

Preliminary Site Investigation

Lot 1, Lot 2, and Lot 3, DP197295, 26 Lithgow Street, Goulburn, NSW, 2580

Prepared for:

Goulburn Projects



19 April 2024



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Executive Summary

Goulburn Projects engaged Lanterra Consulting Pty Ltd (Lanterra) to complete a Preliminary Site Investigation (PSI) with limited soil sampling on Lots 1, 2, and 3, DP 197295, Goulburn, NSW, 2580 (herein referred to as the site).

Based on the Goulburn Mulwaree Local Environmental Plan 2009, the site has an area of approximately 1,068 square metres (m^2) and zoned as MU1 – Mixed Use.

The site is currently vacant. It is understood that the site has not been occupied since the previous residential buildings were damaged from fire and demolished in 2016. The site is proposed for future residential development.

The objective of this investigation was to assess the site and its surrounding for potential contamination risk and its suitability for residential land use.

The scope of work completed for the investigation was as follows:

- Review of previous environmental investigations for the site that may have been made available.
- Acquisition and review of desktop documentation and associated historical information to assess whether there are any known contaminating activities either on the site or on neighbouring properties.
- A review of the environmental setting with regards to geology, topography, hydrology, and hydrogeology.
- Perform a site visit to characterise the layout of the site, including inspection of the site surface for obvious and visible signs of potential contamination and / or contaminant sources.
- A visual evaluation of the surrounding land to identify any neighbouring activities which may have affected or present a potential risk to the environmental quality of the site from a contamination perspective.
- Undertake an intrusive site investigation across the site including the construction of seven (7) boreholes for soil sampling.
- Undertake soil analysis at a National Associated of Testing Authorities (NATA) accredited laboratory for contaminants of potential concern (COPCs) identified as part of this investigation.

The detailed review (see **Section 3**) and site inspection identified the following areas of environmental concern (AECs) for the site:

- AEC 1: The site, including the former building footprint may have been impacted by contamination released during the 2016 onsite residential fire. ACM was identified on site after the fire, although the site was cleared by a licenced asbestos assessor there still remains a potential risk that ACM may be present on site.
- AEC 2: The site may have been subject to former cut and fill activity, with fill materials of unknown source potentially imported for levelling purposes.
- AEC 3: Off-site commercial/industrial facilities located to the southwest of the site which have the potential to cause contamination to the site via dispersion of dust migrating into the site.

The contaminants of potential concern (COPC) that may be associated with the identified AECs included the following:

- Total recoverable hydrocarbons (TRH);
- Benzene, toluene, ethylbenzene xylenes (BTEX);
- Polycyclic aromatic hydrocarbons (PAH);
- Organochlorine and organophosphate pesticides (OCP/OPP);
- Polychlorinated Biphenyls (PCB);
- Phenols;
- Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc); and
- Asbestos.

The findings of the investigation are summarised below:

- Fill material was present across the site in all boreholes from the surface to a maximum depth of 1.0 m below ground level (bgl).
- Concentrations of TRH, BTEX, PAH, OCP/OPP, PCB, Phenols, and heavy metals analysed in the fourteen (14) primary soil samples collected from across the site were all below the adopted Health Investigation Level A (HIL A) / Health Screening Level A (HSL A) criteria for residential land use. Therefore, the soil on the site was considered suitable for the residential land use.
- Benzo(a)pyrene and zinc levels exceeded the criteria set for protecting ecological receptors (ESL and EIL) in samples BH1 0.0-0.1, BH3 0.0-0.1, BH5 0.0-0.1, and BH7 0.0-0.1. These excess levels of benzo(a)pyrene and zinc are probably linked to the fire that occurred on the site and represent an environmental risk.
- No olfactory indications of contamination were identified with the soil during the site inspection.
- No asbestos fines and/or fibrous asbestos (AF/FA) was detected in any of the analysed soil samples across the site.
- Pieces of asbestos containing material (ACM) were found in the driveway area of the site (Figure 4, Appendix A). Based on the characteristics of this material and the site layout, it is considered that the ACM presence is related to the driveway fill material. The possible presence of more ACM fragments and/or AF/FA materials in the driveway soil poses a health risk.

Based on the findings above, Lanterra concludes and recommends the following:

- Based on the pieces of asbestos sheet debris found in the driveway area, the potential for further ACM, asbestos fines or fibrous asbestos in the driveway fill cannot be eliminated. If present, this may pose a risk to the human health.
- Based on the results of the investigation, it is recommended that an area of approximately 50 m² corresponding with the driveway which comprised of fill material is scraped from the surface to a depth of approximately 0.2-0.3 m below ground level (bgl) to the base of the fill. This would result in approximately 10 cubic metres (m³) of asbestos waste to be disposed.
- Due to the exceedances of benzo(a)pyrene and zinc, specific remediation areas of approximately 50 m² around boreholes BH1, BH3, and BH5 have been designated (Figure 4, Appendix A). These areas shall be excavated to a depth of 0.1-0.2 m bgl, resulting in approximately 15-30 cubic meters (m³) of soil for testing and disposal.
- Once the fill material from the driveway and the areas around boreholes BH1, BH3, and BH5 has been removed, validation sampling shall be conducted to ensure the complete removal of benzo(a)pyrene, zinc, and ACM impacted materials from these locations.

• Any soil to be removed from the site as part of the remediation works must be assessed in accordance with the NSW EPA (2014) *'Waste Classification Guidelines'* and a standalone waste classification report must be prepared.

Based on the results of the investigation, the site may be considered suitable for the proposed residential development, subject to the recommendations above being undertaken and the site validated.

An unexpected finds protocol (UFP) to manage any unexpected occurrences of contamination should they be encountered during the development of the site should be prepared by a suitably qualified environmental consultant prior to any earthworks commencing.

1. Introduction

Goulburn Projects engaged Lanterra Consulting Pty Ltd (Lanterra) to complete a Preliminary Site Investigation (PSI) with limited soil sampling on Lots 1, 2, and 3, DP 197295, Goulburn, NSW, 2580 (herein referred to as the site) to assess the site for possible contamination and its suitability for the proposed residential land use.

The location and layout of the site are illustrated in **Appendix A: Figure 1** and **Figure 2**.

1.1 Background

Based on the NSW Planning Portal, the site has an area of approximately 1,068 square metres (m²) and zoned as MU1 – Mixed Use.

A brief review of aerial photographs provided by Nearmap, show the site to be vacant and it is understood that the site has not been occupied since the previous residential buildings were burned down and demolished in 2016. The site is proposed for residential development.

The following previous assessments have been undertaken across the site:

- ACR (2018) 'Inspection Clearance'
- Tim Lee Architects (2022) 'Statement of Environmental Effects for the Proposed Multi-Unit Development at 26 Lithgow Street, Goulburn NSW'
- ACT Geotechnical Engineers Pty Ltd (2023) 'Proposed Unit Development 26 Lithgow Street, Goulburn, NSW, Geotechnical Investigation Report'

Based on these assessments it was concluded that further environmental investigation including soil sampling was required for the site.

1.2 Objectives

The objective of this investigation was to assess the suitability of the site for the land uses permitted under the MU1 – Mixed Use zone, including the proposed residential development from a contamination perspective.

1.3 Scope of Work

The following scope of work has been completed to meet the project objectives:

- Complete a desktop analysis to assess the potential contamination risks to the site prior to commencing any intrusive investigation. This included:
 - Review aerial photographs that are available of the site to review the historical land uses and conditions both on and adjacent to the site.
 - Review of the results of an NSW Environment Protection Authority (EPA) contaminated sites register and database search to understand any known contamination issues that may be on record, either on the site or on neighbouring properties.
 - A review of the environmental setting with regards to geology, topography, hydrology, and hydrogeology.
- Perform a site visit to characterise the property setting, including inspection of the site surface for obvious and visible signs of potential contamination and/or contaminant sources.

- A visual evaluation of surrounding land uses to identify any neighbouring activities which may present a potential risk to health of future occupants and the overall environmental quality of the site.
- Undertake site investigation across the site including constructing seven (7) boreholes for soil sampling.
- Undertake soil analysis at a National Associated of Testing Authorities (NATA) accredited laboratory for the analyses of contaminants of potential concern (COPCs) identified by Lanterra.
- Assess laboratory results obtained from the investigation against the applicable land use criteria.
- Preparation of this Preliminary Site Investigation (PSI) report in general accordance with the requirements of NSW EPA endorsed guidelines to include:
 - The results of the intrusive investigation.
 - Recommendation if further investigation / remediation is required.

1.4 Regulatory Guidelines / Legislations

The investigation and preparation of this report was undertaken with reference to (but not limited to) the following regulatory guidance documents and standards:

- National Environmental Protection Council (NEPC) (2013). National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended April 2013);
- NSW EPA (2014) Waste Classification Guidelines Part 1: Classification of Waste;
- NSW EPA (2017) Guidelines for the NSW Site Auditor Scheme (3rd Ed.) (2017);
- NSW EPA (2020) Contaminated Land Guidelines Consultants Reporting on Contaminated Land;
- NSW EPA (2022) Contaminated Land Guidelines Sampling Design Part 1: Application; and
- Standards Australia (2005). Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds AS4482.1 (2005) and Part 2: Volatile substances, AS4482.2 (2005).

1.5 Limitations

The findings of the report are based on the Scope of Work outlined above. Lanterra has performed services in a manner consistent with the normal level of care and expertise exercised by members of the environmental assessment profession. No warranties express or implied, are made.

The assessment was limited strictly to identifying typical environmental conditions associated with the subject property area and does not include evaluation of any other issues.

The absence of any identified hazardous or toxic materials on the subject property should not be interpreted as a guarantee that such materials do not exist on the site.

The results of this assessment are based upon the site inspection and the sampling specified above conducted by Lanterra personnel and information from the Client or regulatory agencies. All conclusions and recommendations regarding the property area will be the professional opinions of the Lanterra personnel involved with the project, subject to the qualifications made above.

While normal assessments of data reliability are made, Lanterra will not assume responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of Lanterra, or developments resulting from situations outside the scope of this project.

2. Site Characteristics

2.1 Site Location

The site location and a detailed site plan are presented in **Appendix A**: **Figure 1** and **Figure 2**, with a summary of the site details presented in **Table 1**.

Table 1	: Summary	of Site	Details
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Site Characteristics	Detail	
Street Address	Lot 1, 2 and 3, DP197295 26 Lithgow Street, Goulburn, NSW, 2580	
Approximate Easting and	Easting: 749205.56	
Northing (centre of site)	Northing: 6151601.89 GDA2020 / MGA zone 55	
Approximate Elevation (m AHD)	644 – 648 m	
Lot and Division	Lot 1, 2 and 3, DP197295, Goulburn	
Land Zoning	MU1 – Mixed use	
Current Land Use	Cleared, vacant block of land.	
Proposed Use	Future residential development	
Block Area	Approximately 1,068 m ²	

2.2 Site Description

The following description is based on observations made during a site visit conducted during the service location completed on 19 March 2023:

- The site comprises a rectangular-shaped area of unoccupied land that is generally flat, located at the corner of Lithgow Street Goulburn.
- The site is lightly to moderately grassed.
- Stockpiles of concrete and building materials were located along the north and west edges of the block (see **Section 4.2** for details).
- Fill material was visible at the southern driveway entrance of the block. Anthropogenic waste including bricks, concrete, glass, and plastic around the driveway entrance of the block was observed.

2.3 Surrounding Land Uses

A summary of the land uses that surround the site are as follows:

- North: Low-density residential houses are established.
- **South:** Low-density residential houses and light industrial business areas are to the south of the site.
- **East:** Low-density residential houses and light industrial business areas are to the east of the site.
- West: Low-density residential houses are established.

2.4 Sensitive Environments

Sensitive environments in the vicinity of the site are summarised below:

- Mulwaree River is located approximately 700 m to the south of the Site.
- Grassy Woodland (potential threatened woodland) are located approximately 259m northwest and approximately 623 m southeast of the Site.
- Users of the site.
- Future workers involved in the construction of the proposed development.

Located within a 500 m radius of the site included low-medium density residential properties north, south, east, and west of the site.

2.5 Proposed Land Use

The future use of the site is proposed to be residential land use.

3. Site History

3.1 Previous Investigations

The following environmental investigations were made available to Lanterra:

ACR 2018 'Inspection Clearance'

In October 2018, ACR conducted an inspection clearance of 26 Lithgow Street, Goulburn, NSW to assess the removal of ACM on site and lift all asbestos restrictions on site. Air monitoring and collection of soil samples for testing were undertaken.

Four (4) soil samples were collected and sent to a NATA accredited laboratory for analysis. No asbestos was detected in these samples, and the site was concluded to be cleared of ACM.

Tim Lee Architects, 2022 'Statement of Environmental Effects for the Proposed Multi-Unit Development at 26 Lithgow Street, Goulburn NSW'

Tim Lee Architects undertook a statement of environmental effects in support of the Development Application made in accordance with the Environmental Planning and Assessment Act 1979 to Goulburn Mulwaree council for a 3 Lot subdivision and construction of residential dwellings.

This review did not identify the site to be in a flood or bushfire prone area or be subject to any biodiversity constraints. The statement did not highlight any noncompliance with local or state environmental planning policies for the development of three residential dwellings. It was concluded that the proposed development meets the required standards of section 4,15 of the EPA Act.

ACT Geotechnical Engineers Pty Ltd 2023 'Proposed Unit Development – 26 Lithgow Street, Goulburn, NSW, Geotechnical Investigation Report'

ACT Geotechnical Engineers was engaged by Goulburn Projects to carry out a geotechnical investigation for the proposed residential development at Lot 1, Plan no DP197295, 26 Lithgow Street, Goulburn, NSW.

The aim of the investigation was to:

- Identify subsurface conditions including the extent and nature of any fill materials, soil strata, bedrock type and depth, and groundwater presence.
- Advise on excavation conditions and suitability of excavated material for use as structural fill.
- Provide site classification to AS2870 "Residential Slabs & Footings".
- Advise on suitable footings systems, founding depths, allowable bearing pressures and design parameters for ground slabs.
- Provide guidelines for construction of controlled fill platforms.
- Advise on stable batter slopes and retaining wall design parameters.
- Provide subgrade CBR value(s) for pavement design.
- Drainage and other geotechnical advice

An investigation into surface conditions was conducted in November 2023. A 50 mm diameter tube was used to create three (3) boreholes, designated BH1, BH2 & BH3. The subsurface profiles were logged in general accordance with AS1726-2017. Six (6) disturbed soil samples were collected; two from each borehole. One sample from each borehole was collected for heavy metal contamination

testing, and one sample from each borehole was collected for asbestos testing. Laboratory results were assessed against health-based investigation levels of contaminants in soil for residential sites (HIL-A, EIL Residential, and ESL Residential) as outlined in the NEPM (1999).

Boreholes results found a general subsurface profile comprising topsoil and uncontrolled fill, underlain by natural sandy, clayey, and silty alluvial soils. It was reported that permanent groundwater was not expected within at least 3m of ground surface levels, although temporary, perched seepages could be present at shallower depths within pervious soils following rain events.

The site has been classified by ACT Geotechnical Engineers as a Class "P" (problem) site accordance with AS2870. This was due to the presence of uncontrolled fill materials exceeding a depth of 0.4 m. ACT Geotechnical Engineers advised fill removal, or for the footings to be founded in the natural alluvial soils below fill, for a Class "M" (moderately reactive) category.

Results of soil testing indicated heavy metal (Zinc) exceedances of residential EILs, hydrocarbon levels in in two (2) samples exceeded the threshold levels for HSL residential-B, HIL residential-A and residential EILs, and hydrocarbon concentrations in one (1) sample exceeded the threshold levels for HSL residential-B and residential EILs.

Given the elevated levels of Zinc, and the presence of hydrocarbons within all three boreholes, ACT Geotechnical Engineers recommended that further environmental sampling and testing be completed.

3.2 Zoning

Based on the NSW Planning Portal, the site is currently zoned MU1: Mixed Use.

The zone objectives of MU1: Mixed Use Zone are the following:

- To encourage a diversity of business, retail, office and light industrial land uses that generate employment opportunities.
- To ensure that new development provides diverse and active street frontages to attract pedestrian traffic and to contribute to vibrant, diverse and functional streets and public spaces.
- To minimise conflict between land uses within this zone and land uses within adjoining zones
- To encourage business, retail, community and other non-residential land uses on the ground floor of buildings.

The Goulburn Mulwaree Local Environmental Plan 2009 identifies the applicable land use permissible for residential dwellings without consent.

It is noted that this zoning information was retrieved form the online NSW Planning Portal (https://www.planningportal.nsw.gov.au/).

It is noted that the MU1: Mixed Use includes boarding houses, centre-based childcare facilities, seniors housing and tourist and visitor accommodation.

3.3 Aerial and Historical Photograph Review

A Lotsearch (Environmental Risk Report) was requested, which included historical aerial photographs of the site . These were reviewed to assist with assessing the history of the site, however, more images from Nearmap.com (Nearmap) were reviewed to constrain the history of the site in more

detail. A summary of each photograph examined as a part of the investigation is provided in **Table 3** below and aerial photographs obtained from Nearmap are provided in **Appendix A: Figure 3** and the Lotsearch report in **Appendix D**.

Date	Source	Description of the Subject Site	Description of Surrounding Land
1944	Lotsearch	The 1944 photograph represents the earliest aerial evidence of the Sites layout – resolution of the 1944 aerial image is low. The site appears to have a residential property in the northern section of the lot, with the southern section undeveloped open land.	The area immediately surrounding the Site is developed with residential properties and sealed roads to the west and north. To the south and east of the site a light industrial zone has been established.
1953	Lotsearch	Resolution of the 1953 aerial image is low. There appears to be no discernible changes to the Site from the previous photograph.	There appears to be no discernible changes to the area immediately surrounding the Site from the previous photograph.
1961	Lotsearch	There are few discernible changes to the Site from the previous photograph. Sheds are observed in the centre and southern area of the block. Mature trees line the west and east block boundary.	To the east of the site, multiple vehicles are stored in a yard.
1967	Lotsearch	Resolution of the 1967 aerial image is low. There appears to be no discernible changes to the Site from the previous photograph.	There appears to be no discernible changes to the area immediately surrounding the Site from the previous photograph.
1975	Lotsearch	Resolution of the 1975 aerial image is low. There appears to be no discernible changes to the Site from the previous photograph.	The south and southeast area from site has a large amount of motor vehicles kept across the light industrial zone.
1987	Lotsearch	Resolution of the 1987 aerial image is low. There appears to be no discernible changes to the Site from the previous photograph.	There appears to be no discernible changes to the area immediately surrounding the Site from the previous photograph.
1997	Lotsearch	There appears to be no discernible changes to the Site from the previous photograph.	A large section of vegetation to the east of the site has been cleared, other than this there appears to be no discernible changes to the area immediately surrounding the Site.
2006	Lotsearch	There appears to be no discernible changes to the Site from the previous photograph.	There appears to be no discernible changes to the area immediately surrounding the Site from the previous photograph.
2012	Lotsearch	The sheds in the centre and southern edge of the site have been removed. Some trees along the western block boundary have been removed.	An area southeast of the Site that appeared to be used for light industrial purposes has been cleared.
2015	Lotsearch	Trees have been removed. The only structure on site is the residential property. Grass covers the rest of the site.	The cleared area to the southeast of the site appears to have construction beginning. No discernible changes to the area immediately surrounding the Site from the previous photograph.

Table 2: Details of the Review of Aerial Photographs

Date	Source	Description of the Subject Site	Description of Surrounding Land
2018	Lotsearch	The residential property has been demolished and the surface of the Site has been stripped with trees removed.	The area southeast of the site has that was undergoing construction has been developed with what appears to be a light industrial business constructed. Surrounding area west and north of the Site remain unaffected.
2021	Lotsearch	Vegetation has regrown across the site. Vehicles are seen parked onsite.	There appears to be no discernible changes to the area immediately surrounding the Site from the previous photograph.
2023	Lotsearch	There are some construction materials present in the southern section of the site, and a vehicle is parked in the centre of the site.	There appears to be no discernible changes to the area immediately surrounding the Site from the previous photograph.

It should be noted that the Lotsearch aerial photographs for 1944, 1953, 1967, 1975 and 1987 are black and white and of lower resolution and therefore is of lower image quality.

The site had an established residential property on the north site boundary since 1944. Small structures that appear to be sheds were also present on the site. Since 2018 the site has been cleared of all buildings and structures and has remained clear.

The areas to the north and west of the site were established residential areas since 1944. The are to the south and east of the site have been used as light industrial zones which were established before 1944. There have been new developments and upgrades to the light industrial zones since 1944, with most of these occurring between 2012 – 2021.

