uranquinty Rd) HIGHWAY	Service Station	Regulation under CLM Act not required	-35.15319793	147.3085469
URUNGA	Former Antimony Process plant	Hillside DRIVE	Chemical Industry	Contamination currently regulated under CLM Act	-30.50422942	153.0132011
VALENTINE	BP Express Service Station	855 Macquarie DRIVE	Service Station	Regulation under CLM Act not required	-33.00801109	151.6425806
VALENTINE	Valentine Public School	Tallawalla ROAD	Unclassified	Regulation under CLM Act not required	-33.0091613	151.6423231
VALLA	BP Nambucca Heads (Travel Centre and Truckstop)	2 Corkwood ROAD	Other Industry	Regulation under CLM Act not required	-30.62648768	152.9727148
VILLAWOOD	Nepotian (Former Toll) Site	110A Christina ROAD	Other Industry	Under preliminary investigation order	-33.87919117	150.9812193
VILLAWOOD	Former Defence Site	29 Biloela STREET	Landfill	Regulation under CLM Act not required	-33.88782978	150.9886275
VILLAWOOD	Former Siemens/Westinghouse	49 Miowera ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.87641909	150.9836746
VILLAWOOD	Former Orica Crop Care	2 Christina ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.880329	150.9896329
VILLAWOOD	PPG Industries	9 Birmingham AVENUE	Chemical Industry	Regulation under CLM Act not required	-33.87800757	150.9887929

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
VILLAWOOD	Former Electrical Component Manufacturer	66 Christina ROAD	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.88018315	150.9838773
VILLAWOOD	Ettason Villawood Site	2A Birmingham AVENUE	Chemical Industry	Regulation under CLM Act not required	-33.87877335	150.9827722
VINEYARD	Shell Coles Express Service Station	731 Windsor ROAD	Service Station	Regulation under CLM Act not required	-33.65780463	150.8753245
WAGGA WAGGA	Caltex Service Station	170 Fitzmaurice STREET	Service Station	Regulation under CLM Act not required	-35.10289587	147.3679002
WAGGA WAGGA	Former BP Service Station	31 Bourke STREET	Service Station	Regulation under CLM Act not required	-35.12626628	147.3547199
WAGGA WAGGA	Caltex (former Mobil) Service Station	106 Edward STREET	Service Station	Regulation under CLM Act not required	-35.11910909	147.3682364
WAGGA WAGGA	Former Caltex Depot	60 Lake Albert DRIVE	Service Station	Regulation under CLM Act not required	-35.12316794	147.37724
WAGGA WAGGA	Former Mobil Depot Wagga Wagga	97-99 Coleman STREET	Other Petroleum	Regulation under CLM Act not required	-35.12173871	147.3576651
WAGGA WAGGA	Ashmont Autoport	Cnr Tobruk Street and Bardia STREET	Service Station	Regulation under CLM Act not required	-35.12517373	147.329919
WAGGA WAGGA	Former Caltex Service Station	343 Hammond AVENUE	Service Station	Regulation under CLM Act not required	-35.12420793	147.4157959
WAGGA WAGGA	Caltex Service Station	56 - 60 Docker St STREET	Service Station	Regulation under CLM Act not required	-35.11737947	147.3558145
WAGGA WAGGA	Former Iron Foundry	212-230 Hammond STREET	Metal Industry	Regulation under CLM Act not required	-35.12605478	147.4045461
WAGGA WAGGA	Coles Express Wagga Wagga	353-355 Edward STREET	Service Station	Regulation under CLM Act not required	-35.11606625	147.3509339
WAGGA WAGGA	Former Wiradjuri landfill	Narrung STREET	Landfill	Under assessment	-35.09628532	147.3619535
WAGGA WAGGA	Former Gasworks	54 Chaston STREET	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-35.12262069	147.3482778

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
WAGGA WAGGA	Former Gasworks	Cnr Tarcutta Street and Cross STREET	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-35.10871183	147.3737933
WAGGA WAGGA	BP Wagga Wagga	180 Edward STREET	Service Station	Regulation under CLM Act not required	-35.11850802	147.3639619
WAGGA WAGGA	Former Dry Cleaning Facility	183 Fitzmaurice STREET	Other Industry	Contamination currently regulated under CLM Act	-35.10209987	147.3683852
WAHROONGA	Coles Express Wahroonga	1601 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.71945571	151.1163002
WAHROONGA	7-Eleven Service Station	1579 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.71974617	151.1168106
WAITARA	Caltex Service Station	59-61 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.71064349	151.1024644
WALGETT	Former Shell Depot	Castlereagh HIGHWAY	Other Petroleum	Regulation under CLM Act not required	-30.00861179	148.1239938
WALLERAWANG	Wallerawang Power Station	1 Main STREET	Other Petroleum	Regulation under CLM Act not required	-33.40339296	150.0855101
WALLERAWANG	Lidsdale Coal Loading Facility	Main STREET	Other Industry	Regulation under CLM Act not required	-33.39996523	150.0737717
WALLSEND	Caltex Maryland Service Station Wallsend	41 Minmi ROAD	Service Station	Regulation under CLM Act not required	-32.88967866	151.6619253
WALLSEND	Coles Express Wallsend East	15 Thomas STREET	Service Station	Regulation under CLM Act not required	-32.90719444	151.6693426
WALLSEND	OneSteel Recycling	64-80 Sandgate ROAD	Metal Industry	Regulation under CLM Act not required	-32.89425477	151.6799648
WALLSEND	Ausgrid Wallsend Depot	Abbott STREET	Other Industry	Regulation under CLM Act not required	-32.90162796	151.6857267
WALLSEND	Cnr of Douglas Street and 111 Newcastle Road Wallsend	111 Newcastle ROAD	Metal Industry	Regulation under CLM Act not required	-32.90416617	151.6832227
WAMBERAL	Caltex Service Station	654 The Entrance ROAD	Service Station	Regulation under CLM Act not required	-33.42338668	151.4375685

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
WANGI WANGI	Myuna Colliery	Wangi Point ROAD	Other Industry	Regulation under CLM Act not required	-33.06139532	151.5697186
WARATAH	Waratah Area Health	Turton ROAD	Unclassified	Regulation under CLM Act not required	-32.90961233	151.7260867
WARATAH	Waratah former Gasworks	Turton and Georgetown ROADS	Gasworks	Contamination currently regulated under CLM Act	-32.90591166	151.7272715
WARDELL	Nancy's Cattle Dip, Thurgates Lane, Wardell	Thurgates LANE	Cattle Dip	Regulation under CLM Act not required	-28.9540212	153.4274874
WARILLA	Woolworths Petrol Warilla	43 -57 Shellharbour ROAD	Service Station	Regulation under CLM Act not required	-34.5470966	150.863748
WARKWORTH	Emulsion Plant, Dyno Nobel Asia Pacific Pty Ltd	186 Long Point ROAD	Chemical Industry	Regulation under CLM Act not required	-32.5781708	151.0834387
WARKWORTH	United Colliery	Jerrys Plains ROAD	Other Industry	Regulation under CLM Act not required	-32.5654356	150.9916698
WARNERS BAY	Caltex Service Station	55 King STREET	Service Station	Regulation under CLM Act not required	-32.97418806	151.6476184
WARNERS BAY	7-Eleven (former Mobil) Service Station	393 Hillsborough ROAD	Service Station	Regulation under CLM Act not required	-32.9659363	151.6543264
WARNERS BAY	Historically Filled Land	41-43 Charles STREET	Unclassified	Regulation under CLM Act not required	-32.97340461	151.6464383
WARNERVALE	Former Timber Treatment Plant	Aldenham and Railway ROADS	Other Industry	Contamination formerly regulated under the CLM Act	-33.24732018	151.4469037
WARRAGAMBA	Warragamba Dam Viewing Platform	Eighteenth STREET	Unclassified	Regulation under CLM Act not required	-33.88545624	150.6016219
WARRAGAMBA	Megarrity's Creek Site	Weir ROAD	Unclassified	Regulation under CLM Act not required	-33.8873146	150.5967305
WARRAWONG	Caltex Service Station	75-77 King STREET	Service Station	Regulation under CLM Act not required	-34.49037817	150.888802
WARREN	Former Shell Depot	8 Dubbo STREET	Other Petroleum	Regulation under CLM Act not required	-31.69379262	147.8308088

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
WARREN	Caltex Warren Service Station	1 Coonamble ROAD	Service Station	Regulation under CLM Act not required	-31.69508383	147.8405578
WARREN	Former Mobil Warren Depot	16 Dubbo STREET	Other Petroleum	Contamination currently regulated under CLM Act	-31.6943058	147.8314606
WARWICK FARM	Warwick Farm Public School	95 Lawrence Hargrave ROAD	Unclassified	Regulation under CLM Act not required	-33.90978695	150.9291852
WATERLOO	Proposed Construction Site	2 John STREET	Other Industry	Regulation under CLM Act not required	-33.89989686	151.2010324
WATERLOO	Waverley Woollahra Process Plant	355 Botany ROAD	Other Industry	Regulation under CLM Act not required	-33.9063092	151.2042672
WATERLOO	Shell Coles Express Service Station	867-877 South Dowling STREET	Service Station	Regulation under CLM Act not required	-33.90179774	151.2143789
WATERLOO	Lawrence Dry Cleaners	887-893 Bourke STREET	Unclassified	Contamination currently regulated under CLM Act	-33.89897433	151.2101436
WATERLOO	Diversity Waterloo Blocks C & D and adjacent plaza / park	1, 9, 13, 13A, 13B and 23 Archibald Avenue, 20 Dunkerley Place and 850 Bourke STREET	Other Industry	Regulation under CLM Act not required	-33.90200158	151.2098496
WATERLOO	Iconic (Former Chubb Factory) Waterloo	830-838 Elizabeth STREET	Other Industry	Regulation under CLM Act not required	-33.90227718	151.2060305
WATERLOO	22-24 Archibald Avenue	22-24 Archibald AVENUE	Other Petroleum	Regulation under CLM Act not required	-33.90206938	151.2139293
WAUCHOPE	Expressway Spares UST	3 Sancrox ROAD	Other Petroleum	Regulation under CLM Act not required	-31.44163879	152.8231104
WAUCHOPE	Former Shell Depot	56-64 High STREET	Other Petroleum	Regulation under CLM Act not required	-31.45804845	152.7314151
WAUCHOPE	Wauchope Service Station	57 High STREET	Service Station	Regulation under CLM Act not required	-31.45737022	152.7305018
WAUCHOPE	Former Timber Treatment Site	Blackbutt DRIVE	Other Industry	Regulation under CLM Act not required	-31.46575645	152.7228555
WAUCHOPE	Shell Coles Express Service Station	64 High STREET	Service Station	Regulation under CLM Act not required	-31.45764495	152.7315975

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WAUCHOPE	Wauchope Public Primary School	2 Waugh STREET	Unclassified	Regulation under CLM Act not required	-31.45602953	152.7295059
WAVERTON	SRA Land	95 Bay ROAD	Unclassified	Contamination formerly regulated under the CLM Act	-33.83716728	151.1969497
WAVERTON	Berry's Bay Woodley's Marina	1 Balls Head DRIVE	Other Industry	Contamination formerly regulated under the POEO Act	-33.84441851	151.1947433
WAVERTON	Oyster Cove AGL	2 King STREET	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	-33.83637995	151.193541
WEE JASPER	Wee Jasper Tavern	6499 Wee Jasper ROAD	Other Industry	Regulation under CLM Act not required	-35.10992483	148.679428
WELLINGTON	Former Caltex Service Station	124-128 Lee STREET	Service Station	Regulation under CLM Act not required	-32.55082729	148.9411537
WELLINGTON	BP Wellington Service Station	35A Maxwell STREET	Service Station	Regulation under CLM Act not required	-32.55835121	148.9447284
WELLINGTON	Woolworths Petrol Wellington	79 Lee STREET	Service Station	Regulation under CLM Act not required	-32.54874227	148.9408531
WELLINGTON	The Wash Shed (Laundromat)	67 Gobolion STREET	Gasworks	Under assessment	-32.545494	-32.545494
WELLINGTON	Police Citizens Youth Club (PCYC)	69 Gobolion STREET	Gasworks	Under assessment	-32.5456	148.944004
WELLINGTON	J&J Mechanical	1 Warrawee STREET	Gasworks	Under assessment	-32.545802	148.943318
WENTWORTH	Caltex - Wentworth	110 Adams STREET	Service Station	Regulation under CLM Act not required	-34.1024927	141.9160539
WENTWORTH FALLS	Bodington Hospital	Bodington DRIVE	Unclassified	Contamination formerly regulated under the CLM Act	-33.73204611	150.3874554
WENTWORTH POINT	RMS Eastern Precinct	3-7 Burroway ROAD	Other Petroleum	Regulation under CLM Act not required	-33.8233882	151.0815668
WENTWORTH POINT	Former TNT Express	23 Bennelong PARKWAY	Other Petroleum	Regulation under CLM Act not required	-33.83115118	151.0726636



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WENTWORTHVILLE	Former Workshop	2 Rawson Rd and 8 Barfil CRESCENT	Unclassified	Regulation under CLM Act not required	-33.81568808	150.9671853
WERRINGTON	Caltex Service Station	Cnr Dunheved Rd and Henry Lawson DRIVE	Service Station	Regulation under CLM Act not required	-33.74577725	150.7409877
WERRINGTON	Claremont Meadows Former landfill	Gipps STREET	Landfill	Regulation under CLM Act not required	-33.77341076	150.7557628
WERRINGTON COUNTY	7-Eleven Werrington	Lot 122 Dunheved ROAD	Service Station	Regulation under CLM Act not required	-33.74699408	150.7428609
WEST BALLINA	Caltex Big Prawn Service Station	Pacific HIGHWAY	Service Station	Contamination formerly regulated under the CLM Act	-28.86374913	153.5321482
WEST GOSFORD	Caltex Service Station	283 Manns ROAD	Service Station	Regulation under CLM Act not required	-33.41659727	151.325219
WEST GOSFORD	Caltex Service Station	69-71 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.42729985	151.3214621
WEST GOSFORD	Caltex Service Station	30a Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.42778813	151.3190581
WEST GOSFORD	Adcock Memorial Park	Central Coast HIGHWAY	Landfill	Contamination currently regulated under CLM Act	-33.42963075	151.3273331
WEST NOWRA	Endeavour Energy Nowra Field Service Centre	20 Depot ROAD	Other Industry	Regulation under CLM Act not required	-34.88993085	150.5878854
WEST PENNANT HILLS	7-Eleven (former Mobil) Service Station	552 Pennant Hills ROAD	Service Station	Regulation under CLM Act not required	-33.74686545	151.0508067
WEST RYDE	7-Eleven (former Mobil) Service Station	917 Victoria ROAD	Service Station	Regulation under CLM Act not required	-33.80921103	151.0932917
WEST RYDE	Pfizer Australia Pty Ltd	38-42 Wharf ROAD	Chemical Industry	Regulation under CLM Act not required	-33.81021085	151.0693631
WEST RYDE	Reckitt Benckiser	44 Wharf ROAD	Chemical Industry	Regulation under CLM Act not required	-33.81172205	151.0692752
WEST RYDE	JHM Property Development	2A Mellor STREET	Other Industry	Regulation under CLM Act not required	-33.81207534	151.094598

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WEST TAMWORTH	Woolworths Petrol	119 Bridge STREET	Service Station	Regulation under CLM Act not required	-31.09358262	150.9167693
WEST WALLSEND	West Wallsend Cemetery	6 Cemetery ROAD	Unclassified	Regulation under CLM Act not required	-32.9025615	151.5701278
WEST WYALONG	Lowes Petroleum (Former BP) Depot West Wyalong	Compton (formerly known as Town Bypass/Railway Road) ROAD	Other Petroleum	Regulation under CLM Act not required	-33.93440247	147.2154596
WEST WYALONG	Caltex Depot	(Wyalong By-pass Rd) Lot 1-3 Showground ROAD	Service Station	Regulation under CLM Act not required	-33.92580863	147.1978504
WEST WYALONG	Former Mobil Depot	104 Compton ROAD	Other Petroleum	Regulation under CLM Act not required	-33.93449194	147.2147948
WESTON	Illegal Dumping Site	Corner Kline Street & First STREET	Unclassified	Regulation under CLM Act not required	-32.81367986	151.4551507
WETHERILL PARK	Former Fuel Storage Depot	200-212 Cowpasture ROAD	Other Petroleum	Regulation under CLM Act not required	-33.84568871	150.8764012
WETHERILL PARK	Sims Wetherill Park	35-37 Frank STREET	Metal Industry	Regulation under CLM Act not required	-33.84056122	150.9086265
WETHERILL PARK	Shell Coles Express Service Station	565 Polding STREET	Service Station	Regulation under CLM Act not required	-33.8569731	150.8992804
WETHERILL PARK	Cleanaway (Formerly Nationwide Oil) Wetherill Park	6 Davis ROAD	Other Industry	Regulation under CLM Act not required	-33.83770038	150.9045197
WETHERILL PARK	BOC Sydney Operations Centre	428-440 Victoria STREET	Chemical Industry	Regulation being finalised	-33.84375988	150.8960027
WETHERILL PARK	Camide Former Landfill	Newton ROAD	Landfill	Regulation under CLM Act not required	-33.83898879	150.8963813
WETHERILL PARK	Fairfield Sustainable Resource Centre	Corner Hassall Street and Widemere ROAD	Other Industry	Under assessment	-33.83860329	150.9170013
WICKHAM	Caltex Terminal and "Building 33" on offsite adjacent land	156 Hannell Street and 33 Annie STREET	Other Petroleum	Contamination currently regulated under CLM Act	-32.9153413	151.7560062
WICKHAM	Former Warehouse	10 Dangar STREET	Unclassified	Regulation under CLM Act not required	-32.92383206	151.759761

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WICKHAM	Former Factory	57 Annie STREET	Other Industry	Regulation under CLM Act not required	-32.91524827	151.7539893
WICKHAM	Railcorp Wickham	50 Railway STREET	Other Industry	Regulation under CLM Act not required	-32.9210433	151.7544687
WICKHAM	Fuchs Lubricants Wickham	2 Holland STREET	Other Industry	Contamination currently regulated under CLM Act	-32.9214709	151.7556928
WILBERFORCE	Former Drum Reconditioners	12-14 Box AVENUE	Other Industry	Contamination formerly regulated under the CLM Act	-33.5453884	150.8587934
WILBERFORCE	Former Solvent Recycling Site	13 Box AVENUE	Chemical Industry	Regulation under CLM Act not required	-33.54557427	150.8577006
WILEY PARK	Sydney Water Property	1B Hillcrest STREET	Other Industry	Regulation under CLM Act not required	-33.92391634	151.0676256
WILLIAMTOWN	Hunter Land Effluent Pond	38 Cabbage Tree ROAD	Other Industry	Regulation under CLM Act not required	-32.80750069	151.8310107
WILLOUGHBY	Shell Coles Express Service Station	616-626 Willoughby ROAD	Service Station	Regulation under CLM Act not required	-33.80593769	151.1988559
WILLOUGHBY	Caltex Service Station	157 Penhur STREET	Service Station	Regulation under CLM Act not required	-33.79793513	151.1981926
WILLOUGHBY	BP Willoughby Express Tower	498 Willoughby STREET	Service Station	Contamination currently regulated under POEO Act	-33.81022918	151.199315
WILLOUGHBY	Bicentennial Reserve, Flat Rock Gully, Willoughby Leisure Centre	Small STREET	Other Industry	Under assessment	-33.81232124	151.2030744
WILLOUGHBY EAST	Willoughby Bus Depot	Corner Ann Street and Stan STREET	Other Industry	Regulation under CLM Act not required	-33.7982569	151.2038993
WILTON	Condell Park Homestead	(Part Lot 17 DP 270536) Condell Park ROAD	Unclassified	Regulation under CLM Act not required	-34.21910141	150.6837962
WINDANG	Caltex Service Station	244-248 Windang ROAD	Service Station	Regulation under CLM Act not required	-34.5274434	150.8691161
WINDSOR	Former Caltex Service Station	46-52 Macquarie STREET	Service Station	Regulation under CLM Act not required	-33.60783315	150.8213428

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WINDSOR	Former Caltex Windsor Depot and Service Station	48-50 Mileham STREET	Service Station	Regulation under CLM Act not required	-33.61538627	150.8157517
WINDSOR	Woolworths (former Caltex) Service Station	Cnr Macquarie Street & Baker STREET	Service Station	Regulation under CLM Act not required	-33.60569346	150.8232803
WINDSOR	Former Fire Station Windsor	19 Fitzgerald STREET	Other Industry	Under assessment	-33.6064873	150.8199089
WINDSOR	Windsor Zone Substation	56-60 Macquarie STREET	Other Industry	Under assessment	-33.60812428	150.8208856
WINGHAM	Former Caltex Service Station	1036-1038 Wingham ROAD	Service Station	Regulation under CLM Act not required	-31.86236594	152.3805752
WINGHAM	Bogas Service Station	Cnr Primrose Street and Isabella STREET	Service Station	Regulation under CLM Act not required	-31.86833656	152.3716346
WINMALEE	Prime Winmalee Service Station	281 Hawkesbury ROAD	Service Station	Regulation under CLM Act not required	-33.68223276	150.5997203
WIRLINGA	Former Liquid Waste Disposal Facility	704 Riverina ROAD	Unclassified	Regulation under CLM Act not required	-36.07103958	147.0193522
WOLLI CREEK	Former Ausgrid Substation 10061	13 Gertrude STREET	Other Industry	Regulation under CLM Act not required	-33.93364031	151.1543818
WOLLONGONG	Redevelopment site	33 - 39 Beatson STREET	Other Petroleum	Regulation under CLM Act not required	-34.43196083	150.8976661
WOLLONGONG	Caltex Service Station	9 Flinders STREET	Service Station	Regulation under CLM Act not required	-34.41505616	150.8932515
WOLLONGONG	Greenhouse Park	Springhill ROAD	Landfill	Contamination currently regulated under CLM Act	-34.44119949	150.8931764
WOLLONGONG	Former Wollongong Gasworks	120 and 122 Smith STREET	Gasworks	Regulation under CLM Act not required	-34.42030173	150.8906745
WOLLONGONG	Woolworths Service Station	425 Crown STREET	Service Station	Contamination currently regulated under CLM Act	-34.42637378	150.8799288
WOLLONGONG	Wollongong Harbour Central Spur	Off Endeavour DRIVE	Other Petroleum	Regulation under CLM Act not required	-34.42066879	150.906821

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WOODBURN	Caltex Service Station	129 River STREET	Service Station	Regulation under CLM Act not required	-29.07206887	153.3409769
WOODBURN	Crown Reserve 88037 Woodburn	Pacific HIGHWAY	Landfill	Regulation under CLM Act not required	-29.06580577	153.3541886
WOOLGOOLGA	Caltex Woolgoolga Service Station	16 Bosworth ROAD	Service Station	Regulation under CLM Act not required	-30.12569561	153.1946006
WOOLGOOLGA	United Petroleum Service Station (1868 Solitary Islands Way)	56 Clarence STREET	Service Station	Contamination currently regulated under CLM Act	-30.11045544	153.1904609
WOOLLAHRA	Former Service Station	20 Wallis STREET	Service Station	Regulation under CLM Act not required	-33.8901965	151.2372752
WOOLLAHRA	Proposed Jewish Care Centre	7-21 Saber STREET	Unclassified	Regulation under CLM Act not required	-33.8904055	151.2480062
WOOLLAHRA	Caltex Woollahra Service Station	116 Old South Head ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.88959697	151.2553736
WOOLLOOMOOLOO	Former BP Service Station	2 Dowley STREET	Service Station	Contamination being managed via the planning process (EP&A Act)	-33.86940191	151.2218741
WOLOMIN	Woolomin Gold Rush Store	65 Nundle ROAD	Other Petroleum	Contamination formerly regulated under the CLM Act	-31.30415134	151.149729
WOOLOOWARE	Caltex Service Station	100 Woollooware ROAD	Service Station	Regulation under CLM Act not required	-34.05274635	151.1408413
WOOLOOWARE	Oyster Farm	Captain Cook DRIVE	Other Industry	Regulation under CLM Act not required	-34.03807914	151.1476055
WOONGARRAH	Former Warnervale Landfill	236-264 Hakone ROAD	Landfill	Regulation under CLM Act not required	-33.2376313	151.464362
WOOTTON	Former Chemical Spill Site	11859 Pacific HIGHWAY	Chemical Industry	Regulation under CLM Act not required	-32.28168548	152.3117819
WOY WOY	Mobil Former Woy Woy Service Station and adjacent land	177-181 Blackwall ROAD	Service Station	Contamination formerly regulated under the CLM Act	-33.49257884	151.3273559
WOY WOY	Barry Robertson Holden	231 Blackwall ROAD	Service Station	Regulation under CLM Act not required	-33.49621068	151.3285128

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WOY WOY	Bogas Service Station	66 Memorial AVENUE	Service Station	Contamination currently regulated under CLM Act	-33.5069738	151.3315579
WOY WOY	Rogers Park	Dunban ROAD	Landfill	Regulation under CLM Act not required	-33.50009693	151.3181347
WOY WOY	Austin Butler Memorial Oval	Blackwall ROAD	Landfill	Regulation under CLM Act not required	-33.48672201	151.3283032
WOY WOY	James Browne Oval	Welcome STREET	Landfill	Regulation under CLM Act not required	-33.49720596	151.3242986
WOY WOY	7-Eleven Service Station	Corner Rawson and Ocean Beach ROADS	Service Station	Regulation under CLM Act not required	-33.49379351	151.3201639
WYALONG	Caltex Service Station	50 Neeld (Newell Highway) STREET	Service Station	Regulation under CLM Act not required	-33.92665025	147.2446546
WYOMING	Caltex Service Station Wyoming	465 Pacific HIGHWAY	Service Station	Regulation under CLM Act not required	-33.40945391	151.3499812
WYONG	Wyong Bayer/Kemcon	16 Lucca ROAD	Chemical Industry	Contamination formerly regulated under the CLM Act	-33.26192339	151.4429446
WYONG	Caltex Service Station	M1 Pacific (Northbound) MOTORWAY	Service Station	Regulation under CLM Act not required	-33.25641477	151.4024821
WYONG	Caltex Service Station	M1 Pacific (Southbound) MOTORWAY	Service Station	Regulation under CLM Act not required	-33.25330747	151.4053862
WYONG	IXOM Facility	8 Pavitt CRESCENT	Other Industry	Regulation under CLM Act not required	-33.26379108	151.4485113
YAGOONA	Galserv Galvanising Services	117-153 Rookwood ROAD	Metal Industry	Contamination currently regulated under POEO Act	-33.89493085	151.0388013
YAGOONA	BP Service Station Potts Hill (Yagoona)	155 Rookwood ROAD	Service Station	Regulation under CLM Act not required	-33.89330525	151.0390969
YAGOONA	7-Eleven (former Mobil) Service Station	519 Hume HIGHWAY	Service Station	Regulation under CLM Act not required	-33.90760623	151.0207783
YAGOONA	Shell Coles Express Service Station	112 Rookwood ROAD	Service Station	Regulation under CLM Act not required	-33.89856213	151.0370458

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
YAGOONA	Sydney Water Corporation Potts Hill Complex	91 Brunner ROAD	Other Industry	Regulation under CLM Act not required	-33.89887589	151.0289165
YALLAH	Tallawarra Power Station site	Princes HIGHWAY	Unclassified	Ongoing maintenance required to manage residual contamination (CLM Act)	-34.52412143	150.8062159
YAMBA	Caltex Service Station	22 Treelands DRIVE	Service Station	Regulation under CLM Act not required	-29.42701701	153.3279204
YANCO	Former Service Station	14 Main AVENUE	Service Station	Contamination formerly regulated under the CLM Act	-34.60356494	146.4105016
YASS	Caltex Service Station	228 Comur STREET	Service Station	Regulation under CLM Act not required	-34.84440036	148.9140179
YASS	Caltex Service Station	1715 Yass Valley WAY	Service Station	Regulation under CLM Act not required	-34.80708856	148.8824228
YASS	Former Mobil Depot Yass and adjacent land	54-58 Laidlaw STREET	Service Station	Ongoing maintenance required to manage residual contamination (CLM Act)	-34.83226934	148.9069512
YASS	Former Gasworks	Dutton STREET	Gasworks	Contamination currently regulated under CLM Act	-34.83982614	148.9060029
YASS	Transgrid Depot Yass	Perry STREET	Unclassified	Under assessment	-34.86238341	148.9052809
YENNORA	Former Alcoa Australia Rolled Products Facility - Area 3	1 Kiora CRESCENT	Metal Industry	Regulation under CLM Act not required	-33.86568158	150.9649297
YENNORA	Spicer Axle Australia Manufacturing Facility	205-231 Fairfield ROAD	Other Industry	Regulation under CLM Act not required	-33.85655114	150.9579167
YENNORA	Former Caltex Service Station	137-141 Fairfield STREET	Service Station	Regulation under CLM Act not required	-33.86824768	150.9706137
YENNORA	Former Metal Plant	44 Larra STREET	Metal Industry	Contamination formerly regulated under the CLM Act	-33.86340576	150.9764349
YENNORA	TetraPak Site	6 Foray STREET	Other Industry	Contamination formerly regulated under the CLM Act	-33.8557183	150.9561605
YENNORA	19 Pine Road, Yennora	Pine ROAD	Metal Industry	Contamination currently regulated under CLM Act	-33.86713232	150.9621172

Suburb	SiteName	Address	Contamination Activity Type	ManagementClass	Latitude	Longitude
YETHOLME	Yetholme CCA Timber Treatment Plant	351 Eusdale ROAD	Other Industry	Contamination formerly regulated under the CLM Act	-33.45386256	149.8537787
YOUNG	Former Mobil Depot and Service Station Young	149 Lovell STREET	Service Station	Regulation under CLM Act not required	-34.31024587	148.290424
YOUNG	Former Shell Depot	166 Nasmyth STREET	Other Petroleum	Regulation under CLM Act not required	-34.31025192	148.2931008
YOUNG	Former battery recycler	45 Nasmyth STREET	Metal Industry	Contamination currently regulated under CLM Act	-34.31201571	148.306772
YOUNG	Adjacent to former battery recycler	47 Nasmyth STREET	Metal Industry	Contamination formerly regulated under the CLM Act	-34.31176273	148.3064765
YOUNG	Mobil Depot	186 Nasmyth STREET	Other Petroleum	Contamination currently regulated under CLM Act	-34.30954389	148.2908476
YOUNG	Former Caltex Depot	95 Lovell STREET	Service Station	Regulation under CLM Act not required	-34.31127119	148.2955092
ZETLAND	Energy Australia/ Ausgrid Zetland Depot	122 - 138 Joynton AVENUE	Other Industry	Regulation under CLM Act not required	-33.90883116	151.2101184
ZETLAND	Former Goodrich Control Systems, Zetland	84 - 92 Epsom ROAD	Other Industry	Regulation under CLM Act not required	-33.91025707	151.2078048



## APPENDIX F

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### TABLE 1 – BOREHOLE LOGS

<b>Project:</b>	Proposed Aged Care Facility	<b>Job No:</b>	20219/5
<b>Location:</b>	59-67 Karne Street North, Narwee	<b>Drawing No:</b>	20219/5-AA1
		<b>Logged &amp; Sampled by:</b>	SS

**Table 1**

Page 1 of 4

Borehole	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
BH101	0.0-0.4	0.0-0.15	6/07/2022	FILL: Silty Sandy Clay, low to medium plasticity, brown	Bricks, concrete and timber observed in fill
	0.4-0.9	0.45-0.55		(CH) Silty CLAY, high plasticity, red mottled grey	
BH102	0.0-0.1	NS	6/07/2022	CONCRETE	
	0.1-0.5	0.15-0.25		(CI-CH) Silty CLAY, medium to high plasticity, brown	
	0.5-1.0	NS		(CH) Silty CLAY, high plasticity, red mottled grey	
BH103	0.0-0.1	NS	6/07/2022	CONCRETE	
	0.1-0.5	0.15-0.25		(CH) Silty CLAY, high plasticity, red mottled grey	
BH104	0.0-0.04	NS	6/07/2022	BITUMEN	
	0.04-0.08	0.04-0.08		FILL: Clayey Gravel, dark brown/black	
	0.08-0.5	NS		(CI-CH) Silty CLAY, medium to high plasticity, brown	
BH105	0.0-0.04	NS	6/07/2022	BITUMEN	
	0.04-0.21	0.04-0.19		FILL: Silty Sand, fine to medium grained, brown	
	0.21-0.5	0.25-0.35		(CH) Silty CLAY, high plasticity, red mottled grey	
BH106	0.0-0.3	0.0-0.15	6/07/2022	FILL: Clayey Gravel, dark brown/black	
	0.3-0.7	0.35-0.45		(CH) Silty CLAY, high plasticity, red mottled grey	
BH107	0.0-0.11	NS	6/07/2022	CONCRETE	
	0.11-0.8	0.11-0.41		FILL: Silty Clay, medium to high plasticity, brown, red , grey, with black gravel	
		0.61-0.8			
	0.8-1.2	0.85-0.95		(CI-CH) Silty CLAY, medium to high plasticity, brown	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project:</b>	Proposed Aged Care Facility	<b>Job No:</b>	20219/5
<b>Location:</b>	59-67 Karne Street North, Narwee	<b>Drawing No:</b>	20219/5-AA1
		<b>Logged &amp; Sampled by:</b>	SS

**Table 1**

Page 2 of 4

Borehole	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
BH108	0.0-0.11	NS	6/07/2022	CONCRETE	
	0.11-0.25	0.15-0.25		(CI-CH) Silty CLAY, medium to high plasticity, brown	
	0.25-0.75	NS		(CH) Silty CLAY, high plasticity, red mottled grey	
BH109	0.0-0.15	0.0-0.15	6/07/2022	FILL: Silty Sand, fine to medium grained, brown	
	0.15-0.25	0.15-0.25		FILL: Silty Sand, fine to medium grained, yellow	
	0.25-0.6	0.3-0.4		(CH) Silty CLAY, high plasticity, grey mottled red	
BH110	0.0-0.1	NS	6/07/2022	CONCRETE	
	0.1-0.5	0.15-0.25		(CI-CH) Silty CLAY, medium to high plasticity, brown	
	0.5-0.8	NS		(CH) Silty CLAY, high plasticity, yellow brown mottled red	
BH111	0.0-0.12	NS	6/07/2022	CONCRETE	
	0.12-0.3	0.12-0.3		FILL: Silty Sand, fine to medium grained, yellow	
	0.3-0.5	0.35-0.45		(CH) Silty CLAY, high plasticity, yellow brown mottled red	
	0.5-0.7	NS		(CH) Silty CLAY, high plasticity, red mottled grey	
BH112	0.0-0.14	NS	6/07/2022	CONCRETE	
	0.14-0.3	0.14-0.3		FILL: Silty Sand, fine to medium grained, yellow	
	0.3-0.6	0.35-0.45		(CI-CH) Silty CLAY, medium to high plasticity, brown	
	0.6-0.8	NS		(CH) Silty CLAY, high plasticity, yellow brown mottled red	
	0.8-1.0	NS		(CH) Silty CLAY, high plasticity, red mottled grey	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project:</b>	Proposed Aged Care Facility	<b>Job No:</b>	20219/5
<b>Location:</b>	59-67 Karne Street North, Narwee	<b>Drawing No:</b>	20219/5-AA1
		<b>Logged &amp; Sampled by:</b>	SS

**Table 1**

Page 3 of 4

Borehole	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
BH113	0.0-0.12	NS	6/07/2022	CONCRETE	
	0.12-0.4	0.17-0.32		(CI-CH) Silty CLAY, medium to high plasticity, brown	
	0.4-0.7	NS		(CH) Silty CLAY, high plasticity, yellow brown mottled red	
BH114	0.0-0.1	NS	6/07/2022	CONCRETE	
	0.1-0.3	0.15-0.25		(CH) Silty CLAY, high plasticity, yellow brown mottled red	
	0.3-0.6	NS		(CH) Silty CLAY, high plasticity, red mottled grey	
BH115	0.0-0.2	0.0-0.15	6/07/2022	FILL: Silty Sand, fine to medium grained, brown	Glass, bricks and timber observed in fill
	0.2-0.4	0.2-0.4		FILL: Silty Sand, fine to medium grained, yellow	
	0.4-0.9	0.45-0.55		(CI-CH) Silty CLAY, medium to high plasticity, brown	
BH116	0.0-0.2	0.0-0.15	6/07/2022	FILL: Silty Sand, fine to medium grained, yellow	Brick and concrete fragments observed in fill
	0.2-0.5	0.25-0.35		(CI-CH) Silty CLAY, medium to high plasticity, brown	
BH117	0.0-0.25	0.0-0.15	6/07/2022	FILL: Clayey Gravel, dark brown/black	
	0.25-0.5	0.3-0.4		(CH) Silty CLAY, high plasticity, red mottled grey	
BH118	0.0-0.15	0.0-0.15	6/07/2022	FILL: Clayey Gravel, dark brown/black	
	0.15-0.5	0.2-0.3		(CH) Silty CLAY, high plasticity, red mottled grey	
BH119	0.0-0.07	NS	6/07/2022	CONCRETE	
	0.07-0.17	0.07-0.17		FILL: Silty Sand, fine to medium grained, yellow	
	0.17-0.7	0.22-0.32		(CH) Silty CLAY, high plasticity, red mottled grey	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

<b>Project:</b>	Proposed Aged Care Facility	<b>Job No:</b>	20219/5
<b>Location:</b>	59-67 Karne Street North, Narwee	<b>Drawing No:</b>	20219/5-AA1
		<b>Logged &amp; Sampled by:</b>	SS

**Table 1**

Page 4 of 4

Borehole	Depth (m)	Sample Depth (m)	Date	Material Description	Remarks*
BH120	0.0-0.2	0.0-0.15	6/07/2022	FILL: Silty Clay, medium to high plasticity, brown	Terracotta fragments, rusted metal and fibro cement pieces (FCP) observed in fill
	0.2-0.25	0.2-0.25		FILL: Silty Sandy Clay, high plasticity, yellow	
	0.25-0.7	0.3-0.4		(CI-CH) Silty CLAY, medium to high plasticity, brown	
BH121	0.0-0.2	0.0-0.15	6/07/2022	TOPSOIL: Silty Clay, low to medium plasticity, brown, with root fibres	
	0.2-0.5	NS		(CH) Silty CLAY, high plasticity, red mottled grey	
BH12a	0.0-0.14	NS	6/07/2022	CONCRETE	Soil is wet
	0.14-0.3	0.14-0.3		FILL: Silty Clay, medium to high plasticity, dark grey, with gravel	
	0.3-0.8	0.35-0.45		(CH) Silty CLAY, high plasticity, red-brown	
BH12-1	0.0-0.145	NS	6/07/2022	CONCRETE	Soil is wet
	0.145-0.27	0.15-0.27		FILL: Silty Clay, medium to high plasticity, dark grey, with gravel	
	0.27-0.8	0.3-0.4		(CH) Silty CLAY, high plasticity, red-brown	
BH12-2	0.0-0.14	NS	6/07/2022	CONCRETE	Soil is wet
	0.14-0.3	0.15-0.3		FILL: Silty Clay, medium to high plasticity, dark grey, with gravel	
	0.3-0.7	0.35-0.45		(CH) Silty CLAY, high plasticity, red-brown	
BH12-3	0.0-0.15	NS	6/07/2022	CONCRETE	Soil is wet
	0.15-0.3	0.15-0.3		FILL: Silty Clay, medium to high plasticity, dark grey, with gravel	
	0.3-0.8	0.35-0.45		(CH) Silty CLAY, high plasticity, red-brown	
BH12-4	0.0-0.18	NS	6/07/2022	CONCRETE	
	0.18-0.3	0.18-0.3		FILL: Silty Clay, medium to high plasticity, dark grey, with gravel	
	0.3-0.8	0.35-0.45		(CH) Silty CLAY, high plasticity, red-brown	
FCP1	0.0-0.15	0.0-0.15	6/07/2022	FILL: Clayey Gravel, dark brown/black	One FCP on ground surface
	0.15-0.5	0.2-0.3		(CH) Silty CLAY, high plasticity, red mottled grey	

NS = No Sample

\*Odour (O), Discolouration (D), Petroleum Hydrocarbon Staining (PHS), Asbestos Containing Material (ACM), Ash Material (ASHM), Demolition Waste (DW), Groundwater (GW), Perched Water (PW) PID reading etc.

## **APPENDIX G**

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### **GROUNDWATER MAP**



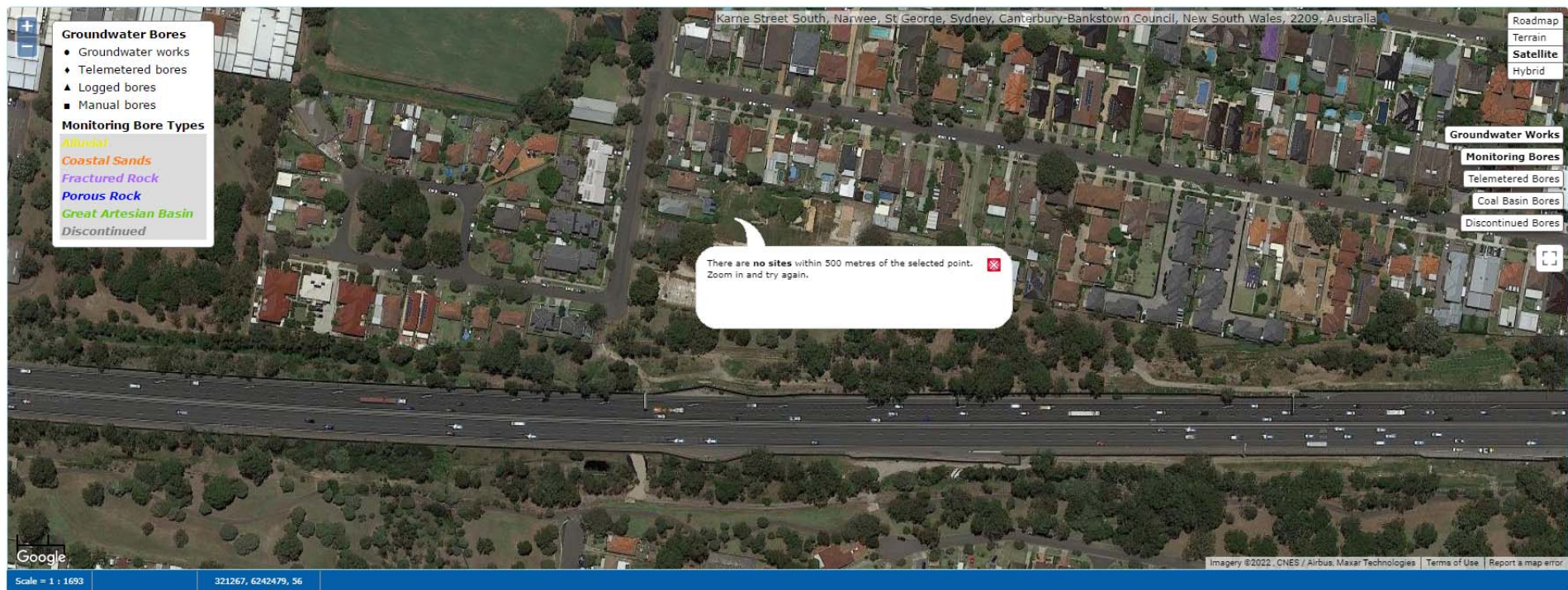
+ All Groundwater Site Details

## ALL GROUNDWATER MAP

All data times are Eastern Standard Time

bookmark this page

Map Info



contact WaterNSW

## **APPENDIX H**

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### **LABORATORY TEST RESULTS REPORTS/CERTIFICATES (PHASE 2 CA)**



## CLIENT DETAILS

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 Email **anwar@geotech.com.au**

Project **13977-2 Narwee**  
 Order Number **(Not specified)**  
 Samples **10**

## LABORATORY DETAILS

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SGS Reference **SE163301 R0**  
 Date Received **20/3/2017**  
 Date Reported **28/3/2017**

## COMMENTS

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

## SIGNATORIES



**Andy Sutton**  
 Senior Organic Chemist



**Bennet Lo**  
 Senior Organic Chemist/Metals Chemist



**Dong Liang**  
 Metals/Inorganics Team Leader



**Kamrul Ahsan**  
 Senior Chemist



**Ly Kim Ha**  
 Organic Section Head



## ANALYTICAL RESULTS

SE163301 R0

VOC's in Soil [AN433] Tested: 23/3/2017

PARAMETER	UOM	LOR	BH2 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2	BH6 0.05-0.2	Trip spike TS1
			SOIL - 16/3/2017 SE163301.002	SOIL - 17/3/2017 SE163301.004	SOIL - 17/3/2017 SE163301.005	SOIL - 17/3/2017 SE163301.006	SOIL - 16/3/2017 SE163301.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[102%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[97%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[103%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	[103%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[103%]
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	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	<1	<1	-
Chloromethane	mg/kg	1	<1	<1	<1	<1	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Bromomethane	mg/kg	1	<1	<1	<1	<1	-
Chloroethane	mg/kg	1	<1	<1	<1	<1	-
Trichlorofluoromethane	mg/kg	1	<1	<1	<1	<1	-
Acetone (2-propanone)	mg/kg	10	<10	<10	<10	<10	-
Iodomethane	mg/kg	5	<5	<5	<5	<5	-
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Acrylonitrile	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	-
Allyl chloride	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Vinyl acetate	mg/kg	10	<10	<10	<10	<10	-
MEK (2-butanone)	mg/kg	10	<10	<10	<10	<10	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Bromochloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Chloroform	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Dibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
2-nitropropane	mg/kg	10	<10	<10	<10	<10	-
Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	<1	<1	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
2-hexanone (MBK)	mg/kg	5	<5	<5	<5	<5	-
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Chlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Bromoform	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	<1	-
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	<1	-



## ANALYTICAL RESULTS

SE163301 R0

VOC's in Soil [AN433] Tested: 23/3/2017 (continued)

PARAMETER	UOM	LOR	BH2 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2	BH6 0.05-0.2	Trip spike TS1
			SOIL	SOIL	SOIL	SOIL	SOIL
			16/3/2017 SE163301.002	17/3/2017 SE163301.004	17/3/2017 SE163301.005	17/3/2017 SE163301.006	16/3/2017 SE163301.010
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Bromobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
n-propylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
n-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Total VOC*	mg/kg	24	<24	<24	<24	<24	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	<3.0	<3.0	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	-



## ANALYTICAL RESULTS

SE163301 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 23/3/2017

			BH2 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2	BH6 0.05-0.2
			SOIL	SOIL	SOIL	SOIL
			-	-	-	-
			16/3/2017	17/3/2017	17/3/2017	17/3/2017
			SE163301.002	SE163301.004	SE163301.005	SE163301.006
PARAMETER	UOM	LOR				
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



## ANALYTICAL RESULTS

SE163301 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 23/3/2017

PARAMETER	UOM	LOR	BH2 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2	BH6 0.05-0.2
			SOIL	SOIL	SOIL	SOIL
			- 16/3/2017 SE163301.002	- 17/3/2017 SE163301.004	- 17/3/2017 SE163301.005	- 17/3/2017 SE163301.006
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 (F2)	mg/kg	25	<25	<25	<25	<25
TRH >C10-C16 (F2) - Naphthalene	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	mg/kg	210	<210	<210	<210	<210



## ANALYTICAL RESULTS

SE163301 R0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 23/3/2017

PARAMETER	UOM	LOR	BH4 0.07-0.15	BH5 0.05-0.2	BH6 0.05-0.2
			SOIL - 17/3/2017 SE163301.004	SOIL - 17/3/2017 SE163301.005	SOIL - 17/3/2017 SE163301.006
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	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



# ANALYTICAL RESULTS

SE163301 R0

OC Pesticides in Soil [AN420] Tested: 23/3/2017

PARAMETER	UOM	LOR	BH1 0.15-0.3	BH2 0-0.15	BH3 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			16/3/2017 SE163301.001	16/3/2017 SE163301.002	16/3/2017 SE163301.003	17/3/2017 SE163301.004	17/3/2017 SE163301.005
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	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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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



## ANALYTICAL RESULTS

SE163301 R0

OC Pesticides in Soil [AN420] Tested: 23/3/2017 (continued)

PARAMETER	UOM	LOR	BH6 0.05-0.2	Duplicate D1
			SOIL - 17/3/2017 SE163301.006	SOIL - 17/3/2017 SE163301.007
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1
Dieldrin	mg/kg	0.05	<0.05	<0.05
Endrin	mg/kg	0.2	<0.2	<0.2
o,p'-DDD	mg/kg	0.1	<0.1	<0.1
o,p'-DDT	mg/kg	0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1
Endrin Ketone	mg/kg	0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1





## ANALYTICAL RESULTS

SE163301 R0

PCBs in Soil [AN420] Tested: 23/3/2017

PARAMETER	UOM	LOR	BH4 0.07-0.15	BH5 0.05-0.2	BH6 0.05-0.2
			SOIL	SOIL	SOIL
			- 17/3/2017 SE163301.004	- 17/3/2017 SE163301.005	- 17/3/2017 SE163301.006
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



ANALYTICAL RESULTS

SE163301 R0

Total Phenolics in Soil [AN289]    Tested: 24/3/2017

			BH4 0.07-0.15	BH5 0.05-0.2	BH6 0.05-0.2
			SOIL	SOIL	SOIL
			-	-	-
			17/3/2017	17/3/2017	17/3/2017
			SE163301.004	SE163301.005	SE163301.006
PARAMETER	UOM	LOR			
Total Phenols	mg/kg	5	<5	<5	<5



## ANALYTICAL RESULTS

SE163301 R0

Total Cyanide in soil by Discrete Analyser (Aquakem) [AN077/AN287] Tested: 23/3/2017

			BH4 0.07-0.15	BH5 0.05-0.2	BH6 0.05-0.2
			SOIL	SOIL	SOIL
			-	-	-
			17/3/2017	17/3/2017	17/3/2017
			SE163301.004	SE163301.005	SE163301.006
PARAMETER	UOM	LOR			
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-
Cyanide Amenable to Chlorination	mg/kg	0.5	-	-	-