3.4 NSW EPA Contaminated Site Search

A Lotsearch (Environmental Risk Report) was requested to assist with contaminated land search for Lots 1, 2, and 3, DP 197295, Goulburn (the site).

At the time of reporting, EPA has not issued any orders of assessment or remediation over the site and as a result the site is not recorded on the register of contaminated sites. The blocks are not recorded on the EPA's contaminated sites management database or geographic information system.

A former Mobil service station is recorded 113 m southeast of the site. Based on the distance, the service station is not considered to pose a risk for the site.

3.5 Historical Business Directorate

A Lotsearch (Environmental Risk Report) was requested to assist with the history of the site and its surroundings. The Lotsearch report includes historical business records from 1950 to 1991 of the area that was reviewed (pages 11 - 14, **Appendix D**). A summary of the historical business activities that may pose contamination risks is tabulated below.

Table 3: Summary of Historical Business Records 1950 – 1991

Business Activity	Distance From Site
Carrier & Cartage ContractorWoode Merchants	On-site
 Painters Engineers Sheet Metal Workers Welders Carrier & Cartage Contractor Shearing Contractors Delicatessens Glass Merchants Windscreen Replacements Motor Windscreens Motor Car/Truck Dealers – New and/or Used Motor Brake Specialists Hydraulic Hose Motor Engineers Motor Garage and Service Stations Hydraulic Hose Manufacturers Motor Engineers Builders and Contractors Newspaper Publishers and/or Printers Dentist Soap Manufacturers 	0 – 100 m
 Painters Motor Engineers Motor Garage and Service Stations Engineers Agricultural Machinery Dealers Blacksmiths and Farriers Motor Body Builders Motor Panel Beaters Windscreen Replacements and Repairs Motor Painters Builders and Contractors Joinery Manufacturers Electrical Contractors Welders Electrical Supplies Aerated Water and/or Cordial Manufacturers Plumbers, Gasfitters and Drainlayers 	100 – 200 m

Business Activity	Distance From Site
 Auto Electricians Battery Sales Boot and Shoe Repairers Motor Towing Services Schools and Colleges Joiners Rubber Stamp Manufacturers Ceramics Manufacturers and/or Suppliers Bakers Local Bodies Laundries and/or Laundrettes Optometrists Chemists – Pharmaceutical 	
 Motor Service Stations Motor Garages and/or Engineers Dry Cleaners and Pressers 	200 – 400 m

Businesses operating between 1950 – 1991 within a 150 m area of the site with potentially contaminating activities are listed above. The light industrial zone east – southeast of the site are the location of most potentially contaminating business activities.

3.6 SafeWork NSW Dangerous Goods Search

A search of the SafeWork NSW Dangerous Goods was not lodged as this service is no longer offered. Despite this, the site is unlikely to have been used for chemical storage as the site history indicates the site was primarily vacant.

3.7 Storage Tanks

There was no evidence of storage tanks during the site walkover.

3.8 Waste Management and Liquid Fuel Facilities

There are no records within the site for National Liquid Fuel Facilities or records in the National Waste Management Site Database (**Appendix D**).

There are four (4) national liquid fuel facilities within a 1000 m buffer of the site. The closest facility being a Caltex Petrol Station located 193 Southeast of the site. As the topography of the area slopes toward the east, this fuel facility is not expected to impact the site.

3.9 Hazardous Materials

No hazardous materials investigations have been completed for the site.

Fragments of asbestos containing material (ACM) were found on the surface of the driveway of the site (Figure 2 and Figure 4, Appendix A).

3.10 Chemical Storage

No evidence of chemical storage facilities was identified on-site.

3.11 Manufacturing Processes

There are no known manufacturing processes that have occurred on the site.

3.12 Discharges to Land, Water and Air

No information regarding discharges to land, water and air was available for review at the time of writing this report. As no manufacturing operations are known to have occurred at the site, it is unlikely that there may have been previous discharges to land, water, or air in the past.

4. Site Condition and Environmental Setting

4.1 Topography

The digital topographic map presented in Sixmaps (available at https://maps.six.nsw.gov.au/) indicates the site has an elevation of approximately 644 to 648 m above Australian Height Datum (m AHD).

The general topography of the site relatively flat with a slight slope towards the east.

4.2 Visible Signs of Contamination

Anthropogenic materials including concrete fragments, bricks, glass and plastic were observed to be stockpiled on the surface of the site along the southern and western boundary. A resident of a neighbouring property informed the SQEC on site that the construction waste materials belonged to him and would be removed from site soon.

During the investigation on 19 March 2023, ACM fragments were observed on the surface of the site (Figure 4, Appendix A).

4.3 Fill Material

Uncontrolled filling material was noted by ACT Geotechnical Engineers during the borehole drilling in November 2023. The fill was encountered at 0.1 m below ground level (bgl) to a maximum depth of approximately 1.2 m bgl.

During sampling works on the 19 March 2024, Lanterra identified fill material to a depth of 1.0 m bgl across the site.

4.4 Odours

There were no olfactory indicators of possible contamination during the site walk over.

4.5 Staining

No staining was observed on the surface of the site during the service location inspection or within the soil during sampling.

5. Geology and Hydrogeology

5.1 Geology

The Lotsearch (Environmental Risk Report) included information relating to the geological units found within and surrounding the site.

The report shows that the site is underlain by Quaternary aged, residual deposits comprised of weakly-consolidated regolithic residuum such as soil or saprolite mostly developed in-situ as a result of advanced weathering and/or pedogenesis.

Beneath that Pleistocene aged Alluvial deposits consisting of dominantly sand & gravel; friable to unconsolidated or cemented to sandstone or conglomerate. Massive to bedded, ranging from thin to very thick; horizontal to cross bedded. Includes some lacustrine deposits & sub-basaltic sediments are found.

5.2 Hydrogeology

A groundwater bore search was provided within the Lotsearch report (**Appendix D**). The purpose of the bore search was to document the location and depth of any nearby registered groundwater bores and the associated quality of the groundwater so that potential impacts of contaminants from the site or surrounding land uses (if any) on local users of groundwater may be assessed. A copy of the groundwater bore search results is presented in **Appendix D**.

This search indicated that there were sixteen (16) groundwater boreholes according to the NSW Bureau of Meteorology data source within a 500 m radius of the site. The nearest groundwater functioning borehole is located 148 m to the northwest of the site.

A review of the Lotsearch report (**Appendix D**) indicates that groundwater beneath the site is situated within fractured or fissured aquifers of low to moderate productivity.

Based on the topography and elevation of the site, the groundwater flow direction is likely to be in an easterly direction towards Mulwaree River, located approximately 800 m east of the site.

5.3 Hydrology

No open surface water bodies are located in the vicinity of the site. Most surface water is anticipated to be captured on the site and would infiltrate into the subsurface. Surface water on the site is expected to follow the topographic contours of the site and flow in an easterly direction.

5.4 Acid Sulfate Soil Risk

A soil landscapes search from the NSW Office of Environment & Heritage and an acid sulfate soil search from the CSIRO Atlas of Australian Acid Sulfate Soils was provided within the Lotsearch report (**Appendix D**). Soils are defined by the Bullamalita soil landscape as described by the NSW Department of Planning, Industry and Environment. The soil landscape of the region has been identified as:

• Acid to neutral yellow duplex soils, usually with bleached A2 horizons that set very hard on drying, occur on lower side slopes, foot slopes and drainage lines. Red Podzolic Soils are found on upper slopes whilst Yellow Solodic Soils and Alluvial Soils occur in some drainage lines.

A review of the Australian Soil Resource Information System (ASRIS) map shows the subject site to be situated in an area of 'low probability (6-70% chance of occurrence) for acid sulfate soil'. Based on the site elevation of 640 to 650 m above the AHD, acid sulfate soil is not expected to be present on-site.

6. Preliminary Conceptual Site Model

Conceptual site models (CSM) are a method of presenting site contamination information and the relationships between sources of contamination, how it may have been introduced to the site, possible pathways for contaminant migration and exposure and the receptors that may be affected by contaminants.

Based on the information reviewed prior to conducting any intrusive investigation, the CSM was developed to assist with generating areas of environmental concern (AEC) based on the risk of contamination being present and the potential for exposure pathways.

The preliminary CSM is presented in the sections below.

6.1 Areas of Environmental Concern

Three (3) areas of environmental concern were identified on the site based on the site history, review of aerial photographs and site observations. These AECs are summarised below:

AEC 1: The site, including the former building footprint may be impacted by contamination released during the 2016 onsite residential fire. ACM was identified on site after the fire, although the site was cleared by a licenced asbestos assessor there still remains a low risk that ACM may be present on site.

AEC 2: The site may be subject to former cut and fill activity, with fill materials of unknown source potentially imported to level the site pre-development.

AEC 3: Off-site commercial/industrial historical facilities located to the southwest of the site which may have included automotive mechanical services, storage yard facilities, among others (see **Table 3**). These off-site facilities/activities present a potential contaminations source which could migrate into the site.

6.2 Contaminants of Potential Concern

To comprehensively characterise the site and based on some of the activities associated within the site and its surroundings and respective AEC the following contaminants of potential concern (COPC) were identified:

 Total recoverable hydrocarbons (TRH); Benzene, toluene, ethylbenzene, xylene (BTEX);
 Benzene, toluene, ethylbenzene, xylene (BTEX);
 Polycyclic aromatic hydrocarbons (PAH);
 Polychlorinated biphenyls (PCB);
AEC 1 – Former building footprint • Speciated Phenols;
Heavy metals (arsenic, cadmium, chromium, copper, lead,
mercury, nickel, and zinc); and
Anthropogenic material including asbestos containing
materials (ACM).
• TRH;
• BTEX;
• PAH;
 Organochlorine/organophosphorus pesticides (OCP/OPP);

Table 4: Summary of AECs and COPCs identified

AECs	Contaminants of Potential Concerns (CoPCs)		
	• PCB;		
	Phenols;		
	Heavy metals; and		
	Anthropogenic material including asbestos containing		
	materials (ACM).		
	• TRH;		
	• BTEX;		
AEC 2 – Off-site	• PAH;		
commercial/industrial facilities	• PCB;		
	Phenols;		
	Heavy metals.		

6.3 Exposure Pathways and Receptors

For a contaminant to pose a risk to either human health and/or the environment, there must be a complete or potentially complete pathway that links the contaminant with the receptor. Identified receptors at the site are as follows:

- On-site users of the current use of the site.
- Future on-site workers and users for the site.
- Ecological receptors.
- Groundwater.

Common pathways for contaminants to migrate through the environment and result in exposure to receptors are summarised in **Table 5** below.

Table 5: Summary of Exposure Pathway

Pathway	Contaminants of Concern	Exposure Pathway Complete or Potentially Complete (Yes/No)	Comments
Direct Contact with Soil including dermal contact and ingestion	TRH, BTEX, PAH, PCB, OPP/OCP, Phenols, Heavy Metals, Asbestos, PFAS	Potentially Complete	Fill material may be sourced from a contaminated site, and this has the potential for contaminants to introduce these during its establishment. In addition, the areas surrounding the site include historical commercial/industrial facilities that have been used as a storage yard for vehicles and heavy machinery and mechanical automotive services (Table 4). These off-site activities also have the potential to introduce contaminants. Based on the time of construction of structures on the site and surrounding area, and the fire resulting in the demolition of the property onsite, the potential presence of

Pathway	Contaminants of Concern	Exposure Pathway Complete or Potentially Complete (Yes/No)	Comments
			these COPCs in the surface or subsurface of the site cannot be ruled out and could pose a risk to the human health and the environment. Therefore, the pathway for direct contact is considered potentially complete.
Direct Contact with Groundwater including dermal contact and ingestion	TRH, BTEX, PAH, Heavy metals	Incomplete	No abstraction bores are located on or near the site. Presently the exposure pathway between groundwater and possible receptors is considered incomplete. Should future development intersect groundwater then it is possible that the exposure pathway may become complete should there be contaminants of concern in groundwater.
Inhalation of Asbestos Fibres	Inhalation of Asbestos Fibres	Complete	Asbestos was identified on the ground surface during the site inspection in the driveway area (Figure 4, Appendix A). As asbestos was confirmed to be present, then the exposure pathway is considered completed.
Inhalation of gasses and vapour	TRH, BTEX	Potentially Complete	If volatile contaminants were present in the soil these could produce a vapour that could migrate to the surface, then there is a potentially complete exposure pathway. Any buildings that may be constructed are at greater risk of vapour inhalation than outdoor areas.

In its current condition, there are potentially complete contaminant exposure pathways which are dependent on whether COPCs are present.

7. Data Quality Objectives

This section outlines the data quality objectives (DQOs) applied to the investigation.

The DQO process is planning tool that relies on scientific methods for establishing criteria for data quality and for designing data collection programs. The DQO defines the experimental process required to test a hypothesis. The DQO process aims to ensure that efforts relating to data collection are cost effective, by eliminating unnecessary, duplicative, or overly precise data whilst at the same time, ensuring the data collected is of sufficient quality and quantity to support defensible decision making.

The DQO process consists of seven steps, which are designed to clarify the study objectives, define the appropriate type of data, and specify tolerable levels of potential decision errors. The seven-step DQO process adopted for this DSI is as follows:

Step 1: State the Problem – concisely describe the problem to be studied. Review prior studies and existing information to gain a sufficient understanding to define the problem;

Step 2: Identify the Decision – identify what questions the study will attempt to resolve, and what actions may result;

Step 3: Identify the Inputs to the Decision – identify the information that needs to be obtained and the measurements that need to be taken to resolve the decision statement;

Step 4: Define the Study Boundaries – specify the time periods and spatial area to which decisions will apply. Determine when and where data should be collected;

Step 5: Develop a Decision Rule – define the statistical parameter of interest, specify the action level, and integrate the previous DQO outputs into a single statement that describes the logical basis for choosing among alternative actions;

Step 6: Specify Tolerable Limits on Decision Errors – define the decision maker's tolerable decision error rates based on a consideration of the consequences of making an incorrect decision; and

Step 7: Optimise the Design – evaluate information from the previous steps and generate alternative data collection designs. Choose the most resource-effective design that meets all DQOs.

The DQOs derived for the investigation are presented in Table 6.

Table 6: DQOs derivea	for the Investigation
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Step	Details
Step 1: State the Problem	The site is proposed for future residential use. Due to the fire which destroyed the original residential dwelling there is uncertainty as to whether the site has been impacted with contaminants that may compromise the suitability of the site for residential use.
Step 2: Identify the Decision	The purpose of the investigation is to assess the site for potential contamination risks and whether the site is suitable for proposed residential development from a contamination perspective. Should COPCs be identified at concentrations that exceeded the adopted assessment criteria, then management and /or options for remediation to make the site suitable for the permitted land uses may be necessary.
Step 3: Identify the Inputs into the Decision	The COPCs selected are based on the review of site history and based on previous site activities as described in Section 3 and Section 6 .

Step	Details
	 As the site is proposed to be developed for future residential use, the following assessment criteria from the National Environment Protection Council (NEPC) 'National Environment Protection (Assessment of Site Contamination) Measure 1999' (revised in 2013; ASC NEPM 2013) has been selected: Health Based Investigation Levels for Standard Residential Sites (HIL A) Health Based Screening Levels for Standard Residential Sites (HSL A) Ecological Investigation Levels (EIL) for Urban Residential and Open Space Ecological Screening Levels (ESL) for Urban Residential and Open Space Values for each criterion are presented in Section 9 below.
Step 4: Define the Site Boundaries	 The site boundary is restricted to the boundary of Lot 1, 2 and 3, DP197295, Goulburn as shown in Appendix A: Figure 2. The vertical boundary of the site was 2.0 m bgl which was the maximum sampling depth. It is also noted that the results of the assessment are limited to the condition of the site as of 19 March 2024 when the site investigation work was completed.
Step 5: Develop a Decision Rule	 If analytical results for COPCs are below the adopted criteria for residential sites, then the site would be considered suitable for the land uses permitted under the current zone and no further management or remediation would be required. However, should the concentration of one or more COPC exceed the adopted criteria value then further investigation may be required to delineate the lateral and vertical extent of the impact and/or recommendations for the remediation/management of contamination that may be required. If the laboratory quality assurance / quality control data are within acceptable ranges, the results will be considered suitable for use. If the COPC is reported below the laboratory detection limit in the samples applicable to a specific pathway, then it will be considered that there is no evidence of a potential complete source-pathway-receptor linkage and therefore inclusion of that pathway in further assessment may not be required.
Step 6: Specify Tolerable Limits	 The tolerable limits for the investigation adopted for quality assurance/quality control (QA/QC) purposes are as follows: The relative percentage difference (RPD) for laboratory duplicates for TRH and BTEX analysis is less than 60%; and Recovery of matrix spikes and surrogate spikes is as per the laboratory's Quality Assurance targets accepted under their NATA accreditation. The tolerable limits for field QA/QC data are as follows: RPD criteria of 30% or less, for concentrations > or = 5 times practical quantitation limits (PQL); Replicate data for field duplicates for inorganics, including metals and inorganics are expected to be as follows: RPD criteria of 30% or less, for concentrations > or = 5 times POL
Step 7: Optimise the Design	The investigation program for this assessment is detailed in Section 8 to adequately characterise the identified risks of contamination across the site (Section 3 and Section 4) and in accordance with the NSW EPA (2022) 'Contaminated Land Guidelines – Sampling Design Part 1 – Application'. As a summary, seven (7) boreholes for soil sampling were constructed to assess the potential of finding COPCs.

8. Sampling and Analysis Quality

Details of the sampling and analytical plan adopted to meet the project objectives are presented in the following sections.

The chronology of key project events is summarised in Table 7.

 Table 7: Summary of the Chronology of Works

Date	Event
06 March 2024	Lanterra was engaged by the Goulburn Projects to undertake a Preliminary Site Investigation of Lots 1, 2, and 3, DP 197295, Goulburn.
19 March 2024	Site inspection and drilling of sampling locations BH1 to BH7.
19 March 2024	Dispatch of samples to SGS Australia Pty Ltd
27 March 2024	Receipt of laboratory results
18 April 2024	Issue of PSI report

8.1 Sampling Plan

A total of seven (7) boreholes were drilled across the investigation area. The rationale for each sample location is summarised in **Table 8** below.

Sample Location	Target Location	Rationale
BH7	Site entry driveway	Borehole location selected in southeastern portion of site to characterise the soil from a contamination perspective and the presence of potential contaminants focussed on the area of the site driveway fill.
BH1, BH2	Construction Materials/Waste Storage Area	Borehole location selected in southwestern portion of site to characterise the soil from a contamination perspective and the presence of potential contaminants associated with construction materials/waste
BH3 – BH6	AEC 2	General screening for potential contaminants associated with uncontrolled fill used during the construction of the site.
BH1	AEC 3	Drilling location characterising the western portion of the site, adjacent to commercial/industrial infrastructure observed to the west.

Table 8: Rationale for sample locations advanced as a part of the PSI

It is noted that the seven (7) drilling locations for soil sampling are below the recommended number of samples in the NSW EPA (2022) 'Contaminated Land Guidelines – Sampling Design Part 1 – Application' for a site of 1,068 m² (8 sampling locations), however the seven sampling locations addressed each of the AECs identified, in a judgemental manner, and therefore are considered appropriate for the characterisation of the site.

Based on the history of the site and identified risks, samples were planned to a maximum depth of 2.0 m below ground level (bgl).

The locations of boreholes drilled across the site are shown in **Appendix A: Figure 3**.

8.2 Analytical Plan

From the samples collected across the site, the analytical plan presented in **Table 9** was executed to assess the identified COPCs.

 Table 9: Analytical Plan Completed for the PSI

Sample Type	ТКН	ВТЕХ	РАН	Phenols	ось	ΘРΡ	Heavy Metals	Asbestos	Asbestos in cement sheet
Primary	13	13	13	13	13	13	13	8	1
Duplicate	1	1	1	0	0	0	1	0	0
Triplicate	1	1	1	0	0	0	1	0	0

9. Assessment Criteria

The assessment criteria that were adopted for the investigation was based on the proposed residential land use of the site. Therefore, the following criteria have been adopted from the National Environment Protection Council (NEPC) 'National Environment Protection (Assessment of Site Contamination) Measure 1999' (revised in 2013; ASC NEPM 2013):

- NEPC (1999) National Environment Protection Assessment of Site Contamination Measure 1999' as amended 2013 (hereafter ASC NEPM 2013).
 - Health Investigation Levels (HIL) for Residential use (HIL A).
 - Health Screening Levels (HSL) for Residential use (HSL A) for a clay lithology and a depth of 0 m to <1 m below ground level for soil vapour HSLs for vapour intrusion. A clay lithology is considered appropriate as the soil across the site is located below the surface and was predominantly clay.
 - Ecological Investigation Levels (EIL) for aged contaminants on Urban Residential and Open Public Spaces.
 - Ecological Screening Level (ESL) for Urban Residential and Open Public Spaces land use for fine soil texture based on the predominantly clay soil found during this investigation.