ANALYTICAL RESULTS

SE163301 R0

pH in soil (1:5) [AN101]    Tested: 24/3/2017

			BH1 0.15-0.3	BH2 0-0.15	BH3 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/3/2017	16/3/2017	16/3/2017	17/3/2017	17/3/2017
PARAMETER	UOM	LOR	SE163301.001	SE163301.002	SE163301.003	SE163301.004	SE163301.005
pH	pH Units	-	7.5	5.7	6.9	10.8	8.2

			BH6 0.05-0.2
			SOIL
			-
			17/3/2017
PARAMETER	UOM	LOR	SE163301.006
pH	pH Units	-	8.7



# ANALYTICAL RESULTS

SE163301 R0

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 24/3/2017

PARAMETER	UOM	LOR	BH1 0.15-0.3	BH2 0-0.15	BH3 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			16/3/2017 SE163301.001	16/3/2017 SE163301.002	16/3/2017 SE163301.003	17/3/2017 SE163301.004	17/3/2017 SE163301.005
Exchangeable Sodium, Na	mg/kg	2	80	80	70	10	130
Exchangeable Sodium, Na	meq/100g	0.01	0.35	0.35	0.31	0.05	0.58
Exchangeable Sodium Percentage*	%	0.1	2.7	4.4	2.2	0.2	1.8
Exchangeable Potassium, K	mg/kg	2	200	170	130	77	210
Exchangeable Potassium, K	meq/100g	0.01	0.52	0.42	0.33	0.20	0.53
Exchangeable Potassium Percentage*	%	0.1	4.1	5.4	2.4	0.7	1.6
Exchangeable Calcium, Ca	mg/kg	2	2100	1200	2200	5300	6000
Exchangeable Calcium, Ca	meq/100g	0.01	11	6.1	11	26	30
Exchangeable Calcium Percentage*	%	0.1	83.0	78.7	79.5	95.6	92.7
Exchangeable Magnesium, Mg	mg/kg	2	160	110	260	120	150
Exchangeable Magnesium, Mg	meq/100g	0.02	1.3	0.89	2.2	0.96	1.3
Exchangeable Magnesium Percentage*	%	0.1	10.2	11.4	15.8	3.5	3.9
Cation Exchange Capacity	meq/100g	0.02	13	7.8	14	28	32

PARAMETER	UOM	LOR	BH6 0.05-0.2
			SOIL
			17/3/2017 SE163301.006
Exchangeable Sodium, Na	mg/kg	2	28
Exchangeable Sodium, Na	meq/100g	0.01	0.12
Exchangeable Sodium Percentage*	%	0.1	0.7
Exchangeable Potassium, K	mg/kg	2	93
Exchangeable Potassium, K	meq/100g	0.01	0.24
Exchangeable Potassium Percentage*	%	0.1	1.4
Exchangeable Calcium, Ca	mg/kg	2	3300
Exchangeable Calcium, Ca	meq/100g	0.01	16
Exchangeable Calcium Percentage*	%	0.1	95.1
Exchangeable Magnesium, Mg	mg/kg	2	58
Exchangeable Magnesium, Mg	meq/100g	0.02	0.48
Exchangeable Magnesium Percentage*	%	0.1	2.8
Cation Exchange Capacity	meq/100g	0.02	17



ANALYTICAL RESULTS

SE163301 R0

Formaldehyde in Soil [AN226]    Tested: 27/3/2017

			BH2 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2	BH6 0.05-0.2
			SOIL	SOIL	SOIL	SOIL
			-	-	-	-
			16/3/2017	17/3/2017	17/3/2017	17/3/2017
PARAMETER	UOM	LOR	SE163301.002	SE163301.004	SE163301.005	SE163301.006
Formaldehyde*	mg/kg	2	<2	<2	<2	<2



# ANALYTICAL RESULTS

SE163301 R0

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 23/3/2017

PARAMETER	UOM	LOR	BH1 0.15-0.3	BH2 0-0.15	BH3 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 16/3/2017 SE163301.001	- 16/3/2017 SE163301.002	- 16/3/2017 SE163301.003	- 17/3/2017 SE163301.004	- 17/3/2017 SE163301.005
Arsenic, As	mg/kg	3	6	7	<3	4	6
Cadmium, Cd	mg/kg	0.3	0.4	0.5	<0.3	<0.3	0.6
Chromium, Cr	mg/kg	0.3	19	23	2.9	11	23
Copper, Cu	mg/kg	0.5	15	23	1.8	9.9	42
Lead, Pb	mg/kg	1	21	43	5	12	30
Nickel, Ni	mg/kg	0.5	4.5	15	1.1	7.6	13
Zinc, Zn	mg/kg	0.5	15	63	6.8	40	77

PARAMETER	UOM	LOR	BH6 0.05-0.2	Duplicate D1
			SOIL	SOIL
			- 17/3/2017 SE163301.006	- 17/3/2017 SE163301.007
Arsenic, As	mg/kg	3	7	5
Cadmium, Cd	mg/kg	0.3	<0.3	0.3
Chromium, Cr	mg/kg	0.3	10	15
Copper, Cu	mg/kg	0.5	7.2	16
Lead, Pb	mg/kg	1	17	20
Nickel, Ni	mg/kg	0.5	6.1	3.7
Zinc, Zn	mg/kg	0.5	31	14



## ANALYTICAL RESULTS

SE163301 R0

Mercury in Soil [AN312] Tested: 23/3/2017

			BH1 0.15-0.3	BH2 0-0.15	BH3 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/3/2017	16/3/2017	16/3/2017	17/3/2017	17/3/2017
PARAMETER	UOM	LOR	SE163301.001	SE163301.002	SE163301.003	SE163301.004	SE163301.005
Mercury	mg/kg	0.05	<0.05	<0.05	<b>0.07</b>	<0.05	<b>0.38</b>

			BH6 0.05-0.2	Duplicate D1
			SOIL	SOIL
			-	-
			17/3/2017	17/3/2017
PARAMETER	UOM	LOR	SE163301.006	SE163301.007
Mercury	mg/kg	0.05	<b>0.88</b>	<0.05





## ANALYTICAL RESULTS

SE163301 R0

Moisture Content [AN002] Tested: 23/3/2017

			BH1 0.15-0.3	BH2 0-0.15	BH3 0-0.15	BH4 0.07-0.15	BH5 0.05-0.2
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			16/3/2017	16/3/2017	16/3/2017	17/3/2017	17/3/2017
PARAMETER	UOM	LOR	SE163301.001	SE163301.002	SE163301.003	SE163301.004	SE163301.005
% Moisture	%w/w	0.5	25	18	25	14	15

			BH6 0.05-0.2	Duplicate D1
			SOIL	SOIL
			-	-
			17/3/2017	17/3/2017
PARAMETER	UOM	LOR	SE163301.006	SE163301.007
% Moisture	%w/w	0.5	20	26



## ANALYTICAL RESULTS

SE163301 R0

Metals in Water (Dissolved) by ICPOES [AN320/AN321] Tested: 27/3/2017

			Rinsate R1	Rinsate R2
			WATER	WATER
			-	-
			16/3/2017	17/3/2017
PARAMETER	UOM	LOR	SE163301.008	SE163301.009
Arsenic, As	mg/L	0.02	<0.02	<0.02
Cadmium, Cd	mg/L	0.001	<0.001	<0.001
Chromium, Cr	mg/L	0.005	<0.005	<0.005
Copper, Cu	mg/L	0.005	<0.005	<0.005
Lead, Pb	mg/L	0.02	<0.02	<0.02
Nickel, Ni	mg/L	0.005	<0.005	<0.005
Zinc, Zn	mg/L	0.01	<0.01	<0.01



## ANALYTICAL RESULTS

SE163301 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 24/3/2017

			Rinsate R1	Rinsate R2
			WATER	WATER
			-	-
			16/3/2017	17/3/2017
			SE163301.008	SE163301.009
PARAMETER	UOM	LOR		
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.
- AN077** Hydrogen cyanide is liberated from an acidified alkali soil extract by distillation and purging with air. The hydrogen cyanide gas is then collected by passing it through a sodium hydroxide scrubbing solution. The scrubbing solution will then be analysed for cyanide by the appropriate method.
- AN101** pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl<sub>2</sub>) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H<sup>+</sup>.
- AN122** Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
- AN122** The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100.  
ESP can be used to categorise the sodicity of the soil as below:
- |           |                |
|-----------|----------------|
| ESP < 6%  | non-sodic      |
| ESP 6-15% | sodic          |
| ESP >15%  | strongly sodic |
- Method is referenced to Rayment and Higginson, 1992, sections 15D3 and 15N1.-
- AN226** Formaldehyde is taken into solution and aliquots are reacted with chromotropic acid in the presence of sulfuric acid to form a purple, not-cationic, chromogen. The intensity of the colour is directly proportional to the amount of formaldehyde in the solution. Corrected for dilution factor and moisture factor for concentration in soil.
- AN287** A buffered distillate or water sample is treated with chloramine/barbituric acid reagents and the intensity of the colour developed is proportional to the cyanide concentration by Aquakem DA.
- AN289** Analysis of Total Phenols in Soil Sediment and Water: Steam distillable phenols react with 4-aminoantipyrine at pH 7.9±0.1 in the presence of potassium ferricyanide to form a coloured antipyrine dye analysed by Discrete Analyser. Reference APHA 5530 B/D.
- 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
- AN320/AN321** Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
- AN320/AN321** Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.
- AN403** Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). 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 Petroleum Hydrocarbons (TPH) 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).
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.

## 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.
		IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Samples 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:

- 1 Bq is equivalent to 27 pCi
- 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 criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.sgs.com.au/-/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf>

This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at <http://www.sgs.com/en/terms-and-conditions>. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein.

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## STATEMENT OF QA/QC PERFORMANCE

SE163301 R0

### CLIENT DETAILS

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Project **13977-2 Narwee**  
Order Number (Not specified)  
Samples 10

### LABORATORY DETAILS

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SGS Reference **SE163301 R0**  
Date Received 20 Mar 2017  
Date Reported 28 Mar 2017

### 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 and was supplied by the Client.

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:

Extraction Date	Formaldehyde in Soil	4 items
Analysis Date	Formaldehyde in Soil	4 items
Duplicate	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	1 item
	Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES	1 item
Matrix Spike	Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES	2 items
	TRH (Total Recoverable Hydrocarbons) in Soil	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	8 Soil, 2 Water
Date documentation received	20/3/2017	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	18.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		



## HOLDING TIME SUMMARY

SE163301 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

### Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-ENVJAN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.3	SE163301.001	LB120974	16 Mar 2017	20 Mar 2017	13 Apr 2017	24 Mar 2017	13 Apr 2017	27 Mar 2017
BH2 0-0.15	SE163301.002	LB120974	16 Mar 2017	20 Mar 2017	13 Apr 2017	24 Mar 2017	13 Apr 2017	27 Mar 2017
BH3 0-0.15	SE163301.003	LB120974	16 Mar 2017	20 Mar 2017	13 Apr 2017	24 Mar 2017	13 Apr 2017	27 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120974	17 Mar 2017	20 Mar 2017	14 Apr 2017	24 Mar 2017	14 Apr 2017	27 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120974	17 Mar 2017	20 Mar 2017	14 Apr 2017	24 Mar 2017	14 Apr 2017	27 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120974	17 Mar 2017	20 Mar 2017	14 Apr 2017	24 Mar 2017	14 Apr 2017	27 Mar 2017

### Formaldehyde In Soil

Method: ME-(AU)-ENVJAN226

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH2 0-0.15	SE163301.002	LB121143	16 Mar 2017	20 Mar 2017	18 Mar 2017	27 Mar 2017†	18 Mar 2017	28 Mar 2017†
BH4 0.07-0.15	SE163301.004	LB121143	17 Mar 2017	20 Mar 2017	19 Mar 2017	27 Mar 2017†	19 Mar 2017	28 Mar 2017†
BH5 0.05-0.2	SE163301.005	LB121143	17 Mar 2017	20 Mar 2017	19 Mar 2017	27 Mar 2017†	19 Mar 2017	28 Mar 2017†
BH6 0.05-0.2	SE163301.006	LB121143	17 Mar 2017	20 Mar 2017	19 Mar 2017	27 Mar 2017†	19 Mar 2017	28 Mar 2017†

### Mercury (dissolved) in Water

Method: ME-(AU)-ENVJAN311(Perth)/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Rinsate R1	SE163301.008	LB120969	16 Mar 2017	20 Mar 2017	13 Apr 2017	24 Mar 2017	13 Apr 2017	24 Mar 2017
Rinsate R2	SE163301.009	LB120969	17 Mar 2017	20 Mar 2017	14 Apr 2017	24 Mar 2017	14 Apr 2017	24 Mar 2017

### Mercury in Soil

Method: ME-(AU)-ENVJAN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.3	SE163301.001	LB120890	16 Mar 2017	20 Mar 2017	13 Apr 2017	23 Mar 2017	13 Apr 2017	27 Mar 2017
BH2 0-0.15	SE163301.002	LB120890	16 Mar 2017	20 Mar 2017	13 Apr 2017	23 Mar 2017	13 Apr 2017	27 Mar 2017
BH3 0-0.15	SE163301.003	LB120890	16 Mar 2017	20 Mar 2017	13 Apr 2017	23 Mar 2017	13 Apr 2017	27 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120890	17 Mar 2017	20 Mar 2017	14 Apr 2017	23 Mar 2017	14 Apr 2017	27 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120890	17 Mar 2017	20 Mar 2017	14 Apr 2017	23 Mar 2017	14 Apr 2017	27 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120890	17 Mar 2017	20 Mar 2017	14 Apr 2017	23 Mar 2017	14 Apr 2017	27 Mar 2017
Duplicate D1	SE163301.007	LB120890	17 Mar 2017	20 Mar 2017	14 Apr 2017	23 Mar 2017	14 Apr 2017	27 Mar 2017

### Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-ENVJAN320/AN321

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Rinsate R1	SE163301.008	LB121043	16 Mar 2017	20 Mar 2017	12 Sep 2017	27 Mar 2017	12 Sep 2017	27 Mar 2017
Rinsate R2	SE163301.009	LB121043	17 Mar 2017	20 Mar 2017	13 Sep 2017	27 Mar 2017	13 Sep 2017	27 Mar 2017

### Moisture Content

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.3	SE163301.001	LB120923	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	28 Mar 2017	24 Mar 2017
BH2 0-0.15	SE163301.002	LB120923	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	28 Mar 2017	24 Mar 2017
BH3 0-0.15	SE163301.003	LB120923	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	28 Mar 2017	24 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120923	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	28 Mar 2017	24 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120923	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	28 Mar 2017	24 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120923	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	28 Mar 2017	24 Mar 2017
Duplicate D1	SE163301.007	LB120923	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	28 Mar 2017	24 Mar 2017

### OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.3	SE163301.001	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH2 0-0.15	SE163301.002	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH3 0-0.15	SE163301.003	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
Duplicate D1	SE163301.007	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017

### PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.3	SE163301.001	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH2 0-0.15	SE163301.002	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH3 0-0.15	SE163301.003	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
Duplicate D1	SE163301.007	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017



## HOLDING TIME SUMMARY

SE163301 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

### PCBs in Soil Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.3	SE163301.001	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH2 0-0.15	SE163301.002	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH3 0-0.15	SE163301.003	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
Duplicate D1	SE163301.007	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017

### pH in soil (1:5) Method: ME-(AU)-[ENV]AN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.15-0.3	SE163301.001	LB120979	16 Mar 2017	20 Mar 2017	23 Mar 2017	23 Mar 2017	24 Mar 2017	23 Mar 2017
BH2 0-0.15	SE163301.002	LB120979	16 Mar 2017	20 Mar 2017	23 Mar 2017	23 Mar 2017	24 Mar 2017	23 Mar 2017
BH3 0-0.15	SE163301.003	LB120979	16 Mar 2017	20 Mar 2017	23 Mar 2017	23 Mar 2017	24 Mar 2017	23 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120979	17 Mar 2017	20 Mar 2017	24 Mar 2017	23 Mar 2017	24 Mar 2017	23 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120979	17 Mar 2017	20 Mar 2017	24 Mar 2017	23 Mar 2017	24 Mar 2017	23 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120979	17 Mar 2017	20 Mar 2017	24 Mar 2017	23 Mar 2017	24 Mar 2017	23 Mar 2017

### Total Cyanide in soil by Discrete Analyser (Aquakem) Method: ME-(AU)-[ENV]AN077/AN287

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH4 0.07-0.15	SE163301.004	LB120929	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	31 Mar 2017	24 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120929	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	31 Mar 2017	24 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120929	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	31 Mar 2017	24 Mar 2017

### Total Phenolics in Soil Method: ME-(AU)-[ENV]AN289

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH4 0.07-0.15	SE163301.004	LB120957	17 Mar 2017	20 Mar 2017	31 Mar 2017	24 Mar 2017	31 Mar 2017	24 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120957	17 Mar 2017	20 Mar 2017	31 Mar 2017	24 Mar 2017	31 Mar 2017	24 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120957	17 Mar 2017	20 Mar 2017	31 Mar 2017	24 Mar 2017	31 Mar 2017	24 Mar 2017

### Total Recoverable Metals 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
BH1 0.15-0.3	SE163301.001	LB120900	16 Mar 2017	20 Mar 2017	12 Sep 2017	23 Mar 2017	12 Sep 2017	27 Mar 2017
BH2 0-0.15	SE163301.002	LB120900	16 Mar 2017	20 Mar 2017	12 Sep 2017	23 Mar 2017	12 Sep 2017	27 Mar 2017
BH3 0-0.15	SE163301.003	LB120900	16 Mar 2017	20 Mar 2017	12 Sep 2017	23 Mar 2017	12 Sep 2017	27 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120900	17 Mar 2017	20 Mar 2017	13 Sep 2017	23 Mar 2017	13 Sep 2017	27 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120901	17 Mar 2017	20 Mar 2017	13 Sep 2017	23 Mar 2017	13 Sep 2017	27 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120901	17 Mar 2017	20 Mar 2017	13 Sep 2017	23 Mar 2017	13 Sep 2017	27 Mar 2017
Duplicate D1	SE163301.007	LB120901	17 Mar 2017	20 Mar 2017	13 Sep 2017	23 Mar 2017	13 Sep 2017	27 Mar 2017

### 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
BH1 0.15-0.3	SE163301.001	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH2 0-0.15	SE163301.002	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH3 0-0.15	SE163301.003	LB120909	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017
Duplicate D1	SE163301.007	LB120909	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	27 Mar 2017

### VOC's in Soil Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH2 0-0.15	SE163301.002	LB120907	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	24 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120907	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	24 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120907	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	24 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120907	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	24 Mar 2017
Tripspike TS1	SE163301.010	LB120907	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	24 Mar 2017

### Volatile Petroleum Hydrocarbons in Soil Method: ME-(AU)-[ENV]AN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH2 0-0.15	SE163301.002	LB120907	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	24 Mar 2017
BH4 0.07-0.15	SE163301.004	LB120907	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	24 Mar 2017
BH5 0.05-0.2	SE163301.005	LB120907	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	24 Mar 2017
BH6 0.05-0.2	SE163301.006	LB120907	17 Mar 2017	20 Mar 2017	31 Mar 2017	23 Mar 2017	02 May 2017	24 Mar 2017





# HOLDING TIME SUMMARY

SE163301 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Tripspike TS1	SE163301.010	LB120907	16 Mar 2017	20 Mar 2017	30 Mar 2017	23 Mar 2017	02 May 2017	24 Mar 2017

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 identifier 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)	BH1 0.15-0.3	SE163301.001	%	60 - 130%	101
	BH2 0.0-0.15	SE163301.002	%	60 - 130%	101
	BH3 0.0-0.15	SE163301.003	%	60 - 130%	102
	BH4 0.07-0.15	SE163301.004	%	60 - 130%	99
	BH5 0.05-0.2	SE163301.005	%	60 - 130%	98
	BH6 0.05-0.2	SE163301.006	%	60 - 130%	99
	Duplicate D1	SE163301.007	%	60 - 130%	102

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH4 0.07-0.15	SE163301.004	%	70 - 130%	88
	BH5 0.05-0.2	SE163301.005	%	70 - 130%	86
	BH6 0.05-0.2	SE163301.006	%	70 - 130%	88
d14-p-terphenyl (Surrogate)	BH4 0.07-0.15	SE163301.004	%	70 - 130%	92
	BH5 0.05-0.2	SE163301.005	%	70 - 130%	106
	BH6 0.05-0.2	SE163301.006	%	70 - 130%	88
d5-nitrobenzene (Surrogate)	BH4 0.07-0.15	SE163301.004	%	70 - 130%	92
	BH5 0.05-0.2	SE163301.005	%	70 - 130%	90
	BH6 0.05-0.2	SE163301.006	%	70 - 130%	90

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH4 0.07-0.15	SE163301.004	%	60 - 130%	99
	BH5 0.05-0.2	SE163301.005	%	60 - 130%	98
	BH6 0.05-0.2	SE163301.006	%	60 - 130%	99

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH2 0.0-0.15	SE163301.002	%	60 - 130%	86
	BH4 0.07-0.15	SE163301.004	%	60 - 130%	84
	BH5 0.05-0.2	SE163301.005	%	60 - 130%	79
	BH6 0.05-0.2	SE163301.006	%	60 - 130%	81
	TripSpike TS1	SE163301.010	%	60 - 130%	96
d4-1,2-dichloroethane (Surrogate)	BH2 0.0-0.15	SE163301.002	%	60 - 130%	71
	BH4 0.07-0.15	SE163301.004	%	60 - 130%	76
	BH5 0.05-0.2	SE163301.005	%	60 - 130%	75
	BH6 0.05-0.2	SE163301.006	%	60 - 130%	72
	TripSpike TS1	SE163301.010	%	60 - 130%	84
d8-toluene (Surrogate)	BH2 0.0-0.15	SE163301.002	%	60 - 130%	85
	BH4 0.07-0.15	SE163301.004	%	60 - 130%	80
	BH5 0.05-0.2	SE163301.005	%	60 - 130%	74
	BH6 0.05-0.2	SE163301.006	%	60 - 130%	77
	TripSpike TS1	SE163301.010	%	60 - 130%	87
Dibromofluoromethane (Surrogate)	BH2 0.0-0.15	SE163301.002	%	60 - 130%	73
	BH4 0.07-0.15	SE163301.004	%	60 - 130%	74
	BH5 0.05-0.2	SE163301.005	%	60 - 130%	72
	BH6 0.05-0.2	SE163301.006	%	60 - 130%	73
	TripSpike TS1	SE163301.010	%	60 - 130%	79

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH2 0.0-0.15	SE163301.002	%	60 - 130%	99
	BH4 0.07-0.15	SE163301.004	%	60 - 130%	95
	BH5 0.05-0.2	SE163301.005	%	60 - 130%	94
	BH6 0.05-0.2	SE163301.006	%	60 - 130%	97
d4-1,2-dichloroethane (Surrogate)	BH2 0.0-0.15	SE163301.002	%	60 - 130%	71
	BH4 0.07-0.15	SE163301.004	%	60 - 130%	80
	BH5 0.05-0.2	SE163301.005	%	60 - 130%	76
	BH6 0.05-0.2	SE163301.006	%	60 - 130%	71
d8-toluene (Surrogate)	BH2 0.0-0.15	SE163301.002	%	60 - 130%	72
	BH4 0.07-0.15	SE163301.004	%	60 - 130%	81
	BH5 0.05-0.2	SE163301.005	%	60 - 130%	81
	BH6 0.05-0.2	SE163301.006	%	60 - 130%	71



## SURROGATES

SE163301 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 identifier 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 %
Dibromofluoromethane (Surrogate)	BH2 0-0.15	SE163301.002	%	60 - 130%	72
	BH4 0.07-0.15	SE163301.004	%	60 - 130%	71
	BH5 0.05-0.2	SE163301.005	%	60 - 130%	73
	BH6 0.05-0.2	SE163301.006	%	60 - 130%	72



## METHOD BLANKS

SE163301 R0

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.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-(ENV)AN122

Sample Number	Parameter	Units	LOR
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## Mercury (dissolved) in Water

Method: ME-(AU)-(ENV)AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB120969.001	Mercury	mg/L	0.0001	<0.0001

## Mercury in Soil

Method: ME-(AU)-(ENV)AN312

Sample Number	Parameter	Units	LOR	Result
LB120890.001	Mercury	mg/kg	0.05	<0.05

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-(ENV)AN320/AN321

Sample Number	Parameter	Units	LOR	Result
LB121043.001	Arsenic, As	mg/L	0.02	<0.02
	Cadmium, Cd	mg/L	0.001	<0.001
	Chromium, Cr	mg/L	0.005	<0.005
	Copper, Cu	mg/L	0.005	<0.005
	Lead, Pb	mg/L	0.02	<0.02
	Nickel, Ni	mg/L	0.005	<0.005
	Zinc, Zn	mg/L	0.01	<0.01

## OC Pesticides in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result
LB120909.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.05	<0.05
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result
LB120909.001	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



## METHOD BLANKS

SE163301 R0

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
LB120909.001	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)	%	-	94
	2-fluorobiphenyl (Surrogate)	%	-	90
	d14-p-terphenyl (Surrogate)	%	-	92

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB120909.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates			
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89

## Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result
LB120929.001	Total Cyanide	mg/kg	0.5	<0.5

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result
LB120957.001	Total Phenols	mg/kg	5	<5

## Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB120900.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5
LB120901.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB120909.001	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



## METHOD BLANKS

SE163301 R0

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.

## VOC's in Soil

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB120907.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
		1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Bromomethane	mg/kg	1	<1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		Iodomethane	mg/kg	5	<5
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Dibromomethane	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		cis-1,4-dichloro-2-butene	mg/kg	1	<1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
		Hexachlorobutadiene	mg/kg	0.1	<0.1
	Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1
		Bromobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
	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
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
		p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
	Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1
		2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10

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.

## VOC's in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB120907.001	Oxygenated Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1
		Vinyl acetate	mg/kg	10	<10
		MEK (2-butanone)	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
		2-hexanone (MBK)	mg/kg	5	<5
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	80
		d4-1,2-dichloroethane (Surrogate)	%	-	77
		d8-toluene (Surrogate)	%	-	87
		Bromofluorobenzene (Surrogate)	%	-	88
	Totals	Total BTEX	mg/kg	0.6	<0.6
		Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
		Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
	Trihalomethanes	Chloroform	mg/kg	0.1	<0.1
		Bromodichloromethane	mg/kg	0.1	<0.1
		Chlorodibromomethane	mg/kg	0.1	<0.1
		Bromoform	mg/kg	0.1	<0.1

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB120907.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	79
		d4-1,2-dichloroethane (Surrogate)	%	-	82
		d8-toluene (Surrogate)	%	-	87

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163312.001	LB120969.007	Mercury	µg/L	0.0001	-0.0136	<0.0001	200	0

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163313.003	LB120890.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE163313.006	LB120890.018	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163314.045	LB121043.014	Arsenic, As	mg/L	0.02	<0.020	<0.020	200	0
		Cadmium, Cd	mg/L	0.001	<0.001	<0.001	200	0
		Chromium, Cr	mg/L	0.005	<0.005	<0.005	200	0
		Copper, Cu	mg/L	0.005	<0.005	<0.005	133	0
		Lead, Pb	mg/L	0.02	<0.02	<0.02	200	0
		Nickel, Ni	mg/L	0.005	<0.005	<0.005	200	0
		Zinc, Zn	mg/L	0.01	0.01	0.02	77	20

## Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163399.003	LB120923.011	% Moisture	%w/w	0.5	15	16	36	2
SE163420.001	LB120923.022	% Moisture	%w/w	0.5	8.1	8.3	42	2
SE163424.002	LB120923.033	% Moisture	%w/w	0.5	5.2	5.4	49	4
SE163424.006	LB120923.038	% Moisture	%w/w	0.5	8.4	8.6	42	3

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163341.004	LB120909.014	Hexachlorobenzene (HCB)	mg/kg	0.1	0	0	200	0
		Alpha BHC	mg/kg	0.1	0	0	200	0
		Lindane	mg/kg	0.1	0	0	200	0
		Heptachlor	mg/kg	0.1	0	0	200	0
		Aldrin	mg/kg	0.1	0	0	200	0
		Beta BHC	mg/kg	0.1	0	0	200	0
		Delta BHC	mg/kg	0.1	0	0	200	0
		Heptachlor epoxide	mg/kg	0.1	0	0	200	0
		o,p'-DDE	mg/kg	0.1	0	0	200	0
		Alpha Endosulfan	mg/kg	0.2	0	0	200	0
		Gamma Chlordane	mg/kg	0.1	0	0	200	0
		Alpha Chlordane	mg/kg	0.1	0	0	200	0
		trans-Nonachlor	mg/kg	0.1	0	0	200	0
		p,p'-DDE	mg/kg	0.1	0	0	200	0
		Dieldrin	mg/kg	0.05	0	0	200	0
		Endrin	mg/kg	0.2	0	0	200	0
		o,p'-DDD	mg/kg	0.1	0	0	200	0
		o,p'-DDT	mg/kg	0.1	0	0	200	0
		Beta Endosulfan	mg/kg	0.2	0	0	200	0
		p,p'-DDD	mg/kg	0.1	0	0	200	0
		p,p'-DDT	mg/kg	0.1	0	0	200	0
		Endosulfan sulphate	mg/kg	0.1	0	0	200	0
		Endrin Aldehyde	mg/kg	0.1	0	0	200	0
		Methoxychlor	mg/kg	0.1	0	0	200	0
		Endrin Ketone	mg/kg	0.1	0	0	200	0
		Isodrin	mg/kg	0.1	0	0	200	0
		Mirex	mg/kg	0.1	0	0	200	0
			Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.154	0.156
SE163341.017	LB120909.023	Hexachlorobenzene (HCB)	mg/kg	0.1	0	0	200	0
		Alpha BHC	mg/kg	0.1	0	0	200	0
		Lindane	mg/kg	0.1	0	0	200	0
		Heptachlor	mg/kg	0.1	0	0	200	0
		Aldrin	mg/kg	0.1	0	0	200	0



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163341.017	LB120909.023	Beta BHC	mg/kg	0.1	0	0	200	0
		Delta BHC	mg/kg	0.1	0	0	200	0
		Heptachlor epoxide	mg/kg	0.1	0	0	200	0
		o,p'-DDE	mg/kg	0.1	0	0	200	0
		Alpha Endosulfan	mg/kg	0.2	0	0	200	0
		Gamma Chlordane	mg/kg	0.1	0	0	200	0
		Alpha Chlordane	mg/kg	0.1	0	0	200	0
		trans-Nonachlor	mg/kg	0.1	0	0	200	0
		p,p'-DDE	mg/kg	0.1	0	0	200	0
		Dieldrin	mg/kg	0.05	0	0	200	0
		Endrin	mg/kg	0.2	0	0	200	0
		o,p'-DDD	mg/kg	0.1	0	0	200	0
		o,p'-DDT	mg/kg	0.1	0	0	200	0
		Beta Endosulfan	mg/kg	0.2	0	0	200	0
		p,p'-DDD	mg/kg	0.1	0	0	200	0
		p,p'-DDT	mg/kg	0.1	0	0	200	0
		Endosulfan sulphate	mg/kg	0.1	0	0	200	0
		Endrin Aldehyde	mg/kg	0.1	0	0	200	0
		Methoxychlor	mg/kg	0.1	0	0	200	0
		Endrin Ketone	mg/kg	0.1	0	0	200	0
		Isodrin	mg/kg	0.1	0	0	200	0
		Mirex	mg/kg	0.1	0	0	200	0
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)		mg/kg	-	0.143	0.151	30	5

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163341.004	LB120909.014	Naphthalene	mg/kg	0.1	0.56	0.39	51	36
		2-methylnaphthalene	mg/kg	0.1	0.15	0.14	99	7
		1-methylnaphthalene	mg/kg	0.1	0.11	0.1	125	10
		Acenaphthylene	mg/kg	0.1	0.75	1.02	41	31
		Acenaphthene	mg/kg	0.1	0.15	0.12	104	22
		Fluorene	mg/kg	0.1	0.15	0.19	89	24
		Phenanthrene	mg/kg	0.1	3.63	3.72	33	2
		Anthracene	mg/kg	0.1	0.97	1.12	40	14
		Fluoranthene	mg/kg	0.1	8.16	7	31	15
		Pyrene	mg/kg	0.1	6.02	5.32	32	12
		Benzo(a)anthracene	mg/kg	0.1	3.79	3.3	33	14
		Chrysene	mg/kg	0.1	3.31	2.78	33	17
		Benzo(b&j)fluoranthene	mg/kg	0.1	4.97	4.72	32	5
		Benzo(k)fluoranthene	mg/kg	0.1	2.86	2.4	34	17
		Benzo(a)pyrene	mg/kg	0.1	4.54	4.48	32	1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	2.69	2.64	34	2
		Dibenzo(ah)anthracene	mg/kg	0.1	0.62	0.53	47	16
		Benzo(ghi)perylene	mg/kg	0.1	2.94	2.86	33	3
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	6.6485	6.3654	13	4
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	6.6485	6.3654	15	4
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	6.6485	6.3654	13	4
		Surrogates	Total PAH (18)	mg/kg	0.8	46.32	29.29	32
d5-nitrobenzene (Surrogate)	mg/kg		-	0.52	0.54	30	4	
2-fluorobiphenyl (Surrogate)	mg/kg		-	0.45	0.51	30	13	
d14-p-terphenyl (Surrogate)	mg/kg		-	0.55	0.57	30	4	

## PCBs in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163341.004	LB120909.014	Arochlor 1016	mg/kg	0.2	0	0	200	0
		Arochlor 1221	mg/kg	0.2	0	0	200	0
		Arochlor 1232	mg/kg	0.2	0	0	200	0
		Arochlor 1242	mg/kg	0.2	0	0	200	0
		Arochlor 1248	mg/kg	0.2	0	0	200	0
		Arochlor 1254	mg/kg	0.2	0	0	200	0
		Arochlor 1260	mg/kg	0.2	0	0	200	0
		Arochlor 1262	mg/kg	0.2	0	0	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163341.004	LB120909.014	Arochlor 1268	mg/kg	0.2	0	0	200	0
		Total PCBs (Arochlors)	mg/kg	1	0	0	200	0
		Surrogates	mg/kg	-	0.154	0.156	30	1
SE163341.017	LB120909.023	Arochlor 1016	mg/kg	0.2	0	0	200	0
		Arochlor 1221	mg/kg	0.2	0	0	200	0
		Arochlor 1232	mg/kg	0.2	0	0	200	0
		Arochlor 1242	mg/kg	0.2	0	0	200	0
		Arochlor 1248	mg/kg	0.2	0	0	200	0
		Arochlor 1254	mg/kg	0.2	0	0	200	0
		Arochlor 1260	mg/kg	0.2	0	0	200	0
		Arochlor 1262	mg/kg	0.2	0	0	200	0
		Arochlor 1268	mg/kg	0.2	0	0	200	0
		Total PCBs (Arochlors)	mg/kg	1	0	0	200	0
		Surrogates	mg/kg	-	0.143	0.151	30	5

## pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163314.012	LB120979.014	pH	pH Units	-	5.0	5.2	32	4
SE163377.007	LB120979.031	pH	pH Units	-	5.36	5.283	32	1

## Total Cyanide in soil by Discrete Analyser (AquaKem)

Method: ME-(AU)-[ENV]AN077/AN287

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163301.004	LB120929.004	Total Cyanide	mg/kg	0.5	<0.5	<0.5	200	0

## Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163206.007	LB120900.014	Arsenic, As	mg/kg	3	4	3	59	24
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.3	8.8	8.2	36	8
		Copper, Cu	mg/kg	0.5	1.0	0.8	85	14
		Lead, Pb	mg/kg	1	3	3	63	0
		Nickel, Ni	mg/kg	0.5	<0.5	<0.5	140	0
SE163213.005	LB120901.014	Zinc, Zn	mg/kg	0.5	1.6	1.3	168	0
		Arsenic, As	mg/kg	3	8	9	42	6
		Cadmium, Cd	mg/kg	0.3	1.2	1.3	54	5
		Chromium, Cr	mg/kg	0.3	120	130	30	5
		Copper, Cu	mg/kg	0.5	390	390	30	1
		Lead, Pb	mg/kg	1	16	19	36	13
SE163225.002	LB120901.024	Nickel, Ni	mg/kg	0.5	100	100	30	2
		Zinc, Zn	mg/kg	0.5	110	86	32	26
		Arsenic, As	mg/kg	3	2	2	78	22
		Cadmium, Cd	mg/kg	0.3	0.6	0.7	79	16
		Chromium, Cr	mg/kg	0.3	13	15	34	15
		Copper, Cu	mg/kg	0.5	170	170	30	1
SE163301.004	LB120900.024	Lead, Pb	mg/kg	1	16	17	36	6
		Nickel, Ni	mg/kg	0.5	14	14	34	0
		Zinc, Zn	mg/kg	0.5	70	69	33	2
		Arsenic, As	mg/kg	3	4	4	53	5
		Cadmium, Cd	mg/kg	0.3	<0.3	0.3	151	1
		Chromium, Cr	mg/kg	0.3	11	16	34	35 @
		Copper, Cu	mg/kg	0.5	9.9	13	34	29
		Lead, Pb	mg/kg	1	12	17	37	37
		Nickel, Ni	mg/kg	0.5	7.6	9.1	36	18
		Zinc, Zn	mg/kg	0.5	40	49	35	21

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR
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Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-ENVJAN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163341.004	LB120909.014	TRH C10-C14	mg/kg	20	0	0	200	0
		TRH C15-C28	mg/kg	45	176	178	55	1
		TRH C29-C36	mg/kg	45	211	223	51	6
		TRH C37-C40	mg/kg	100	0	0	200	0
		TRH C10-C36 Total	mg/kg	110	387	401	58	4
		TRH C10-C40 Total	mg/kg	210	333	337	93	1
		TRH F Bands						
		TRH >C10-C16 (F2)	mg/kg	25	0	0	200	0
		TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	-0.01	0	200	0
		TRH >C16-C34 (F3)	mg/kg	90	333	337	57	1
SE163341.017	LB120909.023	TRH >C34-C40 (F4)	mg/kg	120	0	0	200	0
		TRH C10-C14	mg/kg	20	0	0	200	0
		TRH C15-C28	mg/kg	45	0	0	200	0
		TRH C29-C36	mg/kg	45	0	0	200	0
		TRH C37-C40	mg/kg	100	0	0	200	0
		TRH C10-C36 Total	mg/kg	110	0	0	200	0
		TRH C10-C40 Total	mg/kg	210	0	0	200	0
		TRH F Bands						
		TRH >C10-C16 (F2)	mg/kg	25	0	0	200	0
		TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	-0.01	0	200	0
		TRH >C16-C34 (F3)	mg/kg	90	0	0	200	0
		TRH >C34-C40 (F4)	mg/kg	120	0	0	200	0

## VOC's in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %		
SE163341.006	LB120907.014	Fumigants	2,2-dichloropropane	mg/kg	0.1	0	0	200	0		
			1,2-dichloropropane	mg/kg	0.1	0	0	200	0		
			cis-1,3-dichloropropene	mg/kg	0.1	0	0	200	0		
			trans-1,3-dichloropropene	mg/kg	0.1	0	0	200	0		
			1,2-dibromoethane (EDB)	mg/kg	0.1	0	0	200	0		
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	0	0	0	200	0	
			Aliphatics	Chloromethane	mg/kg	1	0	0	0	200	0
		Vinyl chloride (Chloroethene)		mg/kg	0.1	0	0	0	200	0	
		Bromomethane		mg/kg	1	0	0	0	200	0	
		Chloroethane		mg/kg	1	0	0	0	200	0	
		Trichlorofluoromethane		mg/kg	1	0	0	0	200	0	
		Iodomethane		mg/kg	5	0.01	0.02	0	200	0	
		1,1-dichloroethene		mg/kg	0.1	0	0	0	200	0	
		Dichloromethane (Methylene chloride)		mg/kg	0.5	0	0	0	200	0	
		Allyl chloride		mg/kg	0.1	0	0	0	200	0	
		trans-1,2-dichloroethene		mg/kg	0.1	0	0	0	200	0	
		1,1-dichloroethane		mg/kg	0.1	0	0	0	200	0	
		cis-1,2-dichloroethene		mg/kg	0.1	0	0	0	200	0	
		Bromochloromethane		mg/kg	0.1	0	0	0	200	0	
		1,2-dichloroethane		mg/kg	0.1	0	0	0	200	0	
		1,1,1-trichloroethane		mg/kg	0.1	0	0	0	200	0	
		1,1-dichloropropene		mg/kg	0.1	0	0	0	200	0	
		Carbon tetrachloride		mg/kg	0.1	0	0	0	200	0	
		Dibromomethane		mg/kg	0.1	0	0	0	200	0	
		Trichloroethene (Trichloroethylene -TCE)		mg/kg	0.1	0	0	0	200	0	
		1,1,2-trichloroethane		mg/kg	0.1	0	0	0	200	0	
		1,3-dichloropropane		mg/kg	0.1	0.01	0.01	0	200	0	
		Tetrachloroethene (Perchloroethylene,PCE)		mg/kg	0.1	0	0	0	200	0	
		1,1,1,2-tetrachloroethane		mg/kg	0.1	0	0	0	200	0	
		cis-1,4-dichloro-2-butene		mg/kg	1	0.01	0.01	0	200	0	
		1,1,2,2-tetrachloroethane		mg/kg	0.1	0	0	0	200	0	
		1,2,3-trichloropropane	mg/kg	0.1	0	0	0	200	0		
		trans-1,4-dichloro-2-butene	mg/kg	1	0.02	0.01	0	200	0		
		1,2-dibromo-3-chloropropane	mg/kg	0.1	0.01	0	0	200	0		
		Hexachlorobutadiene	mg/kg	0.1	0	0	0	200	0		
		Halogenated	Chlorobenzene	mg/kg	0.1	0	0	0	200	0	
			Aromatics	Bromobenzene	mg/kg	0.1	0	0	0	200	0
				2-chlorotoluene	mg/kg	0.1	0.02	0	0	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE163341.006	LB120907.014	Halogenated Aromatics	4-chlorotoluene	mg/kg	0.1	0	0	200	0	
			1,3-dichlorobenzene	mg/kg	0.1	0	0	200	0	
			1,4-dichlorobenzene	mg/kg	0.1	0	0	200	0	
			1,2-dichlorobenzene	mg/kg	0.1	0	0.01	200	0	
			1,2,4-trichlorobenzene	mg/kg	0.1	0	0	200	0	
			1,2,3-trichlorobenzene	mg/kg	0.1	0	0	200	0	
		Monocyclic Aromatic	Benzene	mg/kg	0.1	0	0	200	0	
			Toluene	mg/kg	0.1	0.05	0.06	200	0	
			Ethylbenzene	mg/kg	0.1	0.03	0.02	200	0	
			m/p-xylene	mg/kg	0.2	0.07	0.06	200	0	
			o-xylene	mg/kg	0.1	0.03	0.02	200	0	
			Styrene (Vinyl benzene)	mg/kg	0.1	0.01	0.01	200	0	
			Isopropylbenzene (Cumene)	mg/kg	0.1	0	0	200	0	
			n-propylbenzene	mg/kg	0.1	0.01	0	200	0	
			1,3,5-trimethylbenzene	mg/kg	0.1	0.02	0	200	0	
			tert-butylbenzene	mg/kg	0.1	0	0	200	0	
			1,2,4-trimethylbenzene	mg/kg	0.1	0.03	0.01	200	0	
			sec-butylbenzene	mg/kg	0.1	0.03	0.01	200	0	
			p-isopropyltoluene	mg/kg	0.1	0.01	0	200	0	
			n-butylbenzene	mg/kg	0.1	0.01	0.01	200	0	
			Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	0	0	200	0
			2-nitropropane	mg/kg	10	0	0	200	0	
			Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	0	0	200	0
			MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	0	0	200	0	
		Vinyl acetate	mg/kg	10	0	0	200	0		
		MEK (2-butanone)	mg/kg	10	0	0	200	0		
		MIBK (4-methyl-2-pentanone)	mg/kg	1	0	0	200	0		
		2-hexanone (MBK)	mg/kg	5	0	0	200	0		
		Polycyclic	Naphthalene	mg/kg	0.1	0.03	0.01	200	0	
		Sulphonated	Carbon disulfide	mg/kg	0.5	0	0	200	0	
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.67	4.27	50	15	
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.26	4.5	50	5	
			d8-toluene (Surrogate)	mg/kg	-	3.8	4.13	50	8	
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.09	4.47	50	9	
		Totals	Total Xylenes*	mg/kg	0.3	0.1	0.08	200	0	
			Total BTEX	mg/kg	0.6	0.18	0.16	200	0	
			Total VOC*	mg/kg	24	0.44	0.31	200	0	
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	0.04	0.01	200	0	
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	0.03	0.05	200	0	
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	0.03	0.05	200	0	
		Trihalomethanes	Chloroform	mg/kg	0.1	0.03	0.04	200	0	
			Bromodichloromethane	mg/kg	0.1	0	0	200	0	
			Chlorodibromomethane	mg/kg	0.1	0	0	200	0	
			Bromoform	mg/kg	0.1	0	0	200	0	
SE163341.017	LB120907.024	Fumigants	2,2-dichloropropane	mg/kg	0.1	0	0	200	0	
			1,2-dichloropropane	mg/kg	0.1	0	0	200	0	
			cis-1,3-dichloropropene	mg/kg	0.1	0	0	200	0	
			trans-1,3-dichloropropene	mg/kg	0.1	0	0	200	0	
			1,2-dibromoethane (EDB)	mg/kg	0.1	0	0	200	0	
		Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	0	0	200	0	
			Chloromethane	mg/kg	1	0	0	200	0	
			Vinyl chloride (Chloroethene)	mg/kg	0.1	0	0	200	0	
			Bromomethane	mg/kg	1	0	0	200	0	
			Chloroethane	mg/kg	1	0	0	200	0	
			Trichlorofluoromethane	mg/kg	1	0	0	200	0	
			Iodomethane	mg/kg	5	0	0	200	0	
			1,1-dichloroethene	mg/kg	0.1	0	0	200	0	
			Dichloromethane (Methylene chloride)	mg/kg	0.5	0	0	200	0	
			Allyl chloride	mg/kg	0.1	0	0	200	0	
			trans-1,2-dichloroethene	mg/kg	0.1	0	0	200	0	
			1,1-dichloroethane	mg/kg	0.1	0	0	200	0	

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163341.017	LB120907.024	Halogenated	cis-1,2-dichloroethene	mg/kg	0.1	0	0	200	0
			Bromochloromethane	mg/kg	0.1	0	0	200	0
		Aliphatics	1,2-dichloroethane	mg/kg	0.1	0	0	200	0
			1,1,1-trichloroethane	mg/kg	0.1	0	0	200	0
			1,1-dichloropropene	mg/kg	0.1	0	0	200	0
			Carbon tetrachloride	mg/kg	0.1	0	0	200	0
			Dibromomethane	mg/kg	0.1	0	0	200	0
			Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	0	0	200	0
			1,1,2-trichloroethane	mg/kg	0.1	0	0	200	0
			1,3-dichloropropane	mg/kg	0.1	0	0	200	0
			Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	0	0	200	0
			1,1,1,2-tetrachloroethane	mg/kg	0.1	0	0	200	0
			cis-1,4-dichloro-2-butene	mg/kg	1	0	0	200	0
			1,1,2,2-tetrachloroethane	mg/kg	0.1	0	0	200	0
			1,2,3-trichloropropane	mg/kg	0.1	0	0	200	0
			trans-1,4-dichloro-2-butene	mg/kg	1	0	0	200	0
			1,2-dibromo-3-chloropropane	mg/kg	0.1	0	0	200	0
			Hexachlorobutadiene	mg/kg	0.1	0	0	200	0
		Halogenated	Chlorobenzene	mg/kg	0.1	0	0	200	0
			Bromobenzene	mg/kg	0.1	0	0	200	0
		Aromatics	2-chlorotoluene	mg/kg	0.1	0	0	200	0
			4-chlorotoluene	mg/kg	0.1	0	0	200	0
			1,3-dichlorobenzene	mg/kg	0.1	0	0	200	0
			1,4-dichlorobenzene	mg/kg	0.1	0	0	200	0
			1,2-dichlorobenzene	mg/kg	0.1	0	0	200	0
			1,2,4-trichlorobenzene	mg/kg	0.1	0	0	200	0
			1,2,3-trichlorobenzene	mg/kg	0.1	0	0	200	0
		Monocyclic	Benzene	mg/kg	0.1	0	0	200	0
			Toluene	mg/kg	0.1	0.06	0	200	0
			Ethylbenzene	mg/kg	0.1	0.02	0	200	0
			m/p-xylene	mg/kg	0.2	0.08	0	200	0
			o-xylene	mg/kg	0.1	0.02	0	200	0
			Styrene (Vinyl benzene)	mg/kg	0.1	0	0	200	0
			Isopropylbenzene (Cumene)	mg/kg	0.1	0	0	200	0
			n-propylbenzene	mg/kg	0.1	0	0	200	0
			1,3,5-trimethylbenzene	mg/kg	0.1	0	0	200	0
			tert-butylbenzene	mg/kg	0.1	0	0	200	0
			1,2,4-trimethylbenzene	mg/kg	0.1	0	0	200	0
			sec-butylbenzene	mg/kg	0.1	0	0	200	0
			p-isopropyltoluene	mg/kg	0.1	0	0	200	0
			n-butylbenzene	mg/kg	0.1	0	0	200	0
		Nitrogenous	Acrylonitrile	mg/kg	0.1	0	0	200	0
			2-nitropropane	mg/kg	10	0	0	200	0
		Oxygenated	Acetone (2-propanone)	mg/kg	10	0	0	200	0
		Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	0	0	200	0
			Vinyl acetate	mg/kg	10	0	0	200	0
			MEK (2-butanone)	mg/kg	10	0	0	200	0
			MIBK (4-methyl-2-pentanone)	mg/kg	1	0	0	200	0
			2-hexanone (MBK)	mg/kg	5	0	0	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	0.01	0	200	0
		Sulphonated	Carbon disulfide	mg/kg	0.5	0	0	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.73	3.64	50	2
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	3.86	3.72	50	4
			d8-toluene (Surrogate)	mg/kg	-	3.77	3.78	50	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.04	4.07	50	1
		Totals	Total Xylenes*	mg/kg	0.3	0.1	0	200	0
			Total BTEX	mg/kg	0.6	0.18	0	200	0
			Total VOC*	mg/kg	24	0.19	0	200	0
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	0	0	200	0
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	0	0	200	0
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	0	0	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163341.017	LB120907.024	Trihalomethanes	Chloroform	mg/kg	0.1	0	200	0
			Bromodichloromethane	mg/kg	0.1	0	200	0
			Chlorodibromomethane	mg/kg	0.1	0	200	0
			Bromoform	mg/kg	0.1	0	200	0

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163341.006	LB120907.014	TRH C6-C10	mg/kg	25	0	0	200	0
		TRH C6-C9	mg/kg	20	0	0	200	0
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.72	3.91	30	5
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	3.96	4.41	30	11
		d8-toluene (Surrogate)	mg/kg	-	4.18	4.71	30	12
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.53	4.95	30	9
	VPH F Bands	Benzene (F0)	mg/kg	0.1	0	0	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	-0.18	-0.16	200	0
SE163341.017	LB120907.024	TRH C6-C10	mg/kg	25	0	0	200	0
		TRH C6-C9	mg/kg	20	0	0	200	0
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.79	3.61	30	5
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.01	3.9	30	3
		d8-toluene (Surrogate)	mg/kg	-	4.21	4.04	30	4
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.71	4.82	30	2
	VPH F Bands	Benzene (F0)	mg/kg	0.1	0	0	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	-0.18	0	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB120974.002	Exchangeable Sodium, Na	mg/kg	2	NA	390	80 - 120	95
	Exchangeable Potassium, K	mg/kg	2	NA	343	80 - 120	84
	Exchangeable Calcium, Ca	mg/kg	2	NA	2570	80 - 120	95
	Exchangeable Magnesium, Mg	mg/kg	2	NA	635	80 - 120	88

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB120890.002	Mercury	mg/kg	0.05	0.21	0.2	70 - 130	106

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121043.002	Arsenic, As	mg/L	0.02	2.0	2	80 - 120	102
	Cadmium, Cd	mg/L	0.001	2.0	2	80 - 120	102
	Chromium, Cr	mg/L	0.005	2.0	2	80 - 120	102
	Copper, Cu	mg/L	0.005	2.0	2	80 - 120	101
	Lead, Pb	mg/L	0.02	2.1	2	80 - 120	103
	Nickel, Ni	mg/L	0.005	2.0	2	80 - 120	102
	Zinc, Zn	mg/L	0.01	2.1	2	80 - 120	103

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB120909.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	115
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	105
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	110
	Dieldrin	mg/kg	0.05	0.20	0.2	60 - 140	100
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	90
	p,p'-DDT	mg/kg	0.1	0.3	0.2	60 - 140	125
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB120909.002	Naphthalene	mg/kg	0.1	3.9	4	60 - 140	98	
	Acenaphthylene	mg/kg	0.1	3.8	4	60 - 140	96	
	Acenaphthene	mg/kg	0.1	4.1	4	60 - 140	101	
	Phenanthrene	mg/kg	0.1	3.9	4	60 - 140	98	
	Anthracene	mg/kg	0.1	3.7	4	60 - 140	92	
	Fluoranthene	mg/kg	0.1	4.0	4	60 - 140	99	
	Pyrene	mg/kg	0.1	4.0	4	60 - 140	99	
	Benzo(a)pyrene	mg/kg	0.1	4.8	4	60 - 140	121	
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	90
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	86
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	78

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB120909.002	Arochlor 1260	mg/kg	0.2	0.5	0.4	60 - 140	118

## pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB120979.003	pH	pH Units	-	7.4	7.415	98 - 102	100

## Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB120929.002	Total Cyanide	mg/kg	0.5	<0.5	0.25	70 - 130	114

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR
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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.