ESLs were derived based on the following physicochemical properties:

- pH: 5.5
- CEC: 5.5
- Clay: 10%

It is noted that the adopted physicochemical properties are conservative values. EIL calculations are provided in **Appendix F**.

The adopted assessment criteria for the assessment of the site are presented in **Table 10** below.

Table 10: Soil Assessment Criteria

Contaminant Group	ASC NEPM (2013) HIL/HSL – A (mg/kg)	ASC NEPM (2013) EIL – Urban Residential and Public Open Space (mg/kg)	ASC NEPM (2013) ESL – Urban Residential and Public Open Space (mg/kg)				
Heavy Metals							
Arsenic	100	100	-				
Cadmium	20	-	-				
Chromium (III)	100	410	-				
Copper	6000	120	-				
Lead	300	1000	-				
Nickel	400	45	-				
Zinc	7400	270	-				
Mercury	40	-	-				
OCP/OPP							

Contaminant Group	ASC NEPM (2013) HIL/HSL – A (mg/kg)	ASC NEPM (2013) EIL – Urban Residential and Public Open Space (mg/kg)	ASC NEPM (2013) ESL – Urban Residential and Public Open Space (mg/kg)				
DDT+ DDE +DDD	240	180	-				
Aldrin and Dieldrin	6	-	-				
Chlordane	50	-	-				
Endosulfan	270	-	-				
Endrin	10	-	-				
Heptachlor	6	-	-				
НСВ	10	-	-				
Methoxychlor	300	-	-				
Mirex	10	-	-				
Chlorpyrifos	160	-	-				
PAHs							
Total PAH	300	-	-				
Benzo(a)pyrene [B(a)p]	-	-	0.7				
Carcinogenic PAHs as B(a)P TEQ	3	-	-				
Naphthalene	5	170	-				
		РСВ					
Total PCB	1	-	-				
	TRH	and BTEX					
TRH C ₆ -C ₁₀ – BTEX (F1)	50	-	180				
TRH >C ₁₀ -C ₁₆ — Naphthalene (F2)	280	-	120				
TRH >C ₁₆ -C ₃₄ (F3)	-	-	1300				
TRH >C ₃₄ -C ₄₀ (F4)	-	-	5600				
Benzene	1	-	65				
Toluene	NL	-	105				
Ethylbenzene	NL	-	125				
Xylenes	310	-	45				
Phenols							

Contaminant Group	ASC NEPM (2013) HIL/HSL – A (mg/kg)	ASC NEPM (2013) EIL – Urban Residential and Public Open Space (mg/kg)	ASC NEPM (2013) ESL – Urban Residential and Public Open Space (mg/kg)	
Phenol	3000	-	-	
Pentachlorophenol	100	-	-	
Cresols	400	-	-	
Asbestos				
AF and FA (friable asbestos)	0.001%	-	-	
Bonded ACM	0.01%	-	-	
All forms of asbestos	Not visible at surface	-	-	

Notes:

• ESL for Carcinogenic PAH provides concentration for Benzo(a)pyrene only.

The criteria values adopted for the assessment of the site are presented in Appendix B: Table 1.

10. Methods

Suitably qualified environmental consultants (SQEC) and an excavation subcontractor were mobilised to the site with appropriate equipment to undertake the soil investigation. Methodology as below:

- All boreholes were advanced with a 300 mm auger powered by an excavator until natural material was encountered or to a target depth of 2.0 m below ground level (bgl).
- Soil samples were collected by a suitably qualified and experienced environmental consultant from Lanterra. Borehole samples were collected at the surface (0.0-0.1 m), 0.5m below ground level (bgl), 1.0 m bgl, and 2.0 m bgl.
- Samples were collected directly from soil recovered from the auger. Care was taken to not recover soil in contact with the auger to minimise the risk of cross-contamination between samples.
- Each sample was collected with a new, clean pair of single-use disposable nitrile gloves from each sampling location to prevent cross-contamination.
- Soil samples were placed into a laboratory prepared 250 mL glass jar, sealed with a Teflon lined screw-top lid, for the analysis of heavy metals and TRH, PAH, Phenols, OCC, OPP, and PCBs. Each sample was labelled with the details of the sample, including the sample name, the job number, the date of sample and the sample depth.
- For asbestos ID analysis, 200 grams of soil were placed in a zip lock bag. Each sample was labelled with the details of the sample, including the sample name, the job number, the date of sample and the sample depth.
- One (1) duplicate and one (1) triplicate QA/QC sample was collected in general accordance with Australian Standard AS4482.1-2005.
- All holes were backfilled once drilling had been completed before moving to the next sample location.
- All samples were placed and stored in an ice-filled esky to keep them chilled. Samples were transported to a SGS Australia, which is a NATA accredited laboratory with accompanying chain of custody (COC) documentation for the required analysis (**Appendix C**).

11. Quality Assurance / Quality Control

11.1 Field QA/QC

Two (2) duplicates and one (1) triplicate sample was collected for calculating the relative percent difference (RPD) to assess the precision and accuracy of the laboratory. An RPD of less than 30% is considered acceptable where the analyte concentration is greater than five (5) times the laboratory LOR. Should the RPD be greater than 30%, then further investigation as to the reason for high RPD would occur.

The duplicate and triplicate samples were collected with the following primary samples:

• QC1 _(duplicate) and QC2 _(triplicate) were collected with primary sample BH4 0.5-0.6 on 19 March 2024.

A summary of field duplicate and triplicate analytical results is presented in **Appendix B: Table 2**, and summarised in the table below:

Table 11: Summary of QA/QC samples results and RPD

Sample Type	Number of samples	Target	Actual	Criteria Met (Yes/No)
Primary samples	14			
Duplicate (QA/QC)	1	≥ 5%	7.1%	Yes
Triplicate (QA/QC)	1	≥ 5%	7.1%	Yes
Total RPDs	98			
Total RPDs > 5x LOR & > 30%	4	≤ 5%	4.1%	Yes

The calculated RPDs (where applicable) for detectable concentrations of COPCs were less than 50%. Based on the above, the RPD targets are complied with and therefore, the analytical data is considered suitable for the purpose of the assessment.

11.2 Laboratory Quality Assurance/Quality Control

A review of the laboratory QA/QC data is summarised below.

Holding Times

All holding times were reported within their tolerable ranges.

Laboratory Accreditation

All analysis was performed in NATA accredited laboratory as follow:

- Primary laboratory SGS Australia Pty Ltd (NATA # 2562); and
- Secondary Laboratory Envirolab Services Pty Ltd (NATA # 2901).

Surrogate and Spike Recoveries

All surrogate recoveries were within the tolerable limits with the exception of the following:

 Table 12: Surrogate recovery samples that exceed the Laboratory QA/QC criteria

Sample Name	Sample Number	Parameter	Recovery (%)
BH5 0.0-0.1	SE262484.009	2.4.6-Tribromophenol	48
		d5-phenol	25
BH6 2.0-2.1	SE262484.013	2.4.6-Tribromophenol	67

The laboratory advised that the above recovery failed the acceptance criteria due to matrix interference. Majority of surrogate recoveries were within acceptance criteria. Based on the comments provided by the laboratory, the exceedances are not considered to have impacted the outcome of this investigation.

All matrix spike recoveries were within tolerable limits with the exception of the following:

Table 13: Matrix spike samples that exceed the Laboratory QA/QC criteria

QC Sample Name	Sample Number	Parameter	Recovery (%)
SE262484.001	LB307794.004	Lead	42
SE262484.001	LB307794.004	Zinc	61
SE262484.001	LB307769.004	TRH C15-C28	438
SE262484.001	LB307769.004	TRH C29-C36	182
SE262484.001	LB307769.004	TRH > C16-C34 (F3)	487

The laboratory advised that the above recovery failed the acceptance criteria due to matrix interference and sample heterogeneity. Majority of matrix spike recoveries were within acceptance criteria. Based on the comments provided by the laboratory, the exceedances are not considered to have impacted the outcome of this investigation.

Laboratory Control Sample Results

All laboratory control sample results were within the tolerable limits.

Laboratory Duplicate Results

The duplicate sample RPDs were within the tolerable range for each sample.

Laboratory Blank Results

All method laboratory blanks were below the laboratory LOR and therefore within tolerable limits.

12. Results

Visual observations and laboratory results of the investigation are presented in the following sections.

12.1 Observations

The site comprises of a rectangular-shaped area of generally flat, unoccupied land that is lightly to moderately grassed with small patches of exposed soil visible in the southern portion of the site. Anthropogenic waste was visible at across the surface of the site around the south and west portion of the site.

The general soil profile observed during the drilling of soil bores can be summarised as follows:

- Topsoil mostly comprising of Gravelly Sandy SILT, Sandy SILT and Clayey SILT that was pale to dark brown, dry to moist, and soft to lose. The thickness of the topsoil ranged from 0.1 to 0.3 m.
- Beneath the topsoil, generally, a layer of residual soil containing weathered spherules was observed throughout the site. This layer was generally described as Gravelly Sandy SILT, Sandy SILT, or Sandy Clayey SILT, that varied in colour within pale to light brown, grey and orange.
- Fill material was observed from the surface to a maximum depth of 1.0 m bgl.
- Natural material was observed in all holes across the site, corresponding with a clay variant. This material was generally described as Sandy Silty CLAY, Silty CLAY, or Clayey SILT that was orange to brown/pale brown in colour.

A summary of the soil profile across the site is provided in **Table 14**.

Borehole	Sample Name	Soil Layer Depth (m bgl)	Topsoil / Fill / Natural	Soil Description	
BH1	BH1 0.0-0.1	0.0 - 0.3	Topsoil	Gravelly Sandy SILT: dark brown, moist, soft to loose	
	BH1 0.5-0.6	0.3 - 0.6	Residual Soil	Gravelly Sandy SILT: dark brown, dry to moist, soft to loose	
	BH1 1.0-1.1	06.21	Natural	Sandy Silty CLAY: orange, brown, dry to moist	
	BH1 2.0-2.1	0.0 - 2.1			
	BH2 0.0-0.1	0.0 - 0.3	Topsoil	Sandy SILT: dark brown, dry to moist, soft	
BH2 B	BH2 0.5-0.6	0.3 - 0.6	Residual Soil	Gravelly Sandy SILT: dark brown, dry to moist, firm	
	BH2 1.0-1.1	06.20	Natural	Sandy Silty CLAY: orange, brown, dry to moist	
	BH2 2.0-2.1	0.6 - 2.0			
Bł	BH3 0.0-0.1	BH3 0.0-0.1 0.0 – 1.0 Fill BH3 0.5-0.6	Fill	Sandy SILT: dark brown, dry to moist, soft to loose, traces of gravel	
BH3	BH3 0.5-0.6			Sandy SILT: pale brown to grey, dry to moist	
	BH3 1.0-1.1	Natural	Sandy Silty CLAY: orange to brown, dry to		
	BH3 2.0-2.1	1.0 - 2.0	Naturai	moist, black nodules.	
BH4	BH4 0.0-0.1	0.0 - 0.1	Topsoil	Sandy SILT: pale brown, dry to moist, traces of black nodules	
	BH4 0.5-0.6	0.1 - 0.5	Residual Soil	Gravelly Sandy SILT: brown to orange, dry to moist, loose	

Table 14: Summary of Soil Types
Borehole	Sample Name	Soil Layer Depth (m bgl)	Topsoil / Fill / Natural	Soil Description
	BH4 1.0-1.1	05.20	Natural	Sandy Silty CLAY: orange to brown, dry to moist, black nodules.
	BH4 2.0-2.1	0.5 - 2.0	Naturai	Silty CLAY: orange to brown, dry to moist, black nodules.
	BH5 0.0-0.1	0.0 - 0.1	Topsoil	Sandy SILT: brown, dry to moist, traces of rounded nodules
BH5	BH5 0.5-0.6	0.5 - 0.6	Residual Soil	Sandy Clayey SILT: brown to orange, dry to moist
	BH5 1.0-1.1	10 21	Natural	Silty CLAY: brown to orange, dry to moist
	BH5 2.0-2.1	1.0 - 2.1	Naturai	Silty CLAY: grey to orange, dry to moist
	BH6 0.0-0.1	0.0 - 0.1	Topsoil	Clayey SILT: pale brown, moist, soft to loose
	BH6 0.5-0.6	0.1 - 0.5	Desidual Cail	Sandy SILT: orange to brown, dry to moist
BH6	BH6 1.0-1.1	0.5 - 1.1	Residual Soli	Silty CLAY: orange to brown, dry to moist
	BH6 2.0-2.1	1.1 - 2.1	Natural	Silty CLAY: orange to pale brown, dry to moist, grey mottles
	BH7 0.0-0.1	0.0 - 0.3	Fill	Sandy SILT: dark brown, dry to moist, large gravel
BH7	BH7 0.5-0.6	0.3 - 0.6	Natural	Clayey SILT: brown to pale brown, dry to moist, soft
	BH7 1.0-1.1	0.5 - 1.1	INdluidi	Sandy Silty CLAY: brown to orange, dry to moist.

Traces of anthropogenic materials were observed in in the following boreholes:

- BH1: traces of brick and plastic in fill material.
- BH2: traces of glass on surface of borehole location.
- BH3: traces of concrete, bricks, glass and plastic were observed in fill material.
- BH7: abundant fragments of plastic, glass, bricks, and tiles were observed on the surface and subsurface of the driveway fill.

Fragments of asbestos-containing materials (ACM) were found on the surface of the driveway area. One fragment was collected and analysed for the presence of asbestos by the laboratory (refer to **Section 12.2**). Since the site had been cleared of asbestos previously (ACR, 2018; see **Section 3.1**), and considering the presence of construction waste in the driveway fill, along with the weathered condition of the observed ACM fragments, it is presumed that these ACM fragments originate from the driveway fill rather than from remnants of building demolition.

No odours were noted in any of the boreholes, while field PID screening of soil samples indicated a low potential for ionisable volatile compounds with a maximum of PID measurement of 0.2 ppm across the site.

Sample locations are presented in **Appendix A: Figure 3**, while details of the soil profiles are presented as bore logs in **Appendix E**.

12.2 Analytical Results

A total of fourteen (14) primary soil samples were selected for analysis. A summary of the analytical results is presented in **Appendix B: Table 1**, while copies of the laboratory reports, sample receipt and COCs is presented in **Appendix C**.

BTEX, OCP/OPP, PCB and Phenols

A total of thirteen (13) primary soil samples were analysed for BTEX, OCP/OPP, PCB and Phenols from across the site. Concentrations of BTEX, OCP/OPP, PCB and Phenols were below the laboratory limit of reporting (LOR; see **Appendix B: Table 1**) and therefore below the adopted criteria for the protection of human health and ecological receptors.

PAH

PAH compounds were below the adopted criteria for the investigation in all samples excepting BH1 0.0-0.1 which recorded a benzo(a)pyrene concentration of 1.4 mg/kg, above the ESL criteria for the protection of ecological receptors (0.7 mg/kg). This exceedance poses a risk to the environment.

TRH

TRH compounds were below the laboratory LOR in all samples excepting BH1 0.0-0.1 and BH3 0.0-0.1. However, these concentrations were below the investigation adopted criteria.

Heavy Metals

A total of thirteen (13) primary soil samples were analysed for heavy metals from across the site. Details of metal concentrations were as follows:

- Concentrations of arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury were detected above the laboratory limit of reporting in each sample, but all concentrations were below the criteria of HIL A (see **Appendix B: Table 1**).
- Zinc concentrations exceeded the EIL criteria (270 mg/kg) for protecting ecological receptors in samples BH1 0.0-0.1 (460 mg/kg), BH3 0.0-0.1 (290 mg/kg), BH5 0.0-0.1 (290 mg/kg) and BH7 0.0-0.1 (310 mg/kg) posing a risk to the environment.

Asbestos

A total of eight (8) primary samples were analysed for asbestos from across the site. No asbestos was detected in the samples analysed (see **Appendix B: Table 1)**.

One (1) piece of ACM sheet debris was analysed for asbestos, with chrysotile asbestos being detected.

13. Revised Conceptual Site Model

Based on the results of the intrusive investigation, the CSM has been revised to reflect information obtained from the site investigation results.

13.1 Summary of Site Condition

The site investigation identified fill material throughout the site in each borehole, from the surface to a depth ranging from 0.1 m to 1.0 m bgl. Natural material was identified throughout the site in all boreholes to the limit of investigation at 2.0 m bgl.

The analytical results obtained from the soil investigation identified indicated that all COPC were below the adopted investigation criteria excepting concentrations of benzo(a)pyrene in sample BH1 0.0-0.1 and zinc in samples BH1 0.0-0.1, BH3 0.0-0.1, BH5 0.0-0.1 and BH7 0.0-0.1; which exceeded the criteria for the protection of ecological receptors (ESL/EIL). These concentrations are likely related to the fire that affected the site and pose a risk to the environmental health.

Anthropogenic material was identified in fill material of boreholes BH1, BH2, BH3, and BH7 as described in **Section 12.1**.

No AF/FA was detected in any of the analysed soil samples across the site. However, fragments of ACM were observed as sheet debris on the surface of fill material located in the driveway of the site. Considering the asbestos clearance undertaken in 2018 and the characteristics of the driveway fill material and ACM fragments (see **Section 12.1**) it has been assumed that the observed ACM fragments are related to the imported fill material used in the driveway and are not residual fragments from the demolition of the former building.

No olfactory signs of contamination were identified during the site investigation.

13.2 Potential Receptors and Exposure Pathways

Based on the results of the investigation, the revised CSM is presented in **Table 15** below.

Pathway	Contaminants of Concern	Potential Receptor	Exposure Pathway Complete or Potentially Complete (Yes/No)	Comments
Direct Contact with Soil including dermal contact and ingestion	TRH, BTEX, PAH, OCP, OCB, PCB, phenols, heavy metals	 Users of the site Construction workers Ecological receptors 	Complete	COPC were below the adopted criteria for the protection of the human health in a residential setting. Concentrations of benzo(a)pyrene and zinc were above the ESL and EIL criteria for the protection of ecological receptors in samples BH1 0.0-0.1, BH3 0.0- 0.1, BH5 0.0-0.1 and BH7 0.0- 0.1.

 Table 15: Revised Conceptual Site Model

Pathway	Contaminants of Concern	Potential Receptor	Exposure Pathway Complete or Potentially Complete (Yes/No)	Comments
				Therefore, the exposure pathway is considered to be complete.
Direct Contact with Groundwater including dermal contact and ingestion	TRH, BTEX, PCB, OCP, PAH, Heavy metals	 Users of the site Construction workers Ecological receptors 	Incomplete	The pathway is incomplete as there are no COPCs present across the site to risk migration to the underlying groundwater. Furthermore, there are no abstraction wells on the site that may allow direct contact with groundwater.
Inhalation of Asbestos Fibres	Asbestos	 Users of the site Construction workers Ecological receptors 	Potentially Complete	Pieces of asbestos containing material (cement sheet) were observed on the surface of the site. This material appears to be associated to fill material used to establish the driveway of the site (Figure 4, Appendix A). Although asbestos fines and fibrous asbestos was not detected in soil across the site, its presence, particularly in the driveway fill, cannot be eliminated. Therefore, the exposure pathway is considered potentially complete.
Inhalation of gasses and vapour	TRH, BTEX	 Users of the site Construction workers Ecological receptors 	Incomplete	Exposure pathway is incomplete due to the absence of volatile compounds in soil that may pose a vapour risk.

14. Summary and Conclusions

Goulburn Projects engaged Lanterra to complete this PSI with soil sampling on Lots 1, 2, and 3, DP 197295, Goulburn, NSW, 2580 (herein referred to as the site).

According to the Goulburn Mulwaree Local Environmental Plan 2009, the site has an area of approximately 1,068 square metres (m²) and zoned as MU1 – Mixed Use.

It is understood that the site has been vacant since a previous residential building was damaged by fire and demolished in 2016. The site is proposed for residential development.

The objective of this investigation was to assess the site and its surrounding for potential contamination risk and its suitability for future land uses permitted under the MU1 – Mixed Use zone.