## Total Phenolics in Soil (continued)

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB120957.002	Total Phenols	mg/kg	5	<5	2.5	70 - 130	97

## Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB120900.002	Arsenic, As	mg/kg	3	51	50	80 - 120	103
	Cadmium, Cd	mg/kg	0.3	50	50	80 - 120	100
	Chromium, Cr	mg/kg	0.3	49	50	80 - 120	98
	Copper, Cu	mg/kg	0.5	49	50	80 - 120	98
	Lead, Pb	mg/kg	1	51	50	80 - 120	102
	Nickel, Ni	mg/kg	0.5	50	50	80 - 120	100
LB120901.002	Zinc, Zn	mg/kg	0.5	50	50	80 - 120	101
	Arsenic, As	mg/kg	3	53	50	80 - 120	105
	Cadmium, Cd	mg/kg	0.3	51	50	80 - 120	101
	Chromium, Cr	mg/kg	0.3	49	50	80 - 120	99
	Copper, Cu	mg/kg	0.5	50	50	80 - 120	101
	Lead, Pb	mg/kg	1	52	50	80 - 120	104
	Nickel, Ni	mg/kg	0.5	50	50	80 - 120	100
	Zinc, Zn	mg/kg	0.5	51	50	80 - 120	103

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB120909.002	TRH C10-C14	mg/kg	20	33	40	60 - 140	83	
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	103	
	TRH C29-C36	mg/kg	45	46	40	60 - 140	115	
	TRH F Bands	TRH >C10-C16 (F2)	mg/kg	25	35	40	60 - 140	88
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	118
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	110

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB120907.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	1.8	2.56	60 - 140	69
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	2.1	2.56	60 - 140	80
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	2.3	2.56	60 - 140	89
	Halogenated	Chlorobenzene	mg/kg	0.1	2.4	2.56	60 - 140	92
	Monocyclic	Benzene	mg/kg	0.1	2.6	2.9	60 - 140	89
	Aromatic	Toluene	mg/kg	0.1	2.2	2.9	60 - 140	77
		Ethylbenzene	mg/kg	0.1	2.2	2.9	60 - 140	76
		m/p-xylene	mg/kg	0.2	4.2	5.8	60 - 140	73
		o-xylene	mg/kg	0.1	2.4	2.9	60 - 140	83
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.9	5	60 - 140	78
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.4	5	60 - 140	88
		d8-toluene (Surrogate)	mg/kg	-	4.5	5	60 - 140	90
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.3	5	60 - 140	87
	Trihalomethan	Chloroform	mg/kg	0.1	2.2	2.56	60 - 140	85

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB120907.002	TRH C6-C10	mg/kg	25	<25	24.65	60 - 140	82	
	TRH C6-C9	mg/kg	20	<20	23.2	60 - 140	74	
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.0	5	60 - 140	80
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	5.1	5	60 - 140	102
		d8-toluene (Surrogate)	mg/kg	-	5.3	5	60 - 140	105
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.9	5	60 - 140	99
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	7.25	60 - 140	90



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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163301.008	LB120969.004	Mercury	mg/L	0.0001	0.0079	<0.0001	0.008	99

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163301.001	LB120890.004	Mercury	mg/kg	0.05	0.17	<0.05	0.2	76

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163301.004	LB120909.025	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	123
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	118
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	121
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.05	0.22	<0.05	0.2	110
		Endrin	mg/kg	0.2	<0.2	<0.2	0.2	99
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	124
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
		Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	-	103	

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163341.003	LB120909.027	Naphthalene	mg/kg	0.1	3.6	0.12	4	86
		2-methylnaphthalene	mg/kg	0.1	0.2	0.07	-	-
		1-methylnaphthalene	mg/kg	0.1	0.2	0.08	-	-
		Acenaphthylene	mg/kg	0.1	3.8	0.23	4	90
		Acenaphthene	mg/kg	0.1	3.8	0.28	4	89
		Fluorene	mg/kg	0.1	0.5	0.51	-	-
		Phenanthrene	mg/kg	0.1	7.0	2.37	4	116
		Anthracene	mg/kg	0.1	5.5	0.71	4	119
		Fluoranthene	mg/kg	0.1	6.8	2.94	4	95
		Pyrene	mg/kg	0.1	5.2	2.11	4	76
		Benzo(a)anthracene	mg/kg	0.1	0.9	0.9	-	-
		Chrysene	mg/kg	0.1	0.7	0.77	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	0.7	0.91	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	0.5	0.49	-	-
		Benzo(a)pyrene	mg/kg	0.1	4.1	0.83	4	81
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.4	0.36	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0.05	-	-
		Benzo(ghi)perylene	mg/kg	0.1	0.4	0.36	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ	0.2	4.3	1.1033	-	-

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 identifier 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%
SE163341.003	LB120909.027	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.4	1.2033	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.4	1.1533	-	-
		Total PAH (18)	mg/kg	0.8	44	13.85	-	-
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.53	-	104
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.44	-	86
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.59	-	112

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163301.004	LB120909.024	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	123
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
		Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	-	98

## Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163301.006	LB120929.007	Total Cyanide	mg/kg	0.5	<0.5	<0.5	0.25	98

## Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163204.001	LB120900.004	Arsenic, As	mg/kg	3	49	<3	50	94
		Cadmium, Cd	mg/kg	0.3	47	<0.3	50	93
		Chromium, Cr	mg/kg	0.3	53	7.9	50	90
		Copper, Cu	mg/kg	0.5	48	2.0	50	93
		Lead, Pb	mg/kg	1	53	6	50	94
		Nickel, Ni	mg/kg	0.5	49	2.7	50	93
		Zinc, Zn	mg/kg	0.5	69	23	50	92
SE163301.005	LB120901.004	Arsenic, As	mg/kg	3	48	6	50	85
		Cadmium, Cd	mg/kg	0.3	44	0.6	50	87
		Chromium, Cr	mg/kg	0.3	63	23	50	79
		Copper, Cu	mg/kg	0.5	120	42	50	164 @
		Lead, Pb	mg/kg	1	67	30	50	73
		Nickel, Ni	mg/kg	0.5	52	13	50	79
		Zinc, Zn	mg/kg	0.5	110	77	50	58 @

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163341.003	LB120909.024	TRH C10-C14	mg/kg	20	34	0	40	85
		TRH C15-C28	mg/kg	45	96	73	40	58 @
		TRH C29-C36	mg/kg	45	59	20	40	98
		TRH C37-C40	mg/kg	100	<100	0	-	-
		TRH C10-C36 Total	mg/kg	110	190	93	-	-
		TRH C10-C40 Total	mg/kg	210	<210	92	-	-
		TRH >C10-C16 (F2)	mg/kg	25	36	0	40	90
		TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	36	-0.01	-	-
		TRH >C16-C34 (F3)	mg/kg	90	120	92	40	70
		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%
SE163301.002	LB120907.004	Fumigants						
		2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-
		1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-
		trans-1,3-dichloropropene	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 identifier 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%	
SE163301.002	LB120907.004	Fumigants	1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	-	-	
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	-	-	
		Aliphatics	Chloromethane	mg/kg	1	<1	<1	-	-	
			Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	-	-	
			Bromomethane	mg/kg	1	<1	<1	-	-	
			Chloroethane	mg/kg	1	<1	<1	-	-	
			Trichlorofluoromethane	mg/kg	1	<1	<1	-	-	
			Iodomethane	mg/kg	5	<5	<5	-	-	
			1,1-dichloroethene	mg/kg	0.1	1.8	<0.1	2.56	71	
			Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	-	-	
			Allyl chloride	mg/kg	0.1	<0.1	<0.1	-	-	
			trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-	-	
			1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	-	-	
			cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-	-	
			Bromochloromethane	mg/kg	0.1	<0.1	<0.1	-	-	
			1,2-dichloroethane	mg/kg	0.1	2.1	<0.1	2.56	82	
			1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	-	-	
			1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-	
			Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	-	-	
			Dibromomethane	mg/kg	0.1	<0.1	<0.1	-	-	
			Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	2.4	<0.1	2.56	94	
			1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	-	-	
			1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
			Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	-	-	
			1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-	-	
			cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-	-	
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-	-	
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-	-	
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
			Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	-	-	
			Halogenated	Chlorobenzene	mg/kg	0.1	2.3	<0.1	2.56	88
			Aromatics	Bromobenzene	mg/kg	0.1	<0.1	<0.1	-	-
				2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-	-
				4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-	-
				1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	-
		1,4-dichlorobenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		1,2-dichlorobenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		1,2,4-trichlorobenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		1,2,3-trichlorobenzene		mg/kg	0.1	<0.1	<0.1	-	-	
		Monocyclic	Benzene	mg/kg	0.1	2.5	<0.1	2.9	86	
		Aromatic	Toluene	mg/kg	0.1	2.2	<0.1	2.9	72	
			Ethylbenzene	mg/kg	0.1	2.1	<0.1	2.9	72	
			m/p-xylene	mg/kg	0.2	4.0	<0.2	5.8	68	
			o-xylene	mg/kg	0.1	2.3	<0.1	2.9	78	
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	-	-	
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	-	-	
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
			tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
			1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
			sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
			p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	-	-	
			n-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
			Nitrogenous	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	-	-
			Compounds	2-nitropropane	mg/kg	10	<10	<10	-	-
			Oxygenated	Acetone (2-propanone)	mg/kg	10	<10	<10	-	-
			Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	-	-
				Vinyl acetate	mg/kg	10	<10	<10	-	-
				MEK (2-butanone)	mg/kg	10	<10	<10	-	-
		MIBK (4-methyl-2-pentanone)		mg/kg	1	<1	<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 identifier 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%
SE163301.002	LB120907.004	Oxygenated	2-hexanone (MBK)	mg/kg	5	<5	<5	-
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	-
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.7	3.6	-
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.4	3.6	-
			d8-toluene (Surrogate)	mg/kg	-	4.0	4.2	-
			Bromofluorobenzene (Surrogate)	mg/kg	-	3.8	4.3	-
		Totals	Total Xylenes*	mg/kg	0.3	6.3	<0.3	-
			Total BTEX	mg/kg	0.6	13	<0.6	-
			Total VOC*	mg/kg	24	<24	<24	-
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	-
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	11	<1.8	-
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	11	<1.8	-
		Trihalomethanes	Chloroform	mg/kg	0.1	2.2	<0.1	2.56
			Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	-
			Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	-
			Bromoform	mg/kg	0.1	<0.1	<0.1	-

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163301.002	LB120907.004	TRH C6-C10	mg/kg	25	<25	<25	24.65	83
			mg/kg	20	<20	<20	23.2	75
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.7	3.6	-
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	3.9	3.6	-
			d8-toluene (Surrogate)	mg/kg	-	4.1	3.6	-
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.9	4.9	-
		VPH F	Benzene (F0)	mg/kg	0.1	2.5	<0.1	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	7.25
								104



Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : <http://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 .
- 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 Analytical Report comments for further information.

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# GEOTECHNIQ IF PTY LTD

**E-MAILED**

20/3/17 12.38pm

Laboratory Test Reque

SGS EHS Alexandria Laboratory



**SE163301 COC**

Received: 21-Mar-2017

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Page 1 of 2

<b>TO:</b> SGS ENVIRONMENTAL SERVICES UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015				<b>Sampling By:</b> LY				<b>Job No:</b> 13977/2			
<b>PH:</b> 02 8594 0400				<b>FAX:</b> 02 8594 0499				<b>Project:</b>			
<b>ATTN:</b> MS EMILY YIN				<b>Project Manager:</b> AB				<b>Location:</b> NARWEE			

Sampling details				Sample type		Results required by: Normal Turnaround Time									
Location	Depth (m)	Date	Time	Soil	Water	Metals As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TPH* & BTEX	PAH	OCP	PCB	PHENOLS, CYANIDE	pH, CEC	FORMALDEHYDE	VOC	KEEP SAMPLE
1 BH1	0.15-0.3	16/03/2017	-	SG/SP		✓			✓			✓			YES
2 BH1	0.35-0.45	16/03/2017	-	SG											YES
3 BH2	0-0.15	16/03/2017	-	SG		✓	✓		✓			✓	✓	✓	YES
4 BH3	0-0.15	16/03/2017	-	SG		✓			✓			✓			YES
5 BH4	0.07-0.15	17/03/2017	-	SG/SP		✓	✓	✓	✓	✓	✓	✓	✓	✓	YES
BH4	0.2-0.3	17/03/2017	-	SG											YES
6 BH5	0.05-0.2	17/03/2017	-	SG/SP		✓	✓	✓	✓	✓	✓	✓	✓	✓	YES
BH5	0.55-0.65	17/03/2017	-	SG											YES
7 BH6	0.05-0.2	17/03/2017	-	SG/SP		✓	✓	✓	✓	✓	✓	✓	✓	✓	YES
BH6	0.5-0.8	17/03/2017	-	SG/SP											YES
BH6	1.05-1.15	17/03/2017	-	SG											YES

Relinquished by				Received by			
Name	Signature	Date	Name	Signature	Date		
ANWAR BARBHUYIA	AB	20/03/2017	SM	SHS	20/3/17 2:00pm		

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle			✓	Test required	

C/P 18.00e



Lemko Place  
PENRITH NSW 2750

P O Box 880  
PENRITH NSW 2751

Tel: (02) 4722 2700  
Fax: (02) 4722 6161

Page 2 of 2

TO: SGS ENVIRONMENTAL SERVICES UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015	Sampling By: LY	Job No: 13977/2
PH: 02 8594 0400	Project Manager: AB	Location: NARWEE
ATTN: MS EMILY YIN	FAX: 02 8594 0499	Project:

Sampling details				Sample type		Results required by: Normal Turnaround Time									
Location	Depth (m)	Date	Time	Soil	Water	Metals As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TPH* & BTEX	PAH	OCP	PCB	PHENOLS, CYANIDE	pH, CEC	BTEX		KEEP SAMPLE
7 Duplicate D1		16/03/2017	-	SG		✓			✓						YES
8 Rinsate R1		16/03/2017	-		WG/Via	✓									YES
9 Rinsate R2		17/03/2017	-		WG/Via	✓									YES
10 Trip spike TS1			-	Sand									✓		YES

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
ANWAR BARBHUYIA	AB	20/03/2017			

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle			✓	Test required	





## SAMPLE RECEIPT ADVICE

SE163301

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **13977-2 Narwee**  
Order Number (Not specified)  
Samples 10

### 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 20/3/2017  
Report Due Mon 27/3/2017  
SGS Reference **SE163301**

### SUBMISSION DETAILS

This is to confirm that 10 samples were received on Monday 20/3/2017. Results are expected to be ready by Monday 27/3/2017. Please quote SGS reference SE163301 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	8 Soil, 2 Water
Date documentation received	20/3/2017	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	18.0°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

5 soil samples have been placed on hold.

To the extent not inconsistent with the other provisions of this document and unless specifically agreed otherwise in writing by SGS, all SGS services are rendered in accordance with the applicable SGS General Conditions of Service accessible at <http://www.sgs.com/en/terms-and-conditions>, as at the date of this document. Attention is drawn to the limitations of liability and to the clauses of indemnification.

## CLIENT DETAILS

Client **Geotechnique**

Project **13977-2 Narwee**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Cyanide in soil by Discrete Analyser	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BH1 0.15-0.3	28	-	-	-	-	-	-	-
002	BH2 0-0.15	28	-	-	-	-	10	82	8
003	BH3 0-0.15	28	-	-	-	-	-	-	-
004	BH4 0.07-0.15	28	26	11	1	1	10	82	8
005	BH5 0.05-0.2	28	26	11	1	1	10	82	8
006	BH6 0.05-0.2	28	26	11	1	1	10	82	8
007	Duplicate D1	28	-	-	-	-	-	-	-
010	Tripspike TS1	-	-	-	-	-	-	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

SE163301

### CLIENT DETAILS

Client **Geotechnique**

Project **13977-2 Narwee**

### SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Formaldehyde in Soil	Mercury in Soil	Metals in Water (Dissolved) by ICPOES	Moisture Content	pH in soil (1:5)	Total Recoverable Metals in Soil/Waste
001	BH1 0.15-0.3	13	-	1	-	1	1	7
002	BH2 0-0.15	13	1	1	-	1	1	7
003	BH3 0-0.15	13	-	1	-	1	1	7
004	BH4 0.07-0.15	13	1	1	-	1	1	7
005	BH5 0.05-0.2	13	1	1	-	1	1	7
006	BH6 0.05-0.2	13	1	1	-	1	1	7
007	Duplicate D1	-	-	1	-	1	-	7
008	Rinsate R1	-	-	-	7	-	-	-
009	Rinsate R2	-	-	-	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

SE163301

### CLIENT DETAILS

Client **Geotechnique**

Project **13977-2 Narwee**

### SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water
008	Rinsate R1	1
009	Rinsate R2	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 .



## ANALYTICAL REPORT



Accreditation No. 2562

### CLIENT DETAILS

Contact **Anwar Barbhuyia**  
Client **Geotechnique**  
Address **P.O. Box 880  
PENRITH NSW 2751**

Telephone **02 4722 2700**  
Facsimile **02 4722 6161**  
Email **anwar@geotech.com.au**  
Project **13977-2 Narwee Additional**  
Order Number **(Not specified)**  
Samples **10**

### 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 **SE163301A R0**  
Date Received **3/4/2017**  
Date Reported **10/4/2017**

### COMMENTS

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

### SIGNATORIES

**Bennet Lo**  
Senior Organic Chemist/Metals Chemist



## ANALYTICAL RESULTS

SE163301A R0

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 7/4/2017

			BH4 0.07-0.15	BH5 0.05-0.2	BH6 0.05-0.2
			SOIL	SOIL	SOIL
			-	-	-
			17/3/2017	17/3/2017	17/3/2017
PARAMETER	UOM	LOR	SE163301A.004	SE163301A.005	SE163301A.006
Titanium, Ti	mg/kg	10	320	<10	<10

## METHOD

## METHODOLOGY SUMMARY

### 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.

## 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.
		IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Samples 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:

- 1 Bq is equivalent to 27 pCi
- 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 criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.sgs.com.au/~media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf>

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## STATEMENT OF QA/QC PERFORMANCE

SE163301A R0

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **13977-2 Narwee Additional**  
Order Number (Not specified)  
Samples 10

### 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 **SE163301A R0**  
Date Received 03 Apr 2017  
Date Reported 10 Apr 2017

### 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 and was supplied by the Client.  
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	3 Soil
Date documentation received	3/4/17@2:44pm	Type of documentation received	Email
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	18.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		





## HOLDING TIME SUMMARY

SE163301A R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

### Total Recoverable Metals 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
BH4 0.07-0.15	SE163301A.004	LB121949	17 Mar 2017	03 Apr 2017	13 Sep 2017	07 Apr 2017	13 Sep 2017	10 Apr 2017
BH5 0.05-0.2	SE163301A.005	LB121949	17 Mar 2017	03 Apr 2017	13 Sep 2017	07 Apr 2017	13 Sep 2017	10 Apr 2017
BH6 0.05-0.2	SE163301A.006	LB121949	17 Mar 2017	03 Apr 2017	13 Sep 2017	07 Apr 2017	13 Sep 2017	10 Apr 2017



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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No surrogates were required for this job.



METHOD BLANKS

SE163301A R0

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.

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB121949.001	Titanium, Ti	mg/kg	10	<10



## DUPLICATES

SE163301A R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

### Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163301A.006	LB121949.024	Titanium, Ti	mg/kg	10	<10	<10	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.

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121949.002	Titanium, Ti	mg/kg	10	48	50	80 - 120	96



MATRIX SPIKES

SE163301A R0

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

QC Sample	Sample Number	Parameter	Units	LOR
-----------	---------------	-----------	-------	-----



## MATRIX SPIKE DUPLICATES

SE163301A R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.



Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : <http://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 .
- 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 Analytical Report comments for further information.

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**E-MAILED**

3/4/17 @ 2.44

# GEOTECHNIQUE PTY LTD

## Laboratory Test Request / Chain of Custody Record

Lemko Place  
PENRITH NSW 2750

P O Box 880  
PENRITH NSW 2751

Tel: (02) 4722 2700  
Fax: (02) 4722 6161

Page 1 of 1

<b>TO:</b> SGS ENVIRONMENTAL SERVICES UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015				<b>Sampling By:</b> LY				<b>Job No:</b> 13977/2			
<b>PH:</b> 02 8594 0400				<b>FAX:</b> 02 8594 0499				<b>Project:</b>			
<b>ATTN:</b> MS EMILY YIN				<b>Project Manager:</b> AB				<b>Location:</b> NARWEE			

Sampling details				Sample type		Results required by: Normal Turnaround Time SGS Ref No: SE163301										KEEP SAMPLE
Location	Depth (m)	Date	Time	Soil	Water	Ti										
BH1	0.15-0.3	16/03/2017	-	SG/SP												YES
BH1	0.35-0.45	16/03/2017	-	SG												YES
BH2	0-0.15	16/03/2017	-	SG												YES
BH3	0-0.15	16/03/2017	-	SG												YES
4 BH4	0.07-0.15	17/03/2017	-	SG/SP		✓										YES
BH4	0.2-0.3	17/03/2017	-	SG												YES
5 BH5	0.05-0.2	17/03/2017	-	SG/SP		✓										YES
BH5	0.55-0.65	17/03/2017	-	SG												YES
6 BH6	0.05-0.2	17/03/2017	-	SG/SP		✓										YES
BH6	0.5-0.8	17/03/2017	-	SG/SP												YES
BH6	1.05-1.15	17/03/2017	-	SG												YES

SGS EHS Alexandria Laboratory



**SE163301A COC**

Received: 03 - Apr - 2017

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
ANWAR BARBHUYIA	AB	3/04/2017	A. Oaisho		

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle			✓	Test required	



## SAMPLE RECEIPT ADVICE

SE163301A

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **13977-2 Narwee Additional**  
Order Number (Not specified)  
Samples 10

### 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 3/4/2017  
Report Due Mon 10/4/2017  
SGS Reference **SE163301A**

### SUBMISSION DETAILS

This is to confirm that 10 samples were received on Monday 3/4/2017. Results are expected to be ready by Monday 10/4/2017. Please quote SGS reference SE163301A 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	3/4/17@2:44pm	Type of documentation received	Email
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	18.0°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

SE163301A

### CLIENT DETAILS

Client **Geotechnique**

Project **13977-2 Narwee Additional**

### SUMMARY OF ANALYSIS

No.	Sample ID	Total Recoverable Metals in Soil/Waste
004	BH4 0.07-0.15	1
005	BH5 0.05-0.2	1
006	BH6 0.05-0.2	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 .

## CLIENT DETAILS

Contact **Anwar Barbhuyia**  
 Client **Geotechnique**  
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 PENRITH NSW 2751**

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 Facsimile **02 4722 6161**  
 Email **anwar@geotech.com.au**

Project **13977-2 NARWEE**  
 Order Number **(Not specified)**  
 Samples **25**

## LABORATORY DETAILS

Manager **Huong Crawford**  
 Laboratory **SGS Alexandria Environmental**  
 Address **Unit 16, 33 Maddox St  
 Alexandria NSW 2015**

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SGS Reference **SE163547 R0**  
 Date Received **24/3/2017**  
 Date Reported **7/4/2017**

## 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 #9: Asbestos found in 50x20x4mm cement sheet fragments, in >7mm fraction.

Asbestos analysed by Approved Identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin .

Coal Tar subcontracted to RCA, 92 Hill St,Carrington, NSW.

## SIGNATORIES



**Andy Sutton**  
 Senior Organic Chemist



**Bennet Lo**  
 Senior Organic Chemist/Metals Chemist



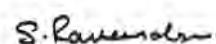
**Dong Liang**  
 Metals/Inorganics Team Leader



**Kamrul Ahsan**  
 Senior Chemist



**Ly Kim Ha**  
 Organic Section Head



**Ravee Sivasubramaniam**  
 Hygiene Team Leader



## ANALYTICAL RESULTS

SE163547 R0

VOC's in Soil [AN433] Tested: 29/3/2017

PARAMETER	UOM	LOR	BH10 0.22-0.37	BH12 0.16-0.31	BH13 0.1-0.25	BH13 0.3-0.45	TP14 0-0.15
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.007	23/3/2017 SE163547.009	23/3/2017 SE163547.011	23/3/2017 SE163547.012	23/3/2017 SE163547.014
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	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorodifluoromethane (CFC-12)	mg/kg	1	-	-	<1	-	<1
Chloromethane	mg/kg	1	-	-	<1	-	<1
Vinyl chloride (Chloroethene)	mg/kg	0.1	-	-	<0.1	-	<0.1
Bromomethane	mg/kg	1	-	-	<1	-	<1
Chloroethane	mg/kg	1	-	-	<1	-	<1
Trichlorofluoromethane	mg/kg	1	-	-	<1	-	<1
Acetone (2-propanone)	mg/kg	10	-	-	<10	-	<10
Iodomethane	mg/kg	5	-	-	<5	-	<5
1,1-dichloroethene	mg/kg	0.1	-	-	<0.1	-	<0.1
Acrylonitrile	mg/kg	0.1	-	-	<0.1	-	<0.1
Dichloromethane (Methylene chloride)	mg/kg	0.5	-	-	<0.5	-	<0.5
Allyl chloride	mg/kg	0.1	-	-	<0.1	-	<0.1
Carbon disulfide	mg/kg	0.5	-	-	<0.5	-	<0.5
trans-1,2-dichloroethene	mg/kg	0.1	-	-	<0.1	-	<0.1
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	-	-	<0.1	-	<0.1
1,1-dichloroethane	mg/kg	0.1	-	-	<0.1	-	<0.1
Vinyl acetate	mg/kg	10	-	-	<10	-	<10
MEK (2-butanone)	mg/kg	10	-	-	<10	-	<10
cis-1,2-dichloroethene	mg/kg	0.1	-	-	<0.1	-	<0.1
Bromochloromethane	mg/kg	0.1	-	-	<0.1	-	<0.1
Chloroform	mg/kg	0.1	-	-	<0.1	-	<0.1
2,2-dichloropropane	mg/kg	0.1	-	-	<0.1	-	<0.1
1,2-dichloroethane	mg/kg	0.1	-	-	<0.1	-	<0.1
1,1,1-trichloroethane	mg/kg	0.1	-	-	<0.1	-	<0.1
1,1-dichloropropene	mg/kg	0.1	-	-	<0.1	-	<0.1
Carbon tetrachloride	mg/kg	0.1	-	-	<0.1	-	<0.1
Dibromomethane	mg/kg	0.1	-	-	<0.1	-	<0.1
1,2-dichloropropane	mg/kg	0.1	-	-	<0.1	-	<0.1
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	-	-	<0.1	-	<0.1
2-nitropropane	mg/kg	10	-	-	<10	-	<10
Bromodichloromethane	mg/kg	0.1	-	-	<0.1	-	<0.1
MIBK (4-methyl-2-pentanone)	mg/kg	1	-	-	<1	-	<1
cis-1,3-dichloropropene	mg/kg	0.1	-	-	<0.1	-	<0.1
trans-1,3-dichloropropene	mg/kg	0.1	-	-	<0.1	-	<0.1
1,1,2-trichloroethane	mg/kg	0.1	-	-	<0.1	-	<0.1
1,3-dichloropropane	mg/kg	0.1	-	-	<0.1	-	<0.1
Chlorodibromomethane	mg/kg	0.1	-	-	<0.1	-	<0.1
2-hexanone (MBK)	mg/kg	5	-	-	<5	-	<5
1,2-dibromoethane (EDB)	mg/kg	0.1	-	-	<0.1	-	<0.1
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	-	-	<0.1	-	<0.1
1,1,1,2-tetrachloroethane	mg/kg	0.1	-	-	<0.1	-	<0.1
Chlorobenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
Bromoform	mg/kg	0.1	-	-	<0.1	-	<0.1
cis-1,4-dichloro-2-butene	mg/kg	1	-	-	<1	-	<1
Styrene (Vinyl benzene)	mg/kg	0.1	-	-	<0.1	-	<0.1
1,1,2,2-tetrachloroethane	mg/kg	0.1	-	-	<0.1	-	<0.1
1,2,3-trichloropropane	mg/kg	0.1	-	-	<0.1	-	<0.1
trans-1,4-dichloro-2-butene	mg/kg	1	-	-	<1	-	<1



## ANALYTICAL RESULTS

SE163547 R0

VOC's in Soil [AN433] Tested: 29/3/2017 (continued)

PARAMETER	UOM	LOR	BH10 0.22-0.37	BH12 0.16-0.31	BH13 0.1-0.25	BH13 0.3-0.45	TP14 0-0.15
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.007	23/3/2017 SE163547.009	23/3/2017 SE163547.011	23/3/2017 SE163547.012	23/3/2017 SE163547.014
Isopropylbenzene (Cumene)	mg/kg	0.1	-	-	<0.1	-	<0.1
Bromobenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
n-propylbenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
2-chlorotoluene	mg/kg	0.1	-	-	<0.1	-	<0.1
4-chlorotoluene	mg/kg	0.1	-	-	<0.1	-	<0.1
1,3,5-trimethylbenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
tert-butylbenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
1,2,4-trimethylbenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
sec-butylbenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
1,3-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
1,4-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
p-isopropyltoluene	mg/kg	0.1	-	-	<0.1	-	<0.1
1,2-dichlorobenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
n-butylbenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
1,2-dibromo-3-chloropropane	mg/kg	0.1	-	-	<0.1	-	<0.1
1,2,4-trichlorobenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
Hexachlorobutadiene	mg/kg	0.1	-	-	<0.1	-	<0.1
1,2,3-trichlorobenzene	mg/kg	0.1	-	-	<0.1	-	<0.1
Total VOC*	mg/kg	24	-	-	<24	-	<24
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	-	-	<3.0	-	<3.0
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	<1.8	-	<1.8
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	-	-	<1.8	-	<1.8



## ANALYTICAL RESULTS

SE163547 R0

VOC's in Soil [AN433] Tested: 29/3/2017 (continued)

PARAMETER	UOM	LOR	BH15 0.2-0.35	BH16 0.8-0.18	BH17 0.1-0.25	Duplicate D2	Trip spike TS2
			SOIL - 23/3/2017 SE163547.017	SOIL - 23/3/2017 SE163547.018	SOIL - 23/3/2017 SE163547.019	SOIL - 23/3/2017 SE163547.023	SOIL - 23/3/2017 SE163547.025
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[100%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[106%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[88%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	[89%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	[87%]
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	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	<1	-	-
Chloromethane	mg/kg	1	<1	<1	<1	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromomethane	mg/kg	1	<1	<1	<1	-	-
Chloroethane	mg/kg	1	<1	<1	<1	-	-
Trichlorofluoromethane	mg/kg	1	<1	<1	<1	-	-
Acetone (2-propanone)	mg/kg	10	<10	<10	<10	-	-
Iodomethane	mg/kg	5	<5	<5	<5	-	-
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Acrylonitrile	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	<0.5	-	-
Allyl chloride	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	<0.5	-	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Vinyl acetate	mg/kg	10	<10	<10	<10	-	-
MEK (2-butanone)	mg/kg	10	<10	<10	<10	-	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromochloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Chloroform	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Dibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2-nitropropane	mg/kg	10	<10	<10	<10	-	-
Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	<1	-	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2-hexanone (MBK)	mg/kg	5	<5	<5	<5	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Chlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromoform	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	-	-
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	-	-



## ANALYTICAL RESULTS

SE163547 R0

VOC's in Soil [AN433] Tested: 29/3/2017 (continued)

PARAMETER	UOM	LOR	BH15 0.2-0.35	BH16 0.8-0.18	BH17 0.1-0.25	Duplicate D2	Trip spike TS2
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.017	23/3/2017 SE163547.018	23/3/2017 SE163547.019	23/3/2017 SE163547.023	23/3/2017 SE163547.025
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Bromobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
n-propylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
n-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-	-
Total VOC*	mg/kg	24	<24	<24	<24	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	<3.0	-	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	-	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	-	-





## ANALYTICAL RESULTS

SE163547 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 29/3/2017

PARAMETER	UOM	LOR	BH10 0.22-0.37	BH12 0.16-0.31	BH13 0.3-0.45	BH16 0.8-0.18	Duplicate D2
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/3/2017 SE163547.007	23/3/2017 SE163547.009	23/3/2017 SE163547.012	23/3/2017 SE163547.018	23/3/2017 SE163547.023
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



## ANALYTICAL RESULTS

SE163547 R0

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 29/3/2017

PARAMETER	UOM	LOR	BH10 0.22-0.37	BH12 0.16-0.31	BH13 0.3-0.45	BH16 0.8-0.18	Duplicate D2
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/3/2017 SE163547.007	23/3/2017 SE163547.009	23/3/2017 SE163547.012	23/3/2017 SE163547.018	23/3/2017 SE163547.023
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 (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 (F2) - Naphthalene	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	mg/kg	210	<210	<210	<210	<210	<210



# ANALYTICAL RESULTS

SE163547 R0

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 29/3/2017

PARAMETER	UOM	LOR	BH10 0.22-0.37	BH12 0.16-0.31	BH13 0.3-0.45	BH16 0.8-0.18	Duplicate D2
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.007	23/3/2017 SE163547.009	23/3/2017 SE163547.012	23/3/2017 SE163547.018	23/3/2017 SE163547.023
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	<b>0.2</b>	<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	<b>0.3</b>	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<b>0.3</b>	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<b>0.2</b>	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<b>0.1</b>	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<b>0.2</b>	<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	<b>0.1</b>	<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	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	<b>0.2</b>	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<b>1.3</b>	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<b>1.3</b>	<0.8	<0.8	<0.8	<0.8



# ANALYTICAL RESULTS

SE163547 R0

OC Pesticides in Soil [AN420] Tested: 29/3/2017

PARAMETER	UOM	LOR	TP7 0-0.15	BH8 0-0.15	BH8 0.2-0.35	BH11 0-0.15	BH12 0.16-0.31
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.001	23/3/2017 SE163547.002	23/3/2017 SE163547.003	23/3/2017 SE163547.008	23/3/2017 SE163547.009
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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



## ANALYTICAL RESULTS

SE163547 R0

OC Pesticides in Soil [AN420] Tested: 29/3/2017 (continued)

PARAMETER	UOM	LOR	BH13 0.1-0.25	BH13 0.3-0.45	BH13 0.46-0.6	TP14 0-0.15	TP14 0.2-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.011	23/3/2017 SE163547.012	23/3/2017 SE163547.013	23/3/2017 SE163547.014	23/3/2017 SE163547.015
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	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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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



# ANALYTICAL RESULTS

SE163547 R0

OC Pesticides in Soil [AN420] Tested: 29/3/2017 (continued)

PARAMETER	UOM	LOR	BH15 0.1-0.2	BH15 0.2-0.35	BH16 0.8-0.18	BH17 0.1-0.25
			SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.016	23/3/2017 SE163547.017	23/3/2017 SE163547.018	23/3/2017 SE163547.019
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	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	0.05	<0.05	<0.05	<0.05	<0.05
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



## ANALYTICAL RESULTS

SE163547 R0

PCBs in Soil [AN420] Tested: 29/3/2017

			BH12 0.16-0.31	BH13 0.3-0.45	BH16 0.8-0.18
			SOIL	SOIL	SOIL
			-	-	-
			23/3/2017	23/3/2017	23/3/2017
			SE163547.009	SE163547.012	SE163547.018
PARAMETER	UOM	LOR			
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



ANALYTICAL RESULTS

SE163547 R0

Total Phenolics in Soil [AN289]    Tested: 31/3/2017

			BH10 0.22-0.37	BH12 0.16-0.31	BH13 0.3-0.45	BH16 0.8-0.18	Duplicate D2
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/3/2017	23/3/2017	23/3/2017	23/3/2017	23/3/2017
			SE163547.007	SE163547.009	SE163547.012	SE163547.018	SE163547.023
PARAMETER	UOM	LOR					
Total Phenols	mg/kg	5	<5	<5	<5	<5	<5





## ANALYTICAL RESULTS

SE163547 R0

Total Cyanide in soil by Discrete Analyser (Aquakem) [AN077/AN287] Tested: 30/3/2017

			BH12 0.16-0.31	BH13 0.3-0.45	BH16 0.8-0.18
			SOIL	SOIL	SOIL
			-	-	-
			23/3/2017	23/3/2017	23/3/2017
			SE163547.009	SE163547.012	SE163547.018
PARAMETER	UOM	LOR			
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-
Cyanide Amenable to Chlorination	mg/kg	0.5	-	-	-



## ANALYTICAL RESULTS

SE163547 R0

pH in soil (1:5) [AN101] Tested: 30/3/2017

			BH8 0-0.15	BH9 0.18-0.28	BH10 0.06-0.21	BH11 0-0.15	BH12 0.16-0.31
			SOIL - 23/3/2017 SE163547.002	SOIL - 23/3/2017 SE163547.004	SOIL - 23/3/2017 SE163547.006	SOIL - 23/3/2017 SE163547.008	SOIL - 23/3/2017 SE163547.009
PARAMETER	UOM	LOR					
pH	pH Units	-	7.0	5.2	9.0	7.2	8.5

			BH13 0.3-0.45	BH13 0.46-0.6	BH16 0.8-0.18
			SOIL - 23/3/2017 SE163547.012	SOIL - 23/3/2017 SE163547.013	SOIL - 23/3/2017 SE163547.018
PARAMETER	UOM	LOR			
pH	pH Units	-	7.1	6.9	8.6



# ANALYTICAL RESULTS

SE163547 R0

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 31/3/2017

PARAMETER	UOM	LOR	BH8 0-0.15	BH9 0.18-0.28	BH10 0.06-0.21	BH11 0-0.15	BH12 0.16-0.31
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.002	23/3/2017 SE163547.004	23/3/2017 SE163547.006	23/3/2017 SE163547.008	23/3/2017 SE163547.009
Exchangeable Sodium, Na	mg/kg	2	56	90	120	38	31
Exchangeable Sodium, Na	meq/100g	0.01	0.24	0.39	0.51	0.17	0.13
Exchangeable Sodium Percentage*	%	0.1	1.8	5.4	1.2	1.3	0.6
Exchangeable Potassium, K	mg/kg	2	130	110	470	38	200
Exchangeable Potassium, K	meq/100g	0.01	0.32	0.29	1.2	0.10	0.52
Exchangeable Potassium Percentage*	%	0.1	2.4	4.0	2.8	0.7	2.2
Exchangeable Calcium, Ca	mg/kg	2	2300	820	7900	2500	4600
Exchangeable Calcium, Ca	meq/100g	0.01	11	4.1	40	12	23
Exchangeable Calcium Percentage*	%	0.1	85.7	56.4	93.9	94.3	95.7
Exchangeable Magnesium, Mg	mg/kg	2	160	300	100	59	46
Exchangeable Magnesium, Mg	meq/100g	0.02	1.3	2.5	0.86	0.49	0.38
Exchangeable Magnesium Percentage*	%	0.1	10.1	34.2	2.0	3.7	1.6
Cation Exchange Capacity	meq/100g	0.02	13	7.2	42	13	24

PARAMETER	UOM	LOR	BH13 0.3-0.45	BH13 0.46-0.6	BH16 0.8-0.18
			SOIL	SOIL	SOIL
			23/3/2017 SE163547.012	23/3/2017 SE163547.013	23/3/2017 SE163547.018
Exchangeable Sodium, Na	mg/kg	2	3	120	75
Exchangeable Sodium, Na	meq/100g	0.01	0.01	0.52	0.32
Exchangeable Sodium Percentage*	%	0.1	1.7	3.9	1.2
Exchangeable Potassium, K	mg/kg	2	6	93	40
Exchangeable Potassium, K	meq/100g	0.01	0.02	0.24	0.10
Exchangeable Potassium Percentage*	%	0.1	2.0	1.8	0.4
Exchangeable Calcium, Ca	mg/kg	2	130	1900	5000
Exchangeable Calcium, Ca	meq/100g	0.01	0.67	9.6	25
Exchangeable Calcium Percentage*	%	0.1	90.9	73.1	90.5
Exchangeable Magnesium, Mg	mg/kg	2	5	340	270
Exchangeable Magnesium, Mg	meq/100g	0.02	0.04	2.8	2.2
Exchangeable Magnesium Percentage*	%	0.1	5.4	21.1	7.9
Cation Exchange Capacity	meq/100g	0.02	0.74	13	28



ANALYTICAL RESULTS

SE163547 R0

Formaldehyde in Soil [AN226]    Tested: 30/3/2017

			BH13 0.1-0.25	TP14 0-0.15	BH15 0.2-0.35	BH16 0.8-0.18	BH17 0.1-0.25
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/3/2017	23/3/2017	23/3/2017	23/3/2017	23/3/2017
			SE163547.011	SE163547.014	SE163547.017	SE163547.018	SE163547.019
PARAMETER	UOM	LOR					
Formaldehyde*	mg/kg	2	<2	<2	<2	<2	<2



# ANALYTICAL RESULTS

SE163547 R0

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 31/3/2017

PARAMETER	UOM	LOR	TP7 0-0.15	BH8 0-0.15	BH8 0.2-0.35	BH9 0.18-0.28	BH10 0.06-0.21
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.001	23/3/2017 SE163547.002	23/3/2017 SE163547.003	23/3/2017 SE163547.004	23/3/2017 SE163547.006
Arsenic, As	mg/kg	3	3	4	3	5	3
Cadmium, Cd	mg/kg	0.3	<0.3	0.6	<0.3	0.5	<0.3
Chromium, Cr	mg/kg	0.3	11	23	15	16	15
Copper, Cu	mg/kg	0.5	12	18	16	19	36
Lead, Pb	mg/kg	1	13	27	15	25	29
Nickel, Ni	mg/kg	0.5	7.3	49	11	2.7	7.5
Zinc, Zn	mg/kg	0.5	29	300	60	18	78

PARAMETER	UOM	LOR	BH10 0.22-0.37	BH11 0-0.15	BH12 0.16-0.31	BH13 0.1-0.25	BH13 0.3-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.007	23/3/2017 SE163547.008	23/3/2017 SE163547.009	23/3/2017 SE163547.011	23/3/2017 SE163547.012
Arsenic, As	mg/kg	3	8	6	<3	<3	<3
Cadmium, Cd	mg/kg	0.3	0.6	0.7	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	28	13	6.7	3.1	1.1
Copper, Cu	mg/kg	0.5	19	35	16	4.6	0.8
Lead, Pb	mg/kg	1	38	110	46	15	2
Nickel, Ni	mg/kg	0.5	6.1	5.7	6.9	1.3	<0.5
Zinc, Zn	mg/kg	0.5	53	150	60	20	4.8

PARAMETER	UOM	LOR	BH13 0.46-0.6	TP14 0-0.15	TP14 0.2-0.35	BH15 0.1-0.2	BH15 0.2-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			23/3/2017 SE163547.013	23/3/2017 SE163547.014	23/3/2017 SE163547.015	23/3/2017 SE163547.016	23/3/2017 SE163547.017
Arsenic, As	mg/kg	3	28	<3	<3	<3	3
Cadmium, Cd	mg/kg	0.3	0.6	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	27	3.3	1.6	1.3	1.3
Copper, Cu	mg/kg	0.5	20	4.7	1.8	1.4	1.9
Lead, Pb	mg/kg	1	71	18	5	2	2
Nickel, Ni	mg/kg	0.5	9.1	1.3	0.7	0.6	0.8
Zinc, Zn	mg/kg	0.5	82	25	10	6.1	6.1

PARAMETER	UOM	LOR	BH16 0.8-0.18	BH17 0.1-0.25	Duplicate D2
			SOIL	SOIL	SOIL
			23/3/2017 SE163547.018	23/3/2017 SE163547.019	23/3/2017 SE163547.023
Arsenic, As	mg/kg	3	7	4	<3
Cadmium, Cd	mg/kg	0.3	<0.3	0.5	<0.3
Chromium, Cr	mg/kg	0.3	25	12	7.6
Copper, Cu	mg/kg	0.5	59	27	12
Lead, Pb	mg/kg	1	98	39	38
Nickel, Ni	mg/kg	0.5	13	12	4.9
Zinc, Zn	mg/kg	0.5	69	83	44



## ANALYTICAL RESULTS

SE163547 R0

Mercury in Soil [AN312] Tested: 30/3/2017

			TP7 0-0.15	BH8 0-0.15	BH8 0.2-0.35	BH9 0.18-0.28	BH10 0.06-0.21
			SOIL - 23/3/2017 SE163547.001	SOIL - 23/3/2017 SE163547.002	SOIL - 23/3/2017 SE163547.003	SOIL - 23/3/2017 SE163547.004	SOIL - 23/3/2017 SE163547.006
PARAMETER	UOM	LOR					
Mercury	mg/kg	0.05	<0.05	<b>0.09</b>	<0.05	<0.05	<b>0.20</b>

			BH10 0.22-0.37	BH11 0-0.15	BH12 0.16-0.31	BH13 0.1-0.25	BH13 0.3-0.45
			SOIL - 23/3/2017 SE163547.007	SOIL - 23/3/2017 SE163547.008	SOIL - 23/3/2017 SE163547.009	SOIL - 23/3/2017 SE163547.011	SOIL - 23/3/2017 SE163547.012
PARAMETER	UOM	LOR					
Mercury	mg/kg	0.05	<b>0.32</b>	<b>0.19</b>	<0.05	<b>28</b>	<b>2.6</b>

			BH13 0.46-0.6	TP14 0-0.15	TP14 0.2-0.35	BH15 0.1-0.2	BH15 0.2-0.35
			SOIL - 23/3/2017 SE163547.013	SOIL - 23/3/2017 SE163547.014	SOIL - 23/3/2017 SE163547.015	SOIL - 23/3/2017 SE163547.016	SOIL - 23/3/2017 SE163547.017
PARAMETER	UOM	LOR					
Mercury	mg/kg	0.05	<b>0.05</b>	<b>17</b>	<b>4.5</b>	<b>1.7</b>	<b>1.9</b>

			BH16 0.8-0.18	BH17 0.1-0.25	Duplicate D2
			SOIL - 23/3/2017 SE163547.018	SOIL - 23/3/2017 SE163547.019	SOIL - 23/3/2017 SE163547.023
PARAMETER	UOM	LOR			
Mercury	mg/kg	0.05	<b>0.35</b>	<b>0.55</b>	<b>0.08</b>



# ANALYTICAL RESULTS

SE163547 R0

Moisture Content [AN002] Tested: 30/3/2017

PARAMETER	UOM	LOR	TP7 0-0.15	BH8 0-0.15	BH8 0.2-0.35	BH9 0.18-0.28	BH10 0.06-0.21
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/3/2017 SE163547.001	23/3/2017 SE163547.002	23/3/2017 SE163547.003	23/3/2017 SE163547.004	23/3/2017 SE163547.006
% Moisture	%w/w	0.5	18	17	19	21	6.7

PARAMETER	UOM	LOR	BH10 0.22-0.37	BH11 0-0.15	BH12 0.16-0.31	BH13 0.1-0.25	BH13 0.3-0.45
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/3/2017 SE163547.007	23/3/2017 SE163547.008	23/3/2017 SE163547.009	23/3/2017 SE163547.011	23/3/2017 SE163547.012
% Moisture	%w/w	0.5	11	27	24	10	6.0

PARAMETER	UOM	LOR	BH13 0.46-0.6	TP14 0-0.15	TP14 0.2-0.35	BH15 0.1-0.2	BH15 0.2-0.35
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/3/2017 SE163547.013	23/3/2017 SE163547.014	23/3/2017 SE163547.015	23/3/2017 SE163547.016	23/3/2017 SE163547.017
% Moisture	%w/w	0.5	24	13	12	14	17

PARAMETER	UOM	LOR	BH16 0.8-0.18	BH17 0.1-0.25	Duplicate D2
			SOIL	SOIL	SOIL
			-	-	-
			23/3/2017 SE163547.018	23/3/2017 SE163547.019	23/3/2017 SE163547.023
% Moisture	%w/w	0.5	19	19	20



## ANALYTICAL RESULTS

SE163547 R0

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 31/3/2017

			BH12 0.16-0.31
			SOIL
			-
			23/3/2017
			SE163547.009
PARAMETER	UOM	LOR	
Total Sample Weight	g	1	<b>738</b>
ACM in >7mm Sample*	g	0.01	<b>8.40</b>
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001
Asbestos in soil ( >7mm ACM)*	%w/w	0.01	<b>0.17</b>
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001
Fibre Type	No unit	-	CRY





ANALYTICAL RESULTS

SE163547 R0

Fibre ID in bulk materials [AN602]    Tested: 3/4/2017

			BH12 0.16-0.36	FCP1 Surface	FCP2 Surface	FCP3 Surface
			MATERIAL	MATERIAL	MATERIAL	MATERIAL
			-	-	-	-
			23/3/2017	23/3/2017	23/3/2017	23/3/2017
			SE163547.010	SE163547.020	SE163547.021	SE163547.022
PARAMETER	UOM	LOR				
Asbestos Detected	No unit	-	Yes	Yes	Yes	Yes



## ANALYTICAL RESULTS

SE163547 R0

Metals in Water (Dissolved) by ICPOES [AN320/AN321] Tested: 3/4/2017

			Rinsate R3
			WATER
			-
			23/3/2017
			SE163547.024
PARAMETER	UOM	LOR	
Arsenic, As	mg/L	0.02	<0.02
Cadmium, Cd	mg/L	0.001	<0.001
Chromium, Cr	mg/L	0.005	<0.005
Copper, Cu	mg/L	0.005	<0.005
Lead, Pb	mg/L	0.02	<0.02
Nickel, Ni	mg/L	0.005	<0.005
Zinc, Zn	mg/L	0.01	<0.01



## ANALYTICAL RESULTS

SE163547 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 31/3/2017

			Rinsate R3
			WATER
			-
			23/3/2017
			SE163547.024
PARAMETER	UOM	LOR	
Mercury	mg/L	0.0001	<0.0001

## METHOD

## METHODOLOGY SUMMARY

- AN002** The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
- AN020** Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
- AN040/AN320** A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
- AN040** A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
- AN077** Hydrogen cyanide is liberated from an acidified alkali soil extract by distillation and purging with air. The hydrogen cyanide gas is then collected by passing it through a sodium hydroxide scrubbing solution. The scrubbing solution will then be analysed for cyanide by the appropriate method.
- AN101** pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl<sub>2</sub>) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H<sup>+</sup>.
- AN122** Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
- AN122** The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100.  
ESP can be used to categorise the sodicity of the soil as below:
- |           |                |
|-----------|----------------|
| ESP < 6%  | non-sodic      |
| ESP 6-15% | sodic          |
| ESP >15%  | strongly sodic |
- Method is referenced to Rayment and Higginson, 1992, sections 15D3 and 15N1.-
- AN226** Formaldehyde is taken into solution and aliquots are reacted with chromotropic acid in the presence of sulfuric acid to form a purple, not-cationic, chromogen. The intensity of the colour is directly proportional to the amount of formaldehyde in the solution. Corrected for dilution factor and moisture factor for concentration in soil.
- AN287** A buffered distillate or water sample is treated with chloramine/barbituric acid reagents and the intensity of the colour developed is proportional to the cyanide concentration by Aquakem DA.
- AN289** Analysis of Total Phenols in Soil Sediment and Water: Steam distillable phenols react with 4-aminoantipyrine at pH 7.9±0.1 in the presence of potassium ferricyanide to form a coloured antipyrine dye analysed by Discrete Analyser. Reference APHA 5530 B/D.
- 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
- AN320/AN321** Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
- AN320/AN321** Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.
- AN403** Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). 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 Petroleum Hydrocarbons (TPH) 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).
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 unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf).
AN605	This technique gravimetrically determines the mass of Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free fibres which are only observed by standard trace analysis as per AN 602.
AN605	<p>AMO = Amosite Detected</p> <p>CRY = Chrysotile Detected</p> <p>CRO = Crocidolite Detected</p> <p>ORG = Organic Fibres Detected</p> <p>SMF = Synthetic Mineral Fibres Detected</p> <p>UMF = Unknown Mineral Fibres Detected</p> <p>NAD = No Asbestos Detected</p>
AN605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009.