Seven (7) boreholes were drilled across the investigation area and the outcomes of the investigation are summarised as follows:

- Fill material was present across the site in each borehole from the surface to a maximum depth of 1.0 m below ground level (bgl).
- Concentrations of TRH, BTEX, PAH, OCP/OPP, PCB, Phenols, and heavy metals analysed in the fourteen (13) primary soil samples collected from across the site were all below the adopted Health Investigation Level A (HIL A) / Health Screening Level A (HSL A) criteria for residential land use. Therefore, the soil on the site was considered suitable for the protection of human health for residential land use.
- Benzo(a)pyrene and zinc were observed above their respective criteria for the protection of ecological receptors (ESL and EIL) in samples BH1 0.0-0.1, BH3 0.0-0.1, BH5 0.0-0.1 and BH7 0.0-0.1. These benzo(a)pyrene and zinc exceedances are likely related to the fire that affected the site and pose a risk to the environment.
- No olfactory indications of contamination were identified with the soil during the site inspection.
- No asbestos fines and/or fibrous asbestos (AF/FA) was detected in any of the soil samples collected from across the site.
- Asbestos containing material (ACM) sheet debris was identified in the driveway area of the site (Figure 4, Appendix A). Based on the characteristics of this material and the site, it has been inferred that the presence of ACM was associated to the driveway fill material. The potential presences of more ACM fragments and/or AF/FA in the driveway soil poses a risk for the human health.

Based on the findings above, Lanterra concludes and recommends the following:

- The potential presence of AF/FA and other ACM in the subsurface soil of the driveway fill cannot be eliminated. This constitutes a risk to the human health.
- Based on the results of the investigation, a remediation area of approximately 50 m² corresponding with the driveway area of the site comprised of fill material has been defined (see Figure 4 Appendix A). It is recommended that the surface is scraped to a depth of 0.2-0.3 m bgl which is the approximate thickness of fill in the driveway. This would result in approximately 10 cubic metres (m³) of asbestos waste that will require disposal to a suitably licensed waste facility.
- Considering benzo(a)pyrene and zinc occurrences, remediation areas of approximately 50 m² around boreholes BH1, BH3, and BH5 have been defined. These areas shall be scraped to a

depth of 0.1-0.2 m bgl, resulting in approximately 15 - 30 cubic metres (m³) of soil for soil classification and disposal.

- Once the fill material from the driveway area, where borehole BH7 is located, and around boreholes BH1, BH3, and BH5 has been cleared, validation sampling will be required to assess whether benzo(a)pyrene, zinc, and ACM impacted materials have been removed from the area.
- Any soil to be removed from the site as part of the remediation works must be assessed in accordance with the NSW EPA (2014) *'Waste Classification Guidelines'* and a standalone waste classification report must be prepared.

Based on the results of the investigation, the site may be considered suitable for the proposed residential development, subject to the recommendations above being undertaken and the site validated.

Prior to construction works commencing, an unexpected finds protocol (UFP) to manage any unexpected occurrences of contamination should they be encountered during the development of the site should be prepared by a suitably qualified environmental consultant.

15. References

ACR (2018) 'Inspection Clearance'

ACT Geotechnical Engineers Pty Ltd (2023) 'Proposed Unit Development – 26 Lithgow Street, Goulburn, NSW, Geotechnical Investigation Report'

Bureau of Mineral Resources, Geology and Geophysics (1984) '1:100,000 Hydrogeology of the Australian Capital Territory and Environs'

Bureau of Mineral Resources, Geology and Geophysics (1992) '1:100,000 Geological Series, Canberra, New South Wales and Australian Capital Territory, Sheet 8727'

National Environment Protection Council (1999) National Environment Protection (Assessment of Site Contamination Measure 1999) as amended 2013

NSW EPA (2017) 'Guidelines for the NSW Site Auditor Scheme (3rd Ed.)'

NSW EPA (2020) Contaminated Land Guidelines - Consultants Reporting on Contaminated Land

NSW Government (2009) Goulburn Mulwaree Local Environmental Plan

Tim Lee Architects (2022) 'Statement of Environmental Effects for the Proposed Multi-Unit Development at 26 Lithgow Street, Goulburn NSW'

Figures

Appendix A





	lanterra	consulting			-			
Unit 13/71 l	_eichhardt Street, I	Kingston, ACT2604	PROJECT No:	P24032				
	ABN 30 629 182 823		PROJECT:	Preliminary Site Investigation				
0	10	20 m	LOCATION:	Lots 1, 2 and 3, DP 197295, Goulburn, NSW, 2580				
0	0 10 20 m		CLIENT:	Goulburn Projects				
		Image Source: Nea	rmap Aerial	Coordinate System: GDA 2020 MGA Zone 55				



		2						
	Unit 13/71 Leichhardt Stree	et, Kingston, ACT2604	PROJECT No:	P24032				
	ABN 30 629	182 823	PROJECT:	Preliminary Site Investigation				
ſ	0 10	20 m	LOCATION:	Lots 1, 2 and 3, DP 197295, Goulburn, NSW, 2580				
			CLIENT:	Goulburn Projects				
			Image Source: Nea	rmap Aerial	Coordinate System: GDA 2020 MGA Zone 55			



//	lanterra con	sulting	1100112 4.11	oposed Remediation	Aleas			
Unit 13/7	1 Leichhardt Street, Kingsto	on, ACT2604	PROJECT No:	P24032				
	ABN 30 629 182 823	•	PROJECT:	Preliminary Site Investigation				
	0 10 20 m -		LOCATION:	Lots 1, 2 and 3, DP 19729	5, Goulburn, NSW, 2580			
0			CLIENT:	Goulburn Projects				
			Image Source: Nea	armap Aerial	Coordinate System: GDA 2020 MGA Zone 55			

Laboratory Data Summary Table



						Field_ID	BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1	BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6
						-								
						Depth m	0.0-0.1	0.5-0.6	1.0-1.1	2.0-2.1	0.0-0.1	2.0-2.1	0.0-0.1	0.5-0.6
						Sampled-date	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024
				ASC NEPM (2013)	ASC NEPM (2013) HSLA	ASC NEPM (2013) HIL								
				EIL/ESL Urban	(mg/kg) 0.0-	A								
				Residential and Public	1.0m/1.0-2.0m/2.0-									
				Open Space	4.0m									
Method_Type	ChemName	Units	EQL	1										
Metals in soil	Arsenic, As	mg/kg	1	100		100	5	5	3	3	5	4	5	4
	Cadmium, Cd	mg/kg	0.3			20	0.5	<0.3	<0.3	<0.3	0.3	< 0.3	< 0.3	<0.3
	Chromium, Cr	mg/kg	0.3	410		100	27	73	45	36	32	46	47	68
	Copper, Cu	mg/kg	0.5	120		6000	42	15	17	12	32	18	12	17
	Nickel Ni	mg/kg	0.5	45		400	6.7	24	7.9	13	6.9	190	11	19
	Zinc, Zn	mg/kg	2	270		7400	460	20	13	9.8	290	19	9.9	9.5
	Mercury	mg/kg	0.05			40	0.11	< 0.05	< 0.05	< 0.05	0.25	<0.05	< 0.05	<0.05
Organochlorine Pesticides	Hexachlorobenzene (HCB)	mg/kg	0.1			10	<0.1	<0.1	<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	<0.1	<0.1	<0.1
	Lindane	mg/kg	0.1				N.A.							
	Heptachior	mg/kg	0.1			6	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Pata PHC	mg/kg	0.1			6	<0.1	<0.1	<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	<0.1	<0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1				<0.1	<0.1	<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	<0.1	<0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2			270	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Gamma Chlordane	mg/kg	0.1			50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Alpha Chlordane	mg/kg	0.1			50	<0.1	<0.1	<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	<0.1	<0.1	<0.1
	p,p-DDE	mg/kg	0.1				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Endrin	mg/kg	0.2			10	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	o.p'-DDD	mg/kg	0.2			10	<0.1	<0.1	<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	<0.1	<0.1	<0.1
	Beta Endosulfan	mg/kg	0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	p,p'-DDD	mg/kg	0.1			240	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	p,p'-DDT	mg/kg	0.1	180		240	<0.1	<0.1	<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	<0.1	<0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1			10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Metnoxychior Foddia Kotono	mg/kg	0.1			300	<0.1	<0.1	<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	<0.1	<0.1	<0.1
	Mirex	mg/kg	0.1			10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Organophosphorus	Dichlorvos	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5
Pesticides	Dimethoate	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Diazinon (Dimpylate)	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5
	Fenitrothion	mg/kg	0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Malatnion	mg/kg	0.2			100	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Chiorpyriros (Chiorpyritos Ethyl)	mg/kg	0.2			160	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Bromophos Ethyl	mg/kg	0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Methidathion	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Ethion	mg/kg	0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Azinphos-methyl (Guthion)	mg/kg	0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
PAHs in Soil	Naphthalene	mg/kg	0.1	170	5/NL/NL		<0.1	<0.1	<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	<0.1	<0.1	<0.1
	1-metnyinaphthalene	mg/kg	0.1				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Acenanhthene	mg/kg	0.1				0.2	<0.1	<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	<0.1	<0.1	<0.1
	Phenanthrene	mg/kg	0.1				0.8	0.1	<0.1	<0.1	0.6	<0.1	<0.1	<0.1
	Anthracene	mg/kg	0.1				0.2	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
	Fluoranthene	mg/kg	0.1				1.8	0.1	<0.1	<0.1	1.1	<0.1	<0.1	<0.1
	Pyrene	mg/kg	0.1				1.8	0.1	<0.1	<0.1	1.1	<0.1	<0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1				1.1	<0.1	<0.1	<0.1	0.6	<0.1	<0.1	<0.1
1	Chrysene	mg/kg	0.1				0.9	<0.1	<0.1	<0.1	0.6	<0.1	< 0.1	<0.1



						Field ID	BH1 0 0-0 1	BH1 0 5-0 6	BH2 1 0-1 1	BH2 2 0-2 1	BH3 0 0.0 1	BH3 2 0-2 1	BH4 0 0-0 1	BH4.0.5-0.6
						Field_ID	BH1 0.0-0.1	BIII 0.3-0.0	BH2 1.0-1.1	Briz 2.0-2.1	5113 0.0-0.1	BI13 2.0-2.1	BI14 0.0-0.1	BI14 0.3-0.0
						Donth m	0.0.0.1	0506	1011	2021	0001	2021	0.0.0.1	05.06
						Depth m	0.0-0.1	0.5-0.6	1.0-1.1	2.0-2.1	0.0-0.1	2.0-2.1	0.0-0.1	0.5-0.6
						Sampled-date	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024
						Fill/Natural								
				ASC NEPM (2013)	ASC NEPM (2013) HSL A	ASC NEPM (2013) HIL								
				EIL/ESL Urban	(mg/kg) 0.0-	A								
				Residential and Public	1.0m/1.0-2.0m/2.0-									
				Open Space	4.0m									
Method Type	ChemName	Units	EOL	1										
	Ronzo(h&i)fluoranthono	malka	0.1				1.5	<0.1	<0.1	<0.1	0.8	<0.1	<0.1	<0.1
	Denzo(Uddj)nuoranniene	mg/kg	0.1				1.5	-0.1	-0.1	-0.1	0.8	-0.1	-0.1	-0.1
	Benzo(k)nuoranimene	mg/kg	0.1	0.7			0.5	<0.1	<0.1	<0.1	0.4	<0.1	<0.1	<0.1
	Benzo(a)pyrene	тід/кд	0.1	0.7			1.4	<0.1	<0.1	<0.1	0.7	<0.1	<0.1	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1				0.9	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	<0.1
	Dibenzo(ah)anthracene	mg/kg	0.1				0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1				0.5	<0.1	<0.1	<0.1	0.3	<0.1	<0.1	<0.1
	Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td></td><td></td><td>3</td><td>2</td><td><0.2</td><td><0.2</td><td><0.2</td><td>0.9</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0<>	TEQ (mg/kg)	0.2			3	2	<0.2	<0.2	<0.2	0.9	<0.2	<0.2	<0.2
	Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td></td><td></td><td>3</td><td>2</td><td>< 0.3</td><td>< 0.3</td><td><0.3</td><td>1</td><td>< 0.3</td><td>< 0.3</td><td>< 0.3</td></lor=lor<>	TEQ (mg/kg)	0.3			3	2	< 0.3	< 0.3	<0.3	1	< 0.3	< 0.3	< 0.3
	Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td></td><td></td><td>3</td><td>2</td><td><0.2</td><td><0.2</td><td><0.2</td><td>1</td><td>< 0.2</td><td><0.2</td><td>< 0.2</td></lor=lor>	TEQ (mg/kg)	0.2			3	2	<0.2	<0.2	<0.2	1	< 0.2	<0.2	< 0.2
	Total PAH (18)	mg/kg	0.8			300	12	<0.8	<0.8	<0.8	6.7	< 0.8	<0.8	<0.8
PCBs in Soil	Arochlor 1016	mg/kg	0.2				<0.2	<0.2	<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	< 0.2	<0.2	< 0.2
	Arochlor 1232	mg/kg	0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
1	Arochlor 1242	ma/ka	0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
1	August 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	1118/ NB	0.2				10.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
1	Anaphia 1254	mg/kg	0.2				<u.2< td=""><td><u.2< td=""><td><u.2< td=""><td><u.2< td=""><td><u.2< td=""><td><u.2< td=""><td><0.2</td><td><u.2< td=""></u.2<></td></u.2<></td></u.2<></td></u.2<></td></u.2<></td></u.2<></td></u.2<>	<u.2< td=""><td><u.2< td=""><td><u.2< td=""><td><u.2< td=""><td><u.2< td=""><td><0.2</td><td><u.2< td=""></u.2<></td></u.2<></td></u.2<></td></u.2<></td></u.2<></td></u.2<>	<u.2< td=""><td><u.2< td=""><td><u.2< td=""><td><u.2< td=""><td><0.2</td><td><u.2< td=""></u.2<></td></u.2<></td></u.2<></td></u.2<></td></u.2<>	<u.2< td=""><td><u.2< td=""><td><u.2< td=""><td><0.2</td><td><u.2< td=""></u.2<></td></u.2<></td></u.2<></td></u.2<>	<u.2< td=""><td><u.2< td=""><td><0.2</td><td><u.2< td=""></u.2<></td></u.2<></td></u.2<>	<u.2< td=""><td><0.2</td><td><u.2< td=""></u.2<></td></u.2<>	<0.2	<u.2< td=""></u.2<>
	Arochlor 1254	mg/kg	0.2				<0.2	<0.2	<0.2	<0.2	<0.2	<u.2< td=""><td><0.2</td><td><0.2</td></u.2<>	<0.2	<0.2
	Arochlor 1260	mg/kg	0.2				<0.2	<0.2	<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	<0.2	<0.2	<0.2
	Arochlor 1268	mg/kg	0.2				<0.2	<0.2	<0.2	<0.2	<0.2	< 0.2	<0.2	<0.2
	Total PCBs (Arochlors)	mg/kg	1			1	<1	<1	<1	<1	<1	<1	<1	<1
TRH Soil C10-C40 NEPM	TRH C10-C14	mg/kg	20				<20	<20	<20	<20	<20	<20	<20	<20
	TRH C15-C28	mg/kg	45				55	<45	<45	<45	<45	<45	<45	<45
	TRH C29-C36	mg/kg	45				49	<45	<45	<45	60	<45	<45	<45
	TRH C37-C40	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100
	TRH >C10-C16	mg/kg	25				<25	<25	<25	<25	<25	<25	<25	<25
	TRH xC10+C16 - Nanhthalene (F2)	ma/ka	25	120	280/NI /NI		(25	(25	(25	<25	<25	<25	<25	<25
	TRH >C16-C34 (F3)	ma/ka	90	1300	200/112/112		98	<90	<90	<20	<90	<20	<20	<90
	TRH >C34-C40 (F4)	ma/ka	120	5600			<120	<120	<120	<120	<120	<120	<120	<120
	TRI 2034-040 (F4)	mg/kg	120	5000			~120	-110	-120	-120	-110	~120	-110	-110
	TRH C10-C30 Total	mg/kg	210				<110	<110	<110	<110	<110	<110	<110	<110
	TRH >C10-C40 Total (F bands)	mg/kg	210				<210	<210	<210	<210	<210	<210	<210	<210
BTEX + VOC	Benzene	mg/kg	0.1	65	0.7/1/2		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Toluene	mg/kg	0.1	105	480/NL/NL/NL		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Ethylbenzene	mg/kg	0.1	125	NL/NL/NL		<0.1	<0.1	<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	<0.2	<0.2	<0.2
1	o-xylene	mg/kg	0.1				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1	Total Xylenes	mg/kg	0.3	45	110/310/NL		< 0.3	<0.3	<0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1	Total BTEX	mg/kg	0.6				<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
1	Benzene (F0)	mg/kg	20		0.7/1/2		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1	TRH C6-C9	mg/kg	0.1				<20	<20	<20	<20	<20	<20	<20	<20
1	TRH C6-C10	mg/kg	25				<25	<25	<25	<25	<25	<25	<25	<25
1	TRH C6-C10 minus BTEX (F1)	mg/kg	25	180	50/90/150		<25	<25	<25	<25	<25	<25	<25	<25
Speciated Phenol	Phenol	mg/kg	0.5			3000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	2-methyl phenol (o-cresol)	mg/kg	0.5			5000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1	3/4-methyl phenol (m/n-cresol)	ma/ka	1					-0.5	-0.5	-0.5	-0.5		-0.5	-0.5
1	Total Crocol	mg/kg	1.5			400	-15	-1.5	-1.6	-1.5	-1.6	-1.5	-1	-1.6
1	2 shlorophonol	mg/kg	1.5			400	<1.5	<1.5	<1.5 20.5	<1.5	<1.5 20.5	<1.5	\$1.5	<1.5 2.0.5
1	2-cnorophenor	mg/kg	0.5				<u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""></u.5<></td></u.5<></td></u.5<></td></u.5<></td></u.5<></td></u.5<></td></u.5<></td></u.5<>	<u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""></u.5<></td></u.5<></td></u.5<></td></u.5<></td></u.5<></td></u.5<></td></u.5<>	<u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""></u.5<></td></u.5<></td></u.5<></td></u.5<></td></u.5<></td></u.5<>	<u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""></u.5<></td></u.5<></td></u.5<></td></u.5<></td></u.5<>	<u.5< td=""><td><u.5< td=""><td><u.5< td=""><td><u.5< td=""></u.5<></td></u.5<></td></u.5<></td></u.5<>	<u.5< td=""><td><u.5< td=""><td><u.5< td=""></u.5<></td></u.5<></td></u.5<>	<u.5< td=""><td><u.5< td=""></u.5<></td></u.5<>	<u.5< td=""></u.5<>
1	2,4-aimetnyiphenoi	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1	2,6-dicniorophenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1	2,4-dichlorophenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1	2,4,6-trichlorophenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1	2-nitrophenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	< 0.5	< 0.5	<0.5	< 0.5
1	4-nitrophenol	mg/kg	1				<1	<1	<1	<1	<1	<1	<1	<1
1	2,4,5-trichlorophenol	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	<0.5	<0.5
1	2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1				<1	<1	<1	<1	<1	<1	<1	<1
1	Pentachlorophenol	mg/kg	0.5			100	<0.5	<0.5	<0.5	<0.5	<0.5	< 0.5	< 0.5	<0.5
1	2,4-dinitrophenol	mg/kg	2				<2	<2	<2	<2	<2	<2	<2	<2
1	4-chloro-3-methylphenol	mg/kg	2				<2	<2	<2	<2	<2	<2	<2	<2
Fibre Identification in soil	Ashestos Detected	No unit	0				No	No	No	N A	No	N A	No	NA
	Estimated Fibres	%w/w	0.01				<0.01	<0.01	<0.01	N A	<0.01	N A.	<0.01	N.A.
Elbro ID in bulk mata-lais	Ashestos Deterted	Nounit	0.01				N A	N A	N A	N.A.	N A	N A	N A	N A
prove to in ours materials	r wettettet						11.00	1.1.1.1.1.	1.1.1.1.1.	1.8.7%	1.1.1.1.1.	1.1.1.1.1	1.8.0.5.	1.1.1.1.1.1



						Field ID	DUE 0.0.0.1	DUE 1 0 1 1	DUC 0.0.0.1	DUC 1 0 1 1	DUC 2 0 2 1	0070001	001	002	4614
						Held_ID	BH5 0.0-0.1	BH5 1.0-1.1	BH6 0.0-0.1	BH6 1.0-1.1	BH6 2.0-2.1	BH70.0-0.1	QC1	QC2	ACM
						Depth m	0.0-0.1	10-11	0.0-0.1	1.0-1.1	2 0-2 1	0.0-0.1			ACM
						Sampled-date	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024
						Fill/Natura									
				ASC NEPM (2013)	ASC NEPM (2013) HSL A	ASC NEPM (2013) HIL									
				EIL/ESL Urban	(mg/kg) 0.0-	A									
				Residential and Public	1.0m/1.0-2.0m/2.0-										
				Open Space	4.0m										
Method_Type	ChemName	Units	EQL												
Metals in soil	Arsenic, As	mg/kg	1	100		100	4	3	N.A.	3	3	5	3	5	N.A.
	Cadmium, Cd	mg/kg	0.3			20	0.3	<0.3	N.A.	<0.3	<0.3	0.6	<0.3	<0.4	N.A.
	Connor, Cr	mg/kg	0.3	410		100	28	44	N.A.	30	23	28	50	54	N.A.
	Lead Ph	mg/kg	1	1100		300	120	14	N.A.	14	10	240	15	37	N.A.
	Nickel, Ni	mg/kg	0.5	45		400	6.1	7.4	N.A.	10	14	9.6	9.9	17	N.A.
	Zinc, Zn	mg/kg	2	270		7400	290	16	N.A.	14	17	310	9.8	13	N.A.
	Mercury	mg/kg	0.05			40	0.45	< 0.05	N.A.	<0.05	< 0.05	0.26	<0.05	<0.1	N.A.
Organochlorine Pesticide	s Hexachlorobenzene (HCB)	mg/kg	0.1			10	<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Alpha BHC	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Lindane	mg/kg	0.1				N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Heptachlor	mg/kg	0.1			6	<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Alarin	mg/kg	0.1			6	<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Dolta RHC	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Hostachlor oppyido	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	NL A	N.A.
	o p'-DDF	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Alpha Endosulfan	mg/kg	0.2			270	< 0.2	<0.2	N.A.	<0.2	<0.2	< 0.2	N.A.	N.A.	N.A.
	Gamma Chlordane	mg/kg	0.1			50	<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Alpha Chlordane	mg/kg	0.1			50	<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	trans-Nonachlor	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	p,p'-DDE	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Dieldrin	mg/kg	0.2			6	<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Endrin	mg/kg	0.2			10	<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	0,p-DDD	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	0,p'-DDT Rota Enderulfan	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	n n' DDD	mg/kg	0.2			240	<0.2	<0.2	N.A.	<0.2	<0.2	<0.1	N.A.	NL A	N.A.
	p,p-000	mg/kg	0.1	180		240	<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Endosulfan sulphate	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Endrin Aldehyde	mg/kg	0.1			10	<0.1	< 0.1	N.A.	<0.1	<0.1	< 0.1	N.A.	N.A.	N.A.
	Methoxychlor	mg/kg	0.1			300	<0.1	< 0.1	N.A.	<0.1	<0.1	< 0.1	N.A.	N.A.	N.A.
	Endrin Ketone	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Isodrin	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
	Mirex	mg/kg	0.1			10	<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	N.A.	N.A.	N.A.
Organophosphorus	Dichlorvos	mg/kg	0.5				<0.5	<0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
resucides	Dimetnoate	mg/kg	0.5				<0.5	<0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	Expitrathian	rng/kg	0.5				<0.5	<0.5	IN.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	Malathion	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Chlorovrifos (Chlorovrifos Ethyl)	mg/kg	0.2			160	<0.2	<0.2	N A	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Parathion-ethyl (Parathion)	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Bromophos Ethyl	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Methidathion	mg/kg	0.5				<0.5	< 0.5	N.A.	<0.5	< 0.5	< 0.5	N.A.	N.A.	N.A.
	Ethion	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Azinphos-methyl (Guthion)	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
PAHs in Soil	Naphthalene	mg/kg	0.1	170	5/NL/NL		<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	<0.1	N.A.
	2-methylnaphthalene	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	<0.1	N.A.
	1-metnylnaphthalene	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	<0.1	N.A.
	Acenaphinylene	rng/kg	0.1				<0.1	<0.1	IN.A.	<0.1	<0.1	<0.1	<0.1	<0.1	N.A.
	Eluorene	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	<0.1	N.A.
1	Phenanthrene	mg/kg	0.1				0.1	<0.1	N A	<0.1	<0.1	0.3	<0.1	<0.1	N.A.
	Anthracene	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	<0.1	N.A.
1	Fluoranthene	mg/kg	0.1				0.2	< 0.1	N.A.	<0.1	<0.1	0.7	<0.1	<0.1	N.A.
1	Pyrene	mg/kg	0.1				0.2	< 0.1	N.A.	<0.1	<0.1	0.7	<0.1	<0.1	N.A.
	Benzo(a)anthracene	mg/kg	0.1				0.1	<0.1	N.A.	<0.1	<0.1	0.4	<0.1	<0.1	N.A.
	Chrysene	mg/kg	0.1				0.1	<0.1	N.A.	<0.1	<0.1	0.5	<0.1	<0.1	N.A.



						Field ID	BH5 0.0-0.1	BH5 1.0-1.1	BH6 0.0-0.1	BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1	QC1	QC2	ACM
						Depth m	0.0-0.1	1.0-1.1	0.0-0.1	1.0-1.1	2.0-2.1	0.0-0.1		10/00/0001	ACM
						Sampled-date	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024	19/03/2024
				ASC NEPM (2013)	ASC NEPM (2013) HSL A	ASC NEPM (2013) HIL									
				EIL/ESL Urban	(mg/kg) 0.0-	A									
				Residential and Public	1.0m/1.0-2.0m/2.0-										
				Open Space	4.0m										
Method_Type	ChemName	Units	EQL												
	Benzo(b&j)fluoranthene	mg/kg	0.1				0.1	<0.1	N.A.	<0.1	<0.1	0.4	<0.1	<0.2	N.A.
	Benzo(k)fluoranthene	mg/kg	0.1	0.7			<0.1	<0.1	N.A.	<0.1	<0.1	0.3	<0.1	< 0.05	N.A.
	Indepo(1.2.3.cd)nvrene	mg/kg	0.1	0.7			0.2	<0.1	N.A.	<0.1	<0.1	0.5	<0.1	<0.05	N.A.
	Dibenzo(ah)anthracene	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	<0.1	N.A.
	Benzo(ghi)perylene	mg/kg	0.1				<0.1	< 0.1	N.A.	<0.1	<0.1	0.2	<0.1	<0.1	N.A.
	Carcinogenic PAHs, BaP TEQ <lor=0< th=""><th>TEQ (mg/kg)</th><th>0.2</th><th></th><th></th><th>3</th><th><0.2</th><th><0.2</th><th>N.A.</th><th><0.2</th><th><0.2</th><th>0.6</th><th><0.2</th><th><0.2</th><th>N.A.</th></lor=0<>	TEQ (mg/kg)	0.2			3	<0.2	<0.2	N.A.	<0.2	<0.2	0.6	<0.2	<0.2	N.A.
	Carcinogenic PAHs, BaP TEQ <lor=lor< th=""><th>TEQ (mg/kg)</th><th>0.3</th><th></th><th></th><th>3</th><th>< 0.3</th><th>< 0.3</th><th>N.A.</th><th><0.3</th><th><0.3</th><th>0.7</th><th><0.3</th><th><0.3</th><th>N.A.</th></lor=lor<>	TEQ (mg/kg)	0.3			3	< 0.3	< 0.3	N.A.	<0.3	<0.3	0.7	<0.3	<0.3	N.A.
	Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" th=""><th>TEQ (mg/kg)</th><th>0.2</th><th></th><th></th><th>3</th><th>0.2</th><th><0.2</th><th>N.A.</th><th><0.2</th><th><0.2</th><th>0.7</th><th><0.2</th><th><0.2</th><th>N.A.</th></lor=lor>	TEQ (mg/kg)	0.2			3	0.2	<0.2	N.A.	<0.2	<0.2	0.7	<0.2	<0.2	N.A.
PCBs in Soil	Arachlar 1016	mg/kg	0.8			300	1.5	<0.8	N.A.	<0.8	<0.8	4.2	<u.8< th=""><th><0.05</th><th>N.A.</th></u.8<>	<0.05	N.A.
1 000 11 301	Arochlor 1221	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Arochlor 1232	mg/kg	0.2				<0.2	< 0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Arochlor 1242	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Arochlor 1248	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Arochlor 1254	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Arochlor 1260	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Arochlor 1262	mg/kg	0.2				<0.2	<0.2	N.A.	<0.2	<0.2	<0.2	N.A.	N.A.	N.A.
	Total PCBs (Arochlors)	mg/kg	1			1	<1	<1	N.A.	<1	<1	<1	N.A.	N.A.	N.A.
TRH Soil C10-C40 NEPM	TRH C10-C14	mg/kg	20				<20	<20	N.A.	<20	<20	<20	<20	<50	N.A.
	TRH C15-C28	mg/kg	45				<45	<45	N.A.	<45	<45	<45	<45	<100	N.A.
	TRH C29-C36	mg/kg	45				<45	<45	N.A.	<45	<45	<45	<45	<100	N.A.
	TRH C37-C40	mg/kg	100				<100	<100	N.A.	<100	<100	<100	<100	<100	N.A.
	TRH >C10-C16 TRH >C10-C16 Naphthalogo (63)	mg/kg	25	120	220/511/511		<25	<25	N.A.	<25	<25	<25	<25	<25	N.A.
	TRH >C10-C16 - Naphthalene (F2)	mg/kg	90	1300	200/INL/INL		<90	<25	N.A.	<25	<25	<25	<25	<100	N.A.
	TRH >C34-C40 (F4)	mg/kg	120	5600			<120	<120	N.A.	<120	<120	<120	<120	<100	N.A.
	TRH C10-C36 Total	mg/kg	110				<110	<110	N.A.	<110	<110	<110	<110	<50	N.A.
	TRH >C10-C40 Total (F bands)	mg/kg	210				<210	<210	N.A.	<210	<210	<210	<210	<50	N.A.
BTEX + VOC	Benzene	mg/kg	0.1	65	0.7/1/2		<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	<0.2	N.A.
	I diuene	mg/kg	0.1	105	48U/NL/NL/NL		<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	<0.5	N.A.
	m/n-xylene	mg/kg	0.1	125	NL/NL/NL		<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	<2	N.A.
	o-xylene	mg/kg	0.1				<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	<1	N.A.
	Total Xylenes	mg/kg	0.3	45	110/310/NL		< 0.3	< 0.3	N.A.	<0.3	<0.3	<0.3	< 0.3	<1	N.A.
	Total BTEX	mg/kg	0.6				<0.6	<0.6	N.A.	<0.6	<0.6	<0.6	<0.6	N.A.	N.A.
	Benzene (F0)	mg/kg	20		0.7/1/2		<0.1	<0.1	N.A.	<0.1	<0.1	<0.1	<0.1	N.A.	N.A.
	TRH C6-C10	mg/kg	0.1				<20	<20	N.A.	<20	<20	<20	<20	<25	N.A.
	TRH C6-C10 minus BTEX (F1)	mg/kg	25	180	50/90/150		<25	<25	N.A.	<25	<25	<25	<25	<25	N.A.
Speciated Phenol	Phenol	mg/kg	0.5			3000	<0.5	< 0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	2-methyl phenol (o-cresol)	mg/kg	0.5				< 0.5	<0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	3/4-methyl phenol (m/p-cresol)	mg/kg	1				<1	<1	N.A.	<1	<1	<1	N.A.	N.A.	N.A.
	1 otal Cresol	mg/kg	1.5			400	<1.5	<1.5	N.A.	<1.5	<1.5	<1.5	N.A.	N.A.	N.A.
	2 4-dimethylphenol	mg/kg	0.5				<0.5	<0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	2,6-dichlorophenol	mg/kg	0.5				<0.5	<0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	2,4-dichlorophenol	mg/kg	0.5				< 0.5	< 0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	2,4,6-trichlorophenol	mg/kg	0.5				<0.5	<0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	2-nitrophenol	mg/kg	0.5				<0.5	< 0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	4-nitropnenol	mg/kg	1				<1	<1	N.A.	<1	<1	<1	N.A.	N.A.	N.A.
	2 3 4 6/2 3 5 6-tetrachlorophenol	mg/Kg	1				<0.5	<0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	Pentachlorophenol	mg/kg	0.5			100	<0.5	<0.5	N.A.	<0.5	<0.5	<0.5	N.A.	N.A.	N.A.
	2,4-dinitrophenol	mg/kg	2				<2	<2	N.A.	<2	<2	<2	N.A.	N.A.	N.A.
	4-chloro-3-methylphenol	mg/kg	2				<2	<2	N.A.	<2	<2	<2	N.A.	N.A.	N.A.
Fibre Identification in soil	Asbestos Detected	No unit	0				No	N.A.	No	N.A.	N.A.	No	N.A.	N.A.	N.A.
Eibro ID in bulk materials	Estimated Fibres	%w/w	0.01				<0.01	N.A.	<0.01	N.A.	N.A.	<0.01	N.A.	N.A.	N.A.
In DUR IN DUR INSTERIOS	provestos Detecteu	1 NO UNIC					111.75.	19.25.	116.7%	116.2%	19.75	13.75.	116.75	116.7%	1 163



		Sample Name		BH4 0.506	QCI	RPD	QCZ	RPD
			Depth (m)	0.5-0.6				
		Sa	ampled Date	19/3/2024	19/3/2024		19/3/2024	
			Sample Type	Soil	Soil		Soil	
Method_Type	ChemName	Units	EQL					
Heavy Metals in Soil	Arsenic, As	mg/kg	1	4	3	29%	5	0%
	Cadmium, Cd	mg/kg	0.3	< 0.3	< 0.3	0%	< 0.4	0%
	Chromium, Cr	mg/kg	0.5	68	50	31%	54	23%
	Copper, Cu	mg/kg	0.5	17	15	13%	20	16%
	Lead. Pb	mg/kg	1	19	18	5%	37	64%
	Nickel Ni	mg/kg	0.5	10	9.9	1%	17	52%
	Zinc Zn	mg/kg	2	9.5	9.8	3%	13	31%
	Morcury	ma/ka	0.05	<0.05	<0.05	0%	<0.1	0%
PAHr (Polynycloar	Naphthalana	mg/kg	0.05	<0.05	<0.05	0%	<0.1	0%
Aromatic Hudrocarbonc)	2 math depatheless	mg/kg	0.1	-0.1	-0.1	0%	+0.1	0%
in Soil	2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	0%	40.1	0%
111 3011	1-methymaphthalene	mg/kg	0.1	<0.1	<0.1	0%	40.1	0%
	Acenaphtnylene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	0%
	Acenaphthene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	0%
	Fluorene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	0%
	Phenanthrene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	0%
	Anthracene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	0%
	Fluoranthene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	0%
	Pyrene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	0%
	Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	0%	<0.2	0%
	Chrysene	mg/kg	0.1	<0.1	<0.1	0%	< 0.05	0%
	Benzo(b&j)fluoranthene	mg/kg	0.1	< 0.1	< 0.1	0%	< 0.05	0%
	Benzo(k)fluoranthene	mg/kg	0.1	<0.1	< 0.1	0%	<0.1	0%
	Benzo(a)pyrene	mg/kg	0.1	<0.1	< 0.1	0%	<0.1	0%
	Indepo(1.2.3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	0%
	Dibenzo(ab)anthracene	mg/kg	0.1	<0.1	<0.1	0%	<0.1	0%
	Bonzo(dhi)nondono	ma/ka	0.1	<0.1	<0.1	0%	<0.1	0%
	Consideration Datus Dep TEO 4100-0	TEO (ma /lua)	0.2	-0.2	-0.2	0%	10.2	0%
	Carcinogenic PARS, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td>0%</td><td>40.2</td><td>0%</td></lor=0<>	TEQ (mg/kg)	0.2	<0.2	<0.2	0%	40.2	0%
	Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td><0.3</td><td>0%</td><td><0.05</td><td>0%</td></lor=lor<>	TEQ (mg/kg)	0.3	<0.3	<0.3	0%	<0.05	0%
	Carcinogenic PAHS, BaP TEQ <lor=lor 2<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><u.2< td=""><td><u.z< td=""><td>0%</td><td><u.2< td=""><td>0%</td></u.2<></td></u.z<></td></u.2<></td></lor=lor>	TEQ (mg/kg)	0.2	<u.2< td=""><td><u.z< td=""><td>0%</td><td><u.2< td=""><td>0%</td></u.2<></td></u.z<></td></u.2<>	<u.z< td=""><td>0%</td><td><u.2< td=""><td>0%</td></u.2<></td></u.z<>	0%	<u.2< td=""><td>0%</td></u.2<>	0%
	Total PAH (18)	mg/kg	0.8	<0.8	<0.8	0%	<0.8	0%
TRH (Total Recoverable	TRH C10-C14	mg/kg	20	<20	<20	0%	<100	0%
Hydrocarbons) in Soil	TRH C15-C28	mg/kg	45	<45	<45	0%	<45	0%
	TRH C29-C36	mg/kg	45	<45	<45	0%	<50	0%
	TRH >C10-C16	mg/kg	25	<25	<25	0%	<50	0%
	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	0%	<100	0%
	TRH >C16-C34 (F3)	mg/kg	90	<90	<90	0%	<100	0%
	TRH >C34-C40 (F4)	mg/kg	120	<120	<120	0%	<50	0%
	TRH C10-C36 Total	mg/kg	110	<110	<110	0%	<50	0%
	TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	0%	<0.2	0%
BTEX + VOC	Benzene	mg/kg	0.1	<0.1	<0.1	0%	<0.5	0%
	Toluene	mg/kg	0.1	<0.1	<0.1	0%	<1	0%
	Ethylhonzono	ma/ka	0.1	<0.1	<0.1	0%		0%
	Littyidenzene	iiig/kg	0.1	~0.1	~0.1	0%	~2	0/6
	m/p-xyiene	mg/kg	0.2	<0.2	<0.2	0%	<1	0%
	o-xylene	mg/kg	0.1	<0.1	<0.1	0%	<1	0%
	Total Aylenes	mg/kg	0.3	<0.3	<0.3	0%	N.A.	-
	IOTAI BIEX	mg/kg	0.6	<0.6	<0.6	0%	N.A.	-
	Benzene (FU)	mg/kg	0.1	<0.1	<0.1	0%	<25	0%
	TRH C6-C9	mg/kg	20	<20	<20	0%	<25	0%
	TRH C6-C10	mg/kg	25	<25	<25	0%	<25	0%
	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	0%	N.A.	0%
Speciated Phenols in Soil	Phenol	mg/kg	0.5	<0.5	N.A.	-	N.A.	-
	2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	N.A.	-	N.A.	-
	3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	N.A.	-	N.A.	-
	Total Cresol	mg/kg	1.5	<1.5	N.A.	-	N.A.	-
	2-chlorophenol	mg/kg	0.5	<0.5	N.A.	-	N.A.	-
	2.4-dimethylphenol	mg/kg	0.5	<0.5	N.A.		N/A.	-
	2.6-dichlorophenol	mg/kg	0.5	<0.5	N.A.		N.A.	
	2.4-dichlorophenol	ma/ka	0.5	<0.5	NA		NA	
	2.4.6.trichlorophenol	mg/kg	0.5	<0.5	N A		N A	
	2,4,0-tricinor opnenor	mg/kg	0.5	<u.5< td=""><td>N.A.</td><td>-</td><td>N.A.</td><td></td></u.5<>	N.A.	-	N.A.	
	2-nitropnenoi	mg/kg	0.5	<0.5	N.A.	-	N.A.	-
	4-nitropnenoi	mg/kg	1	<1	N.A.	-	N.A.	-
	2,4,5-trichlorophenol	mg/kg	0.5	<0.5	N.A.	-	N.A.	-
	2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	N.A.	-	N.A.	-
	Pentachlorophenol	mg/kg	0.5	<0.5	N.A.	-	N.A.	-
	2,4-dinitrophenol	mg/kg	2	<2	N.A.	-	N.A.	-
	4-chloro-3-methylphenol	mg/kg	2	<2	<2	-	N.A.	-
Asbestos in Soil	Asbestos Detected	No unit	0	N.A.	No	-	No	-
1	Estimated Fibres	%w/w	0.01	< 0.01	< 0.01	-	<0.01	-

Appendix C

Laboratory Report, Chain of Custody and Sample Receipt



ANALYTICAL REPORT





CLIENT DETAILS		LABORATORY DE	LABORATORY DETAILS					
Contact	Leonardo Baeza	Manager	Huong Crawford					
Client	LANTERRA CONSULTING PTY LTD	Laboratory	SGS Alexandria Environmental					
Address	PO BOX 3626 ACT 2611	Address	Unit 16, 33 Maddox St Alexandria NSW 2015					
Telephone	0412 823 931	Telephone	+61 2 8594 0400					
Facsimile	(Not specified)	Facsimile	+61 2 8594 0499					
Email	leonardo.baeza@lanterra.com.au	Email	au.environmental.sydney@sgs.com					
Project	P24032 - PSI	SGS Reference	SE262484 R0					
Order Number	P24032	Date Received	20/3/2024					
Samples	16	Date Reported	27/3/2024					