## 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.
		IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Samples 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:

- 1 Bq is equivalent to 27 pCi
- 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 criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.sgs.com.au/~media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf>

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## STATEMENT OF QA/QC PERFORMANCE

SE163547 R0

### CLIENT DETAILS

Contact Anwar Barbhuyia  
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Project **13977-2 NARWEE**  
Order Number (Not specified)  
Samples 25

### LABORATORY DETAILS

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SGS Reference **SE163547 R0**  
Date Received 24 Mar 2017  
Date Reported 07 Apr 2017

### 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 and was supplied by the Client.  
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:

Extraction Date	Formaldehyde in Soil	5 items
Analysis Date	Formaldehyde in Soil	5 items
Duplicate	Total Recoverable Metals 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	20 Soil, 1 Water, 4 F
Date documentation received	27/3/17@10:55am	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	9.1°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		



## HOLDING TIME SUMMARY

SE163547 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

### Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH8 0-0.15	SE163547.002	LB121433	23 Mar 2017	24 Mar 2017	20 Apr 2017	31 Mar 2017	20 Apr 2017	03 Apr 2017
BH9 0.18-0.28	SE163547.004	LB121433	23 Mar 2017	24 Mar 2017	20 Apr 2017	31 Mar 2017	20 Apr 2017	03 Apr 2017
BH10 0.06-0.21	SE163547.006	LB121433	23 Mar 2017	24 Mar 2017	20 Apr 2017	31 Mar 2017	20 Apr 2017	03 Apr 2017
BH11 0-0.15	SE163547.008	LB121433	23 Mar 2017	24 Mar 2017	20 Apr 2017	31 Mar 2017	20 Apr 2017	03 Apr 2017
BH12 0.16-0.31	SE163547.009	LB121433	23 Mar 2017	24 Mar 2017	20 Apr 2017	31 Mar 2017	20 Apr 2017	03 Apr 2017
BH13 0.3-0.45	SE163547.012	LB121433	23 Mar 2017	24 Mar 2017	20 Apr 2017	31 Mar 2017	20 Apr 2017	03 Apr 2017
BH13 0.46-0.6	SE163547.013	LB121433	23 Mar 2017	24 Mar 2017	20 Apr 2017	31 Mar 2017	20 Apr 2017	03 Apr 2017
BH16 0.8-0.18	SE163547.018	LB121433	23 Mar 2017	24 Mar 2017	20 Apr 2017	31 Mar 2017	20 Apr 2017	03 Apr 2017

### Fibre ID in bulk materials

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH12 0.16-0.36	SE163547.010	LB121524	23 Mar 2017	24 Mar 2017	23 Mar 2018	03 Apr 2017	23 Mar 2018	03 Apr 2017
FCP1 Surface	SE163547.020	LB121524	23 Mar 2017	24 Mar 2017	23 Mar 2018	03 Apr 2017	23 Mar 2018	03 Apr 2017
FCP2 Surface	SE163547.021	LB121524	23 Mar 2017	24 Mar 2017	23 Mar 2018	03 Apr 2017	23 Mar 2018	03 Apr 2017
FCP3 Surface	SE163547.022	LB121524	23 Mar 2017	24 Mar 2017	23 Mar 2018	03 Apr 2017	23 Mar 2018	03 Apr 2017

### Formaldehyde In Soil

Method: ME-(AU)-[ENV]AN226

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH13 0.1-0.25	SE163547.011	LB121392	23 Mar 2017	24 Mar 2017	25 Mar 2017	27 Mar 2017†	25 Mar 2017	27 Mar 2017†
TP14 0-0.15	SE163547.014	LB121392	23 Mar 2017	24 Mar 2017	25 Mar 2017	27 Mar 2017†	25 Mar 2017	27 Mar 2017†
BH15 0.2-0.35	SE163547.017	LB121392	23 Mar 2017	24 Mar 2017	25 Mar 2017	27 Mar 2017†	25 Mar 2017	27 Mar 2017†
BH16 0.8-0.18	SE163547.018	LB121392	23 Mar 2017	24 Mar 2017	25 Mar 2017	27 Mar 2017†	25 Mar 2017	27 Mar 2017†
BH17 0.1-0.25	SE163547.019	LB121392	23 Mar 2017	24 Mar 2017	25 Mar 2017	27 Mar 2017†	25 Mar 2017	27 Mar 2017†

### Gravimetric Determination of Asbestos in Soil

Method: ME-(AU)-[ENV]AN605

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH12 0.16-0.31	SE163547.009	LB121506	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017

### 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
Rinsate R3	SE163547.024	LB121457	23 Mar 2017	24 Mar 2017	20 Apr 2017	31 Mar 2017	20 Apr 2017	03 Apr 2017

### Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP7 0-0.15	SE163547.001	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH8 0-0.15	SE163547.002	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH8 0.2-0.35	SE163547.003	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH9 0.18-0.28	SE163547.004	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH10 0.06-0.21	SE163547.006	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH10 0.22-0.37	SE163547.007	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH11 0-0.15	SE163547.008	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH12 0.16-0.31	SE163547.009	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH13 0.1-0.25	SE163547.011	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH13 0.3-0.45	SE163547.012	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH13 0.46-0.6	SE163547.013	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
TP14 0-0.15	SE163547.014	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
TP14 0.2-0.35	SE163547.015	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH15 0.1-0.2	SE163547.016	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH15 0.2-0.35	SE163547.017	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH16 0.8-0.18	SE163547.018	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
BH17 0.1-0.25	SE163547.019	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017
Duplicate D2	SE163547.023	LB121408	23 Mar 2017	24 Mar 2017	20 Apr 2017	30 Mar 2017	20 Apr 2017	03 Apr 2017

### Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Rinsate R3	SE163547.024	LB121520	23 Mar 2017	24 Mar 2017	19 Sep 2017	03 Apr 2017	19 Sep 2017	03 Apr 2017

### Moisture Content

Method: ME-(AU)-[ENV]AN002

Sample Name	Sample No.	QC Ref
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## HOLDING TIME SUMMARY

SE163547 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

### Moisture Content (continued)

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP7 0-0.15	SE163547.001	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH8 0-0.15	SE163547.002	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH8 0.2-0.35	SE163547.003	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH9 0.18-0.28	SE163547.004	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH10 0.06-0.21	SE163547.006	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH10 0.22-0.37	SE163547.007	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH11 0-0.15	SE163547.008	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH12 0.16-0.31	SE163547.009	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH13 0.1-0.25	SE163547.011	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH13 0.3-0.45	SE163547.012	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH13 0.46-0.6	SE163547.013	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
TP14 0-0.15	SE163547.014	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
TP14 0.2-0.35	SE163547.015	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH15 0.1-0.2	SE163547.016	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH15 0.2-0.35	SE163547.017	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH16 0.8-0.18	SE163547.018	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
BH17 0.1-0.25	SE163547.019	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017
Duplicate D2	SE163547.023	LB121389	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	04 Apr 2017	31 Mar 2017

### OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP7 0-0.15	SE163547.001	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH8 0-0.15	SE163547.002	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH8 0.2-0.35	SE163547.003	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH10 0.22-0.37	SE163547.007	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH11 0-0.15	SE163547.008	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH12 0.16-0.31	SE163547.009	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.1-0.25	SE163547.011	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.3-0.45	SE163547.012	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.46-0.6	SE163547.013	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
TP14 0-0.15	SE163547.014	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
TP14 0.2-0.35	SE163547.015	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH15 0.1-0.2	SE163547.016	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH15 0.2-0.35	SE163547.017	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH16 0.8-0.18	SE163547.018	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH17 0.1-0.25	SE163547.019	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
Duplicate D2	SE163547.023	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017

### PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP7 0-0.15	SE163547.001	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH8 0-0.15	SE163547.002	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH8 0.2-0.35	SE163547.003	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH10 0.22-0.37	SE163547.007	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH11 0-0.15	SE163547.008	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH12 0.16-0.31	SE163547.009	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.1-0.25	SE163547.011	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.3-0.45	SE163547.012	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.46-0.6	SE163547.013	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
TP14 0-0.15	SE163547.014	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
TP14 0.2-0.35	SE163547.015	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH15 0.1-0.2	SE163547.016	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH15 0.2-0.35	SE163547.017	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH16 0.8-0.18	SE163547.018	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH17 0.1-0.25	SE163547.019	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
Duplicate D2	SE163547.023	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017

### PCBs in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP7 0-0.15	SE163547.001	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH8 0-0.15	SE163547.002	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017



## HOLDING TIME SUMMARY

SE163547 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

### PCBs in Soil (continued)

Method: ME-(AU)-[ENV]AN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH8 0.2-0.35	SE163547.003	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH10 0.22-0.37	SE163547.007	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH11 0-0.15	SE163547.008	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH12 0.16-0.31	SE163547.009	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.1-0.25	SE163547.011	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.3-0.45	SE163547.012	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.46-0.6	SE163547.013	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
TP14 0-0.15	SE163547.014	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
TP14 0.2-0.35	SE163547.015	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH15 0.1-0.2	SE163547.016	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH15 0.2-0.35	SE163547.017	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH16 0.8-0.18	SE163547.018	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH17 0.1-0.25	SE163547.019	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
Duplicate D2	SE163547.023	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017

### pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH8 0-0.15	SE163547.002	LB121383	23 Mar 2017	24 Mar 2017	30 Mar 2017	30 Mar 2017	31 Mar 2017	31 Mar 2017
BH9 0.18-0.28	SE163547.004	LB121383	23 Mar 2017	24 Mar 2017	30 Mar 2017	30 Mar 2017	31 Mar 2017	31 Mar 2017
BH10 0.06-0.21	SE163547.006	LB121383	23 Mar 2017	24 Mar 2017	30 Mar 2017	30 Mar 2017	31 Mar 2017	31 Mar 2017
BH11 0-0.15	SE163547.008	LB121383	23 Mar 2017	24 Mar 2017	30 Mar 2017	30 Mar 2017	31 Mar 2017	31 Mar 2017
BH12 0.16-0.31	SE163547.009	LB121383	23 Mar 2017	24 Mar 2017	30 Mar 2017	30 Mar 2017	31 Mar 2017	31 Mar 2017
BH13 0.3-0.45	SE163547.012	LB121383	23 Mar 2017	24 Mar 2017	30 Mar 2017	30 Mar 2017	31 Mar 2017	31 Mar 2017
BH13 0.46-0.6	SE163547.013	LB121383	23 Mar 2017	24 Mar 2017	30 Mar 2017	30 Mar 2017	31 Mar 2017	31 Mar 2017
BH16 0.8-0.18	SE163547.018	LB121383	23 Mar 2017	24 Mar 2017	30 Mar 2017	30 Mar 2017	31 Mar 2017	31 Mar 2017

### Total Cyanide in soil by Discrete Analyser (AquaChem)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH12 0.16-0.31	SE163547.009	LB121402	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	06 Apr 2017	03 Apr 2017
BH13 0.3-0.45	SE163547.012	LB121402	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	06 Apr 2017	03 Apr 2017
BH16 0.8-0.18	SE163547.018	LB121402	23 Mar 2017	24 Mar 2017	06 Apr 2017	30 Mar 2017	06 Apr 2017	03 Apr 2017

### Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH10 0.22-0.37	SE163547.007	LB121424	23 Mar 2017	24 Mar 2017	06 Apr 2017	31 Mar 2017	06 Apr 2017	31 Mar 2017
BH12 0.16-0.31	SE163547.009	LB121424	23 Mar 2017	24 Mar 2017	06 Apr 2017	31 Mar 2017	06 Apr 2017	31 Mar 2017
BH13 0.3-0.45	SE163547.012	LB121424	23 Mar 2017	24 Mar 2017	06 Apr 2017	31 Mar 2017	06 Apr 2017	31 Mar 2017
BH16 0.8-0.18	SE163547.018	LB121424	23 Mar 2017	24 Mar 2017	06 Apr 2017	31 Mar 2017	06 Apr 2017	31 Mar 2017
Duplicate D2	SE163547.023	LB121424	23 Mar 2017	24 Mar 2017	06 Apr 2017	31 Mar 2017	06 Apr 2017	31 Mar 2017

### Total Recoverable Metals 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
TP7 0-0.15	SE163547.001	LB121446	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH8 0-0.15	SE163547.002	LB121446	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH8 0.2-0.35	SE163547.003	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH9 0.18-0.28	SE163547.004	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH10 0.06-0.21	SE163547.006	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH10 0.22-0.37	SE163547.007	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH11 0-0.15	SE163547.008	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH12 0.16-0.31	SE163547.009	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH13 0.1-0.25	SE163547.011	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH13 0.3-0.45	SE163547.012	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH13 0.46-0.6	SE163547.013	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
TP14 0-0.15	SE163547.014	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
TP14 0.2-0.35	SE163547.015	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH15 0.1-0.2	SE163547.016	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH15 0.2-0.35	SE163547.017	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH16 0.8-0.18	SE163547.018	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
BH17 0.1-0.25	SE163547.019	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017
Duplicate D2	SE163547.023	LB121447	23 Mar 2017	24 Mar 2017	19 Sep 2017	31 Mar 2017	19 Sep 2017	03 Apr 2017



## HOLDING TIME SUMMARY

SE163547 R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

### TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP7 0-0.15	SE163547.001	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH8 0-0.15	SE163547.002	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH8 0.2-0.35	SE163547.003	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH10 0.22-0.37	SE163547.007	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH11 0-0.15	SE163547.008	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH12 0.16-0.31	SE163547.009	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH13 0.1-0.25	SE163547.011	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH13 0.3-0.45	SE163547.012	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH13 0.46-0.6	SE163547.013	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
TP14 0-0.15	SE163547.014	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
TP14 0.2-0.35	SE163547.015	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH15 0.1-0.2	SE163547.016	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH15 0.2-0.35	SE163547.017	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH16 0.8-0.18	SE163547.018	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
BH17 0.1-0.25	SE163547.019	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017
Duplicate D2	SE163547.023	LB121280	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	31 Mar 2017

### VOC's in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH10 0.22-0.37	SE163547.007	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH12 0.16-0.31	SE163547.009	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.1-0.25	SE163547.011	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.3-0.45	SE163547.012	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
TP14 0-0.15	SE163547.014	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH15 0.2-0.35	SE163547.017	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH16 0.8-0.18	SE163547.018	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH17 0.1-0.25	SE163547.019	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
Duplicate D2	SE163547.023	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
Tripspike TS2	SE163547.025	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017

### Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH10 0.22-0.37	SE163547.007	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH12 0.16-0.31	SE163547.009	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.1-0.25	SE163547.011	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH13 0.3-0.45	SE163547.012	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
TP14 0-0.15	SE163547.014	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH15 0.2-0.35	SE163547.017	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH16 0.8-0.18	SE163547.018	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
BH17 0.1-0.25	SE163547.019	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
Duplicate D2	SE163547.023	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017
Tripspike TS2	SE163547.025	LB121296	23 Mar 2017	24 Mar 2017	06 Apr 2017	29 Mar 2017	08 May 2017	03 Apr 2017

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 identifier 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)	TP7 0-0.15	SE163547.001	%	60 - 130%	97
	BH8 0-0.15	SE163547.002	%	60 - 130%	102
	BH8 0.2-0.35	SE163547.003	%	60 - 130%	100
	BH11 0-0.15	SE163547.008	%	60 - 130%	105
	BH12 0.16-0.31	SE163547.009	%	60 - 130%	101
	BH13 0.1-0.25	SE163547.011	%	60 - 130%	97
	BH13 0.3-0.45	SE163547.012	%	60 - 130%	97
	BH13 0.46-0.6	SE163547.013	%	60 - 130%	102
	TP14 0-0.15	SE163547.014	%	60 - 130%	101
	TP14 0.2-0.35	SE163547.015	%	60 - 130%	98
	BH15 0.1-0.2	SE163547.016	%	60 - 130%	103
	BH15 0.2-0.35	SE163547.017	%	60 - 130%	101
	BH16 0.8-0.18	SE163547.018	%	60 - 130%	101
	BH17 0.1-0.25	SE163547.019	%	60 - 130%	99

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH10 0.22-0.37	SE163547.007	%	70 - 130%	94
	BH12 0.16-0.31	SE163547.009	%	70 - 130%	90
	BH13 0.3-0.45	SE163547.012	%	70 - 130%	82
	BH16 0.8-0.18	SE163547.018	%	70 - 130%	90
	Duplicate D2	SE163547.023	%	70 - 130%	104
d14-p-terphenyl (Surrogate)	BH10 0.22-0.37	SE163547.007	%	70 - 130%	110
	BH12 0.16-0.31	SE163547.009	%	70 - 130%	86
	BH13 0.3-0.45	SE163547.012	%	70 - 130%	104
	BH16 0.8-0.18	SE163547.018	%	70 - 130%	106
	Duplicate D2	SE163547.023	%	70 - 130%	94
d5-nitrobenzene (Surrogate)	BH10 0.22-0.37	SE163547.007	%	70 - 130%	100
	BH12 0.16-0.31	SE163547.009	%	70 - 130%	110
	BH13 0.3-0.45	SE163547.012	%	70 - 130%	96
	BH16 0.8-0.18	SE163547.018	%	70 - 130%	102
	Duplicate D2	SE163547.023	%	70 - 130%	104

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH12 0.16-0.31	SE163547.009	%	60 - 130%	101
	BH13 0.3-0.45	SE163547.012	%	60 - 130%	97
	BH16 0.8-0.18	SE163547.018	%	60 - 130%	101

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH10 0.22-0.37	SE163547.007	%	60 - 130%	89
	BH12 0.16-0.31	SE163547.009	%	60 - 130%	81
	BH13 0.1-0.25	SE163547.011	%	60 - 130%	86
	BH13 0.3-0.45	SE163547.012	%	60 - 130%	89
	TP14 0-0.15	SE163547.014	%	60 - 130%	82
	BH15 0.2-0.35	SE163547.017	%	60 - 130%	75
	BH16 0.8-0.18	SE163547.018	%	60 - 130%	81
	BH17 0.1-0.25	SE163547.019	%	60 - 130%	86
	Duplicate D2	SE163547.023	%	60 - 130%	86
	Tripspike TS2	SE163547.025	%	60 - 130%	85
	BH10 0.22-0.37	SE163547.007	%	60 - 130%	74
d4-1,2-dichloroethane (Surrogate)	BH12 0.16-0.31	SE163547.009	%	60 - 130%	76
	BH13 0.1-0.25	SE163547.011	%	60 - 130%	90
	BH13 0.3-0.45	SE163547.012	%	60 - 130%	77
	TP14 0-0.15	SE163547.014	%	60 - 130%	72
	BH15 0.2-0.35	SE163547.017	%	60 - 130%	72
	BH16 0.8-0.18	SE163547.018	%	60 - 130%	71
	BH17 0.1-0.25	SE163547.019	%	60 - 130%	73
	Duplicate D2	SE163547.023	%	60 - 130%	81
	Tripspike TS2	SE163547.025	%	60 - 130%	95
	BH10 0.22-0.37	SE163547.007	%	60 - 130%	78
d8-toluene (Surrogate)	BH10 0.22-0.37	SE163547.007	%	60 - 130%	78

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 identifier 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)	BH12 0.16-0.31	SE163547.009	%	60 - 130%	83
	BH13 0.1-0.25	SE163547.011	%	60 - 130%	82
	BH13 0.3-0.45	SE163547.012	%	60 - 130%	80
	TP14 0-0.15	SE163547.014	%	60 - 130%	80
	BH15 0.2-0.35	SE163547.017	%	60 - 130%	71
	BH16 0.8-0.18	SE163547.018	%	60 - 130%	75
	BH17 0.1-0.25	SE163547.019	%	60 - 130%	79
	Duplicate D2	SE163547.023	%	60 - 130%	93
	Trip spike TS2	SE163547.025	%	60 - 130%	111
Dibromofluoromethane (Surrogate)	BH10 0.22-0.37	SE163547.007	%	60 - 130%	76
	BH12 0.16-0.31	SE163547.009	%	60 - 130%	79
	BH13 0.1-0.25	SE163547.011	%	60 - 130%	82
	BH13 0.3-0.45	SE163547.012	%	60 - 130%	72
	TP14 0-0.15	SE163547.014	%	60 - 130%	73
	BH15 0.2-0.35	SE163547.017	%	60 - 130%	79
	BH16 0.8-0.18	SE163547.018	%	60 - 130%	73
	BH17 0.1-0.25	SE163547.019	%	60 - 130%	74
	Duplicate D2	SE163547.023	%	60 - 130%	76
	Trip spike TS2	SE163547.025	%	60 - 130%	76

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH10 0.22-0.37	SE163547.007	%	60 - 130%	89
	BH12 0.16-0.31	SE163547.009	%	60 - 130%	81
	BH13 0.3-0.45	SE163547.012	%	60 - 130%	89
	BH16 0.8-0.18	SE163547.018	%	60 - 130%	82
	Duplicate D2	SE163547.023	%	60 - 130%	86
d4-1,2-dichloroethane (Surrogate)	BH10 0.22-0.37	SE163547.007	%	60 - 130%	74
	BH12 0.16-0.31	SE163547.009	%	60 - 130%	76
	BH13 0.3-0.45	SE163547.012	%	60 - 130%	77
	BH16 0.8-0.18	SE163547.018	%	60 - 130%	74
	Duplicate D2	SE163547.023	%	60 - 130%	81
d8-toluene (Surrogate)	BH10 0.22-0.37	SE163547.007	%	60 - 130%	78
	BH12 0.16-0.31	SE163547.009	%	60 - 130%	83
	BH13 0.3-0.45	SE163547.012	%	60 - 130%	80
	BH16 0.8-0.18	SE163547.018	%	60 - 130%	83
	Duplicate D2	SE163547.023	%	60 - 130%	93
Dibromofluoromethane (Surrogate)	BH10 0.22-0.37	SE163547.007	%	60 - 130%	76
	BH12 0.16-0.31	SE163547.009	%	60 - 130%	79
	BH13 0.3-0.45	SE163547.012	%	60 - 130%	72
	BH16 0.8-0.18	SE163547.018	%	60 - 130%	74
	Duplicate D2	SE163547.023	%	60 - 130%	76

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.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-(ENV)AN122

Sample Number	Parameter	Units	LOR
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## Mercury (dissolved) in Water

Method: ME-(AU)-(ENV)AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB121457.001	Mercury	mg/L	0.0001	<0.0001

## Mercury in Soil

Method: ME-(AU)-(ENV)AN312

Sample Number	Parameter	Units	LOR	Result
LB121408.001	Mercury	mg/kg	0.05	<0.05

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-(ENV)AN320/AN321

Sample Number	Parameter	Units	LOR	Result
LB121520.001	Arsenic, As	mg/L	0.02	<0.02
	Cadmium, Cd	mg/L	0.001	<0.001
	Chromium, Cr	mg/L	0.005	<0.005
	Copper, Cu	mg/L	0.005	<0.005
	Lead, Pb	mg/L	0.02	<0.02
	Nickel, Ni	mg/L	0.005	<0.005
	Zinc, Zn	mg/L	0.01	<0.01

## OC Pesticides in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result
LB121280.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.05	<0.05
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	88

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result
LB121280.001	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

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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
LB121280.001	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)	%	-	102
	2-fluorobiphenyl (Surrogate)	%	-	90
	d14-p-terphenyl (Surrogate)	%	-	98

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB121280.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates			
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	88

## Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result
LB121402.001	Total Cyanide	mg/kg	0.5	<0.5

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result
LB121424.001	Total Phenols	mg/kg	5	<5

## Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB121446.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5
LB121447.001	Arsenic, As	mg/kg	3	<3
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Nickel, Ni	mg/kg	0.5	<0.5
	Zinc, Zn	mg/kg	0.5	<0.5

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB121280.001	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





## METHOD BLANKS

SE163547 R0

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Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## VOC's in Soil

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB121296.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
		1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Bromomethane	mg/kg	1	<1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		Iodomethane	mg/kg	5	<5
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	mg/kg	0.1	<0.1
		Dibromomethane	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		cis-1,4-dichloro-2-butene	mg/kg	1	<1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
		Hexachlorobutadiene	mg/kg	0.1	<0.1
	Halogenated Aromatics	Chlorobenzene	mg/kg	0.1	<0.1
		Bromobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
	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
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
		p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
	Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1
		2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10



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Result 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)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB121296.001	Oxygenated Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1
		Vinyl acetate	mg/kg	10	<10
		MEK (2-butanone)	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
		2-hexanone (MBK)	mg/kg	5	<5
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	77
		d4-1,2-dichloroethane (Surrogate)	%	-	75
		d8-toluene (Surrogate)	%	-	85
		Bromofluorobenzene (Surrogate)	%	-	88
	Totals	Total BTEX	mg/kg	0.6	<0.6
		Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
		Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
	Trihalomethanes	Chloroform	mg/kg	0.1	<0.1
		Bromodichloromethane	mg/kg	0.1	<0.1
		Chlorodibromomethane	mg/kg	0.1	<0.1
		Bromoform	mg/kg	0.1	<0.1

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB121296.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	77
		d4-1,2-dichloroethane (Surrogate)	%	-	74
		d8-toluene (Surrogate)	%	-	77

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.024	LB121457.007	Mercury	µg/L	0.0001	<0.0001	<0.0001	174	0

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.011	LB121408.014	Mercury	mg/kg	0.05	28	29	30	2
SE163547.023	LB121408.024	Mercury	mg/kg	0.05	0.08	0.07	98	19

## Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.007	LB121389.011	% Moisture	%w/w	0.5	11	12	38	8
SE163547.018	LB121389.022	% Moisture	%w/w	0.5	19	20	35	2
SE163629.004	LB121389.030	% Moisture	%w/w	0.5	4.7	4.4	52	5

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.012	LB121280.026	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
Mirex	mg/kg	0.1	<0.1	<0.1	200	0		
Surrogates		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	30	0

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.012	LB121280.026	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

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.012	LB121280.026	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	TEQ (mg/kg)	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates						
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	0
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	7
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	6

#### PCBs in Soil

Method: ME-(AU)-[ENV]JAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.012	LB121280.026	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	0

#### pH in soil (1:5)

Method: ME-(AU)-[ENV]JAN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163543.018	LB121383.014	pH	pH Units	-	5.3	5.3	32	0
SE163547.018	LB121383.035	pH	pH Units	-	8.6	8.6	31	0

#### Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]JAN077/AN287

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.009	LB121402.004	Total Cyanide	mg/kg	0.5	<0.5	<0.5	200	0

#### Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]JAN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.002	LB121446.024	Arsenic, As	mg/kg	3	4	5	53	35
		Cadmium, Cd	mg/kg	0.3	0.6	0.7	75	22
		Chromium, Cr	mg/kg	0.3	23	24	32	4
		Copper, Cu	mg/kg	0.5	18	17	33	5
		Lead, Pb	mg/kg	1	27	39	33	39 @
		Nickel, Ni	mg/kg	0.5	49	34	31	34 @
		Zinc, Zn	mg/kg	0.5	300	290	31	0
SE163547.014	LB121447.014	Arsenic, As	mg/kg	3	<3	3	64	14
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	177	0
		Chromium, Cr	mg/kg	0.3	3.3	3.4	45	1
		Copper, Cu	mg/kg	0.5	4.7	4.8	41	1
		Lead, Pb	mg/kg	1	18	18	36	1
		Nickel, Ni	mg/kg	0.5	1.3	1.4	67	7
		Zinc, Zn	mg/kg	0.5	25	25	38	1
SE163614.003	LB121447.024	Arsenic, As	mg/kg	3	5	5	50	15
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	160	0
		Chromium, Cr	mg/kg	0.3	4.2	3.8	42	10
		Copper, Cu	mg/kg	0.5	9.6	7.7	36	22
		Lead, Pb	mg/kg	1	20	24	35	17
		Nickel, Ni	mg/kg	0.5	3.3	2.3	48	34
		Zinc, Zn	mg/kg	0.5	47	45	34	5

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163632.021	LB121446.014	Arsenic, As	mg/kg	3	6	4	51	34
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	149	0
		Chromium, Cr	mg/kg	0.3	13	14	34	12
		Copper, Cu	mg/kg	0.5	4.8	3.8	42	25
		Lead, Pb	mg/kg	1	16	14	37	14
		Nickel, Ni	mg/kg	0.5	2.5	2.2	51	10
		Zinc, Zn	mg/kg	0.5	12	12	47	6

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.012	LB121280.026	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	mg/kg	210	<210	<210	200	0
		TRH F Bands						
		TRH >C10-C16 (F2)	mg/kg	25	<25	<25	200	0
		TRH >C10-C16 (F2) - Naphthalene	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 %
SE163547.023	LB121296.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	173	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	Napthalene	mg/kg	0.1	<0.1	<0.1	200
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.8	4.0	50	6
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.0	4.7	50	16
			d8-toluene (Surrogate)	mg/kg	-	4.6	5.4	50	16
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.3	4.3	50	1
Totals	Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0		
	Total BTEX	mg/kg	0.6	<0.6	<0.6	197	0		
SE163597.001	LB121296.024	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	200	0
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	200	0
			Aliphatics	Chloromethane	mg/kg	1	<1	<1	200
		Vinyl chloride (Chloroethene)		mg/kg	0.1	<0.1	<0.1	200	0
		Bromomethane		mg/kg	1	<1	<1	200	0
		Chloroethane		mg/kg	1	<1	<1	200	0
		Trichlorofluoromethane		mg/kg	1	<1	<1	200	0
		Iodomethane		mg/kg	5	<5	<5	200	0
		1,1-dichloroethene		mg/kg	0.1	<0.1	<0.1	200	0
		Dichloromethane (Methylene chloride)		mg/kg	0.5	<0.5	<0.5	200	0
		Allyl chloride		mg/kg	0.1	<0.1	<0.1	200	0
		trans-1,2-dichloroethene		mg/kg	0.1	<0.1	<0.1	200	0
		1,1-dichloroethane		mg/kg	0.1	<0.1	<0.1	200	0
		cis-1,2-dichloroethene		mg/kg	0.1	<0.1	<0.1	200	0
		Bromochloromethane		mg/kg	0.1	<0.1	<0.1	200	0
		1,2-dichloroethane		mg/kg	0.1	<0.1	<0.1	200	0
		1,1,1-trichloroethane		mg/kg	0.1	<0.1	<0.1	200	0
		1,1-dichloropropene		mg/kg	0.1	<0.1	<0.1	200	0
		Carbon tetrachloride		mg/kg	0.1	<0.1	<0.1	200	0
		Dibromomethane		mg/kg	0.1	<0.1	<0.1	200	0
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	200	0	
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0			
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0			

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE163597.001	LB121296.024	Halogenated	Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	200	0	
		Aliphatics	1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0	
			cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	200	0	
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0	
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	200	0	
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	200	0	
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	200	0	
			Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	200	0	
		Halogenated	Chlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			Aromatics	Bromobenzene	mg/kg	0.1	<0.1	<0.1	200	0
		2-chlorotoluene		mg/kg	0.1	<0.1	<0.1	200	0	
		4-chlorotoluene		mg/kg	0.1	<0.1	<0.1	200	0	
		1,3-dichlorobenzene		mg/kg	0.1	<0.1	<0.1	200	0	
		1,4-dichlorobenzene		mg/kg	0.1	<0.1	<0.1	200	0	
		1,2-dichlorobenzene		mg/kg	0.1	<0.1	<0.1	200	0	
		1,2,4-trichlorobenzene		mg/kg	0.1	<0.1	<0.1	200	0	
		1,2,3-trichlorobenzene		mg/kg	0.1	<0.1	<0.1	200	0	
		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	
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	200	0	
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	200	0	
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	200	0	
			n-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			Nitrogenous	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	200	0
			Compounds	2-nitropropane	mg/kg	10	<10	<10	200	0
			Oxygenated	Acetone (2-propanone)	mg/kg	10	<10	<10	200	0
			Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	200	0
				Vinyl acetate	mg/kg	10	<10	<10	200	0
				MEK (2-butanone)	mg/kg	10	<10	<10	200	0
				MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	200	0
		2-hexanone (MBK)		mg/kg	5	<5	<5	200	0	
		Polycyclic		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Sulphonated		Carbon disulfide	mg/kg	0.5	<0.5	<0.5	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.6	3.6	50	1	
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	3.8	4.0	50	5	
			d8-toluene (Surrogate)	mg/kg	-	4.3	4.0	50	5	
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.5	4.3	50	5	
		Totals	Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0	
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0	
			Total VOC*	mg/kg	24	<24	<24	200	0	
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	200	0	
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0	
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0	
		Trihalomethanes	Chloroform	mg/kg	0.1	<0.1	<0.1	200	0	
			Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	200	0	
			Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	200	0	
			Bromoform	mg/kg	0.1	<0.1	<0.1	200	0	

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.023	LB121296.014	TRH C6-C10	mg/kg	25	<25	<25	200	0
		TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.8	4.0	30

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547.023	LB121296.014	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.0	4.7	30	16
			d8-toluene (Surrogate)	mg/kg	-	4.6	5.4	30	16
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.3	4.3	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
SE163597.001	LB121296.024		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.5	3.6	30	1
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	3.7	3.8	30	2
			d8-toluene (Surrogate)	mg/kg	-	4.1	4.1	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.6	4.6	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

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.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121433.002	Exchangeable Sodium, Na	mg/kg	2	NA	390	80 - 120	91
	Exchangeable Potassium, K	mg/kg	2	NA	343	80 - 120	90
	Exchangeable Calcium, Ca	mg/kg	2	NA	2570	80 - 120	91
	Exchangeable Magnesium, Mg	mg/kg	2	NA	635	80 - 120	90

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121408.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	94

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320/AN321

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121520.002	Arsenic, As	mg/L	0.02	2.0	2	80 - 120	100
	Cadmium, Cd	mg/L	0.001	2.0	2	80 - 120	101
	Chromium, Cr	mg/L	0.005	2.0	2	80 - 120	100
	Copper, Cu	mg/L	0.005	2.0	2	80 - 120	100
	Lead, Pb	mg/L	0.02	2.0	2	80 - 120	101
	Nickel, Ni	mg/L	0.005	2.0	2	80 - 120	101
	Zinc, Zn	mg/L	0.01	2.0	2	80 - 120	101

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121280.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	116
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	114
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	121
	Dieldrin	mg/kg	0.05	0.22	0.2	60 - 140	110
	Endrin	mg/kg	0.2	0.2	0.2	60 - 140	123
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	124
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB121280.002	Naphthalene	mg/kg	0.1	4.4	4	60 - 140	111	
	Acenaphthylene	mg/kg	0.1	4.9	4	60 - 140	121	
	Acenaphthene	mg/kg	0.1	4.3	4	60 - 140	108	
	Phenanthrene	mg/kg	0.1	4.6	4	60 - 140	116	
	Anthracene	mg/kg	0.1	4.7	4	60 - 140	118	
	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	4.8	4	60 - 140	119	
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	112
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	102
		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 %
LB121280.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	101

## pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121383.003	pH	pH Units	-	7.4	7.415	98 - 102	100

## Total Cyanide in soil by Discrete Analyser (Aquaem)

Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121402.002	Total Cyanide	mg/kg	0.5	<0.5	0.25	70 - 130	101

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR
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## LABORATORY CONTROL SAMPLES

SE163547 R0

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.

## Total Phenolics in Soil (continued)

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121424.002	Total Phenols	mg/kg	5	<5	2.5	70 - 130	92

## Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121446.002	Arsenic, As	mg/kg	3	51	50	80 - 120	102
	Cadmium, Cd	mg/kg	0.3	52	50	80 - 120	103
	Chromium, Cr	mg/kg	0.3	52	50	80 - 120	104
	Copper, Cu	mg/kg	0.5	52	50	80 - 120	104
	Lead, Pb	mg/kg	1	52	50	80 - 120	104
	Nickel, Ni	mg/kg	0.5	52	50	80 - 120	105
LB121447.002	Zinc, Zn	mg/kg	0.5	53	50	80 - 120	105
	Arsenic, As	mg/kg	3	50	50	80 - 120	101
	Cadmium, Cd	mg/kg	0.3	51	50	80 - 120	102
	Chromium, Cr	mg/kg	0.3	51	50	80 - 120	102
	Copper, Cu	mg/kg	0.5	51	50	80 - 120	101
	Lead, Pb	mg/kg	1	51	50	80 - 120	102
	Nickel, Ni	mg/kg	0.5	51	50	80 - 120	102
	Zinc, Zn	mg/kg	0.5	51	50	80 - 120	103

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB121280.002	TRH C10-C14	mg/kg	20	41	40	60 - 140	103	
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	103	
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	78	
	TRH F Bands	TRH >C10-C16 (F2)	mg/kg	25	42	40	60 - 140	105
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	93
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	75

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB121296.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	1.8	2.56	60 - 140	70	
		Aliphatics	1,2-dichloroethane	mg/kg	0.1	2.2	2.56	60 - 140	88
		Trichloroethene (Trichloroethylene -TCE)		mg/kg	0.1	1.9	2.56	60 - 140	75
	Halogenated	Chlorobenzene	mg/kg	0.1	2.8	2.56	60 - 140	108	
	Monocyclic	Benzene	mg/kg	0.1	2.3	2.9	60 - 140	81	
	Aromatic	Toluene	mg/kg	0.1	2.9	2.9	60 - 140	99	
		Ethylbenzene	mg/kg	0.1	2.8	2.9	60 - 140	95	
		m/p-xylene	mg/kg	0.2	4.7	5.8	60 - 140	81	
		o-xylene	mg/kg	0.1	3.0	2.9	60 - 140	102	
	Surrogates	Dibromofluoromethane (Surrogate)		mg/kg	-	4.8	5	60 - 140	97
		d4-1,2-dichloroethane (Surrogate)		mg/kg	-	5.6	5	60 - 140	111
		d8-toluene (Surrogate)		mg/kg	-	5.6	5	60 - 140	111
		Bromofluorobenzene (Surrogate)		mg/kg	-	4.7	5	60 - 140	94
	Trihalomethan	Chloroform	mg/kg	0.1	2.2	2.56	60 - 140	86	

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB121296.002	TRH C6-C10	mg/kg	25	<25	24.65	60 - 140	91	
	TRH C6-C9	mg/kg	20	21	23.2	60 - 140	89	
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.8	5	60 - 140	97
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	5.6	5	60 - 140	111
		d8-toluene (Surrogate)	mg/kg	-	5.6	5	60 - 140	111
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.7	5	60 - 140	94
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	7.25	60 - 140	95



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 identifier 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%
SE163537.001	LB121408.004	Mercury	mg/kg	0.05	0.19	<0.05	0.2	83

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163547.001	LB121280.027	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	122
		Aldrin	mg/kg	0.1	0.2	<0.1	0.2	119
		Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	119
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
		Dieldrin	mg/kg	0.05	0.23	<0.05	0.2	114
		Endrin	mg/kg	0.2	0.2	<0.2	0.2	123
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	0.3	<0.1	0.2	125
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
		Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	-	103

## Total Cyanide in soil by Discrete Analyser (Aquakem)

Method: ME-(AU)-[ENV]AN077/AN287

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163547.018	LB121402.007	Total Cyanide	mg/kg	0.5	<0.5	<0.5	0.25	114

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163547.023	LB121424.009	Total Phenols	mg/kg	5	<5	<5	2.5	115

## Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163547.003	LB121447.004	Arsenic, As	mg/kg	3	51	3	50	95
		Cadmium, Cd	mg/kg	0.3	52	<0.3	50	103
		Chromium, Cr	mg/kg	0.3	67	15	50	103
		Copper, Cu	mg/kg	0.5	67	16	50	101
		Lead, Pb	mg/kg	1	62	15	50	94
		Nickel, Ni	mg/kg	0.5	63	11	50	104
		Zinc, Zn	mg/kg	0.5	110	60	50	105
SE163632.012	LB121446.004	Arsenic, As	mg/kg	3	52	3	50	98
		Cadmium, Cd	mg/kg	0.3	58	<0.3	50	116
		Chromium, Cr	mg/kg	0.3	73	10	50	126
		Copper, Cu	mg/kg	0.5	64	4.6	50	119
		Lead, Pb	mg/kg	1	70	12	50	115
		Nickel, Ni	mg/kg	0.5	62	2.6	50	118

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Total Recoverable Metals 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%
SE163632.012	LB121446.004	Zinc, Zn	mg/kg	0.5	76	13	50	127

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE163495A.00 2	LB121296.004	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-	
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-	
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-	
			1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	-	-	
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	-	-	
			Aliphatics	Chloromethane	mg/kg	1	<1	<1	-	-
		Vinyl chloride (Chloroethene)		mg/kg	0.1	<0.1	<0.1	-	-	
		Bromomethane		mg/kg	1	<1	<1	-	-	
		Chloroethane		mg/kg	1	<1	<1	-	-	
		Trichlorofluoromethane		mg/kg	1	<1	<1	-	-	
		Iodomethane		mg/kg	5	<5	<5	-	-	
		1,1-dichloroethene		mg/kg	0.1	1.9	<0.1	2.56	75	
		Dichloromethane (Methylene chloride)		mg/kg	0.5	<0.5	<0.5	-	-	
		Allyl chloride		mg/kg	0.1	<0.1	<0.1	-	-	
		trans-1,2-dichloroethene		mg/kg	0.1	<0.1	<0.1	-	-	
		1,1-dichloroethane		mg/kg	0.1	<0.1	<0.1	-	-	
		cis-1,2-dichloroethene		mg/kg	0.1	<0.1	<0.1	-	-	
		Bromochloromethane		mg/kg	0.1	<0.1	<0.1	-	-	
		1,2-dichloroethane		mg/kg	0.1	2.6	<0.1	2.56	102	
		1,1,1-trichloroethane		mg/kg	0.1	<0.1	<0.1	-	-	
		1,1-dichloropropene		mg/kg	0.1	<0.1	<0.1	-	-	
		Carbon tetrachloride		mg/kg	0.1	<0.1	<0.1	-	-	
		Dibromomethane		mg/kg	0.1	<0.1	<0.1	-	-	
		Trichloroethene (Trichloroethylene -TCE)		mg/kg	0.1	1.8	<0.1	2.56	69	
		1,1,2-trichloroethane		mg/kg	0.1	<0.1	<0.1	-	-	
		1,3-dichloropropane		mg/kg	0.1	<0.1	<0.1	-	-	
		Tetrachloroethene (Perchloroethylene,PCE)		mg/kg	0.1	<0.1	<0.1	-	-	
		1,1,1,2-tetrachloroethane		mg/kg	0.1	<0.1	<0.1	-	-	
		cis-1,4-dichloro-2-butene		mg/kg	1	<1	<1	-	-	
		1,1,2,2-tetrachloroethane		mg/kg	0.1	<0.1	<0.1	-	-	
		1,2,3-trichloropropane		mg/kg	0.1	<0.1	<0.1	-	-	
		trans-1,4-dichloro-2-butene		mg/kg	1	<1	<1	-	-	
		1,2-dibromo-3-chloropropane		mg/kg	0.1	<0.1	<0.1	-	-	
		Hexachlorobutadiene		mg/kg	0.1	<0.1	<0.1	-	-	
		Halogenated		Chlorobenzene	mg/kg	0.1	2.9	<0.1	2.56	113
				Aromatics	Bromobenzene	mg/kg	0.1	<0.1	<0.1	-
		2-chlorotoluene			mg/kg	0.1	<0.1	<0.1	-	-
		4-chlorotoluene			mg/kg	0.1	<0.1	<0.1	-	-
		1,3-dichlorobenzene	mg/kg		0.1	<0.1	<0.1	-	-	
		1,4-dichlorobenzene	mg/kg		0.1	<0.1	<0.1	-	-	
		1,2-dichlorobenzene	mg/kg		0.1	<0.1	<0.1	-	-	
		1,2,4-trichlorobenzene	mg/kg		0.1	<0.1	<0.1	-	-	
		1,2,3-trichlorobenzene	mg/kg		0.1	<0.1	<0.1	-	-	
		Monocyclic Aromatic	Benzene		mg/kg	0.1	2.3	<0.1	2.9	80
			Toluene		mg/kg	0.1	2.8	<0.1	2.9	95
			Ethylbenzene	mg/kg	0.1	2.6	<0.1	2.9	89	
			m/p-xylene	mg/kg	0.2	4.9	<0.2	5.8	84	
			o-xylene	mg/kg	0.1	3.0	<0.1	2.9	102	
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	-	-	
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	-	-	
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-	-	
tert-butylbenzene	mg/kg		0.1	<0.1	<0.1	-	-			
1,2,4-trimethylbenzene	mg/kg		0.1	<0.1	<0.1	-	-			
sec-butylbenzene	mg/kg		0.1	<0.1	<0.1	-	-			
p-isopropyltoluene	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 identifier 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%
SE163495A.00 2	LB121296.004	Monocyclic	n-butylbenzene	mg/kg	0.1	<0.1	<0.1	-
		Nitrogenous	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	-
		Compounds	2-nitropropane	mg/kg	10	<10	<10	-
		Oxygenated	Acetone (2-propanone)	mg/kg	10	<10	<10	-
		Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	-
			Vinyl acetate	mg/kg	10	<10	<10	-
			MEK (2-butanone)	mg/kg	10	<10	<10	-
			MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	-
			2-hexanone (MBK)	mg/kg	5	<5	<5	-
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	-
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.7	4.0	-
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	5.8	3.9	-
			d8-toluene (Surrogate)	mg/kg	-	5.4	3.7	-
			Bromofluorobenzene (Surrogate)	mg/kg	-	3.7	4.0	-
		Totals	Total Xylenes*	mg/kg	0.3	7.9	<0.3	-
			Total BTEX	mg/kg	0.6	16	<0.6	-
			Total VOC*	mg/kg	24	27	<24	-
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	-
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	12	<1.8	-
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	12	<1.8	-
		Trihalomethanes	Chloroform	mg/kg	0.1	2.7	<0.1	2.56
			Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	-
			Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	-
			Bromoform	mg/kg	0.1	<0.1	<0.1	-

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163495A.00 2	LB121296.004	TRH C6-C10	mg/kg	25	<25	<25	24.65	89
		TRH C6-C9	mg/kg	20	<20	<20	23.2	65
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	5.1	3.7	-
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	5.3	3.8	-
			d8-toluene (Surrogate)	mg/kg	-	6.0	3.8	-
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.3	3.9	-
		VPH F	Benzene (F0)	mg/kg	0.1	2.3	<0.1	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	7.25
								88



Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.



Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : <http://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 .
- 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 Analytical Report comments for further information.

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## CLIENT DETAILS

Contact Anwar Barbhuiya  
 Client Geotechnique  
 Address P.O. Box 880  
 PENRITH NSW 2751

Telephone 02 4722 2700  
 Facsimile 02 4722 6161  
 Email anwar@geotech.com.au

Project **13977-2 NARWEE**  
 Order Number (Not specified)  
 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 **SE163547 R0**  
 Date Received 24 Mar 2017  
 Date Reported 07 Apr 2017

## 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 #9: Asbestos found in 50x20x4mm cement sheet fragments, in >7mm fraction.

Asbestos analysed by Approved Identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin .

Coal Tar subcontracted to RCA, 92 Hill St, Carrington, NSW.

## SIGNATORIES



Andy Sutton  
 Senior Organic Chemist




Bennet Lo  
 Senior Organic Chemist/Metals Chemis



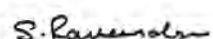
Dong Liang  
 Metals/Inorganics Team Leader



Kamrul Ahsan  
 Senior Chemist



Ly Kim Ha  
 Organic Section Head



Ravee Sivasubramaniam  
 Hygiene Team Leader



# ANALYTICAL REPORT

SE163547 R0

## RESULTS

Fibre ID in bulk materials

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification
SE163547.010	BH12 0.16-0.36	Other	45x25mm cement sheet fragment	23 Mar 2017	Chrysotile Asbestos Detected
SE163547.020	FCP1 Surface	Other	75x20x5mm cement sheet fragment	23 Mar 2017	Amosite, Chrysotile & Crocidolite Asbestos Detected
SE163547.021	FCP2 Surface	Other	85x60x5mm cement sheet fragment	23 Mar 2017	Amosite, Chrysotile & Crocidolite Asbestos Detected
SE163547.022	FCP3 Surface	Other	60x40x5mm cement sheet fragment	23 Mar 2017	Chrysotile Asbestos Detected

## 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 unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf).

## 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.

(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.

Sampled by the client.

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 criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.sgs.com.au/~media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf>

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SGS Environmental Services Sydney  
Unit 16, 33 Maddox Street  
ALEXANDRIA NSW 2015

Attention Irfan Sayeed

**Project:** RCA ref 12817-701  
**Date:** 6/04/2017  
**Client reference:** SE 163547  
**Received date:** 31/03/2017 **Number of samples:** 1  
**Client order number:** Not Supplied **Testing commenced:** 4/04/2017

## CERTIFICATE OF ANALYSIS

### 1 ANALYTICAL TEST METHODS

ANALYSIS	METHOD	UNITS	ANALYSING LABORATORY	NATA ANALYSIS/ NON NATA
Identification of Tar or Pitch in Asphalt	Test Method T542	n/a	RCA Laboratories - Environmental	NON NATA

## 2 RESULTS

ANALYSIS	UNITS	SE163547.005 BH10 0-0.06
Soil		
Sample Number	-	031712817001
Date Sampled	-	23/03/2017
Sampled By		Client
Identification of Tar or Pitch in Asphalt	n/a	absent

## 3 DUPLICATES

Note sample supplied was the minimum amount to conduct the test. Entire sample volume used to perform the analysis. No duplicate could be performed due to insufficient sample volume. (No other samples in the batch)

Please contact the undersigned if you have any queries.

Yours sincerely



Laura Schofield  
Environmental Laboratory Manager  
Robert Carr & Associates Pty Ltd Trading as  
RCA Laboratories - Environmental



Chad South  
Environmental Technician  
Robert Carr & Associates Pty Ltd Trading as  
RCA Laboratories - Environmental

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## RCA Internal Quality Review

### General

1. Laboratory QC results for Method Blanks, Duplicates and Laboratory Control Samples are included in this QC report where applicable. Additional QC data maybe available on request.
2. RCA QC Acceptance / Rejection Criteria are available on request.
3. Proficiency Trial results are available on request.
4. Actual PQLs are matrix dependant. Quoted PQLs may be raised where sample extracts are diluted due to interferences.
5. When individual results are qualified in the body of a report, refer to the qualifier descriptions that follow.
6. Samples were analysed on an 'as received' basis.
7. Sampled dates in this report are those listed on the COC or sample jars; if no sample dates are noted, the date the samples are received at the laboratory have been used.
8. All soil results are reported on a dry basis, unless otherwise stated. (ACID SULPHATE SOILS)
9. This report replaces any interim results previously issued.

### Holding Times.

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample

Receipt Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

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

### QC - ACCEPTANCE CRITERIA

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR: RPD must lie between 0-30%

### QC DATA GENERAL COMMENTS

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Duplicate RPD's are calculated from raw analytical data thus it is possible to have two sets of data.

### Glossary

#### UNITS

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre ppm: Parts per million

ppb: Parts per billion %: Percentage

org/100ml: Organisms per 100 millilitres NTU: Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/l: milligrams per Litre

#### TERMS

**Dry** Where moisture has been determined on a solid sample the result is expressed on a dry basis.

**LOR** Limit of Reporting.

**RPD** Relative Percent Difference between two Duplicate pieces of analysis can be obtained upon request.

**QCS** Quality Control Sample - reported as value recovery

**Method Blank** In the case of solid samples these are performed on laboratory certified clean sands.

In the case of water samples these are performed on de-ionised water.

**Duplicate** A second piece of analysis from the same sample and reported in the same units as the result to show comparison.

**Batch Duplicate** A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.

**USEPA** United States Environment Protection Authority

**APHA** American Public Health Association

**COC** Chain of Custody

**CP** Client Parent - QC was performed on samples pertaining to this report

**NCP** Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within

< indicates less than

> Indicates greater than

**ND** Not Detected



SGS Environmental Services Sydney  
Unit 16, 33 Maddox Street

Alexandria NSW 2015

Telephone No: (02) 85940400

Facsimile No: (02) 85940499

Email: au.samplerreceipt.sydney@sgs.com

## CHAIN OF CUSTODY & ANALYSIS REQUEST

Page \_\_\_\_ of \_\_\_\_

To: RCA Australia  
92 Hill Street  
Carrington NSW 2294

Phone: 02 4902 9228

Facsimile:

Attn: Sample Receipt

Purchase Order

Results Required 05/04/17

Comment: AU.Environmental.Sydney@sgs.com

Our Report No:

SE163547

Client ID

DATE  
SAMPLED

WATER

SOIL

CONTAIN  
ER TYPE  
/  
PRESERVA  
TIVE

Caol Tar

SGS Alexandria Environmental



**SE163547 SUBCON**

Received: 24 - Mar - 2017

Sample ID

BH10 0-0.06

23/03/17

X

X

Relinquished By: Emily Yin

Date/Time: 29/03/17

Received By:

Date/Time 11:55

Samples Intact: Yes / No

Temperature: Ambient / Chilled

Sample Cooler Sealed: Yes (No)

Laboratory Quotation No:

Comments:

Courier Service: star-track

Booking No: 26407708

SGS EHS Alexandria Laboratory



SE163547 COC

Received: 27-Mar-2017

**E-MAILED**  
27/3/17 10:55

**GEOTECHNIQUE PTY LTD**

Laboratory Test Request / Chain of Custody Record

Lemko Place  
PENRITH NSW 2750

P O Box 880  
PENRITH NSW 2751

Tel: (02) 4722 2700  
Fax: (02) 4722 6161

Page 1 of 3

<b>TO:</b> SGS ENVIRONMENTAL SERVICES UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015				<b>Sampling By:</b> SS		<b>Job No:</b> 13977/2	
<b>PH:</b> 02 8594 0400				<b>FAX:</b> 02 8594 0499		<b>Project:</b>	
<b>ATTN:</b> MS EMILY YIN				<b>Project Manager:</b> AB		<b>Location:</b> NARWEE	

Sampling details				Sample type		Results required by: Normal Turnaround Time										
Location	Depth (m)	Date	Time	Soil / Material	Water	Metals As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TPH* & BTEX & PAH	OCP	PCB	PHENOLS	pH, CEC	ASBESTOS 0.001% w/w	ASBESTOS	COAL TAR	CYANIDE	KEEP SAMPLE
1 TP7	0-0.15	23/03/2017	-	SG/SP		✓		✓								YES
2 BH8	0-0.15	23/03/2017	-	SG/SP		✓		✓			✓					YES
3 BH8	0.2-0.35	23/03/2017	-	SG/SP		✓		✓								YES
BH8	0.5-0.8	23/03/2017	-	SG/SP												YES
BH8	0.85-0.95	23/03/2017	-	SG												YES
4 BH9	0.18-0.28	23/03/2017	-	SG		✓					✓					YES
5 BH10	0-0.06	23/03/2017	-	SG										✓		YES
6 BH10	0.06-0.21	23/03/2017	-	SG/SP		✓					✓					YES
7 BH10	0.22-0.37	23/03/2017	-	SG/SP		✓	✓			✓						YES
BH10	0.55-0.65	23/03/2017	-	SG												YES
8 BH11	0-0.15	23/03/2017	-	SG		✓		✓			✓	✓				YES
9 BH12	0.16-0.31	23/03/2017	-	SG/SP		✓	✓	✓	✓	✓	✓	✓			✓	YES
10 BH12	0.16-0.36	23/03/2017	-	FCP									✓			YES

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
ANWAR BARBHUYIA	AB	27/03/2017	Open	Open	24/3/17 02:00

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle	FCP	Fibro Cement Piece (plastic bag)	✓	Test required	



Lemko Place  
PENRITH NSW 2750

P O Box 880  
PENRITH NSW 2751

Tel: (02) 4722 2700  
Fax: (02) 4722 6161

Page 2 of 3

<b>TO:</b> SGS ENVIRONMENTAL SERVICES UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015  <b>PH:</b> 02 8594 0400 <b>FAX:</b> 02 8594 0499  <b>ATTN:</b> MS EMILY YIN	<b>Sampling By:</b> SS <b>Job No:</b> 13977/2  <b>Project:</b>  <b>Project Manager:</b> AB <b>Location:</b> NARWEE
--	--

Sampling details				Sample type		Results required by: Normal Turnaround Time										
Location	Depth (m)	Date	Time	Soil / Material	Water	Metals As, Cd, Cr, Cu, Pb, Hg, Ni and Zn	TPH* & BTEX & PAH	OCP	PCB	PHENOLS & CYANIDE	pH, CEC	ASBESTOS 0.001% w/w	ASBESTOS	FORMALDEHYDE	VOC	KEEP SAMPLE
BH12	0.4-0.5	23/03/2017	-	SG												YES
11 BH13	0.1-0.25	23/03/2017	-	SG/SP		✓		✓						✓	✓	YES
12 BH13	0.3-0.45	23/03/2017	-	SG/SP		✓	✓	✓	✓	✓	✓					YES
13 BH13	0.46-0.6	23/03/2017	-	SG/SP		✓		✓			✓					YES
14 TP14	0-0.15	23/03/2017	-	SG/SP		✓		✓						✓	✓	YES
15 TP14	0.2-0.35	23/03/2017	-	SG/SP		✓		✓								YES
16 BH15	0.1-0.2	23/03/2017	-	SG/SP		✓		✓								YES
17 BH15	0.2-0.35	23/03/2017	-	SG/SP		✓		✓						✓	✓	YES
18 BH15	0.55-0.65	23/03/2017	-	SG												YES
18 BH16	0.08-0.18	23/03/2017	-	SG/SP		✓	✓	✓	✓	✓	✓			✓	✓	YES
19 BH17	0.1-0.25	23/03/2017	-	SG/SP		✓		✓						✓	✓	YES
BH17	0.35-0.4	23/03/2017	-	SG												YES
20 FCP1	Surface	23/03/2017		FCP									✓			YES
21 FCP2	Surface	23/03/2017		FCP									✓			YES
22 FCP3	Surface	23/03/2017		FCP									✓			YES

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
ANWAR BARBHUYIA	AB	27/03/2017	<i>Anwar</i>	<i>Anwar</i>	24/3/17 02.00

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle	FCP	Fibro Cement Piece (plastic bag)	✓	Test required	

Lemko Place  
PENRITH NSW 2750

P O Box 880  
PENRITH NSW 2751

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Fax: (02) 4722 6161

Page 3 of 3

TO: SGS ENVIRONMENTAL SERVICES  
UNIT 16  
33 MADDOX STREET  
ALEXANDRIA NSW 2015

**PH: 02 8594 0400**

**FAX: 02 8594 0499**

Sampling By: SS

Job No: 13977/2

**Project:**

**Project Manager: AB**

Location: NARWEE

ATTN: MS EMILY YIN

[illegible]



## SAMPLE RECEIPT ADVICE

SE163547

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **13977-2 NARWEE**  
Order Number (Not specified)  
Samples 25

### 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 24/3/2017  
Report Due Mon 3/4/2017  
SGS Reference **SE163547**

### SUBMISSION DETAILS

This is to confirm that 25 samples were received on Friday 24/3/2017. Results are expected to be ready by Monday 3/4/2017. Please quote SGS reference SE163547 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	20 Soil, 1 Water, 4 FCP
Date documentation received	27/3/17@10:55am	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	9.1°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

6 soil samples have been placed on hold.  
Coal Tar subcontracted to RCA, 92 Hill St, Carrington, NSW. Results may be delayed.

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## SAMPLE RECEIPT ADVICE

SE163547

### CLIENT DETAILS

Client **Geotechnique**

Project **13977-2 NARWEE**

### SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Cyanide in soil by Discrete Analyser	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	TP7 0-0.15	28	-	-	-	-	-	-	-
002	BH8 0-0.15	28	-	-	-	-	-	-	-
003	BH8 0.2-0.35	28	-	-	-	-	-	-	-
007	BH10 0.22-0.37	-	26	-	-	1	10	12	8
008	BH11 0-0.15	28	-	-	-	-	-	-	-
009	BH12 0.16-0.31	28	26	11	3	1	10	12	8
011	BH13 0.1-0.25	28	-	-	-	-	-	82	-
012	BH13 0.3-0.45	28	26	11	3	1	10	12	8
013	BH13 0.46-0.6	28	-	-	-	-	-	-	-
014	TP14 0-0.15	28	-	-	-	-	-	82	-
015	TP14 0.2-0.35	28	-	-	-	-	-	-	-
016	BH15 0.1-0.2	28	-	-	-	-	-	-	-
017	BH15 0.2-0.35	28	-	-	-	-	-	82	-
018	BH16 0.8-0.18	28	26	11	3	1	10	82	8
019	BH17 0.1-0.25	28	-	-	-	-	-	82	-
023	Duplicate D2	-	26	-	-	1	10	12	8

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

SE163547

### CLIENT DETAILS

Client **Geotechnique**

Project **13977-2 NARWEE**

### SUMMARY OF ANALYSIS

		VOC's in Soil
No.	Sample ID	
025	Tripspike TS2	12

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 .

## CLIENT DETAILS

Client **Geotechnique**

Project **13977-2 NARWEE**

## SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre ID in bulk materials	Formaldehyde in Soil	Gravimetric Determination of Asbestos in Soil	Mercury in Soil	Moisture Content	pH in soil (1:5)	Total Recoverable Metals in Soil/Waste
001	TP7 0-0.15	-	-	-	-	1	1	-	7
002	BH8 0-0.15	13	-	-	-	1	1	1	7
003	BH8 0.2-0.35	-	-	-	-	1	1	-	7
004	BH9 0.18-0.28	13	-	-	-	1	1	1	7
006	BH10 0.06-0.21	13	-	-	-	1	1	1	7
007	BH10 0.22-0.37	-	-	-	-	1	1	-	7
008	BH11 0-0.15	13	-	-	-	1	1	1	7
009	BH12 0.16-0.31	13	-	-	9	1	1	1	7
010	BH12 0.16-0.36	-	1	-	-	-	-	-	-
011	BH13 0.1-0.25	-	-	1	-	1	1	-	7
012	BH13 0.3-0.45	13	-	-	-	1	1	1	7
013	BH13 0.46-0.6	13	-	-	-	1	1	1	7
014	TP14 0-0.15	-	-	1	-	1	1	-	7
015	TP14 0.2-0.35	-	-	-	-	1	1	-	7
016	BH15 0.1-0.2	-	-	-	-	1	1	-	7
017	BH15 0.2-0.35	-	-	1	-	1	1	-	7
018	BH16 0.8-0.18	13	-	1	-	1	1	1	7
019	BH17 0.1-0.25	-	-	1	-	1	1	-	7
020	FCP1 Surface	-	1	-	-	-	-	-	-
021	FCP2 Surface	-	1	-	-	-	-	-	-
022	FCP3 Surface	-	1	-	-	-	-	-	-
023	Duplicate D2	-	-	-	-	1	1	-	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

SE163547

### CLIENT DETAILS

Client **Geotechnique**

Project **13977-2 NARWEE**

### SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Metals in Water (Dissolved) by ICPOES	Sample Subcontracted
005	BH10 0-0.06	-	-	1
024	Rinsate R3	1	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 .



## ANALYTICAL REPORT



Accreditation No. 2562

### CLIENT DETAILS

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PENRITH NSW 2751**

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Project **13977-2 NARWEE Additional**  
Order Number **(Not specified)**  
Samples **25**

### 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 **SE163547A R0**  
Date Received **3/4/2017**  
Date Reported **6/4/2017**

### COMMENTS

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

### SIGNATORIES

**Bennet Lo**  
Senior Organic Chemist/Metals Chemist

**Dong Liang**  
Metals/Inorganics Team Leader



ANALYTICAL RESULTS

SE163547A R0

Total Phenolics in Soil [AN289]    Tested: 5/4/2017

			BH8 0-0.15	BH13 0.1-0.25	TP14 0-0.15	BH15 0.1-0.2	BH17 0.1-0.25
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/3/2017	23/3/2017	23/3/2017	23/3/2017	23/3/2017
PARAMETER	UOM	LOR	SE163547A.002	SE163547A.011	SE163547A.014	SE163547A.016	SE163547A.019
Total Phenols	mg/kg	5	<5	<5	<5	<5	<5



## ANALYTICAL RESULTS

SE163547A R0

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 4/4/2017

			BH8 0-0.15	BH13 0.1-0.25	TP14 0-0.15	BH15 0.1-0.2	BH16 0.8-0.18
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			23/3/2017	23/3/2017	23/3/2017	23/3/2017	23/3/2017
PARAMETER	UOM	LOR	SE163547A.002	SE163547A.011	SE163547A.014	SE163547A.016	SE163547A.018
Titanium, Ti	mg/kg	10	38	12	<10	<10	18

			BH17 0.1-0.25
			SOIL
			-
			23/3/2017
PARAMETER	UOM	LOR	SE163547A.019
Titanium, Ti	mg/kg	10	27

## METHOD

## METHODOLOGY SUMMARY

### 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.

### AN289

Analysis of Total Phenols in Soil Sediment and Water: Steam distillable phenols react with 4-aminoantipyrine at pH 7.9±0.1 in the presence of potassium ferricyanide to form a coloured antipyrine dye analysed by Discrete Analyser. Reference APHA 5530 B/D.

## 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.
		IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Samples 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:

- 1 Bq is equivalent to 27 pCi
- 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 criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.sgs.com.au/~media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf>

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## STATEMENT OF QA/QC PERFORMANCE

SE163547A R0

### CLIENT DETAILS

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Project **13977-2 NARWEE Additional**  
Order Number (Not specified)  
Samples 25

### LABORATORY DETAILS

Manager Huong Crawford  
Laboratory SGS Alexandria Environmental  
Address Unit 16, 33 Maddox St  
Alexandria NSW 2015

Telephone +61 2 8594 0400  
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Email au.environmental.sydney@sgs.com

SGS Reference **SE163547A R0**  
Date Received 03 Apr 2017  
Date Reported 06 Apr 2017

### 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 and was supplied by the Client.  
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	6 Soil
Date documentation received	3/4/17@2:44pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	9.1°C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days		



## HOLDING TIME SUMMARY

SE163547A R0

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

### Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH8 0-0.15	SE163547A.002	LB121704	23 Mar 2017	03 Apr 2017	06 Apr 2017	05 Apr 2017	06 Apr 2017	06 Apr 2017
BH13 0.1-0.25	SE163547A.011	LB121704	23 Mar 2017	03 Apr 2017	06 Apr 2017	05 Apr 2017	06 Apr 2017	06 Apr 2017
TP14 0-0.15	SE163547A.014	LB121704	23 Mar 2017	03 Apr 2017	06 Apr 2017	05 Apr 2017	06 Apr 2017	06 Apr 2017
BH15 0.1-0.2	SE163547A.016	LB121704	23 Mar 2017	03 Apr 2017	06 Apr 2017	05 Apr 2017	06 Apr 2017	06 Apr 2017
BH17 0.1-0.25	SE163547A.019	LB121704	23 Mar 2017	03 Apr 2017	06 Apr 2017	05 Apr 2017	06 Apr 2017	06 Apr 2017

### Total Recoverable Metals 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
BH8 0-0.15	SE163547A.002	LB121696	23 Mar 2017	03 Apr 2017	19 Sep 2017	04 Apr 2017	19 Sep 2017	06 Apr 2017
BH13 0.1-0.25	SE163547A.011	LB121696	23 Mar 2017	03 Apr 2017	19 Sep 2017	04 Apr 2017	19 Sep 2017	06 Apr 2017
TP14 0-0.15	SE163547A.014	LB121696	23 Mar 2017	03 Apr 2017	19 Sep 2017	04 Apr 2017	19 Sep 2017	06 Apr 2017
BH15 0.1-0.2	SE163547A.016	LB121696	23 Mar 2017	03 Apr 2017	19 Sep 2017	04 Apr 2017	19 Sep 2017	06 Apr 2017
BH16 0.8-0.18	SE163547A.018	LB121696	23 Mar 2017	03 Apr 2017	19 Sep 2017	04 Apr 2017	19 Sep 2017	06 Apr 2017
BH17 0.1-0.25	SE163547A.019	LB121696	23 Mar 2017	03 Apr 2017	19 Sep 2017	04 Apr 2017	19 Sep 2017	06 Apr 2017



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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No surrogates were required for this job.



METHOD BLANKS

SE163547A R0

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.

Total Phenolics in Soil			Method: ME-(AU)-[ENV]AN289	
Sample Number	Parameter	Units	LOR	Result
LB121704.001	Total Phenols	mg/kg	5	<5

Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES			Method: ME-(AU)-[ENV]AN040/AN320	
Sample Number	Parameter	Units	LOR	Result
LB121696.001	Titanium, Ti	mg/kg	10	<10



## DUPLICATES

SE163547A R0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

### Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547A.002	LB121704.004	Total Phenols	mg/kg	5	<5	<5	47	15

### Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE163547A.014	LB121696.014	Titanium, Ti	mg/kg	10	<10	<10	200	0
SE163547A.019	LB121696.018	Titanium, Ti	mg/kg	10	27	42	59	45



## LABORATORY CONTROL SAMPLES

SE163547A R0

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.

### Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN289

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121704.002	Total Phenols	mg/kg	5	<5	2.5	70 - 130	99

### Total Recoverable Metals in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB121696.002	Titanium, Ti	mg/kg	10	49	50	80 - 120	98



MATRIX SPIKES

SE163547A R0

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Total Phenolics in Soil

Method: ME-(AU)-(ENV)AN289

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE163812.004	LB121704.019	Total Phenols	mg/kg	5	<5	0.10720086206	2.5	87



Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.





Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here : <http://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 .
- 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 Analytical Report comments for further information.

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**E-MAILED**  
3/4/17 @ 2.44

**GEOTECHNIQUE PTY LTD**

**Laboratory Test Request / Chain of Custody Record**

Lemko Place  
PENRITH NSW 2750

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PENRITH NSW 2751


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Page 1 of 2

<b>TO:</b> SGS ENVIRONMENTAL SERVICES UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015				<b>Sampling By:</b> SS		<b>Job No:</b> 13977/2	
<b>PH:</b> 02 8594 0400				<b>FAX:</b> 02 8594 0499		<b>Project:</b>	
<b>ATTN:</b> MS EMILY YIN				<b>Project Manager:</b> AB		<b>Location:</b> NARWEE	

Sampling details				Sample type		Results required by: 6 April 2017 SGS Ref No: SE163547										
Location	Depth (m)	Date	Time	Soil / Material	Water	Ti	PHENOLS									KEEP SAMPLE
																YES
TP7	0-0.15	23/03/2017	-	SG/SP												YES
1 BH8	0-0.15	23/03/2017	-	SG/SP		✓	✓									YES
BH8	0.2-0.35	23/03/2017	-	SG/SP												YES
BH8	0.5-0.8	23/03/2017	-	SG/SP												YES
BH8	0.85-0.95	23/03/2017	-	SG												YES
BH9	0.18-0.28	23/03/2017	-	SG												YES
BH10	0-0.06	23/03/2017	-	SG												YES
BH10	0.06-0.21	23/03/2017	-	SG/SP												YES
BH10	0.22-0.37	23/03/2017	-	SG/SP												YES
BH10	0.55-0.65	23/03/2017	-	SG												YES
BH11	0-0.15	23/03/2017	-	SG												YES
BH12	0.16-0.31	23/03/2017	-	SG/SP												YES
BH12	0.16-0.36	23/03/2017	-	FCP												YES

SGS EHS Alexandria Laboratory



SE163547A COC

Received: 03 – Apr – 2017

SGS EHS Alexandria Laboratory



**SE163547A COC**

Received: 03 - Apr - 2017

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
ANWAR BARBHUYIA	AB	3/04/2017	A. Odisho	[Signature]	

<b>Legend:</b>					
WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)
WP	Water sample, plastic bottle	FCP	Fibro Cement Piece (plastic bag)	✓	Test required

\* Purge & Trap

Lemko Place  
PENRITH NSW 2750

P O Box 880  
PENRITH NSW 2751

Tel: (02) 4722 2700  
Fax: (02) 4722 6161

Page 2 of 2

<b>TO:</b> SGS ENVIRONMENTAL SERVICES UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015  <b>PH:</b> 02 8594 0400 <b>FAX:</b> 02 8594 0499  <b>ATTN:</b> MS EMILY YIN	<b>Sampling By:</b> SS <b>Job No:</b> 13977/2  <b>Project:</b>  <b>Project Manager:</b> AB <b>Location:</b> NARWEE
--	--

Sampling details				Sample type		Results required by: 6 April 2017 SGS Ref No: SE163547										KEEP SAMPLE
Location	Depth (m)	Date	Time	Soil / Material	Water	Ti	PHENOLS									
BH12	0.4-0.5	23/03/2017	-	SG												YES
11 BH13	0.1-0.25	23/03/2017	-	SG/SP		✓	✓									YES
BH13	0.3-0.45	23/03/2017	-	SG/SP												YES
BH13	0.46-0.6	23/03/2017	-	SG/SP												YES
14 TP14	0-0.15	23/03/2017	-	SG/SP		✓	✓									YES
TP14	0.2-0.35	23/03/2017	-	SG/SP												YES
16 BH15	0.1-0.2	23/03/2017	-	SG/SP		✓	✓									YES
BH15	0.2-0.35	23/03/2017	-	SG/SP												YES
BH15	0.55-0.65	23/03/2017	-	SG												YES
18 BH16	0.08-0.18	23/03/2017	-	SG/SP		✓										YES
19 BH17	0.1-0.25	23/03/2017	-	SG/SP		✓	✓									YES
BH17	0.35-0.4	23/03/2017	-	SG												YES
FCP1	Surface	23/03/2017		FCP												YES
FCP2	Surface	23/03/2017		FCP												YES
FCP3	Surface	23/03/2017		FCP												YES

Relinquished by			Received by		
Name	Signature	Date	Name	Signature	Date
ANWAR BARBHUYIA	AB	3/04/2017	A Odusno		

Legend:

WG	Water sample, glass bottle	SG	Soil sample (glass jar)	SP	Soil sample (plastic bag)	* Purge & Trap
WP	Water sample, plastic bottle	FCP	Fibro Cement Piece (plastic bag)	✓	Test required	



## SAMPLE RECEIPT ADVICE

SE163547A

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **13977-2 NARWEE Additional**  
Order Number (Not specified)  
Samples 25

### 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 3/4/2017  
Report Due Thu 6/4/2017  
SGS Reference **SE163547A**

### SUBMISSION DETAILS

This is to confirm that 25 samples were received on Monday 3/4/2017. Results are expected to be ready by Thursday 6/4/2017. Please quote SGS reference SE163547A 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	6 Soil
Date documentation received	3/4/17@2:44pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	9.1°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

This document is issued by the Company under its General Conditions of Service accessible at [www.sgs.com/en/Terms-and-Conditions.aspx](http://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

SE163547A

### CLIENT DETAILS

Client **Geotechnique**

Project **13977-2 NARWEE Additional**

### SUMMARY OF ANALYSIS

No.	Sample ID	Total Phenolics in Soil	Total Recoverable Metals in Soil/Waste
002	BH8 0-0.15	1	1
011	BH13 0.1-0.25	1	1
014	TP14 0-0.15	1	1
016	BH15 0.1-0.2	1	1
018	BH16 0.8-0.18	-	1
019	BH17 0.1-0.25	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 .

## **APPENDIX I**

---

### **LABORATORY TEST RESULTS REPORTS/CERTIFICATES (UPDATED DSI)**

## CLIENT DETAILS

Contact **Anwar Barbhuiya**  
 Client **Geotechnique**  
 Address **P.O. Box 880  
 PENRITH NSW 2751**

Telephone **02 4722 2700**  
 Facsimile **02 4722 6161**  
 Email **anwar@geotech.com.au**

Project **20219/5 Narwee**  
 Order Number **20219/5**  
 Samples **30**

## 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 **SE234102 R0**  
 Date Received **8/7/2022**  
 Date Reported **15/7/2022**

## COMMENTS

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

## SIGNATORIES



**Akheeque BENIAEMEEN**  
 Chemist



**Bennet LO**  
 Senior Chemist



**Dong LIANG**  
 Metals/Inorganics Team Leader



**Huong CRAWFORD**  
 Production Manager



**Shane MCDERMOTT**  
 Inorganic/Metals Chemist



**Teresa NGUYEN**  
 Organic Chemist

VOC's in Soil [AN433] Tested: 11/7/2022

PARAMETER	UOM	LOR	BH101	BH102	BH103	BH104	BH105
			CLAY 0.0-0.15 6/7/2022 SE234102.001	CLAY 0.15-0.25 6/7/2022 SE234102.002	CLAY 0.15-0.25 6/7/2022 SE234102.003	GRAVEL 0.04-0.08 6/7/2022 SE234102.004	SAND 0.04-0.19 6/7/2022 SE234102.005
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
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	<1	<1	<1
Chloromethane	mg/kg	1	<1	<1	-	<1	<1
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Bromomethane	mg/kg	1	<1	<1	-	<1	<1
Chloroethane	mg/kg	1	<1	<1	-	<1	<1
Trichlorofluoromethane	mg/kg	1	<1	<1	-	<1	<1
Acetone (2-propanone)	mg/kg	10	<10	<10	-	<10	<10
Iodomethane	mg/kg	5	<5	<5	-	<5	<5
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Acrylonitrile	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	-	<0.5	<0.5
Allyl chloride	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	-	<0.5	<0.5
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Vinyl acetate	mg/kg	10	<10	<10	-	<10	<10
MEK (2-butanone)	mg/kg	10	<10	<10	-	<10	<10
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Bromochloromethane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Chloroform	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Dibromomethane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
2-nitropropane	mg/kg	10	<10	<10	-	<10	<10
Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	-	<1	<1
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
2-hexanone (MBK)	mg/kg	5	<5	<5	-	<5	<5
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Chlorobenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Bromoform	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-	<1	<1
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-	<1	<1



VOC's in Soil [AN433] Tested: 11/7/2022 (continued)

PARAMETER	UOM	LOR	BH101	BH102	BH103	BH104	BH105
			CLAY 0.0-0.15 6/7/2022 SE234102.001	CLAY 0.15-0.25 6/7/2022 SE234102.002	CLAY 0.15-0.25 6/7/2022 SE234102.003	GRAVEL 0.04-0.08 6/7/2022 SE234102.004	SAND 0.04-0.19 6/7/2022 SE234102.005
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Bromobenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
n-propylbenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
n-butylbenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-	<0.1	<0.1
Total VOC*	mg/kg	24	<24	<24	-	<24	<24
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	-	<3.0	<3.0
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	-	<1.8	<1.8
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	-	<1.8	<1.8

VOC's in Soil [AN433] Tested: 11/7/2022 (continued)

PARAMETER	UOM	LOR	BH106	BH107	BH108	BH109	BH109
			GRAVEL 0.0-0.15 6/7/2022 SE234102.006	CLAY 0.11-0.41 6/7/2022 SE234102.007	CLAY 0.15-0.25 6/7/2022 SE234102.009	SAND 0.0-0.15 6/7/2022 SE234102.010	SAND 0.15-0.25 6/7/2022 SE234102.011
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
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	<1	<1	<1
Chloromethane	mg/kg	1	<1	<1	<1	<1	<1
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromomethane	mg/kg	1	<1	<1	<1	<1	<1
Chloroethane	mg/kg	1	<1	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	1	<1	<1	<1	<1	<1
Acetone (2-propanone)	mg/kg	10	<10	<10	<10	<10	<10
Iodomethane	mg/kg	5	<5	<5	<5	<5	<5
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acrylonitrile	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Allyl chloride	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Vinyl acetate	mg/kg	10	<10	<10	<10	<10	<10
MEK (2-butanone)	mg/kg	10	<10	<10	<10	<10	<10
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromochloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chloroform	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-nitropropane	mg/kg	10	<10	<10	<10	<10	<10
Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-hexanone (MBK)	mg/kg	5	<5	<5	<5	<5	<5
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromoform	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	<1	<1
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	<1	<1

VOC's in Soil [AN433] Tested: 11/7/2022 (continued)

PARAMETER	UOM	LOR	BH106	BH107	BH108	BH109	BH109
			GRAVEL 0.0-0.15 6/7/2022 SE234102.006	CLAY 0.11-0.41 6/7/2022 SE234102.007	CLAY 0.15-0.25 6/7/2022 SE234102.009	SAND 0.0-0.15 6/7/2022 SE234102.010	SAND 0.15-0.25 6/7/2022 SE234102.011
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
n-propylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
n-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total VOC*	mg/kg	24	<24	<24	<24	<24	<24
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	<3.0	<3.0	<3.0
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	<1.8
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	<1.8

VOC's in Soil [AN433] Tested: 11/7/2022 (continued)

PARAMETER	UOM	LOR	BH110	BH111	BH112	BH113	BH114
			CLAY 0.15-0.25 6/7/2022 SE234102.012	SAND 0.12-0.3 6/7/2022 SE234102.013	SAND 0.14-0.3 6/7/2022 SE234102.014	CLAY 0.17-0.32 6/7/2022 SE234102.015	CLAY 0.15-0.25 6/7/2022 SE234102.016
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
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	<1	<1	<1
Chloromethane	mg/kg	1	<1	<1	<1	<1	<1
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromomethane	mg/kg	1	<1	<1	<1	<1	<1
Chloroethane	mg/kg	1	<1	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	1	<1	<1	<1	<1	<1
Acetone (2-propanone)	mg/kg	10	<10	<10	<10	<10	<10
Iodomethane	mg/kg	5	<5	<5	<5	<5	<5
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acrylonitrile	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Allyl chloride	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Vinyl acetate	mg/kg	10	<10	<10	<10	<10	<10
MEK (2-butanone)	mg/kg	10	<10	<10	<10	<10	<10
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromochloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chloroform	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-nitropropane	mg/kg	10	<10	<10	<10	<10	<10
Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-hexanone (MBK)	mg/kg	5	<5	<5	<5	<5	<5
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromoform	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	<1	<1
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	<1	<1

VOC's in Soil [AN433] Tested: 11/7/2022 (continued)

PARAMETER	UOM	LOR	BH110	BH111	BH112	BH113	BH114
			CLAY 0.15-0.25 6/7/2022 SE234102.012	SAND 0.12-0.3 6/7/2022 SE234102.013	SAND 0.14-0.3 6/7/2022 SE234102.014	CLAY 0.17-0.32 6/7/2022 SE234102.015	CLAY 0.15-0.25 6/7/2022 SE234102.016
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
n-propylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
n-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total VOC*	mg/kg	24	<24	<24	<24	<24	<24
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	<3.0	<3.0	<3.0
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	<1.8
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	<1.8

VOC's in Soil [AN433] Tested: 11/7/2022 (continued)

PARAMETER	UOM	LOR	BH115	BH115	BH116	BH117	BH118
			SAND 0.0-0.15 6/7/2022 SE234102.017	SAND 0.2-0.4 6/7/2022 SE234102.018	SAND 0.0-0.15 6/7/2022 SE234102.019	GRAVEL 0.0-0.15 6/7/2022 SE234102.020	GRAVEL 0.0-0.15 6/7/2022 SE234102.021
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
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	<1	<1	<1
Chloromethane	mg/kg	1	<1	<1	<1	<1	<1
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromomethane	mg/kg	1	<1	<1	<1	<1	<1
Chloroethane	mg/kg	1	<1	<1	<1	<1	<1
Trichlorofluoromethane	mg/kg	1	<1	<1	<1	<1	<1
Acetone (2-propanone)	mg/kg	10	<10	<10	<10	<10	<10
Iodomethane	mg/kg	5	<5	<5	<5	<5	<5
1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acrylonitrile	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Allyl chloride	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Vinyl acetate	mg/kg	10	<10	<10	<10	<10	<10
MEK (2-butanone)	mg/kg	10	<10	<10	<10	<10	<10
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromochloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chloroform	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-nitropropane	mg/kg	10	<10	<10	<10	<10	<10
Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-hexanone (MBK)	mg/kg	5	<5	<5	<5	<5	<5
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromoform	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	<1	<1
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	<1	<1	<1

VOC's in Soil [AN433] Tested: 11/7/2022 (continued)

PARAMETER	UOM	LOR	BH115	BH115	BH116	BH117	BH118
			SAND 0.0-0.15 6/7/2022 SE234102.017	SAND 0.2-0.4 6/7/2022 SE234102.018	SAND 0.0-0.15 6/7/2022 SE234102.019	GRAVEL 0.0-0.15 6/7/2022 SE234102.020	GRAVEL 0.0-0.15 6/7/2022 SE234102.021
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
n-propylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
n-butylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total VOC*	mg/kg	24	<24	<24	<24	<24	<24
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	<3.0	<3.0	<3.0
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	<1.8
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	<1.8	<1.8	<1.8

VOC's in Soil [AN433] Tested: 11/7/2022 (continued)

PARAMETER	UOM	LOR	BH119	BH120	DSS2	TS1
			SAND 0.07-0.17 6/7/2022 SE234102.022	CLAY 0.2-0.25 6/7/2022 SE234102.024	CLAY - 6/7/2022 SE234102.028	SAND - 6/7/2022 SE234102.030
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	[107%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	[106%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	[104%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	[104%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	[104%]
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	-
Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	-	-	-
Chloromethane	mg/kg	1	<1	-	-	-
Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	-	-	-
Bromomethane	mg/kg	1	<1	-	-	-
Chloroethane	mg/kg	1	<1	-	-	-
Trichlorofluoromethane	mg/kg	1	<1	-	-	-
Acetone (2-propanone)	mg/kg	10	<10	-	-	-
Iodomethane	mg/kg	5	<5	-	-	-
1,1-dichloroethene	mg/kg	0.1	<0.1	-	-	-
Acrylonitrile	mg/kg	0.1	<0.1	-	-	-
Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	-	-	-
Allyl chloride	mg/kg	0.1	<0.1	-	-	-
Carbon disulfide	mg/kg	0.5	<0.5	-	-	-
trans-1,2-dichloroethene	mg/kg	0.1	<0.1	-	-	-
MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	-	-	-
1,1-dichloroethane	mg/kg	0.1	<0.1	-	-	-
Vinyl acetate	mg/kg	10	<10	-	-	-
MEK (2-butanone)	mg/kg	10	<10	-	-	-
cis-1,2-dichloroethene	mg/kg	0.1	<0.1	-	-	-
Bromochloromethane	mg/kg	0.1	<0.1	-	-	-
Chloroform	mg/kg	0.1	<0.1	-	-	-
2,2-dichloropropane	mg/kg	0.1	<0.1	-	-	-
1,2-dichloroethane	mg/kg	0.1	<0.1	-	-	-
1,1,1-trichloroethane	mg/kg	0.1	<0.1	-	-	-
1,1-dichloropropene	mg/kg	0.1	<0.1	-	-	-
Carbon tetrachloride	mg/kg	0.1	<0.1	-	-	-
Dibromomethane	mg/kg	0.1	<0.1	-	-	-
1,2-dichloropropane	mg/kg	0.1	<0.1	-	-	-
Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	-	-	-
2-nitropropane	mg/kg	10	<10	-	-	-
Bromodichloromethane	mg/kg	0.1	<0.1	-	-	-
MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	-	-	-
cis-1,3-dichloropropene	mg/kg	0.1	<0.1	-	-	-
trans-1,3-dichloropropene	mg/kg	0.1	<0.1	-	-	-
1,1,2-trichloroethane	mg/kg	0.1	<0.1	-	-	-
1,3-dichloropropane	mg/kg	0.1	<0.1	-	-	-
Chlorodibromomethane	mg/kg	0.1	<0.1	-	-	-
2-hexanone (MBK)	mg/kg	5	<5	-	-	-
1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	-	-	-
Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	-	-	-
Chlorobenzene	mg/kg	0.1	<0.1	-	-	-
Bromoform	mg/kg	0.1	<0.1	-	-	-
cis-1,4-dichloro-2-butene	mg/kg	1	<1	-	-	-
Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	-	-	-
1,2,3-trichloropropane	mg/kg	0.1	<0.1	-	-	-
trans-1,4-dichloro-2-butene	mg/kg	1	<1	-	-	-



VOC's in Soil [AN433] Tested: 11/7/2022 (continued)

PARAMETER	UOM	LOR	BH119	BH120	DSS2	TS1
			SAND 0.07-0.17 6/7/2022 SE234102.022	CLAY 0.2-0.25 6/7/2022 SE234102.024	CLAY - 6/7/2022 SE234102.028	SAND - 6/7/2022 SE234102.030
Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	-	-	-
Bromobenzene	mg/kg	0.1	<0.1	-	-	-
n-propylbenzene	mg/kg	0.1	<0.1	-	-	-
2-chlorotoluene	mg/kg	0.1	<0.1	-	-	-
4-chlorotoluene	mg/kg	0.1	<0.1	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	-	-	-
tert-butylbenzene	mg/kg	0.1	<0.1	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	-	-	-
sec-butylbenzene	mg/kg	0.1	<0.1	-	-	-
1,3-dichlorobenzene	mg/kg	0.1	<0.1	-	-	-
1,4-dichlorobenzene	mg/kg	0.1	<0.1	-	-	-
p-isopropyltoluene	mg/kg	0.1	<0.1	-	-	-
1,2-dichlorobenzene	mg/kg	0.1	<0.1	-	-	-
n-butylbenzene	mg/kg	0.1	<0.1	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	-	-	-
Hexachlorobutadiene	mg/kg	0.1	<0.1	-	-	-
1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	-	-	-
Total VOC*	mg/kg	24	<24	-	-	-
Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	-	-	-
Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	-	-	-
Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	-	-	-

## Volatile Petroleum Hydrocarbons in Soil [AN433]    Tested: 11/7/2022

PARAMETER	UOM	LOR	BH101	BH103	BH104	BH105	BH106
			CLAY 0.0-0.15 6/7/2022 SE234102.001	CLAY 0.15-0.25 6/7/2022 SE234102.003	GRAVEL 0.04-0.08 6/7/2022 SE234102.004	SAND 0.04-0.19 6/7/2022 SE234102.005	GRAVEL 0.0-0.15 6/7/2022 SE234102.006
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	BH107	BH109	BH109	BH111	BH112
			CLAY 0.11-0.41 6/7/2022 SE234102.007	SAND 0.0-0.15 6/7/2022 SE234102.010	SAND 0.15-0.25 6/7/2022 SE234102.011	SAND 0.12-0.3 6/7/2022 SE234102.013	SAND 0.14-0.3 6/7/2022 SE234102.014
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	BH115	BH115	BH116	BH117	BH118
			SAND 0.0-0.15 6/7/2022 SE234102.017	SAND 0.2-0.4 6/7/2022 SE234102.018	SAND 0.0-0.15 6/7/2022 SE234102.019	GRAVEL 0.0-0.15 6/7/2022 SE234102.020	GRAVEL 0.0-0.15 6/7/2022 SE234102.021
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	BH119	BH120	DSS2
			SAND 0.07-0.17 6/7/2022 SE234102.022	CLAY 0.2-0.25 6/7/2022 SE234102.024	CLAY - 6/7/2022 SE234102.028
TRH C6-C9	mg/kg	20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403]    Tested: 11/7/2022

PARAMETER	UOM	LOR	BH101	BH103	BH104	BH105	BH106
			CLAY 0.0-0.15 6/7/2022	CLAY 0.15-0.25 6/7/2022	GRAVEL 0.04-0.08 6/7/2022	SAND 0.04-0.19 6/7/2022	GRAVEL 0.0-0.15 6/7/2022
			SE234102.001	SE234102.003	SE234102.004	SE234102.005	SE234102.006
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	120	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	230	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	170	<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	230	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	280	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	350	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	510	<210

PARAMETER	UOM	LOR	BH107	BH109	BH109	BH111	BH112
			CLAY 0.11-0.41 6/7/2022	SAND 0.0-0.15 6/7/2022	SAND 0.15-0.25 6/7/2022	SAND 0.12-0.3 6/7/2022	SAND 0.14-0.3 6/7/2022
			SE234102.007	SE234102.010	SE234102.011	SE234102.013	SE234102.014
TRH C10-C14	mg/kg	20	<20	<20	32	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	40	37	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	40	37	<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	BH115	BH115	BH116	BH117	BH118
			SAND 0.0-0.15 6/7/2022	SAND 0.2-0.4 6/7/2022	SAND 0.0-0.15 6/7/2022	GRAVEL 0.0-0.15 6/7/2022	GRAVEL 0.0-0.15 6/7/2022
			SE234102.017	SE234102.018	SE234102.019	SE234102.020	SE234102.021
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	57	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	85	<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	110	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	140	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403]    Tested: 11/7/2022    (continued)

PARAMETER	UOM	LOR	BH119	BH120	DSS2
			SAND 0.07-0.17 6/7/2022 SE234102.022	CLAY 0.2-0.25 6/7/2022 SE234102.024	CLAY - 6/7/2022 SE234102.028
TRH C10-C14	mg/kg	20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420]    Tested: 11/7/2022

PARAMETER	UOM	LOR	BH101	BH103	BH104	BH105	BH106
			CLAY 0.0-0.15 6/7/2022 SE234102.001	CLAY 0.15-0.25 6/7/2022 SE234102.003	GRAVEL 0.04-0.08 6/7/2022 SE234102.004	SAND 0.04-0.19 6/7/2022 SE234102.005	GRAVEL 0.0-0.15 6/7/2022 SE234102.006
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	0.3	0.2	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	0.5	0.6	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	0.5	1.2	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	0.3	0.6	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	0.2	0.7	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.3	1.0	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.1	0.4	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	0.2	0.9	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	0.1	0.6	<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	0.2	0.7	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	0.3	1.3	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	0.4	1.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	0.4	1.3	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	2.9	7.4	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	2.9	7.4	<0.8

PARAMETER	UOM	LOR	BH107	BH109	BH109	BH111	BH112
			CLAY 0.11-0.41 6/7/2022 SE234102.007	SAND 0.0-0.15 6/7/2022 SE234102.010	SAND 0.15-0.25 6/7/2022 SE234102.011	SAND 0.12-0.3 6/7/2022 SE234102.013	SAND 0.14-0.3 6/7/2022 SE234102.014
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: 11/7/2022    (continued)

PARAMETER	UOM	LOR	BH115	BH115	BH116	BH117	BH118
			SAND 0.0-0.15 6/7/2022 SE234102.017	SAND 0.2-0.4 6/7/2022 SE234102.018	SAND 0.0-0.15 6/7/2022 SE234102.019	GRAVEL 0.0-0.15 6/7/2022 SE234102.020	GRAVEL 0.0-0.15 6/7/2022 SE234102.021
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	BH119	BH120	DSS2
			SAND 0.07-0.17 6/7/2022 SE234102.022	CLAY 0.2-0.25 6/7/2022 SE234102.024	CLAY - 6/7/2022 SE234102.028
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	<b>0.1</b>	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<b>0.4</b>	<0.1
Pyrene	mg/kg	0.1	<0.1	<b>0.4</b>	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<b>0.2</b>	<0.1
Chrysene	mg/kg	0.1	<0.1	<b>0.2</b>	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<b>0.2</b>	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<b>0.1</b>	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<b>0.2</b>	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<b>0.1</b>	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<b>0.1</b>	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<b>0.3</b>	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<b>0.4</b>	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<b>0.4</b>	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<b>2.2</b>	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<b>2.2</b>	<0.8