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique. Asbestos analysed by Approved Identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin

SIGNATORIES

Akheeqar BENIAMEEN Chemist



Huong CRAWFORD
Production Manager

Amint

Ly Kim HA Organic Section Head

Institution

Yusuf KUTHPUDIN Asbestos Analyst

узаль узаль гивац

Ying Ying ZHANG Laboratory Technician

> SGS Australia Pty Ltd ABN 44 000 964 278

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SE262484 R0

VOC's in Soil [AN433] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
			SOIL	SOIL	SOIL	SOIL	SOIL
			19/3/2024	19/3/2024	19/3/2024	19/3/2024	19/3/2024
PARAMETER	UOM	LOR	SE262484.001	SE262484.002	SE262484.003	SE262484.004	SE262484.005
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
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	0.2	<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

			BH3 2.0-2.1 BH4 0.0-0		BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.006	SE262484.007	SE262484.008	SE262484.009	SE262484.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene (VOC)*	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

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1	QC1
			SOIL	SOIL	SOIL	SOIL
			-	-	-	-
			19/3/2024	19/3/2024	19/3/2024	19/3/2024
PARAMETER	UOM	LOR	SE262484.012	SE262484.013	SE262484.014	SE262484.016
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6



Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.001	SE262484.002	SE262484.003	SE262484.004	SE262484.005
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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

			BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.006	SE262484.007	SE262484.008	SE262484.009	SE262484.010
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
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

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1	QC1
			SOIL	SOIL	SOIL	SOIL
						-
						19/3/2024
PARAMETER	UOM	LOR	SE262484.012	SE262484.013	SE262484.014	SE262484.016
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25



TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
PARAMETER	UOM	LOR	19/3/2024 SE262484.001	19/3/2024 SE262484.002	SE262484.003	SE262484.004	SE262484.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	55	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	49	<45	<45	<45	60
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	98	<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

			BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.006	SE262484.007	SE262484.008	SE262484.009	SE262484.010
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1	QC1
			SOIL	SOIL	SOIL	SOIL
			- 10/3/2024	- 10/3/2024	- 10/3/2024	-
PARAMETER	UOM	LOR	SE262484.012	SE262484.013	SE262484.014	SE262484.016
TRH C10-C14	mg/kg	20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210



SE262484 R0

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
			00"	00"	00"	0.011	00"
			SOIL	SOIL	SOIL	SOIL	SOIL
			19/3/2024	19/3/2024	- 19/3/2024	19/3/2024	19/3/2024
PARAMETER	UOM	LOR	SE262484.001	SE262484.002	SE262484.003	SE262484.004	SE262484.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	0.2	<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	0.8	0.1	<0.1	<0.1	0.6
Anthracene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	0.1
Fluoranthene	mg/kg	0.1	1.8	0.1	<0.1	<0.1	1.1
Pyrene	mg/kg	0.1	1.8	0.1	<0.1	<0.1	1.1
Benzo(a)anthracene	mg/kg	0.1	1.1	<0.1	<0.1	<0.1	0.6
Chrysene	mg/kg	0.1	0.9	<0.1	<0.1	<0.1	0.6
Benzo(b&j)fluoranthene	mg/kg	0.1	1.5	<0.1	<0.1	<0.1	0.8
Benzo(k)fluoranthene	mg/kg	0.1	0.5	<0.1	<0.1	<0.1	0.4
Benzo(a)pyrene	mg/kg	0.1	1.4	<0.1	<0.1	<0.1	0.7
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.9	<0.1	<0.1	<0.1	0.5
Dibenzo(ah)anthracene	mg/kg	0.1	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	0.5	<0.1	<0.1	<0.1	0.3
Carcinogenic PAHs, BaP TEQ <lor=0*< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>2.0</td><td><0.2</td><td><0.2</td><td><0.2</td><td>0.9</td></lor=0*<>	TEQ (mg/kg)	0.2	2.0	<0.2	<0.2	<0.2	0.9
Carcinogenic PAHs, BaP TEQ <lor=lor*< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>2.0</td><td><0.3</td><td><0.3</td><td><0.3</td><td>1.0</td></lor=lor*<>	TEQ (mg/kg)	0.3	2.0	<0.3	<0.3	<0.3	1.0
Carcinogenic PAHs, BaP TEQ <lor=lor 2*<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>2.0</td><td><0.2</td><td><0.2</td><td><0.2</td><td>1.0</td></lor=lor>	TEQ (mg/kg)	0.2	2.0	<0.2	<0.2	<0.2	1.0
Total PAH (18)	mg/kg	0.8	12	<0.8	<0.8	<0.8	6.7
Total PAH (NEPM/WHO 16)	mg/kg	0.8	12	<0.8	<0.8	<0.8	6.7

			BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
			2011	2011	2011	2011	2011
			-	-	-	- 3012	-
PARAMETER	UOM	LOR	SE262484.006	SE262484.007	SE262484.008	SE262484.009	SE262484.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	0.2	<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	0.2	<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*< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td><0.2</td></lor=0*<>	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor*< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td><td><0.3</td></lor=lor*<>	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2*<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td><0.2</td><td>0.2</td><td><0.2</td></lor=lor>	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	1.3	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	1.3	<0.8



PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 25/3/2024 (continued)

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1	QC1
			5011	SOII	SOII	SOIL
			-	-	-	-
PARAMETER	UOM	LOR	SE262484.012	SE262484.013	SE262484.014	SE262484.016
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	0.7	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	0.7	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	0.4	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	0.5	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.4	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	0.5	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	0.3	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1
Carcinogenic PAHs, BaP TEQ <lor=0*< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td>0.6</td><td><0.2</td></lor=0*<>	TEQ (mg/kg)	0.2	<0.2	<0.2	0.6	<0.2
Carcinogenic PAHs, BaP TEQ <lor=lor*< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td><0.3</td><td><0.3</td><td>0.7</td><td><0.3</td></lor=lor*<>	TEQ (mg/kg)	0.3	<0.3	<0.3	0.7	<0.3
Carcinogenic PAHs, BaP TEQ <lor=lor 2*<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td><0.2</td><td><0.2</td><td>0.7</td><td><0.2</td></lor=lor>	TEQ (mg/kg)	0.2	<0.2	<0.2	0.7	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	4.2	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	4.2	<0.8



Speciated Phenols in Soil [AN420] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
			SOIL -	SOIL	SOIL	SOIL	SOIL
DADAMETED	UOM		19/3/2024	19/3/2024	19/3/2024	19/3/2024	19/3/2024
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2

			BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 10/3/202/	- 10/3/2024	- 10/3/2024		- 10/3/2024
PARAMETER	UOM	LOR	SE262484.006	SE262484.007	SE262484.008	SE262484.009	SE262484.010
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2	<2	<2



Speciated Phenols in Soil [AN420] Tested: 25/3/2024 (continued)

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1
					00"
			SOIL	SOIL	SUIL
			19/3/2024	19/3/2024	19/3/2024
PARAMETER	UOM	LOR	SE262484.012	SE262484.013	SE262484.014
Phenol	mg/kg	0.5	<0.5	<0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	<1
Total Cresol	mg/kg	1.5	<1.5	<1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5
4-nitrophenol	mg/kg	1	<1	<1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	<1
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2	<2	<2
4-chloro-3-methylphenol	mg/kg	2	<2	<2	<2



SE262484 R0

OC Pesticides in Soil [AN420] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.001	SE262484.002	SE262484.003	SE262484.004	SE262484.005
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1



OC Pesticides in Soil [AN420] Tested: 25/3/2024 (continued)

			BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
			2011	2011	2011	2011	801
			-	-	-		-
PARAMETER	UOM	LOR	SE262484.006	SE262484.007	SE262484.008	SE262484.009	SE262484.010
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1



OC Pesticides in Soil [AN420] Tested: 25/3/2024 (continued)

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1
			2011	2011	2011
			-	-	-
					19/3/2024
PARAMETER	UOM	LOR	SE262484.012	SE262484.013	SE262484.014
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1



OP Pesticides in Soil [AN420] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 19/3/2024	- 19/3/2024	- 19/3/2024	- 19/3/2024	- 19/3/2024
PARAMETER	UOM	LOR	SE262484.001	SE262484.002	SE262484.003	SE262484.004	SE262484.005
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

			BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
PARAMETER	UOM	LOR	SOIL - 19/3/2024 SE262484.006	SOIL - 19/3/2024 SE262484.007	SOIL - 19/3/2024 SE262484.008	SOIL - 19/3/2024 SE262484.009	SOIL - 19/3/2024 SE262484.010
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1
			SOIL	SOIL	SOIL
			-	-	-
DADAMETED	11014		19/3/2024	19/3/2024	19/3/2024
PARAMETER	UOW	LUK	SE262404.012	SE262464.015	3E262404.014
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7



PCBs in Soil [AN420] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
DADAMETED	LIOM		SOIL - 19/3/2024 SE282484.001	SOIL - 19/3/2024 SE262484.002	SOIL - 19/3/2024 SE262484.003	SOIL - 19/3/2024 SE262484.004	SOIL - 19/3/2024 SE282484 005
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

			BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
			2011	2011	2011	2011	2011
			30IL	JUL	JUL	JUIL	3012
			10/2/2024	-	-	10/2/2024	-
			19/3/2024	19/3/2024	19/3/2024	19/3/2024	19/3/2024
PARAMETER	UOM	LOR	SE262484.006	SE262484.007	SE262484.008	SE262484.009	SE262484.010
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1
			SOIL	SOIL	SOIL
			-	-	-
PARAMETER	UOM	LOR	19/3/2024 SE262484.012	19/3/2024 SE262484.013	19/3/2024 SE262484.014
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



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Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
			SOIL	SOIL	SOIL	SOIL	SOIL
			19/3/2024	19/3/2024	19/3/2024	19/3/2024	19/3/2024
PARAMETER	UOM	LOR	SE262484.001	SE262484.002	SE262484.003	SE262484.004	SE262484.005
Arsenic, As	mg/kg	1	5	5	3	3	5
Cadmium, Cd	mg/kg	0.3	0.5	<0.3	<0.3	<0.3	0.3
Chromium, Cr	mg/kg	0.5	27	73	45	36	32
Copper, Cu	mg/kg	0.5	42	15	17	12	32
Lead, Pb	mg/kg	1	220	24	11	19	210
Nickel, Ni	mg/kg	0.5	6.7	16	7.9	13	6.9
Zinc, Zn	mg/kg	2	460	20	13	9.8	290

			BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
			001		001	0.011	00"
			SUIL	SOIL	SUIL	SUIL	SUIL
			10/3/2024	10/3/2024	10/3/2024	10/3/2024	- 10/3/2024
PARAMETER	UOM	LOR	SE262484.006	SE262484.007	SE262484.008	SE262484.009	SE262484.010
Arsenic, As	mg/kg	1	4	5	4	4	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	0.3	<0.3
Chromium, Cr	mg/kg	0.5	46	47	68	28	44
Copper, Cu	mg/kg	0.5	18	12	17	28	14
Lead, Pb	mg/kg	1	190	31	19	120	13
Nickel, Ni	mg/kg	0.5	14	11	10	6.1	7.4
Zinc, Zn	mg/kg	2	19	9.9	9.5	290	16

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1	QC1
			SOIL	SOIL	SOIL	SOIL
			- 19/3/2024	- 19/3/2024	- 19/3/2024	- 19/3/2024
PARAMETER	UOM	LOR	SE262484.012	SE262484.013	SE262484.014	SE262484.016
Arsenic, As	mg/kg	1	3	3	5	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	0.6	<0.3
Chromium, Cr	mg/kg	0.5	30	23	28	50
Copper, Cu	mg/kg	0.5	14	16	40	15
Lead, Pb	mg/kg	1	15	11	240	18
Nickel, Ni	mg/kg	0.5	10	14	9.6	9.9
Zinc, Zn	mg/kg	2	14	17	310	9.8



Mercury in Soil [AN312] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.001	SE262484.002	SE262484.003	SE262484.004	SE262484.005
Mercury	mg/kg	0.05	0.11	<0.05	<0.05	<0.05	0.25

			BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.006	SE262484.007	SE262484.008	SE262484.009	SE262484.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	0.45	<0.05

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1	QC1
			SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.012	SE262484.013	SE262484.014	SE262484.016
Mercury	mg/kg	0.05	<0.05	<0.05	0.26	<0.05



Moisture Content [AN002] Tested: 25/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH2 2.0-2.1	BH3 0.0-0.1
			501	SOII	SOII	501	5011
			501L	JOIL	OOIL	U SOIL	U SOIL
			19/3/2024	19/3/2024	19/3/2024	19/3/2024	19/3/2024
			10/0/2024	10/0/2024	10/0/2024	10/0/2024	10/0/2024
PARAMETER	UOM	LOR	SE262484.001	SE262484.002	SE262484.003	SE262484.004	SE262484.005
% Moisture	%	1	45.0	40.4	40.0	44.0	44.4
76 WOIsture	/6 44/ 44		10.0	12.1	10.0	14.9	11.4

			BH3 2.0-2.1	BH4 0.0-0.1	BH4 0.5-0.6	BH5 0.0-0.1	BH5 1.0-1.1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.006	SE262484.007	SE262484.008	SE262484.009	SE262484.010
% Moisture	%w/w	1	16.5	11.5	12.3	11.1	14.1

			BH6 1.0-1.1	BH6 2.0-2.1	BH7 0.0-0.1	QC1
			SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.012	SE262484.013	SE262484.014	SE262484.016
% Moisture	%w/w	1	16.3	20.5	10.4	12.7



Fibre Identification in soil [AS4964/AN602] Tested: 26/3/2024

			BH1 0.0-0.1	BH1 0.5-0.6	BH2 1.0-1.1	BH3 0.0-0.1	BH4 0.0-0.1
			SOIL	SOIL	SOIL	SOIL	SOIL
PARAMETER	UOM	LOR	SE262484.001	SE262484.002	SE262484.003	SE262484.005	SE262484.007
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Date Analysed*	No unit	-	27/03/2024 00:00	27/03/2024 00:00	27/03/2024 00:00	27/03/2024 00:00	27/03/2024 00:00

			BH5 0.0-0.1	BH6 0.0-0.1	BH7 0.0-0.1
			SOIL -	SOIL -	SOIL -
			19/3/2024	19/3/2024	19/3/2024
PARAMETER	UOM	LOR	SE262484.009	SE262484.011	SE262484.014
Asbestos Detected	No unit	-	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01
Date Analysed*	No unit	-	27/03/2024 00:00	27/03/2024 00:00	27/03/2024 00:00


Fibre ID in bulk materials [AN602/AS4964] Tested: 26/3/2024

			ACM
			MATERIAL
PARAMETER	UOM	LOR	SE262484.015
Asbestos Detected	No unit	-	Yes
Date Analysed*	No unit	-	26/03/2024 00:00



METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by AAS or ICP as per USEPA Method 200.8.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
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/AS4964	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/AS4964	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602/AS4964	The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-
	 (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.



FOOTNOTES -

*	NATA accreditation does not cover
	the performance of this service.
**	Indicative data, theoretical holding
	time exceeded.

*** Indicates that both * and ** apply.

Not analysed.
 NVL Not validated.
 IS Insufficient sample for analysis.
 LNR Sample listed, but not received.

UOM Unit of Measure. LOR Limit of Reporting. ↑↓ Raised/lowered Limit of Reporting.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: <u>www.sgs.com.au/en-gb/environment-health-and-safety</u>.

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

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STATEMENT OF QA/QC PERFORMANCE

CLIENT DETAILS		LABORATORY DETAILS	
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Facsimile	(Not specified)	Facsimile	+61 2 8594 0499
Email	leonardo.baeza@lanterra.com.au	Email	au.environmental.sydney@sgs.com
Project	P24032 - PSI	SGS Reference	SE262484 R0
Order Number	P24032	Date Received	20 Mar 2024
Samples	16	Date Reported	27 Mar 2024

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:

Surrogate	Speciated Phenols in Soil	3 items
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items
	TRH (Total Recoverable Hydrocarbons) in Soil	3 items

Sample counts by matrix	15 Soil, 1 Material	Type of documentation received	COC	
Date documentation received	20/3/2024	Samples received in good order	Yes	
Samples received without headspace	Yes	Sample temperature upon receipt	17.3°C	
Sample container provider	SGS	Turnaround time requested	Standard	
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes	
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes	
Complete documentation received	Yes			

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SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre ID in bulk materials							Method: ME-(AU)	-[ENV]AN602/AS4964				
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed				
ACM	SE262484 015	L B307919	19 Mar 2024	20 Mar 2024	19 Mar 2025	26 Mar 2024	19 Mar 2025	27 Mar 2024				
	022021011010	20001010	10 110 2021	20 1101 2021	10 1101 2020	20 Mar 2021	10 1101 2020					
Fibre Identification in soil							Method: ME-(AU)-TENVIAS4964/AN6					
Sample Name	Sample No	OC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed				
BH1 0.0-0.1	SE262484.001	LB307939	19 Mar 2024	20 Mar 2024	19 Mar 2025	26 Mar 2024	19 Mar 2025	27 Mar 2024				
BH1 0 5-0 6	SE262484 002	LB307939	19 Mar 2024	20 Mar 2024	19 Mar 2025	26 Mar 2024	19 Mar 2025	27 Mar 2024				
BH2 1 0-1 1	SE262484 003	LB307939	19 Mar 2024	20 Mar 2024	19 Mar 2025	26 Mar 2024	19 Mar 2025	27 Mar 2024				
BH3 0.0-0.1	SE262484.005	LB307939	19 Mar 2024	20 Mar 2024	19 Mar 2025	26 Mar 2024	19 Mar 2025	27 Mar 2024				
BH4 0 0-0 1	SE262484 007	L B307939	19 Mar 2024	20 Mar 2024	19 Mar 2025	26 Mar 2024	19 Mar 2025	27 Mar 2024				
BH5 0.0-0.1	SE262484.009	LB307939	19 Mar 2024	20 Mar 2024	19 Mar 2025	26 Mar 2024	19 Mar 2025	27 Mar 2024				
BH6 0.0-0.1	SE262484.011	LB307939	19 Mar 2024	20 Mar 2024	19 Mar 2025	26 Mar 2024	19 Mar 2025	27 Mar 2024				
BH7 0.0-0.1	SE262484.014	LB307939	19 Mar 2024	20 Mar 2024	19 Mar 2025	26 Mar 2024	19 Mar 2025	27 Mar 2024				
	022021011011	2000.000	10 110 2021	20 1101 2021	10 1101 2020	20 Mar 2021	Notherada					
Mercury in Soli							Method: I	ME-(AU)-[ENV]AN312				
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed				
BH1 0.0-0.1	SE262484.001	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH1 0.5-0.6	SE262484.002	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH2 1.0-1.1	SE262484.003	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH2 2.0-2.1	SE262484.004	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH3 0.0-0.1	SE262484.005	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH3 2.0-2.1	SE262484.006	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH4 0.0-0.1	SE262484.007	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH4 0.5-0.6	SE262484.008	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH5 0.0-0.1	SE262484.009	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH5 1.0-1.1	SE262484.010	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH6 1.0-1.1	SE262484.012	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH6 2.0-2.1	SE262484.013	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
BH7 0.0-0.1	SE262484.014	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
QC1	SE262484.016	LB307773	19 Mar 2024	20 Mar 2024	16 Apr 2024	25 Mar 2024	16 Apr 2024	27 Mar 2024				
Moisture Content							Method: I	ME-(AU)-[ENV]AN002				
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed				
BH1 0.0-0.1	SE262484.001	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH1 0.5-0.6	SE262484.002	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH2 1.0-1.1	SE262484.003	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH2 2.0-2.1	SE262484.004	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH3 0.0-0.1	SE262484.005	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH3 2.0-2.1	SE262484.006	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH4 0.0-0.1	SE262484.007	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH4 0.5-0.6	SE262484.008	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH5 0.0-0.1	SE262484.009	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH5 1.0-1.1	SE262484.010	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH6 1.0-1.1	SE262484.012	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH6 2.0-2.1	SE262484.013	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
BH7 0.0-0.1	SE262484.014	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
QC1	SE262484.016	LB307774	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	30 Mar 2024	27 Mar 2024				
OC Pesticides in Soll							Method: I	ME-(AU)-[ENV]AN420				
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed				
BH1 0.0-0.1	SE262484.001	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH1 0.5-0.6	SE262484.002	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH2 1.0-1.1	SE262484.003	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH2 2.0-2.1	SE262484.004	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH3 0.0-0.1	SE262484.005	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH3 2.0-2.1	SE262484.006	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH4 0.0-0.1	SE262484.007	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH4 0.5-0.6	SE262484.008	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH5 0.0-0.1	SE262484.009	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH5 1.0-1.1	SE262484.010	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH6 1.0-1.1	SE262484.012	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				
BH6 2 0-2 1	SE262484 013	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024				