OC Pesticides in Soil [AN420]    Tested: 11/7/2022

PARAMETER	UOM	LOR	BH101	BH104	BH105	BH106	BH107
			CLAY 0.0-0.15 6/7/2022 SE234102.001	GRAVEL 0.04-0.08 6/7/2022 SE234102.004	SAND 0.04-0.19 6/7/2022 SE234102.005	GRAVEL 0.0-0.15 6/7/2022 SE234102.006	CLAY 0.11-0.41 6/7/2022 SE234102.007
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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 OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420]    Tested: 11/7/2022    (continued)

PARAMETER	UOM	LOR	BH109	BH109	BH111	BH112	BH115
			SAND 0.0-0.15 6/7/2022 SE234102.010	SAND 0.15-0.25 6/7/2022 SE234102.011	SAND 0.12-0.3 6/7/2022 SE234102.013	SAND 0.14-0.3 6/7/2022 SE234102.014	SAND 0.0-0.15 6/7/2022 SE234102.017
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<b>0.2</b>	<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	0.05	<0.05	<0.05	<0.05	<b>0.84</b>	<0.05
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 OC VIC EPA	mg/kg	1	<1	<1	<1	<b>1</b>	<1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<b>1</b>	<1



OC Pesticides in Soil [AN420]    Tested: 11/7/2022    (continued)

PARAMETER	UOM	LOR	BH115	BH116	BH117	BH118	BH119
			SAND 0.2-0.4 6/7/2022 SE234102.018	SAND 0.0-0.15 6/7/2022 SE234102.019	GRAVEL 0.0-0.15 6/7/2022 SE234102.020	GRAVEL 0.0-0.15 6/7/2022 SE234102.021	SAND 0.07-0.17 6/7/2022 SE234102.022
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
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 OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420]    Tested: 11/7/2022    (continued)

PARAMETER	UOM	LOR	BH120	BH120	BH121	DSS2
			CLAY 0.0-0.15 6/7/2022 SE234102.023	CLAY 0.2-0.25 6/7/2022 SE234102.024	CLAY 0.0-0.15 6/7/2022 SE234102.025	CLAY - 6/7/2022 SE234102.028
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	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	0.05	<0.05	<0.05	<0.05	<0.05
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 OC VIC EPA	mg/kg	1	<1	<1	<1	<1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1

PCBs in Soil [AN420] Tested: 11/7/2022

PARAMETER	UOM	LOR	BH101	BH104	BH105	BH106	BH107
			CLAY 0.0-0.15 6/7/2022 SE234102.001	GRAVEL 0.04-0.08 6/7/2022 SE234102.004	SAND 0.04-0.19 6/7/2022 SE234102.005	GRAVEL 0.0-0.15 6/7/2022 SE234102.006	CLAY 0.11-0.41 6/7/2022 SE234102.007
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	BH109	BH109	BH111	BH112	BH115
			SAND 0.0-0.15 6/7/2022 SE234102.010	SAND 0.15-0.25 6/7/2022 SE234102.011	SAND 0.12-0.3 6/7/2022 SE234102.013	SAND 0.14-0.3 6/7/2022 SE234102.014	SAND 0.0-0.15 6/7/2022 SE234102.017
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	BH115	BH116	BH117	BH118	BH119
			SAND 0.2-0.4 6/7/2022 SE234102.018	SAND 0.0-0.15 6/7/2022 SE234102.019	GRAVEL 0.0-0.15 6/7/2022 SE234102.020	GRAVEL 0.0-0.15 6/7/2022 SE234102.021	SAND 0.07-0.17 6/7/2022 SE234102.022
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: 11/7/2022 (continued)

PARAMETER	UOM	LOR	BH120	DSS2
			CLAY 0.2-0.25 6/7/2022 SE234102.024	CLAY - 6/7/2022 SE234102.028
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	<0.2	<0.2
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

Total Phenolics in Soil [AN295] Tested: 13/7/2022

PARAMETER	UOM	LOR	BH101	BH102	BH103	BH104	BH105
			CLAY	CLAY	CLAY	GRAVEL	SAND
			0.0-0.15	0.15-0.25	0.15-0.25	0.04-0.08	0.04-0.19
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.001	SE234102.002	SE234102.003	SE234102.004	SE234102.005
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

PARAMETER	UOM	LOR	BH106	BH107	BH108	BH109	BH109
			GRAVEL	CLAY	CLAY	SAND	SAND
			0.0-0.15	0.11-0.41	0.15-0.25	0.0-0.15	0.15-0.25
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.006	SE234102.007	SE234102.009	SE234102.010	SE234102.011
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

PARAMETER	UOM	LOR	BH110	BH111	BH112	BH113	BH114
			CLAY	SAND	SAND	CLAY	CLAY
			0.15-0.25	0.12-0.3	0.14-0.3	0.17-0.32	0.15-0.25
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.012	SE234102.013	SE234102.014	SE234102.015	SE234102.016
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

PARAMETER	UOM	LOR	BH115	BH115	BH116	BH117	BH118
			SAND	SAND	SAND	GRAVEL	GRAVEL
			0.0-0.15	0.2-0.4	0.0-0.15	0.0-0.15	0.0-0.15
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.017	SE234102.018	SE234102.019	SE234102.020	SE234102.021
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0	<5.0	<5.0

PARAMETER	UOM	LOR	BH119	DDS1	DSS2
			SAND	CLAY	CLAY
			0.07-0.17	-	-
			6/7/2022	6/7/2022	6/7/2022
			SE234102.022	SE234102.027	SE234102.028
Total Phenols	mg/kg	5	<5.0	<5.0	<5.0

Total Cyanide in soil by Discrete Analyser [AN077/AN287] Tested: 13/7/2022

PARAMETER	UOM	LOR	BH101	BH104	BH105	BH106	BH107
			CLAY	GRAVEL	SAND	GRAVEL	CLAY
			0.0-0.15	0.04-0.08	0.04-0.19	0.0-0.15	0.11-0.41
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.001	SE234102.004	SE234102.005	SE234102.006	SE234102.007
Total Cyanide	mg/kg	0.5	0.6	<0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-	-	-
Cyanide Amenable to Chlorination*	mg/kg	0.5	-	-	-	-	-

PARAMETER	UOM	LOR	BH109	BH109	BH111	BH112	BH115
			SAND	SAND	SAND	SAND	SAND
			0.0-0.15	0.15-0.25	0.12-0.3	0.14-0.3	0.0-0.15
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.010	SE234102.011	SE234102.013	SE234102.014	SE234102.017
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-	-	-
Cyanide Amenable to Chlorination*	mg/kg	0.5	-	-	-	-	-

PARAMETER	UOM	LOR	BH115	BH116	BH117	BH118	BH119
			SAND	SAND	GRAVEL	GRAVEL	SAND
			0.2-0.4	0.0-0.15	0.0-0.15	0.0-0.15	0.07-0.17
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.018	SE234102.019	SE234102.020	SE234102.021	SE234102.022
Total Cyanide	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide Post Chlorination	mg/kg	0.5	-	-	-	-	-
Cyanide Amenable to Chlorination*	mg/kg	0.5	-	-	-	-	-

PARAMETER	UOM	LOR	DSS2
			CLAY
			-
			6/7/2022
			SE234102.028
Total Cyanide	mg/kg	0.5	0.7
Total Cyanide Post Chlorination	mg/kg	0.5	-
Cyanide Amenable to Chlorination*	mg/kg	0.5	-



ANALYTICAL RESULTS

SE234102 R0

Formaldehyde in Soil [AN226]    Tested: 13/7/2022

			BH103	BH112	BH114	BH115	BH117
			CLAY	SAND	CLAY	SAND	GRAVEL
			0.15-0.25	0.14-0.3	0.15-0.25	0.0-0.15	0.0-0.15
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
PARAMETER	UOM	LOR	SE234102.003	SE234102.014	SE234102.016	SE234102.017	SE234102.020
Formaldehyde*	mg/kg	2	<2	<2	<2	<2	<2

pH in soil (1:5) [AN101] Tested: 12/7/2022

PARAMETER	UOM	LOR	BH101	BH102	BH103	BH104	BH105
			CLAY	CLAY	CLAY	GRAVEL	SAND
			0.0-0.15	0.15-0.25	0.15-0.25	0.04-0.08	0.04-0.19
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.001	SE234102.002	SE234102.003	SE234102.004	SE234102.005
pH	pH Units	0.1	5.2	6.6	7.2	7.7	8.7

PARAMETER	UOM	LOR	BH106	BH107	BH108	BH109	BH109
			GRAVEL	CLAY	CLAY	SAND	SAND
			0.0-0.15	0.11-0.41	0.15-0.25	0.0-0.15	0.15-0.25
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.006	SE234102.007	SE234102.009	SE234102.010	SE234102.011
pH	pH Units	0.1	8.2	6.3	7.4	5.3	5.2

PARAMETER	UOM	LOR	BH110	BH111	BH112	BH113	BH114
			CLAY	SAND	SAND	CLAY	CLAY
			0.15-0.25	0.12-0.3	0.14-0.3	0.17-0.32	0.15-0.25
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.012	SE234102.013	SE234102.014	SE234102.015	SE234102.016
pH	pH Units	0.1	6.1	8.6	8.4	6.5	6.6

PARAMETER	UOM	LOR	BH115	BH115	BH116	BH117	BH118
			SAND	SAND	SAND	GRAVEL	GRAVEL
			0.0-0.15	0.2-0.4	0.0-0.15	0.0-0.15	0.0-0.15
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.017	SE234102.018	SE234102.019	SE234102.020	SE234102.021
pH	pH Units	0.1	8.6	8.3	7.8	7.2	8.2

PARAMETER	UOM	LOR	BH119	BH120	BH120	BH121	FCP1
			SAND	CLAY	CLAY	CLAY	GRAVEL
			0.07-0.17	0.0-0.15	0.2-0.25	0.0-0.15	-
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.022	SE234102.023	SE234102.024	SE234102.025	SE234102.026
pH	pH Units	0.1	8.6	6.5	7.1	7.0	7.2



## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122]    Tested: 15/7/2022

PARAMETER	UOM	LOR	BH101	BH102	BH103	BH104	BH105
			CLAY	CLAY	CLAY	GRAVEL	SAND
			0.0-0.15 6/7/2022 SE234102.001	0.15-0.25 6/7/2022 SE234102.002	0.15-0.25 6/7/2022 SE234102.003	0.04-0.08 6/7/2022 SE234102.004	0.04-0.19 6/7/2022 SE234102.005
Exchangeable Calcium, Ca	mg/kg	2	2000	1900	4000	5000	7700
Exchangeable Calcium, Ca	meq/100g	0.01	10	9.7	20	25	38
Exchangeable Calcium Percentage*	%	0.1	87.5	63.5	84.5	91.8	92.6
Exchangeable Potassium, K	mg/kg	2	140	240	150	350	570
Exchangeable Potassium, K	meq/100g	0.01	0.36	0.62	0.39	0.90	1.5
Exchangeable Potassium Percentage*	%	0.1	3.1	4.1	1.7	3.3	3.5
Exchangeable Magnesium, Mg	mg/kg	2	120	480	300	130	75
Exchangeable Magnesium, Mg	meq/100g	0.02	0.99	4.0	2.4	1.0	0.62
Exchangeable Magnesium Percentage*	%	0.1	8.5	26.0	10.4	3.8	1.5
Exchangeable Sodium, Na	mg/kg	2	24	220	190	64	230
Exchangeable Sodium, Na	meq/100g	0.01	0.10	0.98	0.82	0.28	0.99
Exchangeable Sodium Percentage*	%	0.1	0.9	6.4	3.5	1.0	2.4
Cation Exchange Capacity	meq/100g	0.02	12	15	24	27	42

PARAMETER	UOM	LOR	BH106	BH107	BH108	BH109	BH109
			GRAVEL	CLAY	CLAY	SAND	SAND
			0.0-0.15 6/7/2022 SE234102.006	0.11-0.41 6/7/2022 SE234102.007	0.15-0.25 6/7/2022 SE234102.009	0.0-0.15 6/7/2022 SE234102.010	0.15-0.25 6/7/2022 SE234102.011
Exchangeable Calcium, Ca	mg/kg	2	2800	2900	3000	300	230
Exchangeable Calcium, Ca	meq/100g	0.01	14	14	15	1.5	1.2
Exchangeable Calcium Percentage*	%	0.1	95.4	81.7	76.5	76.6	67.5
Exchangeable Potassium, K	mg/kg	2	89	160	190	49	22
Exchangeable Potassium, K	meq/100g	0.01	0.23	0.42	0.48	0.12	0.06
Exchangeable Potassium Percentage*	%	0.1	1.5	2.4	2.5	6.3	3.3
Exchangeable Magnesium, Mg	mg/kg	2	45	280	400	35	52
Exchangeable Magnesium, Mg	meq/100g	0.02	0.37	2.3	3.3	0.29	0.43
Exchangeable Magnesium Percentage*	%	0.1	2.5	13.0	16.9	14.5	25.2
Exchangeable Sodium, Na	mg/kg	2	18	120	190	12	16
Exchangeable Sodium, Na	meq/100g	0.01	0.08	0.51	0.81	0.05	0.07
Exchangeable Sodium Percentage*	%	0.1	0.5	2.9	4.1	2.6	4.0
Cation Exchange Capacity	meq/100g	0.02	15	18	20	2.0	1.7

PARAMETER	UOM	LOR	BH110	BH111	BH112	BH113	BH114
			CLAY	SAND	SAND	CLAY	CLAY
			0.15-0.25 6/7/2022 SE234102.012	0.12-0.3 6/7/2022 SE234102.013	0.14-0.3 6/7/2022 SE234102.014	0.17-0.32 6/7/2022 SE234102.015	0.15-0.25 6/7/2022 SE234102.016
Exchangeable Calcium, Ca	mg/kg	2	870	3300	430	1700	3200
Exchangeable Calcium, Ca	meq/100g	0.01	4.3	17	2.1	8.6	16
Exchangeable Calcium Percentage*	%	0.1	47.6	96.3	92.1	86.1	71.7
Exchangeable Potassium, K	mg/kg	2	120	59	20	150	160
Exchangeable Potassium, K	meq/100g	0.01	0.32	0.15	0.05	0.38	0.42
Exchangeable Potassium Percentage*	%	0.1	3.5	0.9	2.2	3.8	1.9
Exchangeable Magnesium, Mg	mg/kg	2	420	43	13	110	520
Exchangeable Magnesium, Mg	meq/100g	0.02	3.5	0.35	0.10	0.89	4.3
Exchangeable Magnesium Percentage*	%	0.1	37.8	2.1	4.4	8.9	19.3
Exchangeable Sodium, Na	mg/kg	2	230	29	7	29	360
Exchangeable Sodium, Na	meq/100g	0.01	1.0	0.13	0.03	0.13	1.6
Exchangeable Sodium Percentage*	%	0.1	11.1	0.7	1.3	1.3	7.0
Cation Exchange Capacity	meq/100g	0.02	9.1	17	2.3	10	22

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122]    Tested: 15/7/2022    (continued)

PARAMETER	UOM	LOR	BH115	BH115	BH116	BH117	BH118
			SAND 0.0-0.15 6/7/2022 SE234102.017	SAND 0.2-0.4 6/7/2022 SE234102.018	SAND 0.0-0.15 6/7/2022 SE234102.019	GRAVEL 0.0-0.15 6/7/2022 SE234102.020	GRAVEL 0.0-0.15 6/7/2022 SE234102.021
Exchangeable Calcium, Ca	mg/kg	2	3700	280	490	5600	4000
Exchangeable Calcium, Ca	meq/100g	0.01	19	1.4	2.4	28	20
Exchangeable Calcium Percentage*	%	0.1	96.5	94.2	94.9	95.3	97.5
Exchangeable Potassium, K	mg/kg	2	73	10	16	260	64
Exchangeable Potassium, K	meq/100g	0.01	0.19	0.03	0.04	0.67	0.16
Exchangeable Potassium Percentage*	%	0.1	1.0	1.8	1.6	2.3	0.8
Exchangeable Magnesium, Mg	mg/kg	2	51	6	8	67	28
Exchangeable Magnesium, Mg	meq/100g	0.02	0.42	0.05	0.06	0.55	0.23
Exchangeable Magnesium Percentage*	%	0.1	2.2	3.3	2.5	1.9	1.1
Exchangeable Sodium, Na	mg/kg	2	16	3	6	36	26
Exchangeable Sodium, Na	meq/100g	0.01	0.07	0.01	0.03	0.16	0.11
Exchangeable Sodium Percentage*	%	0.1	0.4	0.8	1.0	0.5	0.6
Cation Exchange Capacity	meq/100g	0.02	19	1.5	2.6	29	20

PARAMETER	UOM	LOR	BH119	BH120	BH120	BH121	FCP1
			SAND 0.07-0.17 6/7/2022 SE234102.022	CLAY 0.0-0.15 6/7/2022 SE234102.023	CLAY 0.2-0.25 6/7/2022 SE234102.024	CLAY 0.0-0.15 6/7/2022 SE234102.025	GRAVEL - 6/7/2022 SE234102.026
Exchangeable Calcium, Ca	mg/kg	2	3200	2300	2300	3400	2400
Exchangeable Calcium, Ca	meq/100g	0.01	16	12	12	17	12
Exchangeable Calcium Percentage*	%	0.1	94.5	88.9	93.0	87.7	92.4
Exchangeable Potassium, K	mg/kg	2	5	200	100	360	110
Exchangeable Potassium, K	meq/100g	0.01	0.01	0.51	0.26	0.91	0.28
Exchangeable Potassium Percentage*	%	0.1	<0.1	3.9	2.1	4.7	2.1
Exchangeable Magnesium, Mg	mg/kg	2	97	100	65	150	68
Exchangeable Magnesium, Mg	meq/100g	0.02	0.80	0.84	0.53	1.2	0.56
Exchangeable Magnesium Percentage*	%	0.1	4.7	6.4	4.2	6.2	4.3
Exchangeable Sodium, Na	mg/kg	2	25	24	18	62	34
Exchangeable Sodium, Na	meq/100g	0.01	0.11	0.11	0.08	0.27	0.15
Exchangeable Sodium Percentage*	%	0.1	0.6	0.8	0.6	1.4	1.1
Cation Exchange Capacity	meq/100g	0.02	17	13	13	20	13

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 12/7/2022

PARAMETER	UOM	LOR	BH101	BH102	BH103	BH104	BH105
			CLAY 0.0-0.15 6/7/2022 SE234102.001	CLAY 0.15-0.25 6/7/2022 SE234102.002	CLAY 0.15-0.25 6/7/2022 SE234102.003	GRAVEL 0.04-0.08 6/7/2022 SE234102.004	SAND 0.04-0.19 6/7/2022 SE234102.005
Arsenic, As	mg/kg	1	16	14	5	14	3
Cadmium, Cd	mg/kg	0.3	0.6	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	12	14	19	8.3	11
Copper, Cu	mg/kg	0.5	21	16	13	29	18
Lead, Pb	mg/kg	1	51	79	16	29	24
Nickel, Ni	mg/kg	0.5	4.4	6.6	3.6	9.4	8.2
Zinc, Zn	mg/kg	2	200	110	17	67	73
Titanium, Ti	mg/kg	10	22	16	<10	30	290

PARAMETER	UOM	LOR	BH106	BH107	BH107	BH108	BH109
			GRAVEL 0.0-0.15 6/7/2022 SE234102.006	CLAY 0.11-0.41 6/7/2022 SE234102.007	CLAY 0.61-0.8 6/7/2022 SE234102.008	CLAY 0.15-0.25 6/7/2022 SE234102.009	SAND 0.0-0.15 6/7/2022 SE234102.010
Arsenic, As	mg/kg	1	8	6	6	4	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	5.3	18	12	22	2.6
Copper, Cu	mg/kg	0.5	7.1	14	12	15	5.7
Lead, Pb	mg/kg	1	9	19	17	26	14
Nickel, Ni	mg/kg	0.5	8.7	2.9	4.1	21	0.9
Zinc, Zn	mg/kg	2	23	23	24	96	16
Titanium, Ti	mg/kg	10	110	<10	18	78	<10

PARAMETER	UOM	LOR	BH109	BH110	BH111	BH112	BH113
			SAND 0.15-0.25 6/7/2022 SE234102.011	CLAY 0.15-0.25 6/7/2022 SE234102.012	SAND 0.12-0.3 6/7/2022 SE234102.013	SAND 0.14-0.3 6/7/2022 SE234102.014	CLAY 0.17-0.32 6/7/2022 SE234102.015
Arsenic, As	mg/kg	1	2	7	5	6	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	1.1	29	18	1.2	20
Copper, Cu	mg/kg	0.5	0.9	6.7	20	0.5	14
Lead, Pb	mg/kg	1	2	21	12	2	39
Nickel, Ni	mg/kg	0.5	<0.5	4.5	32	0.6	5.6
Zinc, Zn	mg/kg	2	6	25	70	4	76
Titanium, Ti	mg/kg	10	<10	21	110	<10	20

PARAMETER	UOM	LOR	BH114	BH115	BH115	BH116	BH117
			CLAY 0.15-0.25 6/7/2022 SE234102.016	SAND 0.0-0.15 6/7/2022 SE234102.017	SAND 0.2-0.4 6/7/2022 SE234102.018	SAND 0.0-0.15 6/7/2022 SE234102.019	GRAVEL 0.0-0.15 6/7/2022 SE234102.020
Arsenic, As	mg/kg	1	6	4	2	4	6
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	17	4.7	1.0	1.1	16
Copper, Cu	mg/kg	0.5	15	4.5	<0.5	0.6	14
Lead, Pb	mg/kg	1	13	10	1	1	19
Nickel, Ni	mg/kg	0.5	1.6	1.8	<0.5	0.6	13
Zinc, Zn	mg/kg	2	13	31	5	4	76
Titanium, Ti	mg/kg	10	<10	21	<10	<10	79

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 12/7/2022

PARAMETER	UOM	LOR	BH118	BH119	BH120	BH120	BH121
			GRAVEL 0.0-0.15 6/7/2022 SE234102.021	SAND 0.07-0.17 6/7/2022 SE234102.022	CLAY 0.0-0.15 6/7/2022 SE234102.023	CLAY 0.2-0.25 6/7/2022 SE234102.024	CLAY 0.0-0.15 6/7/2022 SE234102.025
Arsenic, As	mg/kg	1	4	5	5	3	9
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	0.4	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	8.8	2.6	12	7.7	23
Copper, Cu	mg/kg	0.5	11	2.4	36	9.7	9.8
Lead, Pb	mg/kg	1	15	1	370	54	23
Nickel, Ni	mg/kg	0.5	6.4	1.2	6.9	3.6	7.5
Zinc, Zn	mg/kg	2	650	29	230	83	23
Titanium, Ti	mg/kg	10	75	17	-	-	-

PARAMETER	UOM	LOR	FCP1	DDS1	DSS2
			GRAVEL - 6/7/2022 SE234102.026	CLAY - 6/7/2022 SE234102.027	CLAY - 6/7/2022 SE234102.028
Arsenic, As	mg/kg	1	6	5	13
Cadmium, Cd	mg/kg	0.3	0.3	<0.3	0.6
Chromium, Cr	mg/kg	0.5	8.5	13	9.3
Copper, Cu	mg/kg	0.5	12	15	19
Lead, Pb	mg/kg	1	34	10	45
Nickel, Ni	mg/kg	0.5	4.6	1.6	4.0
Zinc, Zn	mg/kg	2	550	11	190
Titanium, Ti	mg/kg	10	36	<10	27

Mercury in Soil [AN312] Tested: 12/7/2022

PARAMETER	UOM	LOR	BH101	BH102	BH103	BH104	BH105
			CLAY	CLAY	CLAY	GRAVEL	SAND
			0.0-0.15	0.15-0.25	0.15-0.25	0.04-0.08	0.04-0.19
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.001	SE234102.002	SE234102.003	SE234102.004	SE234102.005
Mercury	mg/kg	0.05	<b>4.3</b>	<b>0.10</b>	<0.05	<b>0.10</b>	<0.05

PARAMETER	UOM	LOR	BH106	BH107	BH107	BH108	BH109
			GRAVEL	CLAY	CLAY	CLAY	SAND
			0.0-0.15	0.11-0.41	0.61-0.8	0.15-0.25	0.0-0.15
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.006	SE234102.007	SE234102.008	SE234102.009	SE234102.010
Mercury	mg/kg	0.05	<b>0.51</b>	<0.05	<0.05	<b>0.31</b>	<b>22</b>

PARAMETER	UOM	LOR	BH109	BH110	BH111	BH112	BH113
			SAND	CLAY	SAND	SAND	CLAY
			0.15-0.25	0.15-0.25	0.12-0.3	0.14-0.3	0.17-0.32
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.011	SE234102.012	SE234102.013	SE234102.014	SE234102.015
Mercury	mg/kg	0.05	<b>0.69</b>	<0.05	<0.05	<0.05	<b>0.10</b>

PARAMETER	UOM	LOR	BH114	BH115	BH115	BH116	BH117
			CLAY	SAND	SAND	SAND	GRAVEL
			0.15-0.25	0.0-0.15	0.2-0.4	0.0-0.15	0.0-0.15
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.016	SE234102.017	SE234102.018	SE234102.019	SE234102.020
Mercury	mg/kg	0.05	<0.05	<b>4.3</b>	<b>0.48</b>	<b>0.81</b>	<b>0.54</b>

PARAMETER	UOM	LOR	BH118	BH119	BH120	BH120	BH121
			GRAVEL	SAND	CLAY	CLAY	CLAY
			0.0-0.15	0.07-0.17	0.0-0.15	0.2-0.25	0.0-0.15
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.021	SE234102.022	SE234102.023	SE234102.024	SE234102.025
Mercury	mg/kg	0.05	<b>0.20</b>	<0.05	<b>0.11</b>	<0.05	<0.05

PARAMETER	UOM	LOR	FCP1	DDS1	DSS2
			GRAVEL	CLAY	CLAY
			-	-	-
			6/7/2022	6/7/2022	6/7/2022
			SE234102.026	SE234102.027	SE234102.028
Mercury	mg/kg	0.05	<b>0.07</b>	<0.05	<b>4.8</b>

Moisture Content [AN002] Tested: 11/7/2022

PARAMETER	UOM	LOR	BH101	BH102	BH103	BH104	BH105
			CLAY	CLAY	CLAY	GRAVEL	SAND
			0.0-0.15	0.15-0.25	0.15-0.25	0.04-0.08	0.04-0.19
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.001	SE234102.002	SE234102.003	SE234102.004	SE234102.005
% Moisture	%w/w	1	26.2	24.8	25.7	21.9	11.2

PARAMETER	UOM	LOR	BH106	BH107	BH107	BH108	BH109
			GRAVEL	CLAY	CLAY	CLAY	SAND
			0.0-0.15	0.11-0.41	0.61-0.8	0.15-0.25	0.0-0.15
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.006	SE234102.007	SE234102.008	SE234102.009	SE234102.010
% Moisture	%w/w	1	27.6	23.6	26.6	24.3	20.2

PARAMETER	UOM	LOR	BH109	BH110	BH111	BH112	BH113
			SAND	CLAY	SAND	SAND	CLAY
			0.15-0.25	0.15-0.25	0.12-0.3	0.14-0.3	0.17-0.32
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.011	SE234102.012	SE234102.013	SE234102.014	SE234102.015
% Moisture	%w/w	1	17.1	14.7	14.6	17.7	18.2

PARAMETER	UOM	LOR	BH114	BH115	BH115	BH116	BH117
			CLAY	SAND	SAND	SAND	GRAVEL
			0.15-0.25	0.0-0.15	0.2-0.4	0.0-0.15	0.0-0.15
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.016	SE234102.017	SE234102.018	SE234102.019	SE234102.020
% Moisture	%w/w	1	22.9	13.1	15.6	15.2	21.3

PARAMETER	UOM	LOR	BH118	BH119	BH120	BH120	BH121
			GRAVEL	SAND	CLAY	CLAY	CLAY
			0.0-0.15	0.07-0.17	0.0-0.15	0.2-0.25	0.0-0.15
			6/7/2022	6/7/2022	6/7/2022	6/7/2022	6/7/2022
			SE234102.021	SE234102.022	SE234102.023	SE234102.024	SE234102.025
% Moisture	%w/w	1	25.8	25.4	23.4	18.8	17.8

PARAMETER	UOM	LOR	FCP1	DDS1	DSS2
			GRAVEL	CLAY	CLAY
			-	-	-
			6/7/2022	6/7/2022	6/7/2022
			SE234102.026	SE234102.027	SE234102.028
% Moisture	%w/w	1	28.1	20.9	21.5

VOCs in Water [AN433]    Tested: 12/7/2022

			RS1
			WATER
			-
			6/7/2022
			SE234102.029
PARAMETER	UOM	LOR	
Benzene	µg/L	0.5	<0.5
Toluene	µg/L	0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5
m/p-xylene	µg/L	1	<1
o-xylene	µg/L	0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5
Total BTEX	µg/L	3	<3
Naphthalene (VOC)	µg/L	0.5	<0.5

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 12/7/2022

			RS1
			WATER
			-
			6/7/2022
PARAMETER	UOM	LOR	SE234102.029
TRH C6-C9	µg/L	40	<40
Benzene (F0)	µg/L	0.5	<0.5
TRH C6-C10	µg/L	50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50



TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 12/7/2022

			RS1
			WATER
			-
			6/7/2022
PARAMETER	UOM	LOR	SE234102.029
TRH C10-C14	µg/L	50	<50
TRH C15-C28	µg/L	200	<200
TRH C29-C36	µg/L	200	<200
TRH C37-C40	µg/L	200	<200
TRH >C10-C16	µg/L	60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60
TRH >C16-C34 (F3)	µg/L	500	<500
TRH >C34-C40 (F4)	µg/L	500	<500
TRH C10-C40	µg/L	320	<320

## PAH (Polynuclear Aromatic Hydrocarbons) in Water [AN420]    Tested: 12/7/2022

			RS1
			WATER
			-
			6/7/2022
PARAMETER	UOM	LOR	SE234102.029
Naphthalene	µg/L	0.1	<0.1
2-methylnaphthalene	µg/L	0.1	<0.1
1-methylnaphthalene	µg/L	0.1	<0.1
Acenaphthylene	µg/L	0.1	<0.1
Acenaphthene	µg/L	0.1	<0.1
Fluorene	µg/L	0.1	<0.1
Phenanthrene	µg/L	0.1	<0.1
Anthracene	µg/L	0.1	<0.1
Fluoranthene	µg/L	0.1	<0.1
Pyrene	µg/L	0.1	<0.1
Benzo(a)anthracene	µg/L	0.1	<0.1
Chrysene	µg/L	0.1	<0.1
Benzo(b&j)fluoranthene	µg/L	0.1	<0.1
Benzo(k)fluoranthene	µg/L	0.1	<0.1
Benzo(a)pyrene	µg/L	0.1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
Dibenzo(ah)anthracene	µg/L	0.1	<0.1
Benzo(ghi)perylene	µg/L	0.1	<0.1
Total PAH (18)	µg/L	1	<1

Metals in Water (Dissolved) by ICPOES [AN320] Tested: 12/7/2022

			RS1
			WATER
			-
			6/7/2022
			SE234102.029
PARAMETER	UOM	LOR	
Arsenic, As	mg/L	0.02	<0.02
Cadmium, Cd	mg/L	0.001	<0.001
Chromium, Cr	mg/L	0.005	<0.005
Copper, Cu	mg/L	0.005	<0.005
Lead, Pb	mg/L	0.02	<0.02
Nickel, Ni	mg/L	0.005	<0.005
Zinc, Zn	mg/L	0.01	<0.01
Titanium, Ti	mg/L	0.005	<0.005



ANALYTICAL RESULTS

SE234102 R0

Mercury (dissolved) in Water [AN311(Perth)/AN312]    Tested: 12/7/2022

			RS1
			WATER
			-
			6/7/2022
PARAMETER	UOM	LOR	SE234102.029
Mercury	mg/L	0.0001	<0.0001

## METHOD

## METHODOLOGY SUMMARY

- AN002** The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
- AN020** Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
- AN040/AN320** A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
- AN040** A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
- AN077** Hydrogen cyanide is liberated from an acidified alkali soil extract by distillation and purging with air. The hydrogen cyanide gas is then collected by passing it through a sodium hydroxide scrubbing solution. The scrubbing solution will then be analysed for cyanide by the appropriate method.
- AN101** pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl<sub>2</sub>) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
- AN122** Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
- AN122** The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100.  
ESP can be used to categorise the sodicity of the soil as below:
- |           |                |
|-----------|----------------|
| ESP < 6%  | non-sodic      |
| ESP 6-15% | sodic          |
| ESP >15%  | strongly sodic |
- Method is referenced to Rayment and Lyons, 2011, sections 15D3 and 15N1.-
- AN226** Formaldehyde is taken into solution and aliquots are reacted with chromotropic acid in the presence of sulfuric acid to form a purple, not-cationic, chromogen. The intensity of the colour is directly proportional to the amount of formaldehyde in the solution. Corrected for dilution factor and moisture factor for concentration in soil.
- AN287** A buffered distillate or water sample is treated with chloramine/barbituric acid reagents and the intensity of the colour developed is proportional to the cyanide concentration by DA.
- AN295** For Soil, a 1:10 NaOH extraction is made and analysed after 16 hours. The soil extract or water 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-pyrazolin-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.
- 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.
- AN320** Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components.
- AN320** Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements. Reference APHA 3120 B.
- AN403** Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). 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).
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.

## 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.
		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:

- 1 Bq is equivalent to 27 pCi
- 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](http://www.sgs.com.au/en-gb/environment-health-and-safety).

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## STATEMENT OF QA/QC PERFORMANCE

SE234102 R0

### CLIENT DETAILS

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Project **20219/5 Narwee**  
Order Number **20219/5**  
Samples 30

### LABORATORY DETAILS

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SGS Reference **SE234102 R0**  
Date Received 08 Jul 2022  
Date Reported 15 Jul 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:

Extraction Date	Formaldehyde in Soil	5 items
Analysis Date	Formaldehyde in Soil	5 items
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
	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	29 Clay/Gravel/Sand
Date documentation received	8/7/2022@2:40pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	4.5°C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days/Standard		

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

#### Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH102	SE234102.002	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH103	SE234102.003	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH104	SE234102.004	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH105	SE234102.005	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH106	SE234102.006	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH107	SE234102.007	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH108	SE234102.009	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH109	SE234102.010	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH109	SE234102.011	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH110	SE234102.012	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH111	SE234102.013	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH112	SE234102.014	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH113	SE234102.015	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH114	SE234102.016	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH115	SE234102.017	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH115	SE234102.018	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH116	SE234102.019	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH117	SE234102.020	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH118	SE234102.021	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH119	SE234102.022	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH120	SE234102.023	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH120	SE234102.024	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
BH121	SE234102.025	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022
FCP1	SE234102.026	LB253518	06 Jul 2022	08 Jul 2022	03 Aug 2022	15 Jul 2022	03 Aug 2022	15 Jul 2022

#### Formaldehyde in Soil

Method: ME-(AU)-[ENV]AN226

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH103	SE234102.003	LB253364	06 Jul 2022	08 Jul 2022	08 Jul 2022	13 Jul 2022†	08 Jul 2022	14 Jul 2022†
BH112	SE234102.014	LB253364	06 Jul 2022	08 Jul 2022	08 Jul 2022	13 Jul 2022†	08 Jul 2022	14 Jul 2022†
BH114	SE234102.016	LB253364	06 Jul 2022	08 Jul 2022	08 Jul 2022	13 Jul 2022†	08 Jul 2022	14 Jul 2022†
BH115	SE234102.017	LB253364	06 Jul 2022	08 Jul 2022	08 Jul 2022	13 Jul 2022†	08 Jul 2022	14 Jul 2022†
BH117	SE234102.020	LB253364	06 Jul 2022	08 Jul 2022	08 Jul 2022	13 Jul 2022†	08 Jul 2022	14 Jul 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
RS1	SE234102.029	LB253229	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	12 Jul 2022

#### Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH102	SE234102.002	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH103	SE234102.003	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH104	SE234102.004	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH105	SE234102.005	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH106	SE234102.006	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH107	SE234102.007	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH107	SE234102.008	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH108	SE234102.009	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH109	SE234102.010	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH109	SE234102.011	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH110	SE234102.012	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH111	SE234102.013	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH112	SE234102.014	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH113	SE234102.015	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH114	SE234102.016	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH115	SE234102.017	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH115	SE234102.018	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH116	SE234102.019	LB253328	06 Jul 2022	08 Jul 2022	03 Aug 2022	12 Jul 2022	03 Aug 2022	14 Jul 2022
BH117	SE234102.020	LB253395	06 Jul 2022	08 Jul 2022	03 Aug 2022	13 Jul 2022	03 Aug 2022	15 Jul 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)-ENVJAN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH118	SE234102.021	LB253395	06 Jul 2022	08 Jul 2022	03 Aug 2022	13 Jul 2022	03 Aug 2022	15 Jul 2022
BH119	SE234102.022	LB253395	06 Jul 2022	08 Jul 2022	03 Aug 2022	13 Jul 2022	03 Aug 2022	15 Jul 2022
BH120	SE234102.023	LB253395	06 Jul 2022	08 Jul 2022	03 Aug 2022	13 Jul 2022	03 Aug 2022	15 Jul 2022
BH120	SE234102.024	LB253395	06 Jul 2022	08 Jul 2022	03 Aug 2022	13 Jul 2022	03 Aug 2022	15 Jul 2022
BH121	SE234102.025	LB253395	06 Jul 2022	08 Jul 2022	03 Aug 2022	13 Jul 2022	03 Aug 2022	15 Jul 2022
FCP1	SE234102.026	LB253395	06 Jul 2022	08 Jul 2022	03 Aug 2022	13 Jul 2022	03 Aug 2022	15 Jul 2022
DDS1	SE234102.027	LB253395	06 Jul 2022	08 Jul 2022	03 Aug 2022	13 Jul 2022	03 Aug 2022	15 Jul 2022
DSS2	SE234102.028	LB253395	06 Jul 2022	08 Jul 2022	03 Aug 2022	13 Jul 2022	03 Aug 2022	15 Jul 2022

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-ENVJAN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE234102.029	LB253223	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	12 Jul 2022

## Moisture Content

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH102	SE234102.002	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH103	SE234102.003	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH104	SE234102.004	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH105	SE234102.005	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH106	SE234102.006	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH107	SE234102.007	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH107	SE234102.008	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH108	SE234102.009	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH109	SE234102.010	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH109	SE234102.011	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH110	SE234102.012	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH111	SE234102.013	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH112	SE234102.014	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH113	SE234102.015	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH114	SE234102.016	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH115	SE234102.017	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH115	SE234102.018	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH116	SE234102.019	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH117	SE234102.020	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH118	SE234102.021	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH119	SE234102.022	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH120	SE234102.023	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH120	SE234102.024	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
BH121	SE234102.025	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
FCP1	SE234102.026	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
DDS1	SE234102.027	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022
DSS2	SE234102.028	LB253181	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	16 Jul 2022	13 Jul 2022

## OC Pesticides in Soil

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH103	SE234102.003	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
BH104	SE234102.004	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH105	SE234102.005	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH106	SE234102.006	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH107	SE234102.007	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH109	SE234102.010	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH109	SE234102.011	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH111	SE234102.013	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH112	SE234102.014	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH115	SE234102.017	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH115	SE234102.018	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH116	SE234102.019	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH117	SE234102.020	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 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)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH118	SE234102.021	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH119	SE234102.022	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH120	SE234102.023	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH120	SE234102.024	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH121	SE234102.025	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
DSS2	SE234102.028	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022

**PAH (Polynuclear Aromatic Hydrocarbons) in Soil**

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH103	SE234102.003	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH104	SE234102.004	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH105	SE234102.005	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH106	SE234102.006	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH107	SE234102.007	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH109	SE234102.010	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH109	SE234102.011	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH111	SE234102.013	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH112	SE234102.014	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH115	SE234102.017	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH115	SE234102.018	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH116	SE234102.019	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH117	SE234102.020	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH118	SE234102.021	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH119	SE234102.022	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH120	SE234102.023	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
BH120	SE234102.024	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022
BH121	SE234102.025	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
DSS2	SE234102.028	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	13 Jul 2022

**PAH (Polynuclear Aromatic Hydrocarbons) in Water**

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE234102.029	LB253239	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	21 Aug 2022	14 Jul 2022

**PCBs in Soil**

Method: ME-(AU)-ENVJAN420

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH103	SE234102.003	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
BH104	SE234102.004	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH105	SE234102.005	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH106	SE234102.006	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH107	SE234102.007	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH109	SE234102.010	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH109	SE234102.011	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH111	SE234102.013	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH112	SE234102.014	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH115	SE234102.017	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH115	SE234102.018	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH116	SE234102.019	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH117	SE234102.020	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH118	SE234102.021	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH119	SE234102.022	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH120	SE234102.023	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
BH120	SE234102.024	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH121	SE234102.025	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
DSS2	SE234102.028	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022

**pH in soil (1:5)**

Method: ME-(AU)-ENVJAN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH102	SE234102.002	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 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

## pH in soil (1:5) (continued)

Method: ME-(AU)-ENVJAN101

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH103	SE234102.003	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH104	SE234102.004	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH105	SE234102.005	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH106	SE234102.006	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH107	SE234102.007	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH108	SE234102.009	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH109	SE234102.010	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH109	SE234102.011	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH110	SE234102.012	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH111	SE234102.013	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH112	SE234102.014	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH113	SE234102.015	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH114	SE234102.016	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH115	SE234102.017	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH115	SE234102.018	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH116	SE234102.019	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH117	SE234102.020	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH118	SE234102.021	LB253251	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH119	SE234102.022	LB253254	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH120	SE234102.023	LB253254	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH120	SE234102.024	LB253254	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
BH121	SE234102.025	LB253254	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022
FCP1	SE234102.026	LB253254	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	13 Jul 2022	12 Jul 2022

## Total Cyanide in soil by Discrete Analyser

Method: ME-(AU)-ENVJAN077/AN27

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH104	SE234102.004	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH105	SE234102.005	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH106	SE234102.006	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH107	SE234102.007	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH109	SE234102.010	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH109	SE234102.011	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH111	SE234102.013	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH112	SE234102.014	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH115	SE234102.017	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH115	SE234102.018	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH116	SE234102.019	LB253468	06 Jul 2022	08 Jul 2022	20 Jul 2022	14 Jul 2022	20 Jul 2022	14 Jul 2022
BH117	SE234102.020	LB253366	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	13 Jul 2022
BH118	SE234102.021	LB253366	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	13 Jul 2022
BH119	SE234102.022	LB253366	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	13 Jul 2022
DSS2	SE234102.028	LB253366	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	13 Jul 2022

## Total Phenolics in Soil

Method: ME-(AU)-ENVJAN295

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH102	SE234102.002	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH103	SE234102.003	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH104	SE234102.004	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH105	SE234102.005	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH106	SE234102.006	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH107	SE234102.007	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH108	SE234102.009	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH109	SE234102.010	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH109	SE234102.011	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH110	SE234102.012	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH111	SE234102.013	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH112	SE234102.014	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH113	SE234102.015	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH114	SE234102.016	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH115	SE234102.017	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 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

### Total Phenolics in Soil (continued)

Method: ME-(AU)-[ENV]AN295

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH115	SE234102.018	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH116	SE234102.019	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH117	SE234102.020	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH118	SE234102.021	LB253356	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	14 Jul 2022
BH119	SE234102.022	LB253355	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	13 Jul 2022
DDS1	SE234102.027	LB253355	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	13 Jul 2022
DSS2	SE234102.028	LB253355	06 Jul 2022	08 Jul 2022	20 Jul 2022	13 Jul 2022	20 Jul 2022	13 Jul 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
BH101	SE234102.001	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH102	SE234102.002	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH103	SE234102.003	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH104	SE234102.004	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH105	SE234102.005	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH106	SE234102.006	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH107	SE234102.007	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH107	SE234102.008	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH108	SE234102.009	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH109	SE234102.010	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH109	SE234102.011	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH110	SE234102.012	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH111	SE234102.013	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH112	SE234102.014	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH113	SE234102.015	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH114	SE234102.016	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH115	SE234102.017	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH115	SE234102.018	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH116	SE234102.019	LB253329	06 Jul 2022	08 Jul 2022	02 Jan 2023	12 Jul 2022	02 Jan 2023	14 Jul 2022
BH117	SE234102.020	LB253368	06 Jul 2022	08 Jul 2022	02 Jan 2023	13 Jul 2022	02 Jan 2023	15 Jul 2022
BH118	SE234102.021	LB253368	06 Jul 2022	08 Jul 2022	02 Jan 2023	13 Jul 2022	02 Jan 2023	15 Jul 2022
BH119	SE234102.022	LB253368	06 Jul 2022	08 Jul 2022	02 Jan 2023	13 Jul 2022	02 Jan 2023	15 Jul 2022
BH120	SE234102.023	LB253368	06 Jul 2022	08 Jul 2022	02 Jan 2023	13 Jul 2022	02 Jan 2023	15 Jul 2022
BH120	SE234102.024	LB253368	06 Jul 2022	08 Jul 2022	02 Jan 2023	13 Jul 2022	02 Jan 2023	15 Jul 2022
BH121	SE234102.025	LB253368	06 Jul 2022	08 Jul 2022	02 Jan 2023	13 Jul 2022	02 Jan 2023	15 Jul 2022
FCP1	SE234102.026	LB253368	06 Jul 2022	08 Jul 2022	02 Jan 2023	13 Jul 2022	02 Jan 2023	15 Jul 2022
DDS1	SE234102.027	LB253368	06 Jul 2022	08 Jul 2022	02 Jan 2023	13 Jul 2022	02 Jan 2023	15 Jul 2022
DSS2	SE234102.028	LB253368	06 Jul 2022	08 Jul 2022	02 Jan 2023	13 Jul 2022	02 Jan 2023	15 Jul 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
BH101	SE234102.001	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH103	SE234102.003	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH104	SE234102.004	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH105	SE234102.005	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH106	SE234102.006	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH107	SE234102.007	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH109	SE234102.010	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH109	SE234102.011	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
BH111	SE234102.013	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
BH112	SE234102.014	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
BH115	SE234102.017	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH115	SE234102.018	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH116	SE234102.019	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH117	SE234102.020	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH118	SE234102.021	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	14 Jul 2022
BH119	SE234102.022	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
BH120	SE234102.023	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
BH120	SE234102.024	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
BH121	SE234102.025	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 2022
DSS2	SE234102.028	LB253179	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Aug 2022	15 Jul 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 Water

Method: ME-(AU)-ENVJAN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE234102.029	LB253239	06 Jul 2022	08 Jul 2022	13 Jul 2022	12 Jul 2022	21 Aug 2022	14 Jul 2022

### VOC's in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH102	SE234102.002	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH103	SE234102.003	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH104	SE234102.004	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH105	SE234102.005	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH106	SE234102.006	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH107	SE234102.007	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH108	SE234102.009	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH109	SE234102.010	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH109	SE234102.011	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH110	SE234102.012	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH111	SE234102.013	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH112	SE234102.014	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH113	SE234102.015	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH114	SE234102.016	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH115	SE234102.017	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH115	SE234102.018	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH116	SE234102.019	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH117	SE234102.020	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH118	SE234102.021	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH119	SE234102.022	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH120	SE234102.024	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
DSS2	SE234102.028	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
TS1	SE234102.030	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022

### VOCs in Water

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE234102.029	LB253228	06 Jul 2022	08 Jul 2022	20 Jul 2022	12 Jul 2022	20 Jul 2022	14 Jul 2022

### Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101	SE234102.001	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH102	SE234102.002	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	15 Jul 2022
BH103	SE234102.003	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH104	SE234102.004	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH105	SE234102.005	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH106	SE234102.006	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH107	SE234102.007	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH108	SE234102.009	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	15 Jul 2022
BH109	SE234102.010	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH109	SE234102.011	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH110	SE234102.012	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	15 Jul 2022
BH111	SE234102.013	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH112	SE234102.014	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH113	SE234102.015	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	15 Jul 2022
BH114	SE234102.016	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	15 Jul 2022
BH115	SE234102.017	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH115	SE234102.018	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH116	SE234102.019	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH117	SE234102.020	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH118	SE234102.021	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH119	SE234102.022	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
BH120	SE234102.024	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
DSS2	SE234102.028	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	13 Jul 2022
TS1	SE234102.030	LB253180	06 Jul 2022	08 Jul 2022	20 Jul 2022	11 Jul 2022	20 Jul 2022	15 Jul 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

### Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-ENVJAN433

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
RS1	SE234102.029	LB253228	06 Jul 2022	08 Jul 2022	20 Jul 2022	12 Jul 2022	20 Jul 2022	14 Jul 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 identifier 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)	BH101	SE234102.001	%	60 - 130%	101
	BH104	SE234102.004	%	60 - 130%	103
	BH105	SE234102.005	%	60 - 130%	103
	BH106	SE234102.006	%	60 - 130%	117
	BH107	SE234102.007	%	60 - 130%	106
	BH109	SE234102.010	%	60 - 130%	109
	BH109	SE234102.011	%	60 - 130%	102
	BH111	SE234102.013	%	60 - 130%	102
	BH112	SE234102.014	%	60 - 130%	109
	BH115	SE234102.017	%	60 - 130%	98
	BH115	SE234102.018	%	60 - 130%	104
	BH116	SE234102.019	%	60 - 130%	107
	BH117	SE234102.020	%	60 - 130%	107
	BH118	SE234102.021	%	60 - 130%	107
	BH119	SE234102.022	%	60 - 130%	97
	BH120	SE234102.023	%	60 - 130%	104
	BH120	SE234102.024	%	60 - 130%	100
	BH121	SE234102.025	%	60 - 130%	107
	DSS2	SE234102.028	%	60 - 130%	107