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Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria. If the

OC Pesticides in Soil (contin	ued)						Method:	ME-(AU)-[ENV]AN420
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH7 0.0-0.1	SE262484.014	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
QC1	SE262484.016	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
OP Pesticides in Soil							Method:	ME-(AU)-[ENV]AN420
Sample Name	Sample No	OC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.0-0.1	SE262484.001	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH1 0.5-0.6	SE262484.002	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH2 1.0-1.1	SE262484.003	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH2 2.0-2.1	SE262484.004	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH3 0.0-0.1	SE262484.005	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH3 2.0-2.1	SE262484.006	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH4 0.0-0.1	SE262484.007	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH4 0.5-0.6	SE262484.008	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH5 0.0-0.1	SE262484.009	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH5 1.0-1.1	SE262484.010	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH6 1.0-1.1	SE262484.012	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH6 2.0-2.1	SE262484.013	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH7 0.0-0.1	SE262484.014	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
QC1	SE262484.016	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
PAH (Polynuclear Aromatic I	Hydrocarbons) in Soil						Method:	ME-(AU)-[ENV]AN420
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analvsis Due	Analvsed
BH1 0.0-0.1	SE262484.001	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH1 0.5-0.6	SE262484.002	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH2 1.0-1.1	SE262484.003	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH2 2.0-2.1	SE262484.004	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH3 0.0-0.1	SE262484.005	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH3 2.0-2.1	SE262484.006	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH4 0.0-0.1	SE262484.007	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH4 0.5-0.6	SE262484.008	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH5 0.0-0.1	SE262484.009	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH5 1.0-1.1	SE262484.010	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH6 1.0-1.1	SE262484.012	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH6 2.0-2.1	SE262484.013	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH7 0.0-0.1	SE262484.014	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
QC1	SE262484.016	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
PCBs in Soil							Method:	ME-(AU)-[ENV]AN420
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.0-0.1	SE262484.001	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH1 0.5-0.6	SE262484.002	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH2 1.0-1.1	SE262484.003	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH2 2.0-2.1	SE262484.004	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH3 0.0-0.1	SE262484.005	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH3 2.0-2.1	SE262484.006	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH4 0.0-0.1	SE262484.007	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH4 0.5-0.6	SE262484.008	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH5 0.0-0.1	SE262484.009	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH5 1.0-1.1	SE262484.010	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH6 1.0-1.1	SE262484.012	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH6 2.0-2.1	SE262484.013	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH7 0.0-0.1	SE262484.014	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
QC1	SE262484.016	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
Speciated Phenols in Soil							Method:	ME-(AU)-[ENV]AN420
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.0-0.1	SE262484.001	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH1 0.5-0.6	SE262484.002	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH2 1.0-1.1	SE262484.003	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH2 2.0-2.1	SE262484.004	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH3 0.0-0.1	SE262484.005	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH3 2.0-2.1	SE262484.006	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024



HOLDING TIME SUMMARY

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

Speciated Phenols in Soil (continued)

Speciated Phenols in Soli (continued) Method: ME-(AU)-(ENV]AN4							ME-(AU)-[ENV]AN420	
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH4 0.0-0.1	SE262484.007	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH4 0.5-0.6	SE262484.008	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH5 0.0-0.1	SE262484.009	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH5 1.0-1.1	SE262484.010	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH6 1.0-1.1	SE262484.012	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH6 2.0-2.1	SE262484.013	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH7 0.0-0.1	SE262484.014	LB307770	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
Total Recoverable Elements i	n Soil/Waste Solids/Ma	terials by ICPOES					Method: ME-(AU)-[ENV]AN040/AN320
Sample Name	Sample No	OC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
	SE262484 001	L B307794	19 Mar 2024	20 Mar 2024	15 Sep 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH105-06	SE262484.002	LB307794	19 Mar 2024	20 Mar 2024	15 Sep 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH2 1 0-1 1	SE262484 003	LB307794	19 Mar 2024	20 Mar 2024	15 Sep 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH2 2 0-2 1	SE262484 004	LB307794	19 Mar 2024	20 Mar 2024	15 Sep 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH3.0.0-0.1	SE262484 005	LB307794	19 Mar 2024	20 Mar 2024	15 Sep 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH3 2 0-2 1	SE262484 006	LB307794	19 Mar 2024	20 Mar 2024	15 Sep 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH4 0 0-0 1	SE262484.007	LB307794	19 Mar 2024	20 Mar 2024	15 Sep 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH4 0 5-0 6	SE262484 008	LB307794	19 Mar 2024	20 Mar 2024	15 Sen 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH5 0.0-0.1	SE262484 009	LB307794	19 Mar 2024	20 Mar 2024	15 Sen 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH5 1 0-1 1	SE262484 010	1 B307794	19 Mar 2024	20 Mar 2024	15 Sep 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH6 1.0-1.1	SE262484 012	LB307794	19 Mar 2024	20 Mar 2024	15 Sen 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH6 2.0-2.1	SE262484 013	LB307794	19 Mar 2024	20 Mar 2024	15 Sen 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
BH7 0 0-0 1	SE262484 014	LB307794	19 Mar 2024	20 Mar 2024	15 Sep 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
001	SE262484.016	LB307794	19 Mar 2024	20 Mar 2024	15 Sep 2024	25 Mar 2024	15 Sep 2024	27 Mar 2024
TRH (Total Recoverable Hydr	manthana) in Sail	2000/101	10 Mai 2021	20 Mai 2021	10 000 2021	20 Mai 2021	Notbod: 1	
		00 8-6	O a manufactul	Deschued	Eutoration Due	Estus etc.d		
Sample Name	Sample No.	QC Ret	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.0-0.1	SE262484.001	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH1 0.5-0.6	SE262484.002	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH2 1.0-1.1	SE262484.003	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH2 2.0-2.1	SE262484.004	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH3 0.0-0.1	SE262484.005	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH3 2.0-2.1	SE202404.000	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH4 0.0-0.1	SE202404.007	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH4 0.3-0.0	SE202404.000	LB307760	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH5 0.0-0.1	SE262484.009	LB307760	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BHS 1.0-1.1	SE262484.010	LB307760	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH6 2 0-2 1	SE262484.013	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
BH7 0 0 0 1	SE262484.014	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
001	SE262484.016	LB307769	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	04 May 2024	27 Mar 2024
VOC's in Soil	02202404.010	Eboorroo	15 1001 2024	20 Mai 2024	02 / tpi 2024	20 Mai 2024	Method: I	
		00 D (0 1 1			-	Motiod. I	
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH10506	SE202484.001	LD3U///1	19 War 2024	20 War 2024	02 Apr 2024	25 War 2024	02 Apr 2024	27 Mar 2024
DH1 0.3-0.0	SE202484.002	LD3U///1	19 War 2024	20 War 2024	02 Apr 2024	25 War 2024	02 Apr 2024	27 Mar 2024
BH2 2 0-2 1	SE202404.003	1 8307774	19 Wat 2024	20 Wor 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH3 0 0 0 1	SE202484.004	LD3U///1	19 War 2024	20 War 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH3 2 0-2 1	SE262484 006	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Ividi 2024
BH4 0 0 0 1	SE262404.000	1 8307774	10 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH4 0 5-0 6	SE202404.007	LB307771	19 Mar 2024	20 Wat 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH5 0.0-0.1	SE262484 009	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH5 1 0-1 1	SE262484 010	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH6 1 0-1 1	SE262484 012	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH6 2.0-2.1	SE262484 013	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH7 0 0-0 1	SE262484 014	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
QC1	SE262484 016	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
Volatila Patroleum Hydrocorb	one in Soil						Mathedel	
			I				Method: I	vic-(AU)-[ENV]AN433
Sample Name	Sample No.	QC Ref						



HOLDING TIME SUMMARY

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 Soil (continued)

Volatile Petroleum Hydrocarbons in Soil (continued) Method: ME-(AU)							IE-(AU)-[ENV]AN433	
Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1 0.0-0.1	SE262484.001	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH1 0.5-0.6	SE262484.002	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH2 1.0-1.1	SE262484.003	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH2 2.0-2.1	SE262484.004	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH3 0.0-0.1	SE262484.005	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH3 2.0-2.1	SE262484.006	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH4 0.0-0.1	SE262484.007	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH4 0.5-0.6	SE262484.008	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH5 0.0-0.1	SE262484.009	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH5 1.0-1.1	SE262484.010	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH6 1.0-1.1	SE262484.012	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH6 2.0-2.1	SE262484.013	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
BH7 0.0-0.1	SE262484.014	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024
QC1	SE262484.016	LB307771	19 Mar 2024	20 Mar 2024	02 Apr 2024	25 Mar 2024	02 Apr 2024	27 Mar 2024



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil				Method: MI	E-(AU)-[ENV]AN42(
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH1 0.0-0.1	SE262484.001	%	60 - 130%	82
	BH1 0.5-0.6	SE262484.002	%	60 - 130%	80
	BH2 1.0-1.1	SE262484.003	%	60 - 130%	83
	BH2 2.0-2.1	SE262484.004	%	60 - 130%	81
	BH3 0.0-0.1	SE262484.005	%	60 - 130%	81
	BH3 2.0-2.1	SE262484.006	%	60 - 130%	88
	BH4 0.0-0.1	SE262484.007	%	60 130%	81
	BH5 0 0-0 1	SE262484.008	/6	60 - 130%	79
	BH5 1.0-1.1	SE262484.010	%	60 - 130%	81
	BH6 1.0-1.1	SE262484.012	%	60 - 130%	86
	BH6 2.0-2.1	SE262484.013	%	60 - 130%	77
	BH7 0.0-0.1	SE262484.014	%	60 - 130%	82
OP Pesticides in Soil				Method: MI	E-(AU)-[ENV]AN42
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1 0.0-0.1	SE262484.001	%	60 - 130%	80
	BH1 0.5-0.6	SE262484.002	%	60 - 130%	78
	BH2 1.0-1.1	SE262484.003	%	60 - 130%	84
	BH2 2.0-2.1	SE262484.004	%	60 - 130%	80
	BH3 0.0-0.1	SE262484.005	%	60 - 130%	78
	BH3 2.0-2.1	SE262484.006	%	60 - 130%	92
	BH4 0.0-0.1	SE262484.007	%	60 - 130%	75
	BH4 0.5-0.6	SE262484.008	%	60 - 130%	81
	BH5 0.0-0.1	SE262484.009	%	60 - 130%	92
	BH5 1.0-1.1	SE262484.010	%	60 - 130%	86
	BH6 1.0-1.1	SE262484.012	%	60 - 130%	84
	BH6 2.0-2.1	SE262484.013	%	60 - 130%	76
	BH7 0.0-0.1	SE262484.014	%	60 - 130%	83
d14-p-terphenyl (Surrogate)	BH1 0.0-0.1	SE262484.001	%	60 - 130%	121
	BH1 0.5-0.6	SE262484.002	%	60 130%	123
	BH2 2.0.2.1	SE202484.003	0/	60 - 130%	110
	BH3.0.0-0.1	SE262484.004	%	60 - 130%	119
	BH3 2.0-2.1	SE262484.006	%	60 - 130%	116
	BH4 0.0-0.1	SE262484.007	%	60 - 130%	112
	BH4 0.5-0.6	SE262484.008	%	60 - 130%	113
	BH5 0.0-0.1	SE262484.009	%	60 - 130%	114
	BH5 1.0-1.1	SE262484.010	%	60 - 130%	115
	BH6 1.0-1.1	SE262484.012	%	60 - 130%	115
	BH6 2.0-2.1	SE262484.013	%	60 - 130%	109
	BH7 0.0-0.1	SE262484.014	%	60 - 130%	117
PAH (Polynuclear Aromatic Hydrocarbons) in Soil				Method: MI	E-(AU)-[ENV]AN42
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH1 0.0-0.1	SE262484.001	%	70 - 130%	80
	BH1 0.5-0.6	SE262484.002	%	70 - 130%	78
	BH2 1.0-1.1	SE262484.003	%	70 - 130%	84
	BH2 2.0-2.1	SE262484.004	%	70 - 130%	80
	BH3 0.0-0.1	SE262484.005	%	70 - 130%	78
	BH4 0 0.0 1	SE262484.000	70	70 - 130%	92
	BH4 0.5-0.6	SE262484.008	%	70 - 130%	81
	BH5 0.0-0.1	SE262484.009	%	70 - 130%	92
	BH5 1.0-1.1	SE262484.010	%	70 - 130%	86
	BH6 1.0-1.1	SE262484.012	%	70 - 130%	84
	BH6 2.0-2.1	SE262484.013	%	70 - 130%	76
	BH7 0.0-0.1	SE262484.014	%	70 - 130%	83
	QC1	SE262484.016	%	70 - 130%	87
d14-p-terphenyl (Surrogate)	BH1 0.0-0.1	SE262484.001	%	70 - 130%	121
	BH1 0.5-0.6	SE262484.002	%	70 - 130%	123
	BH2 1.0-1.1	SE262484.003	%	70 - 130%	117
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Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)				Method: ME	-(AU)-[ENV]AN420
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d14-p-terphenyl (Surrogate)	BH2 2.0-2.1	SE262484.004	%	70 - 130%	119
	BH3 0.0-0.1	SE262484.005	%	70 - 130%	119
	BH3 2.0-2.1	SE262484.006	%	70 - 130%	116
	BH4 0.0-0.1	SE262484.007	%	70 - 130%	112
	BH4 0.5-0.6	SE262484.008	%	70 - 130%	113
	BH5 0.0-0.1	SE262484.009	%	70 - 130%	114
	BH5 1.0-1.1	SE262484.010	%	70 - 130%	115
	BH6 1.0-1.1	SE262484.012	%	70 - 130%	115
	BH6 2.0-2.1	SE262484.013	%	70 - 130%	109
	BH7 0.0-0.1	SE262484.014	%	70 - 130%	117
	QC1	SE262484.016	%	70 - 130%	120
d5-nitrobenzene (Surrogate)	BH1 0.0-0.1	SE262484.001	%	70 - 130%	94
	BH1 0.5-0.6	SE262484.002	%	70 - 130%	89
	BH2 1.0-1.1	SE262484.003	%	70 - 130%	93
	BH2 2.0-2.1	SE262484.004	%	70 - 130%	88
	BH3 0.0-0.1	SE262484.005	%	70 - 130%	87
	BH3 2.0-2.1	SE262484.006	%	70 - 130%	87
	BH4 0.0-0.1	SE262484.007	%	70 - 130%	79
	BH4 0.5-0.6	SE262484.008	%	70 - 130%	90
	BH5 0.0-0.1	SE262484.009	%	70 - 130%	85
	BH5 1.0-1.1	SE262484.010	%	70 - 130%	91
	BH6 1.0-1.1	SE262484.012	%	70 - 130%	91
	BH6 2.0-2.1	SE262484.013	%	70 - 130%	96
	BH7 0.0-0.1	SE262484.014	%	70 - 130%	86
	QC1	SE262484.016	%	70 - 130%	99
PCBs in Soli				Method: ME	-(AU)-[ENV]AN420
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH1 0.0-0.1	SE262484.001	%	60 - 130%	82
	BH1 0.5-0.6	SE262484.002	%	60 - 130%	80
	BH2 1.0-1.1	SE262484.003	%	60 - 130%	83
	BH2 2.0-2.1	SE262484.004	%	60 - 130%	81
	BH3 0.0-0.1	SE262484.005	%	60 - 130%	81
	BH3 2.0-2.1	SE262484.006	%	60 - 130%	88
	BH4 0.0-0.1	SE262484.007	%	60 - 130%	81
	BH4 0.5-0.6	SE262484.008	%	60 - 130%	79
	BH5 0.0-0.1	SE262484.009	%	60 - 130%	79
	BH5 1.0-1.1	SE262484.010	%	60 - 130%	81
	BH6 1.0-1.1	SE262484.012	%	60 - 130%	86
	BH6 2.0-2.1	SE262484.013	%	60 - 130%	77
	BH7 0.0-0.1	SE262484.014	%	60 - 130%	82
Speciated Phenols in Soil				Method: ME	-(AU)-[ENV]AN420
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2,4,6-Tribromophenol (Surrogate)	BH1 0.0-0.1	SE262484.001	%	70 - 130%	76
	BH1 0.5-0.6	SE262484.002	%	70 - 130%	85
	BH2 1.0-1.1	SE262484.003	%	70 - 130%	100
	BH2 2.0-2.1	SE262484.004	%	70 - 130%	83
	BH3 0.0-0.1	SE262484.005	%	70 - 130%	97
	BH3 2.0-2.1	SE262484.006	%	70 - 130%	73
	BH4 0.0-0.1	SE262484.007	%	70 - 130%	96
	BH4 0.5-0.6	SE262484.008	%	70 - 130%	80
	BH5 0.0-0.1	SE262484.009	%	70 - 130%	48 ④
	BH5 1.0-1.1	SE262484.010	%	70 - 130%	82
	BH6 1.0-1.1	SE262484.012	%	70 - 130%	90
	BH6 2.0-2.1	SE262484.013	%	70 - 130%	67 ④
	BH7 0.0-0.1	SE262484.014	%	70 - 130%	86
d5-phenol (Surrogate)	BH1 0.0-0.1	SE262484.001	%	50 - 130%	85
	BH1 0.5-0.6	SE262484.002	%	50 - 130%	71
	BH2 1.0-1.1	SE262484.003	%	50 - 130%	114
	BH2 2.0-2.1	SE262484.004	%	50 - 130%	79
	BH3 0.0-0.1	SE262484.005	%	50 - 130%	108



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Speciated Phenols in Soil (continued)				Method: ME	-(AU)-[ENV]AN420
Parameter	Sample Name	Sample Number	Units	Criteria	Recoverv %
d5-phenol (Surrogate)	BH3 2.0-2.1	SE262484.006	%	50 - 130%	74
	BH4 0.0-0.1	SE262484.007	%	50 - 130%	94
	BH4 0.5-0.6	SE262484.008	%	50 - 130%	73
	BH5 0.0-0.1	SE262484.009	%	50 - 130%	28 ④
	BH5 1.0-1.1	SE262484.010	%	50 - 130%	71
	BH6 1.0-1.1	SE262484.012	%	50 - 130%	101
	BH6 2.0-2.1	SE262484.013	%	50 - 130%	60
	BH7 0.0-0.1	SE262484.014	%	50 - 130%	96
VOC's in Soli				Method: ME	-(AU)-IENVIAN433
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1 0.0-0.1	SE262484.001	%	60 - 130%	90
	BH1 0.5-0.6	SE262484.002	%	60 - 130%	92
	BH2 1.0-1.1	SE262484.003	%	60 - 130%	95
	BH2 2.0-2.1	SE262484.004	%	60 - 130%	89
	BH3 0.0-0.1	SE262484.005	%	60 - 130%	91
	BH3 2.0-2.1	SE262484.006	%	60 - 130%	79
	BH4 0.0-0.1	SE262484.007	%	60 - 130%	90
	BH4 0.5-0.6	SE262484.008	%	60 - 130%	95
	BH5 0.0-0.1	SE262484.009	%	60 - 130%	81
	BH5 1.0-1.1	SE262484.010	%	60 - 130%	90
	BH6 1.0-1.1	SE262484 012	%	60 - 130%	88
	BH6 2.0-2.1	SE262484.013	%	60 - 130%	88
	BH7 0.0-0.1	SE262484.014	%	60 - 130%	94
	QC1	SE262484.016	%	60 - 130%	84
d4-1,2-dichloroethane (Surrogate)	BH1 0.0-0.1	SE262484.001	%	60 - 130%	78
· , · · · · · · · · · · · · · · · · · ·	BH1 0.5-0.6	SE262484.002	%	60 - 130%	83
	BH2 1.0-1.1	SE262484.003	%	60 - 130%	78
	BH2 2.0-2.1	SE262484.004	%	60 - 130%	79
	BH3 0.0-0.1	SE262484.005	%	60 - 130%	83
	BH3 2.0-2.1	SE262484.006	%	60 - 130%	69
	BH4 0.0-0.1	SE262484.007	%	60 - 130%	82
	BH4 0.5-0.6	SE262484.008	%	60 - 130%	85
	BH5 0 0-0 1	SE262484 009	%	60 - 130%	74
	BH5 1 0-1 1	SE262484 010	%	60 - 130%	83
	BH6 1 0-1 1	SE262484 012	%	60 - 130%	77
	BH6 2 0-2 1	SE262484 013	%	60 - 130%	78
	BH7 0 0-0 1	SE262484 014	%	60 - 130%	85
	QC1	SE262484.016	%	60 - 130%	77
d8-toluene (Surrogate)	BH1 0.0-0.1	SE262484.001	%	60 - 130%	78
	BH1 0.5-0.6	SE262484.002	%	60 - 130%	85
	BH2 1.0-1.1	SE262484.003	%	60 - 130%	95
	BH2 2 0-2 1	SE262484 004	%	60 - 130%	80
	BH3 0.0-0.1	SE262484.005	%	60 - 130%	84
	BH3 2.0-2.1	SE262484.006	%	60 - 130%	72
	BH4 0.0-0 1	SE262484 007	%	60 - 130%	83
	BH4 0 5-0 6	SE262484 008	%	60 - 130%	86
	BH5 0.0-0 1	SE262484 009	%	60 - 130%	75
	BH5 1 0-1 1	SE262484 010	%	60 - 130%	84
	BH6 1.0-1 1	SE262484 012	%	60 - 130%	78
	BH6 2 0-2 1	SE262484 013	%	60 - 130%	80
	BH7 0 0-0 1	SE262484 014	%	60 - 130%	88
	QC1	SE262484.016	%	60 - 130%	77
Volatile Petroleum Hydrocarbons in Soil				Method: MF	-(AU)-IENVIAN433
Parameter	Sample Name	Sample Number	Units	Criteria	Recoverv %
Bromofluorobenzene (Surrogate)	BH1 0.0-0.1	SE262484.001	%	60 - 130%	90
	BH1 0.5-0 6	SE262484 002	%	60 - 130%	92
	BH2 1.0-1 1	SE262484 003	%	60 - 130%	95
	BH2 2 0-2 1	SE262484 004	%	60 - 130%	89
	BH3 0.0-0.1	SE262484.005	%	60 - 130%	91