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH101	SE234102.001	%	70 - 130%	103
	BH103	SE234102.003	%	70 - 130%	98
	BH104	SE234102.004	%	70 - 130%	98
	BH105	SE234102.005	%	70 - 130%	102
	BH106	SE234102.006	%	70 - 130%	123
	BH107	SE234102.007	%	70 - 130%	99
	BH109	SE234102.010	%	70 - 130%	101
	BH109	SE234102.011	%	70 - 130%	99
	BH111	SE234102.013	%	70 - 130%	99
	BH112	SE234102.014	%	70 - 130%	101
	BH115	SE234102.017	%	70 - 130%	104
	BH115	SE234102.018	%	70 - 130%	98
	BH116	SE234102.019	%	70 - 130%	99
	BH117	SE234102.020	%	70 - 130%	100
	BH118	SE234102.021	%	70 - 130%	97
	BH119	SE234102.022	%	70 - 130%	87
	BH120	SE234102.024	%	70 - 130%	105
	DSS2	SE234102.028	%	70 - 130%	103
d14-p-terphenyl (Surrogate)	BH101	SE234102.001	%	70 - 130%	90
	BH103	SE234102.003	%	70 - 130%	88
	BH104	SE234102.004	%	70 - 130%	88
	BH105	SE234102.005	%	70 - 130%	90
	BH106	SE234102.006	%	70 - 130%	109
	BH107	SE234102.007	%	70 - 130%	88
	BH109	SE234102.010	%	70 - 130%	85
	BH109	SE234102.011	%	70 - 130%	88
	BH111	SE234102.013	%	70 - 130%	85
	BH112	SE234102.014	%	70 - 130%	87
	BH115	SE234102.017	%	70 - 130%	90
	BH115	SE234102.018	%	70 - 130%	87
	BH116	SE234102.019	%	70 - 130%	88
	BH117	SE234102.020	%	70 - 130%	89
	BH118	SE234102.021	%	70 - 130%	87
	BH119	SE234102.022	%	70 - 130%	74
	BH120	SE234102.024	%	70 - 130%	93
	DSS2	SE234102.028	%	70 - 130%	92
d5-nitrobenzene (Surrogate)	BH101	SE234102.001	%	70 - 130%	97
	BH103	SE234102.003	%	70 - 130%	94
	BH104	SE234102.004	%	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 identifier 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)	BH105	SE234102.005	%	70 - 130%	97
	BH106	SE234102.006	%	70 - 130%	113
	BH107	SE234102.007	%	70 - 130%	97
	BH109	SE234102.010	%	70 - 130%	93
	BH109	SE234102.011	%	70 - 130%	94
	BH111	SE234102.013	%	70 - 130%	93
	BH112	SE234102.014	%	70 - 130%	94
	BH115	SE234102.017	%	70 - 130%	94
	BH115	SE234102.018	%	70 - 130%	93
	BH116	SE234102.019	%	70 - 130%	94
	BH117	SE234102.020	%	70 - 130%	94
	BH118	SE234102.021	%	70 - 130%	94
	BH119	SE234102.022	%	70 - 130%	77
	BH120	SE234102.024	%	70 - 130%	98
	DSS2	SE234102.028	%	70 - 130%	100

#### PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	RS1	SE234102.029	%	40 - 130%	62
d14-p-terphenyl (Surrogate)	RS1	SE234102.029	%	40 - 130%	74
d5-nitrobenzene (Surrogate)	RS1	SE234102.029	%	40 - 130%	58

#### PCBs in Soil

Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH101	SE234102.001	%	60 - 130%	101
	BH104	SE234102.004	%	60 - 130%	103
	BH105	SE234102.005	%	60 - 130%	103
	BH106	SE234102.006	%	60 - 130%	117
	BH107	SE234102.007	%	60 - 130%	106
	BH109	SE234102.010	%	60 - 130%	109
	BH109	SE234102.011	%	60 - 130%	102
	BH111	SE234102.013	%	60 - 130%	102
	BH112	SE234102.014	%	60 - 130%	109
	BH115	SE234102.017	%	60 - 130%	98
	BH115	SE234102.018	%	60 - 130%	104
	BH116	SE234102.019	%	60 - 130%	107
	BH117	SE234102.020	%	60 - 130%	107
	BH118	SE234102.021	%	60 - 130%	107
	BH119	SE234102.022	%	60 - 130%	97
	BH120	SE234102.024	%	60 - 130%	100
	DSS2	SE234102.028	%	60 - 130%	107

#### VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH101	SE234102.001	%	60 - 130%	87
	BH102	SE234102.002	%	60 - 130%	80
	BH103	SE234102.003	%	60 - 130%	92
	BH104	SE234102.004	%	60 - 130%	85
	BH105	SE234102.005	%	60 - 130%	91
	BH106	SE234102.006	%	60 - 130%	76
	BH107	SE234102.007	%	60 - 130%	91
	BH108	SE234102.009	%	60 - 130%	90
	BH109	SE234102.010	%	60 - 130%	88
	BH109	SE234102.011	%	60 - 130%	88
	BH110	SE234102.012	%	60 - 130%	94
	BH111	SE234102.013	%	60 - 130%	86
	BH112	SE234102.014	%	60 - 130%	87
	BH113	SE234102.015	%	60 - 130%	90
	BH114	SE234102.016	%	60 - 130%	89
	BH115	SE234102.017	%	60 - 130%	91
	BH115	SE234102.018	%	60 - 130%	85
	BH116	SE234102.019	%	60 - 130%	90



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier 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)	BH117	SE234102.020	%	60 - 130%	79
	BH118	SE234102.021	%	60 - 130%	81
	BH119	SE234102.022	%	60 - 130%	79
	BH120	SE234102.024	%	60 - 130%	86
	DSS2	SE234102.028	%	60 - 130%	83
	TS1	SE234102.030	%	60 - 130%	85
d4-1,2-dichloroethane (Surrogate)	BH101	SE234102.001	%	60 - 130%	81
	BH102	SE234102.002	%	60 - 130%	77
	BH103	SE234102.003	%	60 - 130%	83
	BH104	SE234102.004	%	60 - 130%	81
	BH105	SE234102.005	%	60 - 130%	85
	BH106	SE234102.006	%	60 - 130%	76
	BH107	SE234102.007	%	60 - 130%	82
	BH108	SE234102.009	%	60 - 130%	82
	BH109	SE234102.010	%	60 - 130%	81
	BH109	SE234102.011	%	60 - 130%	83
	BH110	SE234102.012	%	60 - 130%	88
	BH111	SE234102.013	%	60 - 130%	79
	BH112	SE234102.014	%	60 - 130%	80
	BH113	SE234102.015	%	60 - 130%	83
	BH114	SE234102.016	%	60 - 130%	83
	BH115	SE234102.017	%	60 - 130%	84
	BH115	SE234102.018	%	60 - 130%	81
	BH116	SE234102.019	%	60 - 130%	83
	BH117	SE234102.020	%	60 - 130%	73
	BH118	SE234102.021	%	60 - 130%	79
	BH119	SE234102.022	%	60 - 130%	74
	BH120	SE234102.024	%	60 - 130%	81
	DSS2	SE234102.028	%	60 - 130%	77
	TS1	SE234102.030	%	60 - 130%	92
d8-toluene (Surrogate)	BH101	SE234102.001	%	60 - 130%	82
	BH102	SE234102.002	%	60 - 130%	82
	BH103	SE234102.003	%	60 - 130%	86
	BH104	SE234102.004	%	60 - 130%	80
	BH105	SE234102.005	%	60 - 130%	85
	BH106	SE234102.006	%	60 - 130%	75
	BH107	SE234102.007	%	60 - 130%	84
	BH108	SE234102.009	%	60 - 130%	84
	BH109	SE234102.010	%	60 - 130%	82
	BH109	SE234102.011	%	60 - 130%	81
	BH110	SE234102.012	%	60 - 130%	89
	BH111	SE234102.013	%	60 - 130%	78
	BH112	SE234102.014	%	60 - 130%	80
	BH113	SE234102.015	%	60 - 130%	84
	BH114	SE234102.016	%	60 - 130%	84
	BH115	SE234102.017	%	60 - 130%	85
	BH115	SE234102.018	%	60 - 130%	81
	BH116	SE234102.019	%	60 - 130%	82
	BH117	SE234102.020	%	60 - 130%	73
	BH118	SE234102.021	%	60 - 130%	78
	BH119	SE234102.022	%	60 - 130%	71
	BH120	SE234102.024	%	60 - 130%	81
	DSS2	SE234102.028	%	60 - 130%	78
	TS1	SE234102.030	%	60 - 130%	91

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	RS1	SE234102.029	%	40 - 130%	107
d4-1,2-dichloroethane (Surrogate)	RS1	SE234102.029	%	40 - 130%	98
d8-toluene (Surrogate)	RS1	SE234102.029	%	40 - 130%	100

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH101	SE234102.001	%	60 - 130%	87
	BH103	SE234102.003	%	60 - 130%	92
	BH104	SE234102.004	%	60 - 130%	85
	BH105	SE234102.005	%	60 - 130%	91
	BH106	SE234102.006	%	60 - 130%	76
	BH107	SE234102.007	%	60 - 130%	91
	BH109	SE234102.010	%	60 - 130%	88
	BH109	SE234102.011	%	60 - 130%	88
	BH111	SE234102.013	%	60 - 130%	86
	BH112	SE234102.014	%	60 - 130%	87
	BH115	SE234102.017	%	60 - 130%	91
	BH115	SE234102.018	%	60 - 130%	85
	BH116	SE234102.019	%	60 - 130%	90
	BH117	SE234102.020	%	60 - 130%	79
	BH118	SE234102.021	%	60 - 130%	81
	BH119	SE234102.022	%	60 - 130%	79
	BH120	SE234102.024	%	60 - 130%	86
	DSS2	SE234102.028	%	60 - 130%	83
d4-1,2-dichloroethane (Surrogate)	BH101	SE234102.001	%	60 - 130%	81
	BH103	SE234102.003	%	60 - 130%	83
	BH104	SE234102.004	%	60 - 130%	81
	BH105	SE234102.005	%	60 - 130%	85
	BH106	SE234102.006	%	60 - 130%	76
	BH107	SE234102.007	%	60 - 130%	82
	BH109	SE234102.010	%	60 - 130%	81
	BH109	SE234102.011	%	60 - 130%	83
	BH111	SE234102.013	%	60 - 130%	79
	BH112	SE234102.014	%	60 - 130%	80
	BH115	SE234102.017	%	60 - 130%	84
	BH115	SE234102.018	%	60 - 130%	81
	BH116	SE234102.019	%	60 - 130%	83
	BH117	SE234102.020	%	60 - 130%	73
	BH118	SE234102.021	%	60 - 130%	79
	BH119	SE234102.022	%	60 - 130%	74
	BH120	SE234102.024	%	60 - 130%	81
	DSS2	SE234102.028	%	60 - 130%	77
d8-toluene (Surrogate)	BH101	SE234102.001	%	60 - 130%	82
	BH103	SE234102.003	%	60 - 130%	86
	BH104	SE234102.004	%	60 - 130%	80
	BH105	SE234102.005	%	60 - 130%	85
	BH106	SE234102.006	%	60 - 130%	75
	BH107	SE234102.007	%	60 - 130%	84
	BH109	SE234102.010	%	60 - 130%	82
	BH109	SE234102.011	%	60 - 130%	81
	BH111	SE234102.013	%	60 - 130%	78
	BH112	SE234102.014	%	60 - 130%	80
	BH115	SE234102.017	%	60 - 130%	85
	BH115	SE234102.018	%	60 - 130%	81
	BH116	SE234102.019	%	60 - 130%	82
	BH117	SE234102.020	%	60 - 130%	73
	BH118	SE234102.021	%	60 - 130%	78
	BH119	SE234102.022	%	60 - 130%	71
	BH120	SE234102.024	%	60 - 130%	81
	DSS2	SE234102.028	%	60 - 130%	78

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	RS1	SE234102.029	%	40 - 130%	107
d4-1,2-dichloroethane (Surrogate)	RS1	SE234102.029	%	60 - 130%	98
d8-toluene (Surrogate)	RS1	SE234102.029	%	40 - 130%	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.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result
LB253518.001	Exchangeable Sodium, Na	mg/kg	2	0
	Exchangeable Potassium, K	mg/kg	2	0
	Exchangeable Calcium, Ca	mg/kg	2	0
	Exchangeable Magnesium, Mg	mg/kg	2	0
LB253518.024	Exchangeable Sodium, Na	mg/kg	2	0
	Exchangeable Potassium, K	mg/kg	2	0
	Exchangeable Calcium, Ca	mg/kg	2	0
	Exchangeable Magnesium, Mg	mg/kg	2	0

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB253229.001	Mercury	mg/L	0.0001	<0.0001

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB253328.001	Mercury	mg/kg	0.05	<0.05
LB253395.001	Mercury	mg/kg	0.05	<0.05

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

Sample Number	Parameter	Units	LOR	Result
LB253223.001	Arsenic, As	mg/L	0.02	<0.02
	Cadmium, Cd	mg/L	0.001	<0.001
	Chromium, Cr	mg/L	0.005	<0.005
	Copper, Cu	mg/L	0.005	<0.005
	Lead, Pb	mg/L	0.02	<0.02
	Nickel, Ni	mg/L	0.005	<0.005
	Titanium, Ti	mg/L	0.005	<0.005
	Zinc, Zn	mg/L	0.01	<0.01

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result
LB253179.001	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
	Alpha BHC	mg/kg	0.1	<0.1
	Lindane	mg/kg	0.1	<0.1
	Heptachlor	mg/kg	0.1	<0.1
	Aldrin	mg/kg	0.1	<0.1
	Beta BHC	mg/kg	0.1	<0.1
	Delta BHC	mg/kg	0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	<0.1
	p,p'-DDE	mg/kg	0.1	<0.1
	Dieldrin	mg/kg	0.05	<0.05
	Endrin	mg/kg	0.2	<0.2
	Beta Endosulfan	mg/kg	0.2	<0.2
	p,p'-DDD	mg/kg	0.1	<0.1
	p,p'-DDT	mg/kg	0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	<0.1
	Methoxychlor	mg/kg	0.1	<0.1
	Endrin Ketone	mg/kg	0.1	<0.1
	Isodrin	mg/kg	0.1	<0.1
	Mirex	mg/kg	0.1	<0.1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	92

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR
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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)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB253179.001	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)	%	-	102
	2-fluorobiphenyl (Surrogate)	%	-	110
	d14-p-terphenyl (Surrogate)	%	-	94

## PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB253239.001	Naphthalene	µg/L	0.1	<0.1
	2-methylnaphthalene	µg/L	0.1	<0.1
	1-methylnaphthalene	µg/L	0.1	<0.1
	Acenaphthylene	µg/L	0.1	<0.1
	Acenaphthene	µg/L	0.1	<0.1
	Fluorene	µg/L	0.1	<0.1
	Phenanthrene	µg/L	0.1	<0.1
	Anthracene	µg/L	0.1	<0.1
	Fluoranthene	µg/L	0.1	<0.1
	Pyrene	µg/L	0.1	<0.1
	Benzo(a)anthracene	µg/L	0.1	<0.1
	Chrysene	µg/L	0.1	<0.1
	Benzo(a)pyrene	µg/L	0.1	<0.1
	Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1
	Dibenzo(ah)anthracene	µg/L	0.1	<0.1
	Benzo(ghi)perylene	µg/L	0.1	<0.1
Surrogates	d5-nitrobenzene (Surrogate)	%	-	56
	2-fluorobiphenyl (Surrogate)	%	-	64
	d14-p-terphenyl (Surrogate)	%	-	82

## PCBs in Soil

Method: ME-(AU)-ENVJAN420

Sample Number	Parameter	Units	LOR	Result
LB253179.001	Arochlor 1016	mg/kg	0.2	<0.2
	Arochlor 1221	mg/kg	0.2	<0.2
	Arochlor 1232	mg/kg	0.2	<0.2
	Arochlor 1242	mg/kg	0.2	<0.2
	Arochlor 1248	mg/kg	0.2	<0.2
	Arochlor 1254	mg/kg	0.2	<0.2
	Arochlor 1260	mg/kg	0.2	<0.2
	Arochlor 1262	mg/kg	0.2	<0.2
	Arochlor 1268	mg/kg	0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1	<1
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	92

## Total Cyanide in soil by Discrete Analyser

Method: ME-(AU)-ENVJAN077/AN287

Sample Number	Parameter	Units	LOR	Result
LB253366.001	Total Cyanide	mg/kg	0.5	<0.5
LB253468.001	Total Cyanide	mg/kg	0.5	<0.5

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

#### Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

Sample Number	Parameter	Units	LOR	Result
LB253355.001	Total Phenols	mg/kg	5	<5.0
LB253356.001	Total Phenols	mg/kg	5	<5.0

#### Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB253329.001	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
	Titanium, Ti	mg/kg	10	<10
LB253368.001	Zinc, Zn	mg/kg	2	<2
	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
	Titanium, Ti	mg/kg	10	<10
	Zinc, Zn	mg/kg	2	<2

#### TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB253179.001	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
LB253239.001	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
LB253180.001	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1
		1,2-dichloropropane	mg/kg	0.1	<0.1
		cis-1,3-dichloropropene	mg/kg	0.1	<0.1
		trans-1,3-dichloropropene	mg/kg	0.1	<0.1
		1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1
	Halogenated Aliphatics	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1
		Chloromethane	mg/kg	1	<1
		Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1
		Bromomethane	mg/kg	1	<1
		Chloroethane	mg/kg	1	<1
		Trichlorofluoromethane	mg/kg	1	<1
		Iodomethane	mg/kg	5	<5
		1,1-dichloroethene	mg/kg	0.1	<0.1
		Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5
		Allyl chloride	mg/kg	0.1	<0.1
		trans-1,2-dichloroethene	mg/kg	0.1	<0.1
		1,1-dichloroethane	mg/kg	0.1	<0.1
		cis-1,2-dichloroethene	mg/kg	0.1	<0.1
		Bromochloromethane	mg/kg	0.1	<0.1
		1,2-dichloroethane	mg/kg	0.1	<0.1
		1,1,1-trichloroethane	mg/kg	0.1	<0.1
		1,1-dichloropropene	mg/kg	0.1	<0.1
		Carbon tetrachloride	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.

## VOC's in Soil (continued)

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB253180.001	Halogenated Aliphatics	Dibromomethane	mg/kg	0.1	<0.1
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1
		1,1,2-trichloroethane	mg/kg	0.1	<0.1
		1,3-dichloropropane	mg/kg	0.1	<0.1
		Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1
		1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1
		cis-1,4-dichloro-2-butene	mg/kg	1	<1
		1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1
		1,2,3-trichloropropane	mg/kg	0.1	<0.1
		trans-1,4-dichloro-2-butene	mg/kg	1	<1
		1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1
	Halogenated Aromatics	Hexachlorobutadiene	mg/kg	0.1	<0.1
		Chlorobenzene	mg/kg	0.1	<0.1
		Bromobenzene	mg/kg	0.1	<0.1
		2-chlorotoluene	mg/kg	0.1	<0.1
		4-chlorotoluene	mg/kg	0.1	<0.1
		1,3-dichlorobenzene	mg/kg	0.1	<0.1
		1,4-dichlorobenzene	mg/kg	0.1	<0.1
		1,2-dichlorobenzene	mg/kg	0.1	<0.1
		1,2,4-trichlorobenzene	mg/kg	0.1	<0.1
		1,2,3-trichlorobenzene	mg/kg	0.1	<0.1
	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
		Styrene (Vinyl benzene)	mg/kg	0.1	<0.1
		Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1
		n-propylbenzene	mg/kg	0.1	<0.1
		1,3,5-trimethylbenzene	mg/kg	0.1	<0.1
		tert-butylbenzene	mg/kg	0.1	<0.1
		1,2,4-trimethylbenzene	mg/kg	0.1	<0.1
		sec-butylbenzene	mg/kg	0.1	<0.1
	Nitrogenous Compounds	p-isopropyltoluene	mg/kg	0.1	<0.1
		n-butylbenzene	mg/kg	0.1	<0.1
	Oxygenated Compounds	Acrylonitrile	mg/kg	0.1	<0.1
		2-nitropropane	mg/kg	10	<10
	Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10
		MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1
		Vinyl acetate	mg/kg	10	<10
		MEK (2-butanone)	mg/kg	10	<10
		MIBK (4-methyl-2-pentanone)	mg/kg	1	<1
	Polycyclic VOCs	2-hexanone (MBK)	mg/kg	5	<5
		Naphthalene (VOC)	mg/kg	0.1	<0.1
	Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	81
		d8-toluene (Surrogate)	%	-	83
		Bromofluorobenzene (Surrogate)	%	-	88
	Totals	Total BTEX	mg/kg	0.6	<0.6
		Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
		Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8
	Trihalomethanes	Chloroform	mg/kg	0.1	<0.1
		Bromodichloromethane	mg/kg	0.1	<0.1
		Chlorodibromomethane	mg/kg	0.1	<0.1
		Bromoform	mg/kg	0.1	<0.1

## VOCs in Water

Method: ME-(AU)-ENVJAN433

Sample Number		Parameter	Units	LOR	Result
LB253228.001	Monocyclic Aromatic	Benzene	µg/L	0.5	<0.5
	Hydrocarbons	Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

## VOCs in Water (continued)

Method: ME-(AU)-ENVJAN433

Sample Number	Parameter	Units	LOR	Result
LB253228.001	Monocyclic Aromatic	m/p-xylene	1	<1
	Hydrocarbons	o-xylene	0.5	<0.5
	Polycyclic VOCs	Naphthalene (VOC)	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	-	92
		d8-toluene (Surrogate)	-	97
		Bromofluorobenzene (Surrogate)	-	109

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-ENVJAN433

Sample Number	Parameter	Units	LOR	Result
LB253180.001	TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	-	81

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-ENVJAN433

Sample Number	Parameter	Units	LOR	Result
LB253228.001	TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	-	92
		d8-toluene (Surrogate)	-	97
		Bromofluorobenzene (Surrogate)	-	109

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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 %
SE234135.001	LB253229.008	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	91

#### Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.010	LB253328.014	Mercury	mg/kg	0.05	22	22	30	1
SE234102.019	LB253328.024	Mercury	mg/kg	0.05	0.81	0.81	36	1
SE234116.001	LB253395.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE234116.010	LB253395.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

#### Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234133.012	LB253223.020	Arsenic, As	mg/L	0.02	<0.02	<0.02	200	0
		Cadmium, Cd	mg/L	0.001	<0.001	<0.001	200	0
		Chromium, Cr	mg/L	0.005	<0.005	<0.005	200	0
		Copper, Cu	mg/L	0.005	<0.005	<0.005	200	0
		Lead, Pb	mg/L	0.02	<0.02	<0.02	200	0
		Nickel, Ni	mg/L	0.005	<0.005	<0.005	200	0
		Zinc, Zn	mg/L	0.01	<0.01	<0.01	200	0

#### Moisture Content

Method: ME-(AU)-[ENV]AN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.010	LB253181.011	% Moisture	%w/w	1	20.2	19.6	35	3
SE234102.020	LB253181.022	% Moisture	%w/w	1	21.3	26.0	34	20
SE234102.028	LB253181.031	% Moisture	%w/w	1	21.5	24.9	34	15

#### OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.014	LB253179.014	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	0.2	0.2	90	9
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.05	0.84	0.88	42	5
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	1	1	127	3
		Total OC VIC EPA	mg/kg	1	1	1	127	3
		Surrogates						
		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30	0
SE234102.028	LB253179.025	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Lindane	mg/kg	0.1	<0.1	<0.1	200	0



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.028	LB253179.025	Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
		Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
		Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
		Dieldrin	mg/kg	0.05	<0.05	<0.05	200	0
		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
		Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
		Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
		Mirex	mg/kg	0.1	<0.1	<0.1	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30

#### PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE234102.014	LB253179.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0	
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0	
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0	
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0	
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0	
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0	
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0	
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0	
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0	
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0	
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0	
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0	
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0	
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0	
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0	
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0	
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0	
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0	
		Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0	
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0	
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0	
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0	
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	3
SE234102.028	LB253179.025	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	

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.028	LB253179.025	Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
		Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	0
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	1

#### PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234133.012	LB253239.019	Naphthalene	µg/L	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	µg/L	0.1	<0.1	<0.1	200	0
		Acenaphthylene	µg/L	0.1	<0.1	<0.1	200	0
		Acenaphthene	µg/L	0.1	<0.1	<0.1	200	0
		Fluorene	µg/L	0.1	<0.1	<0.1	200	0
		Phenanthrene	µg/L	0.1	<0.1	<0.1	200	0
		Anthracene	µg/L	0.1	<0.1	<0.1	200	0
		Fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
		Pyrene	µg/L	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	µg/L	0.1	<0.1	<0.1	200	0
		Chrysene	µg/L	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	µg/L	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	µg/L	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	µg/L	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	µg/L	0.1	<0.1	<0.1	200	0
		Benzo(ghi)perylene	µg/L	0.1	<0.1	<0.1	200	0
		d5-nitrobenzene (Surrogate)	µg/L	-	0.2	0.2	30	13
		2-fluorobiphenyl (Surrogate)	µg/L	-	0.3	0.3	30	0
		d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.4	30	13

#### PCBs in Soil

Method: ME-(AU)-ENVJAN420

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.014	LB253179.014	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
SE234102.028	LB253179.025	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	0
		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

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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]AN240

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.028	LB253179.025	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	mg/kg	-	0	0	30	2

#### pH in soil (1:5)

Method: ME-(AU)-[ENV]AN101

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.011	LB253251.014	pH	pH Units	0.1	5.2	5.3	32	2
SE234102.021	LB253251.025	pH	pH Units	0.1	8.2	8.0	31	3
SE234102.026	LB253254.009	pH	pH Units	0.1	7.2	7.8	31	8

#### Total Cyanide in soil by Discrete Analyser

Method: ME-(AU)-[ENV]AN077/AN287

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.017	LB253468.018	Total Cyanide	mg/kg	0.5	<0.5	<0.5	200	0
SE234133.010	LB253366.021	Total Cyanide	mg/kg	0.5	<0.5	<0.5	200	0

#### Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.011	LB253356.014	Total Phenols	mg/kg	5	<5	<5	200	0
SE234102.021	LB253356.025	Total Phenols	mg/kg	5	<5	<5	143	0
SE234102.027	LB253355.021	Total Phenols	mg/kg	5	<5	<5	200	0
SE234133.011	LB253355.020	Total Phenols	mg/kg	5	<5	<5	143	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 %
SE234102.010	LB253329.014	Arsenic, As	mg/kg	1	3	2	70	2
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	2.6	2.6	49	1
		Copper, Cu	mg/kg	0.5	5.7	5.6	39	2
		Nickel, Ni	mg/kg	0.5	0.9	1.0	82	7
		Lead, Pb	mg/kg	1	14	13	38	7
		Titanium, Ti	mg/kg	10	<10	<10	173	0
		Zinc, Zn	mg/kg	2	16	22	40	30
SE234102.019	LB253329.024	Arsenic, As	mg/kg	1	4	3	58	5
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	1.1	1.0	79	12
		Copper, Cu	mg/kg	0.5	0.6	<0.5	122	25
		Nickel, Ni	mg/kg	0.5	0.6	0.5	122	7
		Lead, Pb	mg/kg	1	1	1	107	6
		Titanium, Ti	mg/kg	10	<10	<10	200	0
		Zinc, Zn	mg/kg	2	4	4	76	2
SE234116.001	LB253368.014	Arsenic, As	mg/kg	1	3	3	63	29
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	11	8.5	35	23
		Copper, Cu	mg/kg	0.5	5.3	4.8	40	9
		Nickel, Ni	mg/kg	0.5	4.6	3.9	42	16
		Lead, Pb	mg/kg	1	35	35	33	2
		Zinc, Zn	mg/kg	2	36	32	36	11
SE234116.010	LB253368.024	Arsenic, As	mg/kg	1	3	3	66	19
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	11	9.5	35	16
		Copper, Cu	mg/kg	0.5	6.4	5.3	39	19
		Nickel, Ni	mg/kg	0.5	4.7	4.6	41	2
		Lead, Pb	mg/kg	1	58	33	32	53 @
		Zinc, Zn	mg/kg	2	37	30	36	21

#### TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR
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Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE234102.014	LB253179.014	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	
SE234102.028	LB253179.025	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	

#### TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-ENVJAN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE234133.012	LB253239.019	TRH C10-C14	µg/L	50	<50	<50	200	0	
		TRH C15-C28	µg/L	200	<200	<200	200	0	
		TRH C29-C36	µg/L	200	<200	<200	200	0	
		TRH C37-C40	µg/L	200	<200	<200	200	0	
		TRH C10-C40	µg/L	320	<320	<320	200	0	
		TRH F Bands	TRH >C10-C16	µg/L	60	<60	<60	200	0
			TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60	<60	200	0
			TRH >C16-C34 (F3)	µg/L	500	<500	<500	200	0
			TRH >C34-C40 (F4)	µg/L	500	<500	<500	200	0

#### VOC's in Soil

Method: ME-(AU)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.011	LB253180.015	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	200	0
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	200	0
			Chloromethane	mg/kg	1	<1	<1	200	0
		Aliphatics	Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	200	0
			Bromomethane	mg/kg	1	<1	<1	200	0
			Chloroethane	mg/kg	1	<1	<1	200	0
			Trichlorofluoromethane	mg/kg	1	<1	<1	200	0
			Iodomethane	mg/kg	5	<5	<5	200	0
			1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	200	0
			Allyl chloride	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			Bromochloromethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	200	0
			Dibromomethane	mg/kg	0.1	<0.1	<0.1	200	0
			Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE234102.011	LB253180.015	Halogenated Aliphatics	Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	200	0	
			1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0	
			cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	200	0	
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0	
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	200	0	
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	200	0	
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	200	0	
		Halogenated Aromatics	Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	200	0	
			Chlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			Bromobenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	200	0	
			4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	200	0	
			1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0	
		Monocyclic Aromatic	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	
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	200	0	
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	200	0	
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	200	0	
			n-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0	
			Nitrogenous Compounds	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	200	0
				2-nitropropane	mg/kg	10	<10	<10	200	0
			Oxygenated Compounds	Acetone (2-propanone)	mg/kg	10	<10	<10	200	0
		MtBE (Methyl-tert-butyl ether)		mg/kg	0.1	<0.1	<0.1	200	0	
		Vinyl acetate		mg/kg	10	<10	<10	200	0	
		MEK (2-butanone)		mg/kg	10	<10	<10	200	0	
		MIBK (4-methyl-2-pentanone)		mg/kg	1	<1	<1	200	0	
		2-hexanone (MBK)		mg/kg	5	<5	<5	200	0	
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	0	
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	200	0	
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	8.2	50	1	
			d8-toluene (Surrogate)	mg/kg	-	8.1	8.2	50	1	
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	8.9	50	2	
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0	
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0	
			Total VOC*	mg/kg	24	<24	<24	200	0	
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3	<3	200	0	
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0	
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0	
		Trihalomethan es	Chloroform	mg/kg	0.1	<0.1	<0.1	200	0	
			Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	200	0	
			Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	200	0	
			Bromoform	mg/kg	0.1	<0.1	<0.1	200	0	
SE234102.021	LB253180.038	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0	
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0	
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0	
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0	
			1,2-dibromoethane (EDB)	mg/kg	0.1	<0.1	<0.1	200	0	
		Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	200	0	
			Aliphatics	Chloromethane	mg/kg	1	<1	<1	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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)-ENVJAN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234102.021	LB253180.038	Halogenated	Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	200	0
		Aliphatics	Bromomethane	mg/kg	1	<1	<1	200	0
			Chloroethane	mg/kg	1	<1	<1	200	0
			Trichlorofluoromethane	mg/kg	1	<1	<1	200	0
			Iodomethane	mg/kg	5	<5	<5	200	0
			1,1-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	200	0
			Allyl chloride	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	200	0
			Bromochloromethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	200	0
			Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	200	0
			Dibromomethane	mg/kg	0.1	<0.1	<0.1	200	0
			Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	200	0
			1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	200	0
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	200	0
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	200	0
		Halogenated	Chlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatics	Bromobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	200	0
			4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	200	0
			1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	200	0
		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
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	200	0
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	200	0
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	200	0
			n-butylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
		Nitrogenous	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	200	0
		Compounds	2-nitropropane	mg/kg	10	<10	<10	200	0
		Oxygenated	Acetone (2-propanone)	mg/kg	10	<10	<10	200	0
		Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	200	0
			Vinyl acetate	mg/kg	10	<10	<10	200	0
			MEK (2-butanone)	mg/kg	10	<10	<10	200	0
			MIBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	200	0
			2-hexanone (MBK)	mg/kg	5	<5	<5	200	0
		Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	200	0
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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 %
SE234102.021	LB253180.038	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.9	8.0	50	2
			d8-toluene (Surrogate)	mg/kg	-	7.8	7.8	50	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.1	8.0	50	1
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
			Total VOC*	mg/kg	24	<24	<24	200	0
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3	<3	200	0
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	<1.8	<1.8	200	0
			Trihalomethanes	Chloroform	mg/kg	0.1	<0.1	<0.1	200
		Bromodichloromethane		mg/kg	0.1	<0.1	<0.1	200	0
		Chlorodibromomethane		mg/kg	0.1	<0.1	<0.1	200	0
		Bromoform		mg/kg	0.1	<0.1	<0.1	200	0
		SE234102.024	LB253180.039	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1	<0.1
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	-	8.1	8.0	50	1
	d8-toluene (Surrogate)			mg/kg	-	8.1	8.1	50	0
	Bromofluorobenzene (Surrogate)			mg/kg	-	8.6	8.7	50	1
Totals	Total Xylenes			mg/kg	0.3	<0.3	<0.3	200	0
	Total BTEX			mg/kg	0.6	<0.6	<0.6	200	0

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE234133.012	LB253228.022	Monocyclic Aromatic	Benzene	µg/L	0.5	<0.5	<0.5	200	0	
			Toluene	µg/L	0.5	<0.5	<0.5	200	0	
			Ethylbenzene	µg/L	0.5	<0.5	<0.5	200	0	
			m/p-xylene	µg/L	1	<1	<1	200	0	
			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	-	10.0	10.0	30	0
				d8-toluene (Surrogate)	µg/L	-	9.7	9.9	30	2
		Bromofluorobenzene (Surrogate)		µg/L	-	9.1	9.3	30	2	

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE234102.011	LB253180.015	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	-	8.3	8.2	30	1
			d8-toluene (Surrogate)	mg/kg	-	8.1	8.2	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	8.9	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
SE234102.021	LB253180.036	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	-	7.9	8.0	30	2
			d8-toluene (Surrogate)	mg/kg	-	7.8	7.8	30	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.1	8.0	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
SE234102.024	LB253180.037	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	8.0	30	1
			d8-toluene (Surrogate)	mg/kg	-	8.1	8.1	30	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.6	8.7	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

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula:  $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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:  $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

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 identifier 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

Method: ME-(AU)-ENVJAN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE234133.012	LB253228.022	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	-	10.0	10.0	30	0
		d8-toluene (Surrogate)	µg/L	-	9.7	9.9	30	2
		Bromofluorobenzene (Surrogate)	µg/L	-	9.1	9.3	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.

## Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-[ENV]AN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253518.002	Exchangeable Sodium, Na	meq/100g	0.01	0.22	0.194	80 - 120	113
	Exchangeable Potassium, K	meq/100g	0.01	0.59	0.63	80 - 120	94
	Exchangeable Calcium, Ca	meq/100g	0.01	6.3	6.3	80 - 120	100
	Exchangeable Magnesium, Mg	meq/100g	0.02	1.0	1.11	80 - 120	93
LB253518.026	Exchangeable Sodium, Na	meq/100g	0.01	0.21	0.194	80 - 120	106
	Exchangeable Potassium, K	meq/100g	0.01	0.59	0.63	80 - 120	94
	Exchangeable Calcium, Ca	meq/100g	0.01	6.2	6.3	80 - 120	99
	Exchangeable Magnesium, Mg	meq/100g	0.02	1.0	1.11	80 - 120	93

## Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253328.002	Mercury	mg/kg	0.05	0.22	0.2	70 - 130	111
LB253395.002	Mercury	mg/kg	0.05	0.22	0.2	70 - 130	109

## Metals in Water (Dissolved) by ICPOES

Method: ME-(AU)-[ENV]AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253223.002	Arsenic, As	mg/L	0.02	0.52	0.5	80 - 120	104
	Cadmium, Cd	mg/L	0.001	0.46	0.5	80 - 120	92
	Chromium, Cr	mg/L	0.005	0.50	0.5	80 - 120	100
	Copper, Cu	mg/L	0.005	0.51	0.5	80 - 120	101
	Lead, Pb	mg/L	0.02	0.49	0.5	80 - 120	97
	Nickel, Ni	mg/L	0.005	0.48	0.5	80 - 120	96
	Titanium, Ti	mg/L	0.005	0.50	0.5	80 - 120	100
	Zinc, Zn	mg/L	0.01	0.50	0.5	80 - 120	101

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253179.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	86
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	87
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	83
	Dieldrin	mg/kg	0.05	0.16	0.2	60 - 140	82
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	91
	p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	61
Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	102

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253179.002	Naphthalene	mg/kg	0.1	4.7	4	60 - 140	117
	Acenaphthylene	mg/kg	0.1	4.6	4	60 - 140	114
	Acenaphthene	mg/kg	0.1	4.6	4	60 - 140	116
	Phenanthrene	mg/kg	0.1	4.6	4	60 - 140	114
	Anthracene	mg/kg	0.1	4.6	4	60 - 140	115
	Fluoranthene	mg/kg	0.1	4.4	4	60 - 140	111
	Pyrene	mg/kg	0.1	4.9	4	60 - 140	123
	Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	102
	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	92
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	100
Surrogates	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87

## PAH (Polynuclear Aromatic Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253239.002	Naphthalene	µg/L	0.1	30	40	60 - 140	74
	Acenaphthylene	µg/L	0.1	34	40	60 - 140	86
	Acenaphthene	µg/L	0.1	34	40	60 - 140	85
	Phenanthrene	µg/L	0.1	36	40	60 - 140	91
	Anthracene	µg/L	0.1	34	40	60 - 140	85
	Fluoranthene	µg/L	0.1	35	40	60 - 140	87
	Pyrene	µg/L	0.1	36	40	60 - 140	90
	Benzo(a)pyrene	µg/L	0.1	38	40	60 - 140	96
	d5-nitrobenzene (Surrogate)	µg/L	-	0.3	0.5	40 - 130	60
	2-fluorobiphenyl (Surrogate)	µg/L	-	0.3	0.5	40 - 130	66
Surrogates	d14-p-terphenyl (Surrogate)	µg/L	-	0.4	0.5	40 - 130	76

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 Method: ME-(AU)-[ENV]AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253179.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	102

## pH in soil (1:5) Method: ME-(AU)-[ENV]AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253251.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100
LB253254.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100

## Total Cyanide in soil by Discrete Analyser Method: ME-(AU)-[ENV]AN077/AN287

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253366.002	Total Cyanide	mg/kg	0.5	<0.5	0.25	70 - 130	95
LB253468.002	Total Cyanide	mg/kg	0.5	<0.5	0.25	70 - 130	95

## Total Phenolics in Soil Method: ME-(AU)-[ENV]AN295

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253355.002	Total Phenols	mg/kg	5	19	20	80 - 120	95
LB253356.002	Total Phenols	mg/kg	5	19	20	80 - 120	97

## 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 %
LB253329.002	Arsenic, As	mg/kg	1	370	318.22	80 - 120	115
	Cadmium, Cd	mg/kg	0.3	4.9	4.81	70 - 130	103
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	107
	Copper, Cu	mg/kg	0.5	330	290	80 - 120	114
	Nickel, Ni	mg/kg	0.5	200	187	80 - 120	105
	Lead, Pb	mg/kg	1	94	89.9	80 - 120	105
	Titanium, Ti	mg/kg	10	960	926	80 - 120	103
	Zinc, Zn	mg/kg	2	300	273	80 - 120	108
LB253368.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	107
	Cadmium, Cd	mg/kg	0.3	5.0	4.81	70 - 130	103
	Chromium, Cr	mg/kg	0.5	39	38.31	80 - 120	103
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	108
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	100
	Lead, Pb	mg/kg	1	88	89.9	80 - 120	98
	Titanium, Ti	mg/kg	10	890	926	80 - 120	96
	Zinc, Zn	mg/kg	2	280	273	80 - 120	102

## TRH (Total Recoverable Hydrocarbons) in Soil Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253179.002	TRH C10-C14	mg/kg	20	50	40	60 - 140	125
	TRH C15-C28	mg/kg	45	48	40	60 - 140	120
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	93
	TRH F Bands	mg/kg	25	50	40	60 - 140	125
	TRH >C10-C16	mg/kg	25	50	40	60 - 140	125
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	105
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	95

## TRH (Total Recoverable Hydrocarbons) in Water Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253239.002	TRH C10-C14	µg/L	50	1200	1200	60 - 140	100
	TRH C15-C28	µg/L	200	1500	1200	60 - 140	122
	TRH C29-C36	µg/L	200	1200	1200	60 - 140	102
	TRH F Bands	µg/L	60	1300	1200	60 - 140	109
	TRH >C10-C16	µg/L	500	1400	1200	60 - 140	119
	TRH >C34-C40 (F4)	µg/L	500	590	600	60 - 140	98

## VOC's in Soil Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB253180.002	Halogenated	1,1-dichloroethene	mg/kg	0.1	4.3	5	60 - 140	85
	Aliphatics	1,2-dichloroethane	mg/kg	0.1	4.8	5	60 - 140	97
		Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	4.8	5	60 - 140	95

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 %
LB253180.002	Halogenated	Chlorobenzene	mg/kg	0.1	5.0	5	60 - 140 <b>101</b>
	Monocyclic	Benzene	mg/kg	0.1	4.2	5	60 - 140 <b>84</b>
	Aromatic	Toluene	mg/kg	0.1	4.4	5	60 - 140 <b>87</b>
		Ethylbenzene	mg/kg	0.1	4.0	5	60 - 140 <b>79</b>
		m/p-xylene	mg/kg	0.2	8.2	10	60 - 140 <b>82</b>
		o-xylene	mg/kg	0.1	4.3	5	60 - 140 <b>86</b>
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	10	70 - 130 <b>85</b>
		d8-toluene (Surrogate)	mg/kg	-	9.1	10	70 - 130 <b>91</b>
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	10	70 - 130 <b>85</b>
	Trihalomethan	Chloroform	mg/kg	0.1	5.4	5	60 - 140 <b>108</b>

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB253228.002	Monocyclic	Benzene	µg/L	0.5	52	45.45	60 - 140 <b>114</b>
	Aromatic	Toluene	µg/L	0.5	52	45.45	60 - 140 <b>115</b>
		Ethylbenzene	µg/L	0.5	52	45.45	60 - 140 <b>114</b>
		m/p-xylene	µg/L	1	100	90.9	60 - 140 <b>113</b>
		o-xylene	µg/L	0.5	52	45.45	60 - 140 <b>114</b>
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.6	10	60 - 140 <b>96</b>
		d8-toluene (Surrogate)	µg/L	-	10.5	10	70 - 130 <b>105</b>
		Bromofluorobenzene (Surrogate)	µg/L	-	11.2	10	70 - 130 <b>112</b>

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB253180.002	TRH C6-C10	mg/kg	25	71	92.5	60 - 140	77	
	TRH C6-C9	mg/kg	20	57	80	60 - 140	71	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	10	70 - 130	85
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	10	70 - 130	85
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/ka	25	46	62.5	60 - 140	74

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB253228.002	TRH C6-C10	µg/L	50	920	946.63	60 - 140	98	
	TRH C6-C9	µg/L	40	800	818.71	60 - 140	98	
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.6	10	60 - 140	96
		d8-toluene (Surrogate)	µg/L	-	10.5	10	70 - 130	105
		Bromofluorobenzene (Surrogate)	µg/L	-	11.2	10	70 - 130	112
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	610	639.67	60 - 140	96

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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

## Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Porth)/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE234102.029	LB253229.004	Mercury	mg/L	0.0001	0.0018	<0.0001	0.008	92

## OC Pesticides in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE234102.004	LB253179.029	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	<0.1	0.2	84
		Aldrin	mg/kg	0.1	<0.1	0.2	81
		Beta BHC	mg/kg	0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	<0.1	0.2	81
		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	0.05	<0.05	0.2	77
		Endrin	mg/kg	0.2	<0.2	0.2	90
		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	0.2	72
		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	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	87

## PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE234102.004	LB253179.027	Naphthalene	mg/kg	0.1	<0.1	4	117
		2-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	<0.1	4	113
		Acenaphthene	mg/kg	0.1	<0.1	4	115
		Fluorene	mg/kg	0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	0.3	4	106
		Anthracene	mg/kg	0.1	0.1	4	110
		Fluoranthene	mg/kg	0.1	0.5	4	100
		Pyrene	mg/kg	0.1	0.5	4	116
		Benzo(a)anthracene	mg/kg	0.1	0.3	-	-
		Chrysene	mg/kg	0.1	0.2	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	0.3	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	0.2	4	93
		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	0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	0.3	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	0.4	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	0.4	-	-
		Total PAH (18)	mg/kg	0.8	2.9	-	-

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 identifier 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	Original	Spike	Recovery%	
SE234102.004	LB253179.027	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	-	99
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	-	107
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	-	93

## PCBs in Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE234102.004	LB253179.029	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	0.4	98
		Arochlor 1262	mg/kg	0.2	<0.2	-	-
		Arochlor 1268	mg/kg	0.2	<0.2	-	-
		Total PCBs (Arochlors)	mg/kg	1	<1	-	-
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	-	87

## Total Phenolics in Soil

Method: ME-(AU)-[ENV]AN295

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE234102.001	LB253356.004	Total Phenols	mg/kg	5	20	<5.0	20	95
SE234133.001	LB253355.004	Total Phenols	mg/kg	5	20	<5.0	20	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%
SE234102.001	LB253329.004	Arsenic, As	mg/kg	1	63	16	50	93
		Cadmium, Cd	mg/kg	0.3	46	0.6	50	90
		Chromium, Cr	mg/kg	0.5	57	12	50	90
		Copper, Cu	mg/kg	0.5	68	21	50	95
		Nickel, Ni	mg/kg	0.5	52	4.4	50	95
		Lead, Pb	mg/kg	1	87	51	50	72
		Titanium, Ti	mg/kg	10	49	22	50	54 @
		Zinc, Zn	mg/kg	2	230	200	50	41 @
SE234102.020	LB253368.004	Arsenic, As	mg/kg	1	71	6	50	131 @
		Cadmium, Cd	mg/kg	0.3	59	<0.3	50	118
		Chromium, Cr	mg/kg	0.5	72	16	50	112
		Copper, Cu	mg/kg	0.5	78	14	50	129
		Nickel, Ni	mg/kg	0.5	73	13	50	120
		Lead, Pb	mg/kg	1	77	19	50	116
		Titanium, Ti	mg/kg	10	120	79	50	82
		Zinc, Zn	mg/kg	2	160	76	50	170 @

## TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE234102.004	LB253179.027	TRH C10-C14	mg/kg	20	<20	40	115
		TRH C15-C28	mg/kg	45	<45	40	103
		TRH C29-C36	mg/kg	45	<45	40	113
		TRH C37-C40	mg/kg	100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	<110	-	-
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	-	-
	TRH F Bands	TRH >C10-C16	mg/kg	25	<25	40	123
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	-	-
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	88
		TRH >C34-C40 (F4)	mg/kg	120	<120	-	-

## VOC's in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE234102.001	LB253180.004	Fumigants	2,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-
			1,2-dichloropropane	mg/kg	0.1	<0.1	<0.1	-	-
			cis-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-
			trans-1,3-dichloropropene	mg/kg	0.1	<0.1	<0.1	-	-
			1,2-dibromoethane (EDB)	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 identifier 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%
SE234102.001	LB253180.004	Halogenated	Dichlorodifluoromethane (CFC-12)	mg/kg	1	<1	<1	-
		Aliphatics	Chloromethane	mg/kg	1	<1	<1	-
			Vinyl chloride (Chloroethene)	mg/kg	0.1	<0.1	<0.1	-
			Bromomethane	mg/kg	1	<1	<1	-
			Chloroethane	mg/kg	1	<1	<1	-
			Trichlorofluoromethane	mg/kg	1	<1	<1	-
			Iodomethane	mg/kg	5	<5	<5	-
			1,1-dichloroethene	mg/kg	0.1	4.2	<0.1	5
			Dichloromethane (Methylene chloride)	mg/kg	0.5	<0.5	<0.5	-
			Allyl chloride	mg/kg	0.1	<0.1	<0.1	-
			trans-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-
			1,1-dichloroethane	mg/kg	0.1	<0.1	<0.1	-
			cis-1,2-dichloroethene	mg/kg	0.1	<0.1	<0.1	-
			Bromochloromethane	mg/kg	0.1	<0.1	<0.1	-
			1,2-dichloroethane	mg/kg	0.1	5.0	<0.1	5
			1,1,1-trichloroethane	mg/kg	0.1	<0.1	<0.1	-
			1,1-dichloropropene	mg/kg	0.1	<0.1	<0.1	-
			Carbon tetrachloride	mg/kg	0.1	<0.1	<0.1	-
			Dibromomethane	mg/kg	0.1	<0.1	<0.1	-
			Trichloroethene (Trichloroethylene -TCE)	mg/kg	0.1	4.9	<0.1	5
			1,1,2-trichloroethane	mg/kg	0.1	<0.1	<0.1	-
			1,3-dichloropropane	mg/kg	0.1	<0.1	<0.1	-
			Tetrachloroethene (Perchloroethylene,PCE)	mg/kg	0.1	<0.1	<0.1	-
			1,1,1,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-
			cis-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-
			1,1,2,2-tetrachloroethane	mg/kg	0.1	<0.1	<0.1	-
			1,2,3-trichloropropane	mg/kg	0.1	<0.1	<0.1	-
			trans-1,4-dichloro-2-butene	mg/kg	1	<1	<1	-
			1,2-dibromo-3-chloropropane	mg/kg	0.1	<0.1	<0.1	-
			Hexachlorobutadiene	mg/kg	0.1	<0.1	<0.1	-
		Halogenated	Chlorobenzene	mg/kg	0.1	5.2	<0.1	5
		Aromatics	Bromobenzene	mg/kg	0.1	<0.1	<0.1	-
			2-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-
			4-chlorotoluene	mg/kg	0.1	<0.1	<0.1	-
			1,3-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,4-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2-dichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2,4-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2,3-trichlorobenzene	mg/kg	0.1	<0.1	<0.1	-
			Benzene	mg/kg	0.1	4.3	<0.1	5
			Toluene	mg/kg	0.1	5.2	<0.1	5
		Monocyclic Aromatic	Ethylbenzene	mg/kg	0.1	5.6	<0.1	5
			m/p-xylene	mg/kg	0.2	11	<0.2	10
			o-xylene	mg/kg	0.1	6.1	<0.1	5
			Styrene (Vinyl benzene)	mg/kg	0.1	<0.1	<0.1	-
			Isopropylbenzene (Cumene)	mg/kg	0.1	<0.1	<0.1	-
			n-propylbenzene	mg/kg	0.1	<0.1	<0.1	-
			1,3,5-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-
			tert-butylbenzene	mg/kg	0.1	<0.1	<0.1	-
			1,2,4-trimethylbenzene	mg/kg	0.1	<0.1	<0.1	-
			sec-butylbenzene	mg/kg	0.1	<0.1	<0.1	-
			p-isopropyltoluene	mg/kg	0.1	<0.1	<0.1	-
			n-butylbenzene	mg/kg	0.1	<0.1	<0.1	-
		Nitrogenous	Acrylonitrile	mg/kg	0.1	<0.1	<0.1	-
		Compounds	2-nitropropane	mg/kg	10	<10	<10	-
		Oxygenated	Acetone (2-propanone)	mg/kg	10	<10	<10	-
		Compounds	MtBE (Methyl-tert-butyl ether)	mg/kg	0.1	<0.1	<0.1	-
			Vinyl acetate	mg/kg	10	<10	<10	-
			MEK (2-butanone)	mg/kg	10	<10	<10	-
			MBK (4-methyl-2-pentanone)	mg/kg	1	<1	<1	-
			2-hexanone (MBK)	mg/kg	5	<5	<5	-

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 identifier 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%
SE234102.001	LB253180.004	Polycyclic	Naphthalene (VOC)	mg/kg	0.1	<0.1	<0.1	-
		Sulphonated	Carbon disulfide	mg/kg	0.5	<0.5	<0.5	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	8.1	10
			d8-toluene (Surrogate)	mg/kg	-	8.3	8.2	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.4	8.7	10
		Totals	Total Xylenes	mg/kg	0.3	17	<0.3	-
			Total BTEX	mg/kg	0.6	32	<0.6	-
			Total VOC*	mg/kg	24	58	<24	-
			Total Volatile Chlorinated Hydrocarbons*	mg/kg	3	<3.0	<3.0	-
			Total Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	25	<1.8	-
			Total Other Chlorinated Hydrocarbons VIC EPA*	mg/kg	1.8	25	<1.8	-
		Trihalomethanes	Chloroform	mg/kg	0.1	5.4	<0.1	5
			Bromodichloromethane	mg/kg	0.1	<0.1	<0.1	-
			Chlorodibromomethane	mg/kg	0.1	<0.1	<0.1	-
			Bromoform	mg/kg	0.1	<0.1	<0.1	-

## VOCs in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE234084.024	LB253228.023	Monocyclic	Benzene	µg/L	0.5	59	<0.5	45.45
			Toluene	µg/L	0.5	61	<0.5	45.45
		Aromatic	Ethylbenzene	µg/L	0.5	60	<0.5	45.45
			m/p-xylene	µg/L	1	110	<1	90.9
			o-xylene	µg/L	0.5	61	<0.5	45.45
		Polycyclic	Naphthalene (VOC)	µg/L	0.5	58	<0.5	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.7	9.8	-
			d8-toluene (Surrogate)	µg/L	-	10.3	10.1	-
			Bromofluorobenzene (Surrogate)	µg/L	-	10.9	10.8	-

## Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE234102.001	LB253180.005	Surrogates	TRH C6-C10	mg/kg	25	76	<25	92.5
			TRH C6-C9	mg/kg	20	67	<20	80
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.5	8.1	10
			d8-toluene (Surrogate)	mg/kg	-	8.3	8.2	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.4	8.7	-
		VPH F	Benzene (F0)	mg/kg	0.1	4.3	<0.1	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	44	<25	62.5

## Volatile Petroleum Hydrocarbons in Water

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE234084.024	LB253228.023	Surrogates	TRH C6-C10	µg/L	50	920	<50	946.63
			TRH C6-C9	µg/L	40	1.1	<40	818.71
		Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	9.8	-	97
			d8-toluene (Surrogate)	µg/L	-	10.1	-	103
			Bromofluorobenzene (Surrogate)	µg/L	-	10.8	-	109
		VPH F	Benzene (F0)	µg/L	0.5		<0.5	-
		Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	570	<50	639.67



Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula:  $RPD = |OriginalResult - ReplicateResult| \times 100 / Mean$

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:  $MAD = 100 \times SDL / Mean + LR$

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 identifier 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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Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client only. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law .

This test report shall not be reproduced, except in full.

**Results Required By: Normal Turnaround**  
**Except pH Results Required By 3 days**

**Date: Wednesday, 13 July 2022**

**Your Reference No.:**

**TO: SGS**

ALEXANDRIA NSW 2015

**Ref No: 20219/5**

**Location:** Narwee

**Project Manager: ANWAR BAREKHUTLA**

**Location:** Narwee

Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals+ TRH BTEX PAH	CL16 Metals+ TRH BTEX PAH OC PCB	Ba B Co Mn Se	Ti	BTEX	TRH & BTEX	PAH	OCP	PCB	OCP & PCB	OPPA&C B	OCP,OPP & PCB	Cyanide	VOC	Phenol	Formaldehy de	TCLP PAH	TCLP	Metals (fetest)
BH101	0.0-0.15	6/07/2022	G		Clay		✓	✓			✓		✓									✓	✓	✓				
BH101	0.45-0.55	6/07/2022	G		Clay																							
BH102	0.15-0.25	6/07/2022	G		Clay	✓	✓	✓					✓										✓	✓				
BH103	0.15-0.25	6/07/2022	G		Clay		✓	✓		✓														✓				
BH104	0.04-0.08	6/07/2022	G		Gravel		✓	✓			✓		✓									✓	✓	✓				
BH105	0.04-0.19	6/07/2022	G		Sand		✓	✓			✓		✓									✓	✓	✓				
BH105	0.25-0.35	6/07/2022	G		Clay																							
BH106	0.0-0.15	6/07/2022	G		Gravel		✓	✓			✓		✓									✓	✓	✓				
BH106	0.35-0.45	6/07/2022	G		Clay																							
BH107	0.11-0.41	6/07/2022	G		Clay	✓		✓			✓		✓									✓	✓	✓				
BH107	0.61-0.8	6/07/2022	G		Clay																							
BH107	0.85-0.95	6/07/2022	G		Clay																							
BH108	0.15-0.25	6/07/2022	G		Clay	✓		✓					✓										✓	✓				
BH109	0.0-0.15	6/07/2022	G		Sand		✓	✓					✓									✓	✓	✓				
BH109	0.15-0.25	6/07/2022	G		Sand		✓	✓					✓									✓	✓	✓				
BH109	0.3-0.4	6/07/2022	G		Clay																							
BH110	0.15-0.25	6/07/2022	G		Clay	✓		✓					✓										✓	✓				
BH111	0.12-0.3	6/07/2022	G		Sand			✓			✓		✓									✓	✓	✓				
BH111	0.35-0.45	6/07/2022	G		Clay																							
BH112	0.14-0.3	6/07/2022	G		Sand			✓					✓									✓	✓	✓				
BH112	0.35-0.45	6/07/2022	G		Clay																							
BH113	0.17-0.32	6/07/2022	G		Clay	✓		✓															✓	✓				
BH114	0.15-0.25	6/07/2022	G		Clay	✓		✓															✓	✓	✓			
BH115	0.0-0.15	6/07/2022	G		Sand			✓					✓									✓	✓	✓				

**SE234102**





GEOTECHNIQUE PTY LTD

1 LEMKO PLACE PENRITH NSW 2750

CHAIN OF CUSTODY

Results Required By: Normal Turnaround  
Except pH Results Required By 3 days

Date: Friday, 15 July 2022  
Date: Wednesday, 13 July 2022

Your Reference No.:

TO: SGS UNIT 16, 33 MADDOX STREET ALEXANDRIA NSW 2015										Sampled By: SS										Ref No: 2021915										Project Manager: ANWAR BARBHUTIA																																																	
Location: ALEXANDRIA NSW 2015										Location: Narwee																																																																					
Location	Depth (m)	Date	Soil	Water	Material	Metals As Cd Cr Cu Pb Hg Ni Zn	pH	CEC	CL8 TRH BTEX PAH	CL10 Metals* TRH BTEX PAH	CL16 Metals* TRH BTEX PAH OC PCB	Ba B Co Mn Se	TI	BTEX	TRH & BTEX	PAH	OCP	PCB	OCP & PCB	OPP&PC B	OCP,OPP & PCB	Cyanide	VOC	Phenol	Formaldehy de	TCLP PAH	TCLP	Metals (Releva)																																																			
FCP1	0.0-0.15	6/07/2022	G		Gravel	✓	✓	✓					✓																																																																		
FCP1	0.2-0.3	6/07/2022	G		Clay																																																																										
DDS1		6/07/2022	G		Clay	✓							✓												✓																																																						
DDS2		6/07/2022	G		Clay								✓												✓																																																						
RS1		6/07/2022		VIA-VIG						✓			✓																																																																		
TS1		6/07/2022	Vial										✓																																																																		
Relinquished by:																														Received by:																																																	
Name: ANWAR BARBHUTIA										Signature: AB										Date: 6/07/2022										Name: Emily Yu										Signature: Ebra										Date: 6/7/2022																													
WQ: Water sample (glass bottle)										G										Soil sample (glass jar)										FCP										Fibro Cement Piece (plastic bag)										✓										Test required																			
WP: Water sample (plastic bottle)										P										Soil sample (plastic bag)																																																											



## SAMPLE RECEIPT ADVICE

SE234102

### CLIENT DETAILS

Contact Anwar Barbhuyia  
Client Geotechnique  
Address P.O. Box 880  
PENRITH NSW 2751

Telephone 02 4722 2700  
Facsimile 02 4722 6161  
Email anwar@geotech.com.au

Project **20219/5 Narwee**  
Order Number **20219/5**  
Samples 30

### 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 8/7/2022  
Report Due Fri 15/7/2022  
SGS Reference **SE234102**

### SUBMISSION DETAILS

This is to confirm that 30 samples were received on Friday 8/7/2022. Results are expected to be ready by COB Friday 15/7/2022. Please quote SGS reference SE234102 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	29 Clay/Gravel/Sand , 1 W:
Date documentation received	8/7/2022@2:40pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	4.5°C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days/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

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

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## CLIENT DETAILS

Client **Geotechnique**

Project **20219/5 Narwee**

## SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Cyanide in soil by Discrete Analyser	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BH101 0.0-0.15	30	26	11	3	1	10	81	7
002	BH102 0.15-0.25	-	-	-	-	1	-	81	-
003	BH103 0.15-0.25	-	26	-	-	1	10	9	7
004	BH104 0.04-0.08	30	26	11	3	1	10	81	7
005	BH105 0.04-0.19	30	26	11	3	1	10	81	7
006	BH106 0.0-0.15	30	26	11	3	1	10	81	7
007	BH107 0.11-0.41	30	26	11	3	1	10	81	7
009	BH108 0.15-0.25	-	-	-	-	1	-	81	-
010	BH109 0.0-0.15	30	26	11	3	1	10	81	7
011	BH109 0.15-0.25	30	26	11	3	1	10	81	7
012	BH110 0.15-0.25	-	-	-	-	1	-	81	-
013	BH111 0.12-0.3	30	26	11	3	1	10	81	7
014	BH112 0.14-0.3	30	26	11	3	1	10	81	7
015	BH113 0.17-0.32	-	-	-	-	1	-	81	-
016	BH114 0.15-0.25	-	-	-	-	1	-	81	-
017	BH115 0.0-0.15	30	26	11	3	1	10	81	7
018	BH115 0.2-0.4	30	26	11	3	1	10	81	7
019	BH116 0.0-0.15	30	26	11	3	1	10	81	7
020	BH117 0.0-0.15	30	26	11	3	1	10	81	7
021	BH118 0.0-0.15	30	26	11	3	1	10	81	7
022	BH119 0.07-0.17	30	26	11	3	1	10	81	7
023	BH120 0.0-0.15	30	-	-	-	-	-	-	-
024	BH120 0.2-0.25	30	26	11	-	-	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

SE234102

### CLIENT DETAILS

Client **Geotechnique**

Project **20219/5 Narwee**

### SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Cyanide in soil by Discrete Analyser	Total Phenolics in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	BH121 0.0-0.15	30	-	-	-	-	-	-	-
027	DDS1	-	-	-	-	1	-	-	-
028	DSS2	30	26	11	3	1	10	11	7
030	TS1	-	-	-	-	-	-	11	-

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 .

### CLIENT DETAILS

Client **Geotechnique**

Project **20219/5 Narwee**

### SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Formaldehyde in Soil	Mercury in Soil	Moisture Content	pH in soil (1:5)	Total Recoverable Elements in Soil/Waste
001	BH101 0.0-0.15	13	-	1	1	1	8
002	BH102 0.15-0.25	13	-	1	1	1	8
003	BH103 0.15-0.25	13	1	1	1	1	8
004	BH104 0.04-0.08	13	-	1	1	1	8
005	BH105 0.04-0.19	13	-	1	1	1	8
006	BH106 0.0-0.15	13	-	1	1	1	8
007	BH107 0.11-0.41	13	-	1	1	1	8
008	BH107 0.61-0.8	-	-	1	1	-	8
009	BH108 0.15-0.25	13	-	1	1	1	8
010	BH109 0.0-0.15	13	-	1	1	1	8
011	BH109 0.15-0.25	13	-	1	1	1	8
012	BH110 0.15-0.25	13	-	1	1	1	8
013	BH111 0.12-0.3	13	-	1	1	1	8
014	BH112 0.14-0.3	13	1	1	1	1	8
015	BH113 0.17-0.32	13	-	1	1	1	8
016	BH114 0.15-0.25	13	1	1	1	1	8
017	BH115 0.0-0.15	13	1	1	1	1	8
018	BH115 0.2-0.4	13	-	1	1	1	8
019	BH116 0.0-0.15	13	-	1	1	1	8
020	BH117 0.0-0.15	13	1	1	1	1	8
021	BH118 0.0-0.15	13	-	1	1	1	8
022	BH119 0.07-0.17	13	-	1	1	1	8
023	BH120 0.0-0.15	13	-	1	1	1	7
024	BH120 0.2-0.25	13	-	1	1	1	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

SE234102

### CLIENT DETAILS

Client **Geotechnique**

Project **20219/5 Narwee**

### SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Mercury in Soil	Moisture Content	pH in soil (1:5)	Total Recoverable Elements in Soil/Waste
025	BH121 0.0-0.15	13	1	1	1	7
026	FCP1	13	1	1	1	8
027	DDS1	-	1	1	-	8
028	DSS2	-	1	1	-	8

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

SE234102

### CLIENT DETAILS

Client **Geotechnique**

Project **20219/5 Narwee**

### SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Metals in Water (Dissolved) by ICPOES	PAH (Polynuclear Aromatic Hydrocarbons) in Water	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
029	RS1	1	8	22	9	11	7

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

Our ref : ASET102801 / 105981 / 1 – 19  
 Your ref : 20219/5 - 59-67 Karne Street North Narwee  
**NATA Accreditation No: 14484**

13 July 2022

Geotechnique Pty Ltd  
 1 Lemko Place  
 Penrith NSW 2750

**Attn: Mr Anwar Barbhuyia**



**Accredited for compliance with ISO/IEC 17025 - Testing.**

Dear Anwar

## **Asbestos Identification**

This report presents the results of nineteen samples, forwarded by Geotechnique Pty Ltd on 11 July 2022, for analysis for asbestos.

**1.Introduction:** Nineteen samples forwarded were examined and analysed for the presence of asbestos on 11 and 12 July 2022.

**2. Methods :** The samples were examined under a Stereo Microscope and selected fibres were analysed by Polarized Light Microscopy in conjunction with Dispersion Staining method (**Australian Standard AS4964 - 2004 and Safer Environment Method 1 as the supplementary work instruction**) (**Qualitative Analysis only**).

The report also provides approximate weights and percentages, categories of asbestos forms appearing in the sample, such as **AF**(Asbestos Fines), **FA**(Friable Asbestos and **ACM** (Asbestos Containing Material), also satisfying the requirements of the NEPM Guidelines).

**3. Results :** **Sample No. 1. ASET102801 / 105981 / 1. BH101 - 0.0-0.15.**  
 Approx dimensions 10.0 cm x 10.0 cm x 7.0 cm  
 Approximate total dry weight of soil = 692.0g.  
 The sample consisted of a mixture of clayish sandy soil, organic fibres, fragments of aluminium foil and plastic, animal matter, stones and plant matter.  
**No asbestos detected.**

**Sample No. 2. ASET102801 / 105981 / 2. BH104 - 0.04-0.08.**  
 Approx dimensions 10.0 cm x 10.0 cm x 9.8 cm  
 Approximate total dry weight of soil = 982.0g.  
 The sample consisted of a mixture of clayish sandy soil, organic fibres, fragments of glass and plaster cement, stones and plant matter.  
**No asbestos detected.**

**Sample No. 3. ASET102801 / 105981 / 3. BH105- 0.04-0.19.**  
 Approx dimensions 10.0 cm x 10.0 cm x 10.6 cm  
 Approximate total dry weight of soil = 1057.0g.  
 The sample consisted of a mixture of clayish sandy soil, organic fibres, fragments of bitumen-like material, stones and plant matter.  
**No asbestos detected.**



**Sample No. 4. ASET102801 / 105981 / 4. BH106 - 0.0-0.15.**

Approx dimensions 10.0 cm x 10.0 cm x 7.7 cm

Approximate total dry weight of soil = 767.0g.

The sample consisted of a mixture of clayish sandy soil, organic fibres, fragments of glass, stones and plant matter.

**No asbestos detected.**

**Sample No. 5. ASET102801 / 105981 / 5. BH109 - 0.0-0.15.**

Approx dimensions 10.0 cm x 10.0 cm x 9.6 cm

Approximate total dry weight of soil = 965.0g.

The sample consisted of a mixture of sandy soil, organic fibres, stones and plant matter.

**No asbestos detected.**

**Sample No. 6. ASET102801 / 105981 / 6. BH109 - 0.15-0.25.**

Approx dimensions 10.0 cm x 10.0 cm x 10.8 cm

Approximate total dry weight of soil = 1078.0g.

The sample consisted of a mixture of sandy soil, organic fibres, stones and plant matter.

**No asbestos detected.**

**Sample No. 7. ASET102801 / 105981 / 7. BH115 - 0.0-0.15.**

Approx dimensions 10.0 cm x 10.0 cm x 12.1 cm

The sample consisted of a mixture of clayish sandy soil, organic fibres, fibrous material# (FA), fragments of glass, plaster cement, paint flakes and brick-like material, stones and plant matter.

**Chrysotile# (Approximate estimated weight = 0.00157g) asbestos, Amosite# (Approximate estimated weight = 0.00026g) asbestos and Crocidolite# (Approximate estimated weight = 0.000393g) asbestos detected.**

**Approximate total dry weight of soil = 1201.0g.**

**Approximate estimated weight of asbestos in soil in the form of FA = 0.00222g.**

**Approximate w/w percentage of asbestos in soil in the form of FA=0.0002%.**

**Sample No. 8. ASET102801 / 105981 / 8. BH115 - 0.2-0.4.**

Approx dimensions 10.0 cm x 10.0 cm x 12.6 cm

Approximate total dry weight of soil = 1262.0g.

The sample consisted of a mixture of sandy soil, organic fibres, fragments of brick-like material, stones and plant matter.

**No asbestos detected.**

**Sample No. 9. ASET102801 / 105981 / 9. BH116 - 0.0-0.15.**

Approx dimensions 10.0 cm x 10.0 cm x 10.9 cm

Approximate total dry weight of soil = 1096.0g.

The sample consisted of a mixture of sandy soil, organic fibres, fragments of plaster cement, paint flakes, stones and plant matter.

**No asbestos detected.**

**Sample No. 10. ASET102801 / 105981 / 10. BH117 - 0.0-0.15.**

Approx dimensions 10.0 cm x 10.0 cm x 8.6 cm

Approximate total dry weight of soil = 862.0g.

The sample consisted of a mixture of clayish sandy soil, organic fibres, fragments of glass, stones and plant matter.

**No asbestos detected.**



**Sample No. 11. ASET102801 / 105981 / 11. BH120 - 0.0-0.15.**

Approx dimensions 10.0 cm x 10.0 cm x 8.5 cm

The sample consisted of a mixture of clayish sandy soil, organic fibres, fibrous material# (FA), fragments of glass, paint flakes, stones and plant matter.

**Chrysotile# (Approximate estimated weight = 0.02918g) asbestos detected.**

**Approximate total dry weight of soil = 851.0g.**

**Approximate estimated weight of asbestos in soil in the form of FA = 0.02918g.**

**Approximate w/w percentage of asbestos in soil in the form of FA=0.0034%.**

**Sample No. 12. ASET102801 / 105981 / 12. BH12a - 0.14-0.3.**

Approx dimensions 10.0 cm x 10.0 cm x 10.0 cm

Approximate total dry weight of soil = 999.0g.

The sample consisted of a mixture of clayish sandy soil, organic fibres, fragments of glass, stones and plant matter.

**No asbestos detected.**

**Sample No. 13. ASET102801 / 105981 / 13. BH12-1 - 0.15-0.27.**

Approx dimensions 10.0 cm x 10.0 cm x 8.5 cm

Approximate total dry weight of soil = 847.0g.

The sample consisted of a mixture of clayish sandy soil, organic fibres, stones and plant matter.

**No asbestos detected.**

**Sample No. 14. ASET102801 / 105981 / 14. BH12-2 - 0.15-0.3.**

Approx dimensions 10.0 cm x 10.0 cm x 10.2 cm

Approximate total dry weight of soil = 1024.0g.

The sample consisted of a mixture of clayish sandy soil, organic fibres, fragments of glass, stones and plant matter.

**No asbestos detected.**

**Sample No. 15. ASET102801 / 105981 / 15. BH12-3 - 0.15-0.3.**

Approx dimensions 10.0 cm x 10.0 cm x 10.1 cm

Approximate total dry weight of soil = 1011.0g.

The sample consisted of a mixture of clayish sandy soil, organic fibres, fragments of glass, stones and plant matter.

**No asbestos detected.**

**Sample No. 16. ASET102801 / 105981 / 16. BH12-4 - 0.18-0.3**

Approx dimensions 10.0 cm x 10.0 cm x 8.4 cm

Approximate total dry weight of soil = 843.0g.

The sample consisted of a mixture of clayish sandy soil, organic fibres, fragments of glass, stones and plant matter.

**No asbestos detected.**

**Sample No. 17. ASET102801 / 105981 / 17. FCP1 - 0.0-0.15.**

Approx dimensions 10.0 cm x 10.0 cm x 9.5 cm

Approximate total dry weight of soil = 946.0g.

The sample consisted of a mixture of clayish sandy soil, organic fibres, fragments of glass, stones and plant matter.

**No asbestos detected.**

λ Sample No. 18. ASET102801 / 105981 / 18. FCP1 - Ground surface.

Approx dimensions 11.0 cm x .0 cm x 0.5 cm

The sample consisted of a fragment of a fibre cement material.

**Chrysotile asbestos detected.**

**Approximate total dry weight of fibre cement = 66.0g.**

λ Sample No. 19. ASET102801 / 105981 / 19. BH120FCP - 0.0-0.15.

Approx dimensions 10.0 cm x 5.0 cm x 0.5 cm

The sample consisted of fragments of a fibre cement material.

**Chrysotile asbestos and Amosite asbestos detected.**

**Approximate total dry weight of fibre cement = 36.0g.**

Reported by,



**Mahen De Silva. BSc, MSc, Grad Dip (Occ Hyg)**

**Occupational Hygienist / Approved Identifier.**

**Approved Signatory**



**Accredited for compliance with ISO/IEC 17025 -Testing.**

*This report is consistent with the analytical procedures and reporting recommendations in the Western Australia Guidelines for the Assessment Remediation and Management of Asbestos contaminated sites in Western Australia and it also satisfies the requirements of the current NEPM Guidelines. NATA Accreditation does not cover the performance of this service.*

**Disclaimers;**

*The approx; weights given above can be used only as a guide. They do not represent absolute weights of each kind of asbestos, as it is impossible to extract all loose fibres from soil and other asbestos containing building material samples using this method. However above figures may be used as closest approximations to the exact values in each case. Estimation and/ or reporting of asbestos fibre weights in asbestos containing materials and soil is out of the Scope of the NATA Accreditation. NATA Accreditation only covers the qualitative part of the results reported. This weight disclaimer also covers weight / weight percentages if given.*

**ACM - Asbestos Containing Material - Products or materials that contain asbestos in an inert bound matrix such as cement or resin. Here taken to be sound material, even as fragments and not fitting through a 7mm X 7 mm sieve.**

**AF -Includes asbestos free fibres, small fibre bundles and also ACM fragments that pass through a 7mm X 7 mm sieve.**

**FA -Friable asbestos material such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products.**

**^ denotes loose fibres of relevant asbestos types detected in soil/dust.**

**\* denotes asbestos detected in ACM in bonded form.**



# denotes friable asbestos as soft fibro plaster, fragments of ACM smaller than 7mm which are considered as friable and / or highly weathered ACM that will easily crumble.

λ denotes samples that have been analysed only in accordance to AS 4964 – 2004.

Ω Sample volume criteria of 500mL have not been satisfied.

*The results contained in this report relate only to the sample/s submitted for testing. Australian Safer Environment & Technology accepts no responsibility for whether or not the submitted sample/s is/are representative. Results indicating "No asbestos detected" indicates a reporting limit specified in AS4964 -2004 which is 0.1g/ Kg (0.01%). Any amounts detected at assumed lower level than that would be reported, however those assumed lower levels may be treated as "No asbestos detected" as specified and recommended by A4964-2004. Trace / respirable level asbestos will be reported only when detected and trace analysis have been performed on each sample as required by AS4964-2004. When loose asbestos fibres/ fibre bundles are detected and reported that means they are larger handpicked fibres/ fibre bundles, and they do not represent respirable fibres. Dust/soil samples are always subjected to trace analysis except where the amounts involved are extremely minute and trace analysis is not possible to be carried out. When trace analysis is not performed on dust samples it will be indicated in the report that trace analysis has not been carried out due to the volume of the sample being extremely minute.*

*Estimation of asbestos weights involves the use of following assumptions;*

*Volume of each kind of Asbestos present in broken edges have been visually estimated and its been assumed that volumes remain similar throughout the binding matrix and those volumes are only approximate and not exact. Material densities have been assumed to be similar to commonly found similar materials and may not be exact.*

**All samples indicating "No asbestos detected" are assumed to be less than 0.001% for friable AF and FA portions detected and 0.01 % for ACM detected unless the approximate weight is given.**



AUSTRALIAN SAFER ENVIRONMENT & TECHNOLOGY PTY LTD  
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PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: info@ausset.com.au

### CHAIN OF CUSTODY RECORD

ASET JOB NO: ASET102801/105981/1-19				Contact Name:	ANWAR BARBHUYIA	Asbestos in Material	Asbestos in Soil (+/-)	Asbestos WA/ NEPM 500mL	Asbestos Fibre Count	Asbestos in Water	Asbestos in Dust	Lead Analysis
Name/ Company Name: Geotechnique				Job No:	20219/5							
Address: 1 Lemko Place Penrith				Project Address:	59-67 Karne Street North, Narwee							
				Purchase Order:								
Contact Ph: 0247222700				Email Results to:								
	Sample ID	Date	Type	Container	Sample Depth (m)							
1	BH101	6/07/2022	Soil	P	0.0-0.15			V				
2	BH104	6/07/2022	Soil	P	0.04-0.08			V				
3	BH105	6/07/2022	Soil	P	0.04-0.19			V				
4	BH106	6/07/2022	Soil	P	0.0-0.15			V				
5	BH109	6/07/2022	Soil	P	0.0-0.15			V				
6	BH109	6/07/2022	Soil	P	0.15-0.25			V				
7	BH115	6/07/2022	Soil	P	0.0-0.15			V				
8	BH115	6/07/2022	Soil	P	0.2-0.4			V				
9	BH116	6/07/2022	Soil	P	0.0-0.15			V				
10	BH117	6/07/2022	Soil	P	0.0-0.15			V				
11	BH120	6/07/2022	Soil	P	0.0-0.15			V				

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Khan  
ASET  
11/7/22 2:45pm





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PHONE: (02) 99872183 FAX: (02)99872151 EMAIL: info@ausset.com.au

### CHAIN OF CUSTODY RECORD

ASET JOB NO:				Contact Name:	ANWAR BARBHUYIA		Asbestos in Material	Asbestos in Soil (+/-)	Asbestos WA/ NEPM 500mL	Asbestos Fibre Count	Asbestos in Water	Asbestos in Dust	Lead Analysis
Name/ Company Name: Geotechnique				Job No:	20219/5								
Address: 1 Lemko Place Penrith				Project Address:	59-67 Karne Street North, Narwee								
				Purchase Order:									
Contact Ph: 0247222700				Email Results to:									
	Sample ID	Date	Type	Container	Sample Depth (m)								
12	BH12a	6/07/2022	Soil	P	0.14-0.3			V					
13	BH12-1	6/07/2022	Soil	P	0.15-0.27			V					
14	BH12-2	6/07/2022	Soil	P	0.15-0.3			V					
15	BH12-3	6/07/2022	Soil	P	0.15-0.3			V					
16	BH12-4	6/07/2022	Soil	P	0.18-0.3			V					
17	FCP1	6/07/2022	Soil	P	0.0-0.15			V					
18	FCP1	6/07/2022	Material	P	Ground Surface		V						
19	BH120FCP	6/07/2022	Material	P	0.0-0.15		V						
Relinquished By: ANWAR BARBHUYIA				Received By: <i>Karne</i>		Turn around time					Shipment Method		
Date & Time: 8/07/2022				Date & Time: 11/7/22 2:45pm		Same Day	24 hrs	48 hrs	3 Days	5 days			
Signature: AB				Signature: <i>[Signature]</i>							V		

## **CERTIFICATE OF ANALYSIS 300023**

### **Client Details**

<b>Client</b>	Geotechnique Pty Ltd
<b>Attention</b>	Anwar Barbhuyia
<b>Address</b>	PO Box 880, Penrith, NSW, 2751

### **Sample Details**

<b>Your Reference</b>	<u>20219/5, Narwee</u>
<b>Number of Samples</b>	2 Soil
<b>Date samples received</b>	08/07/2022
<b>Date completed instructions received</b>	08/07/2022

### **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**

<b>Date results requested by</b>	15/07/2022
<b>Date of Issue</b>	15/07/2022
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Accredited for compliance with ISO/IEC 17025 - Testing. <b>Tests not covered by NATA are denoted with *</b>	

#### **Results Approved By**

Diego Bigolin, Inorganics Supervisor  
Hannah Nguyen, Metals Supervisor  
Josh Williams, Organics and LC Supervisor  
Kyle Gavril, Senior Chemist  
Liam Timmins, Organic Instruments Team Leader

#### **Authorised By**



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		300023-1	300023-2
Your Reference	UNITS	DSS1	DSS2
Date Sampled		06/07/2022	06/07/2022
Type of sample		Soil	Soil
Date extracted	-	11/07/2022	11/07/2022
Date analysed	-	12/07/2022	12/07/2022
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	<25	<25
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	<25	<25
vTPH C <sub>6</sub> - C <sub>10</sub> 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	%	76	93

svTRH (C10-C40) in Soil			
Our Reference		300023-1	300023-2
Your Reference	UNITS	DSS1	DSS2
Date Sampled		06/07/2022	06/07/2022
Type of sample		Soil	Soil
Date extracted	-	11/07/2022	11/07/2022
Date analysed	-	12/07/2022	12/07/2022
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	<50	<50
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	<100	<100
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	<50	<50
TRH >C <sub>10</sub> - C <sub>16</sub> less Naphthalene (F2)	mg/kg	<50	<50
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	<100	<100
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	81	73

PAHs in Soil			
Our Reference		300023-1	300023-2
Your Reference	UNITS	DSS1	DSS2
Date Sampled		06/07/2022	06/07/2022
Type of sample		Soil	Soil
Date extracted	-	11/07/2022	11/07/2022
Date analysed	-	12/07/2022	12/07/2022
Naphthalene	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+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	97	85

Organochlorine Pesticides in soil			
Our Reference		300023-1	300023-2
Your Reference	UNITS	DSS1	DSS2
Date Sampled		06/07/2022	06/07/2022
Type of sample		Soil	Soil
Date extracted	-	11/07/2022	11/07/2022
Date analysed	-	12/07/2022	12/07/2022
alpha-BHC	mg/kg	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	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
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate TCMX	%	95	78

PCBs in Soil			
Our Reference		300023-1	300023-2
Your Reference	UNITS	DSS1	DSS2
Date Sampled		06/07/2022	06/07/2022
Type of sample		Soil	Soil
Date extracted	-	11/07/2022	11/07/2022
Date analysed	-	12/07/2022	12/07/2022
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	95	78

Misc Soil - Inorg			
Our Reference		300023-1	300023-2
Your Reference	UNITS	DSS1	DSS2
Date Sampled		06/07/2022	06/07/2022
Type of sample		Soil	Soil
Date prepared	-	11/07/2022	11/07/2022
Date analysed	-	11/07/2022	11/07/2022
Total Cyanide	mg/kg	<0.5	<0.5
Total Phenolics (as Phenol)	mg/kg	<5	<5



Acid Extractable metals in soil			
Our Reference		300023-1	300023-2
Your Reference	UNITS	DSS1	DSS2
Date Sampled		06/07/2022	06/07/2022
Type of sample		Soil	Soil
Date prepared	-	11/07/2022	11/07/2022
Date analysed	-	12/07/2022	12/07/2022
Arsenic	mg/kg	4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	1	5
Copper	mg/kg	<1	5
Lead	mg/kg	2	9
Mercury	mg/kg	<0.1	4.5
Nickel	mg/kg	<1	2
Zinc	mg/kg	4	30
Titanium	mg/kg	<1	13

Moisture			
Our Reference		300023-1	300023-2
Your Reference	UNITS	DSS1	DSS2
Date Sampled		06/07/2022	06/07/2022
Type of sample		Soil	Soil
Date prepared	-	11/07/2022	11/07/2022
Date analysed	-	12/07/2022	12/07/2022
Moisture	%	12	12

Method ID	Methodology Summary
<b>Inorg-008</b>	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
<b>Inorg-014</b>	<p>Cyanide - free, total, weak acid dissociable by segmented flow analyser (in line dialysis with colourimetric finish).</p> <p>Solids/Filters and sorbents are extracted in a caustic media prior to analysis. Impingers are pH adjusted as required prior to analysis.</p> <p>Cyanides amenable to Chlorination - samples are analysed untreated and treated with hypochlorite to assess the potential for chlorination of cyanide forms. Based on APHA latest edition, 4500-CN_G,H.</p>
<b>Inorg-031</b>	<p>Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish).</p> <p>Solids are extracted in a caustic media prior to analysis.</p>
<b>Metals-020</b>	Determination of various metals by ICP-AES.
<b>Metals-021</b>	Determination of Mercury by Cold Vapour AAS.
<b>Org-020</b>	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.</p> <p>F2 = (&gt;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.</p>
<b>Org-020</b>	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.</p> <p>F2 = (&gt;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.</p> <p>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 (&gt;C10-C40).</p>
<b>Org-021</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
<b>Org-021</b>	<p>Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.</p> <p>Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.</p>
<b>Org-022/025</b>	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.

Method ID	Methodology Summary
<b>Org-022/025</b>	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS.  Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
<b>Org-022/025</b>	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
<b>Org-023</b>	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
<b>Org-023</b>	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)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
<b>Org-023</b>	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)-BTX 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-2	[NT]
Date extracted	-			11/07/2022	[NT]	[NT]	[NT]	[NT]	11/07/2022	[NT]
Date analysed	-			12/07/2022	[NT]	[NT]	[NT]	[NT]	12/07/2022	[NT]
TRH C <sub>6</sub> - C <sub>9</sub>	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	97	[NT]
TRH C <sub>6</sub> - C <sub>10</sub>	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	97	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	100	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	99	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	95	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			11/07/2022	[NT]	[NT]	[NT]	[NT]	11/07/2022	[NT]
Date analysed	-			11/07/2022	[NT]	[NT]	[NT]	[NT]	11/07/2022	[NT]
TRH C <sub>10</sub> - C <sub>14</sub>	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH C <sub>15</sub> - C <sub>28</sub>	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	106	[NT]
TRH C <sub>29</sub> - C <sub>36</sub>	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	[NT]
TRH >C <sub>10</sub> -C <sub>16</sub>	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	102	[NT]
TRH >C <sub>16</sub> -C <sub>34</sub>	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	106	[NT]
TRH >C <sub>34</sub> -C <sub>40</sub>	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	86	[NT]
Surrogate o-Terphenyl	%		Org-020	75	[NT]	[NT]	[NT]	[NT]	81	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			11/07/2022	[NT]	[NT]	[NT]	[NT]	11/07/2022	[NT]
Date analysed	-			12/07/2022	[NT]	[NT]	[NT]	[NT]	12/07/2022	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	116	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	108	[NT]	[NT]	[NT]	[NT]	114	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			11/07/2022	1	11/07/2022	13/07/2022		11/07/2022	[NT]
Date analysed	-			12/07/2022	1	12/07/2022	13/07/2022		12/07/2022	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	115	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.2	67	97	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	128	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	125	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	1	0.9	11	82	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	122	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	90	1	95	82	15	97	[NT]



QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			11/07/2022	[NT]	[NT]	[NT]	[NT]	11/07/2022	[NT]
Date analysed	-			12/07/2022	[NT]	[NT]	[NT]	[NT]	12/07/2022	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	126	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-021	90	[NT]	[NT]	[NT]	[NT]	97	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			11/07/2022	1	11/07/2022	11/07/2022		11/07/2022	[NT]
Date analysed	-			11/07/2022	1	11/07/2022	11/07/2022		11/07/2022	[NT]
Total Cyanide	mg/kg	0.5	Inorg-014	<0.5	1	<0.5	<0.5	0	103	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	101	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date prepared	-			11/07/2022	[NT]	[NT]	[NT]	[NT]	11/07/2022	[NT]
Date analysed	-			12/07/2022	[NT]	[NT]	[NT]	[NT]	12/07/2022	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	100	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	97	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	121	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Titanium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]

## Result Definitions

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

## Quality Control Definitions

<b>Blank</b>	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.
<b>Duplicate</b>	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.
<b>Matrix Spike</b>	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.
<b>LCS (Laboratory Control Sample)</b>	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.
<b>Surrogate Spike</b>	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.	
The recommended maximums for analytes in urine are taken from "2018 TLVs and BEIs", as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.	
Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2	

## Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

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

# GEOTECHNIQUE PTY LTD

1 LEMKO PLACE PENRITH NSW 2750

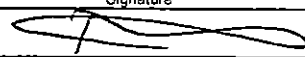
## CHAIN OF CUSTODY

Results Required By: Normal Turnaround  
 Except pH Results Required By: XXXXXXXXXX

Date: Friday, 15 July 2022  
 Date:

Your Reference No.: 300023.

12 Ashley St  
 Chatswood NSW 2067  
 Ph: (02) 9910 6200  
 Date Received: 8.7.22  
 Time Received: 1710  
 Received By: FJHAW  
 Temp: Cool/Ambient  
 Cooling: Ice/Refrigerator  
 Security: Intact/Broken/None

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067						Sampled By: Project Manager:				SS ANWAR BARBHUYIA				Ref No: 20219/5 Location: Narwee			
Location	Depth (m)	Date	Soil	Material	Metals As Cd Cr Cu Pb Hg Ni Ti Zn	TRH & BTEX	PAH	OCP	OP	PCB	PHENOL	CYANIDE	COMBO NO	PFAS (extended)	TCLP PFAS (water-routine level, short) (PFOS+PFHxS , PFOA)	COAL TAR (RTA Test Method T542)2	
DSS1		6/07/2022	G		✓	✓	✓	✓		✓	✓	✓	9				
DSS2		6/07/2022	G		✓	✓	✓	✓		✓	✓	✓	9				
Relinquished by						Received by											
Name		Signature		Date		Name		Signature		Date							
ANWAR BARBHUYIA		AB		8/07/2022		FJHAW				8.7.22		1710					
G	Soil sample (glass jar)		FCP	Fibro Cement Piece (plastic bag)		PFASC		PFAS Container		*: As,Cd,Cr,Cu,Pb,Hg,Ni & Zn (8 metals)							
P	Soil sample (plastic bag)		✓	Test required													

## SAMPLE RECEIPT ADVICE

### Client Details

<b>Client</b>	Geotechnique Pty Ltd
<b>Attention</b>	Anwar Barbhuyia

### Sample Login Details

<b>Your reference</b>	20219/5, Narwee
<b>Envirolab Reference</b>	300023
<b>Date Sample Received</b>	08/07/2022
<b>Date Instructions Received</b>	08/07/2022
<b>Date Results Expected to be Reported</b>	15/07/2022

### Sample Condition

<b>Samples received in appropriate condition for analysis</b>	Yes
<b>No. of Samples Provided</b>	2 Soil
<b>Turnaround Time Requested</b>	Standard
<b>Temperature on Receipt (°C)</b>	10
<b>Cooling Method</b>	Ice Pack
<b>Sampling Date Provided</b>	YES

### Comments

Nil

Please direct any queries to:

<b>Aileen Hie</b>	<b>Jacinta Hurst</b>
<b>Phone:</b> 02 9910 6200	<b>Phone:</b> 02 9910 6200
<b>Fax:</b> 02 9910 6201	<b>Fax:</b> 02 9910 6201
<b>Email:</b> ahie@envirolab.com.au	<b>Email:</b> jhurst@envirolab.com.au

Analysis Underway, details on the following page:



**Envirolab Services Pty Ltd**

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil
DSS1	✓	✓	✓	✓	✓	✓	✓
DSS2	✓	✓	✓	✓	✓	✓	✓

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.

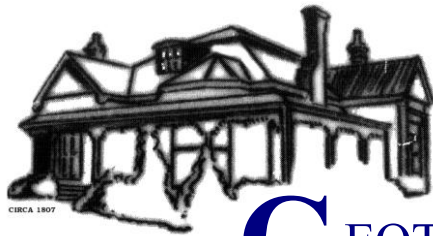
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.



## **APPENDIX J**

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### **UNEXPECTED FINDS MANAGEMENT PROTOCOL**



**G**EOTECHNIQUE<sup>®</sup>  
PTY LTD

ABN 64 002 841 063



## **UNEXPECTED FINDS MANAGEMENT PROTOCOL**

### **LOTS D & C DP403467, LOT 2 DP518877 AND LOTS 2 & 3 DP16063 59-67 KARNE STREET NORTH, NARWEE**

In the event that unexpected finds and/or suspect materials (identified by unusual staining, odour, discolouration or inclusions such as building rubble, asbestos sheeting/pieces/pipes, ash material, imported fill, etc.) are encountered during future earthworks/site preparation or in between sampling locations, the following actions are to be undertaken.

#### **Management of unexpected finds and/or suspect materials**

If unexpected finds and/or suspect materials are encountered:

- Works are to be ceased.
- An environmental consultant is to be engaged to take appropriate sampling and testing of contaminants of potential concern at a nominated rate in accordance with current NSW EPA guidelines.
- If contamination is identified, the contaminated materials must be disposed of at an EPA licensed landfill facility with an appropriate waste classification.

#### **Management of bonded asbestos containing material (ACM)**

If ACM is encountered, the following measures are to be implemented:

- Engage a Class B licensed bonded asbestos contractor.
- Removal of the asbestos waste must be carried out in accordance with the requirements of the regulators, such as SafeWork NSW and NSW EPA.
- Competent personnel or a SafeWork NSW Licensed Asbestos Assessor or a Professional Hygienist should be engaged to provide a clearance certificate.

#### **Management of friable asbestos within the soil**

It is recommended that the following measures are implemented if friable asbestos is encountered:

- Engage a Class A licensed contractor for friable asbestos
- Removal of the asbestos waste must be carried out in accordance with the requirements of the regulators, such as SafeWork NSW and NSW EPA
- A SafeWork NSW Licensed Asbestos Assessor or a Professional Hygienist must be engaged to provide a clearance certificate

## APPENDIX K

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### ENVIRONMENTAL NOTES

## **IMPORTANT INFORMATION REGARDING YOUR ENVIRONMENTAL SITE ASSESSMENT**

These notes have been prepared by Geotechnique Pty Ltd, using guidelines prepared by the ASFE (Associated Soil and Foundation Engineers). The notes are offered to assist in the interpretation of your environmental site assessment report.

### **REASONS FOR AN ENVIRONMENTAL ASSESSMENT**

Environmental site assessments are typically, though not exclusively, performed in the following circumstances:

- As a pre-acquisition assessment on behalf of either a purchaser or a vendor, when a property is to be sold
- As a pre-development assessment, when a property or area of land is to be redeveloped, or the land use has changed e.g. from a factory to a residential subdivision
- As a pre-development assessment of greenfield sites, to establish baseline conditions and assess environmental, geological and hydrological constraints to the development of e.g. a landfill
- As an audit of the environmental effects of previous and present site usage

Each circumstance requires a specific approach to the assessment of soil and groundwater contamination. In all cases the objective is to identify and if possible quantify the risks that unrecognised contamination poses to the ongoing proposed activity. Such risks may be both financial (clean-up costs or limitations in site use) and physical (health risks to site users or the public).

### **ENVIRONMENTAL SITE ASSESSMENT LIMITATIONS**

Although information provided by an environmental site assessment can reduce exposure to the risk of the presence of contamination, no environmental site assessment can eliminate the risk. Even a rigorous professional assessment may not detect all contamination within a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which did not show signs of contamination when sampled. Contaminant analysis cannot possibly cover every type of contaminant that may occur; only the most likely contaminants are screened.

### **AN ENVIRONMENTAL SITE ASSESSMENT REPORT IS BASED ON A UNIQUE SET OF PROJECT SPECIFIC FACTORS**

In the following events and in order to avoid cost problems, you should ask your consultant to assess any changes in the conclusion and recommendations made in the assessment:

- When the nature of the proposed development is changed e.g. if a residential development is proposed, rather than a commercial development
- When the size or configuration of the proposed development is altered e.g. if a basement is added
- When the location or orientation of the proposed structure is modified
- When there is a change of land ownership, or
- For application to an adjacent site

### **ENVIRONMENTAL SITE ASSESSMENT FINDINGS ARE PROFESSIONAL ESTIMATES**

Site assessment identifies actual sub-surface conditions only at those points where samples are taken, when they are taken. Data obtained from the sampling and subsequent laboratory analyses are interpreted by geologists, engineers or scientists and opinions are drawn about the overall sub-surface conditions, the nature and extent of contamination, the likely impact on any proposed development and appropriate remediation measures. Actual conditions may differ from those inferred, because no professional, no matter how qualified and no sub-surface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than an assessment indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to prevent the unanticipated, however, steps can be taken to help minimise the impact. For this reason site owners should retain the services of their consultants throughout the development stages of the project in order to identify variances, conduct additional tests that may be necessary and to recommend solutions to problems encountered on site.

Soil and groundwater contamination is a field in which legislation and interpretation of legislation by government departments is changing rapidly. Whilst every attempt is made by Geotechnique Pty Ltd to be familiar with current policy, our interpretation of the investigation findings should not be taken to be that of the relevant authority. When approval from a statutory authority is required for a project, approval should be directly sought.

**STABILITY OF SUB-SURFACE CONDITIONS**

Sub-surface conditions can change by natural processes and site activities. As an environmental site assessment is based on conditions existing at the time of the investigation, project decisions should not be based on environmental site assessment data that may have been affected by time. The consultant should be requested to advise if additional tests are required.

**ENVIRONMENTAL SITE ASSESSMENTS ARE PERFORMED FOR SPECIFIC PURPOSES AND CLIENTS**

Environmental site assessments are prepared in response to a specific scope of work required to meet the specific needs of specific individuals e.g. an assessment prepared for a consulting civil engineer may not be adequate to a construction contractor or another consulting civil engineer.

An assessment should not be used by other persons for any purpose or by the client for a different purpose. No individual, other than the client, should apply an assessment, even for its intended purpose, without first conferring with the consultant. No person should apply an assessment for any purpose other than that originally contemplated, without first conferring with the consultant.

**MISINTERPRETATION OF ENVIRONMENTAL SITE ASSESSMENTS**

Costly problems can occur when design professionals develop plans based on misinterpretation of an environmental site assessment. In order to minimise problems, the environmental consultant should be retained to work with appropriate design professionals, to explain relevant findings and to review the adequacy of plans and specifications relative to contamination issues.

**LOGS SHOULD NOT BE SEPARATED FROM THE REPORT**

Borehole and test pit logs are prepared by environmental scientists, engineers or geologists, based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these would not be redrawn for inclusion in site remediation or other design drawings, as subtle but significant drafting errors or omissions may occur in the transfer process. Photographic reproduction can eliminate this problem, however, contractors can still misinterpret the logs during bid preparation if separated from the text of the assessment. Should this occur, delays and disputes, or unanticipated costs may result.

To reduce the likelihood of borehole and test pit log misinterpretation, the complete assessment should be available to persons or organisations involved in the project, such as contractors, for their use. Denial of such access and disclaiming responsibility for the accuracy of sub-surface information does not insulate an owner from the attendant liability. It is critical that the site owner provides all available site information to persons and organisations, such as contractors.

**READ RESPONSIBILITY CLAUSES CLOSELY**

An environmental site assessment is based extensively on judgement and opinion; therefore, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. In order to aid in prevention of this problem, model clauses have been developed for use in written transmittals. These are definitive clauses, designed to indicate consultant responsibility. Their use helps all parties involved recognise individual responsibilities and formulate appropriate action. Some of these definitive clauses are likely to appear in the environmental site assessment and you are encouraged to read them closely. Your consultant will be happy to give full and frank answers to any questions you may have.