BH3 2.0-2.1

SE262484.006

79

60 - 130%

%



Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued)				Method: M	E-(AU)-[ENV]AN433
Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH4 0.0-0.1	SE262484.007	%	60 - 130%	90
	BH4 0.5-0.6	SE262484.008	%	60 - 130%	95
	BH5 0.0-0.1	SE262484.009	%	60 - 130%	81
	BH5 1.0-1.1	SE262484.010	%	60 - 130%	90
	BH6 1.0-1.1	SE262484.012	%	60 - 130%	88
	BH6 2.0-2.1	SE262484.013	%	60 - 130%	88
	BH7 0.0-0.1	SE262484.014	%	60 - 130%	94
	QC1	SE262484.016	%	60 - 130%	84
d4-1,2-dichloroethane (Surrogate)	BH1 0.0-0.1	SE262484.001	%	60 - 130%	78
	BH1 0.5-0.6	SE262484.002	%	60 - 130%	83
	BH2 1.0-1.1	SE262484.003	%	60 - 130%	78
	BH2 2.0-2.1	SE262484.004	%	60 - 130%	79
	BH3 0.0-0.1	SE262484.005	%	60 - 130%	83
	BH3 2.0-2.1	SE262484.006	%	60 - 130%	69
	BH4 0.0-0.1	SE262484.007	%	60 - 130%	82
	BH4 0.5-0.6	SE262484.008	%	60 - 130%	85
	BH5 0.0-0.1	SE262484.009	%	60 - 130%	74
	BH5 1.0-1.1	SE262484.010	%	60 - 130%	83
	BH6 1.0-1.1	SE262484.012	%	60 - 130%	77
	BH6 2.0-2.1	SE262484.013	%	60 - 130%	78
	BH7 0.0-0.1	SE262484.014	%	60 - 130%	85
	QC1	SE262484.016	%	60 - 130%	77
d8-toluene (Surrogate)	BH1 0.0-0.1	SE262484.001	%	60 - 130%	78
	BH1 0.5-0.6	SE262484.002	%	60 - 130%	85
	BH2 1.0-1.1	SE262484.003	%	60 - 130%	95
	BH2 2.0-2.1	SE262484.004	%	60 - 130%	80
	BH3 0.0-0.1	SE262484.005	%	60 - 130%	84
	BH3 2.0-2.1	SE262484.006	%	60 - 130%	72
	BH4 0.0-0.1	SE262484.007	%	60 - 130%	83
	BH4 0.5-0.6	SE262484.008	%	60 - 130%	86
	BH5 0.0-0.1	SE262484.009	%	60 - 130%	75
	BH5 1.0-1.1	SE262484.010	%	60 - 130%	84
	BH6 1.0-1.1	SE262484.012	%	60 - 130%	78
	BH6 2.0-2.1	SE262484.013	%	60 - 130%	80
	BH7 0.0-0.1	SE262484.014	%	60 - 130%	86
	QC1	SE262484.016	%	60 - 130%	77



METHOD BLANKS

SE262484 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.

	Meth	od: ME-(AU)-[ENV]AN312
Units	LOR	Result
mg/kg	0.05	<0.05
	Units mg/kg	Meth Units LOR mg/kg 0.05

OC Pesticides in Soil

OC Pesticides in Soil				Meth	iod: ME-(AU)-[ENV]AN420
Sample Number		Parameter	Units	LOR	Result
LB307769.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	77
OP Pesticides in Soil				Meth	od: ME-(AU)-[ENV]AN420
Sample Number		Parameter	Units	LOR	Result
LB307769.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	89
		d14-p-terphenyl (Surrogate)	%	-	124
PAH (Polynuclear Aromatic	Hydrocarbons) in Soll			Meth	iod: ME-(AU)-[ENV]AN420

	,			
Sample Number	Parameter	Units	LOR	Result
LB307769.001	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	ma/ka	0.1	<0.1



METHOD BLANKS

SE262484 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 Result Sample Number Parameter Units LOR LB307769.001 Indeno(1,2,3-cd)pyrene 0.1 <0.1 mg/kg Dibenzo(ah)anthracene mg/kg 0.1 < 0.1 0.1 <0.1 Benzo(ghi)perylene mg/kg Total PAH (18) mg/kg 0.8 <0.8 Surrogates d5-nitrobenzene (Surrogate) % 104 2-fluorobiphenyl (Surrogate) % 89 % 124 d14-p-terphenyl (Surrogate) -Method: ME-(AU)-[ENV]AN420 PCBs in Soil Parameter Result Sample Number Units LB307769.001 Arochlor 1016 0.2 <0.2 mg/kg Arochlor 1221 mg/kg 0.2 < 0.2 Arochlor 1232 mg/kg 0.2 <0.2 Arochlor 1242 0.2 <0.2 mg/kg Arochlor 1248 0.2 mg/kg < 0.2 mg/kg Arochlor 1254 0.2 <0.2 Arochlor 1260 0.2 <0.2 mg/kg Arochlor 1262 mg/kg 0.2 < 0.2 Arochlor 1268 mg/kg 0.2 < 0.2 Total PCBs (Arochlors) <1 mg/kg 1 Surrogates TCMX (Surrogate) % 77 Speciated Phenols in Soil Method: ME-(AU)-[ENV]AN420 Result Sample Number Parameter LB307770.001 Phenol 0.5 <0.5 mg/kg 2-methyl phenol (o-cresol) mg/kg 0.5 < 0.5 3/4-methyl phenol (m/p-cresol) mg/kg <1 1 2-chlorophenol 0.5 <0.5 mg/kg 2,4-dimethylphenol mg/kg 0.5 < 0.5 2,6-dichlorophenol 0.5 <0.5 mg/kg 2,4-dichlorophenol 0.5 <0.5 mg/kg 4-chloro-3-methylphenol mg/kg 2 <2 2,4,6-trichlorophenol mg/kg 0.5 <0.5 2-nitrophenol <0.5 0.5 mg/kg 4-nitrophenol mg/kg 1 <1 2,4,5-trichlorophenol 0.5 <0.5 mg/kg 2,3,4,6/2,3,5,6-tetrachlorophenol <1 mg/kg 1 Pentachlorophenol mg/kg 0.5 <0.5 2,4-dinitrophenol mg/kg 2 <2 Surrogates 2,4,6-Tribromophenol (Surrogate) 78 % d5-phenol (Surrogate) % 93 Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: ME-(AU)-[ENV]AN040/AN320 Sample Number LOR Result Parameter LB307794.001 Arsenic, As mg/kg 1 <1 Cadmium, Cd mg/kg 0.3 < 0.3 Chromium, Cr 0.5 <0.5 mg/kg Copper, Cu mg/kg 0.5 <0.5 Nickel, Ni mg/kg 0.5 <0.5 Lead, Pb <1 mg/kg 1 2 <2.0 Zinc. Zn mg/kg TRH (Total Recoverable Hydrocarbons) in Soil Method: ME-(AU)-[ENV]AN403 Result Sample Number Parameter Units LB307769.001 TRH C10-C14 20 mg/kg <20 TRH C15-C28 mg/kg 45 <45 mg/kg TRH C29-C36 45 <45 TRH C37-C40 100 <100 mg/kg TRH C10-C36 Total mg/kg 110 <110 VOC's in Soil Method: ME-(AU)-[ENV]AN433 Sample Number Units LOR Parameter



METHOD BLANKS

SE262484 R0

Method: ME-(AU)-[ENV]AN433

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)

Sample Number		Parameter	Units	LOR	Result
LB307771.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	78
		d8-toluene (Surrogate)	%	-	81
		Bromofluorobenzene (Surrogate)	%	-	90
	Totals	Total BTEX*	mg/kg	0.6	<0.6
Volatile Petroleum Hyd	rocarbons in Soil			Meth	od: ME-(AU)-[ENV]AN433
Sample Number		Parameter	Units	LOR	Result
LB307771.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1 2-dichloroethane (Surrogate)	%	_	78

27/3/2024



Method: ME-(AU)-[ENV]AN002

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil					Meth	od: ME-(AU)-	ENVJAN312
Original	Duplicate	Parameter	Units LOR	Original	Duplicate	Criteria %	RPD %
SE262484.010	LB307773.014	Mercury	mg/kg 0.05	<0.05	<0.05	200	0

Moisture Content

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262483.006	LB307774.022	% Moisture	%w/w	1	14.207650273	23.3111480865	37	7
SE262484.010	LB307774.011	% Moisture	%w/w	1	14.1	13.6	37	3

OC Pesticides in Soil

OC Pesticides in So	1						Metho	d: ME-(AU)-	[ENV]AN420
Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262483.005	LB307769.027		Alpha BHC	mg/kg	0.1	0.0002016345	0.0001577285	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	0	0	200	0
			Beta BHC	mg/kg	0.1	4.2408010957	0	200	0
			Lindane (gamma BHC)	mg/kg	0.1	1.8000945704	4.4959422252	200	0
			Delta BHC	mg/kg	0.1	9.9695857827	0.0003068591	200	0
			Heptachlor	mg/kg	0.1	0.0006196911	0.0007500699	200	0
			Aldrin	mg/kg	0.1	0.0007342330	0.0009219217	200	0
			Isodrin	mg/kg	0.1	0.0014181173	0.0009807546	200	0
			Heptachlor epoxide	mg/kg	0.1	0.0012447725	0.0013886512	200	0
			Gamma Chlordane	mg/kg	0.1	0.0106878128	0.0110552848	200	0
			Alpha Chlordane	mg/kg	0.1	0.0018345318	0.0019415330	200	0
			Alpha Endosulfan	mg/kg	0.2	0.0016622129	0.0020754410	200	0
			o,p'-DDE*	mg/kg	0.1	0.0004487502	0.0024707086	200	0
			p,p'-DDE	mg/kg	0.1	0.0012384184	0.0012134566	200	0
			Dieldrin	mg/kg	0.2	0.0067370894	0.0068260324	200	0
			Endrin	mg/kg	0.2	9.0185324432	0.0034195210	200	0
			Beta Endosulfan	mg/kg	0.2	0	0	200	0
			o,p'-DDD*	mg/kg	0.1	0.0372364185	0.0097061780	200	0
			p,p'-DDD	mg/kg	0.1	0	0	200	0
			Endrin aldehyde	mg/kg	0.1	0.0009457106	0.0012645526	200	0
			Endosulfan sulphate	mg/kg	0.1	0.0101831295	0.0003118495	200	0
			o,p'-DDT*	mg/kg	0.1	0	0	200	0
			p,p'-DDT	mg/kg	0.1	0.0005005163	0.0009869263	200	0
			Endrin ketone	mg/kg	0.1	0.0044982399	0	200	0
			Methoxychlor	mg/kg	0.1	0	0.0449484294	200	0
			Mirex	mg/kg	0.1	0.0003961496	0	200	0
			trans-Nonachlor	mg/kg	0.1	0.0060145332	0.0061203017	200	0
			Total CLP OC Pesticides	mg/kg	1	0	0	200	0
			Total OC VIC EPA	mg/kg	1	0	0	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.1274	0.1274	30	0
SE262484.010	LB307769.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in S	Soil (continued)						Metho	od: ME-(AU)·	-[ENV]AN42
Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262484.010	LB307769.014		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o.p'-DDT*	ma/ka	0.1	<0.1	<0.1	200	0
			p,'-DDT	ma/ka	0.1	<0.1	<0.1	200	0
			Endrin ketone	ma/ka	0.1	<0.1	<0.1	200	0
			Methoxychlor	ma/ka	0.1	<0.1	<0.1	200	0
			Mirey	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
				mg/kg		<0.1	-0.1	200	0
				mg/kg	1	<1	~1	200	0
		0		Hig/kg		<1 0.40	<1 0.40	200	0
		Surrogates	Tetrachioro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.12	30	
OP Pesticides in S	Soll						Metho	od: ME-(AU)	-[ENV]AN420
Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262483.005	LB307769.027		Azinphos-methyl (Guthion)	mg/kg	0.2	0.0037527551	0	200	0
			Bromophos Ethyl	mg/kg	0.2	0	0	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	0	0	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	0	0	200	0
			Dichlorvos	mg/kg	0.5	0	0	200	0
			Dimethoate	mg/kg	0.5	0.0064414002	0.0019831771	200	0
			Ethion	ma/ka	0.2	0	0.0066446668	200	0
			Fenitrothion	ma/ka	0.2	0	0	200	0
			Malathion	ma/ka	0.2	0.0172197616	0.0186657698	200	0
			Methidathion	ma/ka	0.5	0.0009708075	0 0005351319	200	0
			Parathion-ethyl (Parathion)	ma/ka	0.0	0.0175814632	0.0277445151	200	0
				ma/ka	1.7	0	0	200	0
		Surrogates	2-fluorobiobenyl (Surrogate)	ma/ka		0 4996836883	0 4212685768	30	17
		Sunogates	d14.p.terphenyl (Surrogate)	mg/kg		0.58102/0066	0.4212000700	30	4
SE262494 010	L P207760 014			mg/kg		<0.2	<0.00000000000	200	
3E202404.010	LB307709.014		Azinphos-methyl (Gutnon)	mg/kg	0.2	<0.2	<0.2	200	0
			Oblementing (Oblementing Ethel)	Hig/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
				mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.6	30	0
PAH (Polynuclear)	Aromatic Hydrocarb	ons) in Soil					Metho	od: ME-(AU)-	-[ENV]AN420
Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262483.005	LB307769.027		Naphthalene	mg/kg	0.1	0.0156596255	0.0142784896	200	0
			2-methylnaphthalene	<u> </u>	0.1	0.0089563954	0.0086614903	200	0
			1-methylnaphthalene		0.1	0.0066233527	0.0060490680	200	0
			Acenaphthylene		0.1	0.0445520572	0.0439114285	200	0
			Acenaphthene		0.1	0.0021718096	0.0025574086	200	0
			Fluorene	ma/ka	0.1	0.0063881020	0.0069622947	200	0
			Phenanthrene	ma/ka	0.1	0.0657610217	0.0647052156	183	0
			Anthracene	ma/ka	0.1	0.0218182061	0.0231048244	200	0
			Fluoranthene	mg/kg	0.1	0.0210102001	0.0201040244	150	0
			Durana	mg/kg	0.1	0.1482000274	0.14862011029	07	0
					0.1	0.1400090271	0.1400201199	300	0
				mg/kg	0.1	0.007004000	0.0029057901	200	0
				mg/kg	0.1	0.03/0942295	0.09520/05/9	134	0
			Denzo(L)(fuses the set	mg/kg	0.1	0.0790490389	0.1061843701	138	6
			Benzo(k)fluoranthene	mg/kg	0.1	0.0413982512	0.0442878646	200	0
			Benzo(a)pyrene	mg/kg	0.1	0.0887660824	0.0952543508	139	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.0843160758	0.0863386117	147	0
			Dibenzo(ah)anthracene	mg/kg	0.1	0.0125203543	0.0080855198	200	0



Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

PAH (Polynuclear	Aromatic Hydrocarbo	ns) in Soil (contin	uued)				Metho	d: ME-(AU)-	[ENV]AN420
Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262483.005	LB307769.027		Benzo(ghi)perylene	mg/kg	0.1	0.096636111	50.0762714088	146	0
			Carcinogenic PAHs, BaP TEQ <lor=0*< td=""><td>mg/kg</td><td>0.2</td><td>0</td><td>0</td><td>200</td><td>0</td></lor=0*<>	mg/kg	0.2	0	0	200	0
			Carcinogenic PAHs, BaP TEQ <lor=lor 2*<="" td=""><td>mg/kg</td><td>0.2</td><td>0.121</td><td>0.121</td><td>175</td><td>0</td></lor=lor>	mg/kg	0.2	0.121	0.121	175	0
			Carcinogenic PAHs, BaP TEQ <lor=lor*< td=""><td>mg/kg</td><td>0.3</td><td>0.242</td><td>0.242</td><td>134</td><td>0</td></lor=lor*<>	mg/kg	0.3	0.242	0.242	134	0
			Total PAH (18)	mg/kg	0.8	0.148809027	10.1486201199	97	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.480546864	10.5000400889	30	4
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.499683688	30.4212685768	30	17
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.581924906	60.6055586097	30	4
SE262484.010	LB307769.014		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*< td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>200</td><td>0</td></lor=0*<>	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <lor=lor 2*<="" td=""><td>mg/kg</td><td>0.2</td><td><0.2</td><td><0.2</td><td>175</td><td>0</td></lor=lor>	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <lor=lor*< td=""><td>mg/kg</td><td>0.3</td><td><0.3</td><td><0.3</td><td>134</td><td>0</td></lor=lor*<>	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.6	30	0
PCBs in Soil							Metho	d: ME-(AU)-	

Original Duplicate Criteria % RPD % Units Original Duplicate Parameter SE262483.005 LB307769.027 Arochlor 1016 0.2 0 0 200 0 mg/kg Arochlor 1221 0.2 0 0 200 0 mg/kg 200 0 Arochlor 1232 mg/kg 0.2 0 0 Arochlor 1242 0.2 0 0 200 0 mg/kg Arochlor 1248 0.2 0 200 0 0 mg/kg Arochlor 1254 0.2 200 0 mg/kg 0 0 Arochlor 1260 0.2 0 0 200 0 mg/kg Arochlor 1262 0.2 0 0 200 0 mg/kg Arochlor 1268 mg/kg 0.2 0 0 200 0 Total PCBs (Arochlors) mg/kg 1 0 0 200 0 Surrogates TCMX (Surrogate) 0.1274 0.1274 30 0 mg/kg SE262484.010 LB307769.014 Arochlor 1016 mg/kg 0.2 < 0.2 < 0.2 200 0 Arochlor 1221 0.2 <0.2 <0.2 200 0 mg/kg 0.2 <0.2 <0.2 200 Arochlor 1232 0 mg/kg Arochlor 1242 mg/kg 0.2 <0.2 < 0.2 200 0 Arochlor 1248 0.2 <0.2 <0.2 200 0 mg/kg Arochlor 1254 0.2 <0.2 <0.2 200 0 mg/kg < 0.2 200 Arochlor 1260 mg/kg 0.2 < 0.2 0 Arochlor 1262 0.2 <0.2 <0.2 200 0 mg/kg Arochlor 1268 0.2 <0.2 <0.2 200 0 mg/kg Total PCBs (Arochlors) 200 0 mg/kg 1 <1 <1 Surrogates TCMX (Surrogate) 0 0 30 mg/kg 1 Speciated Phenols in Soil

Original Duplicate Units LOR Parameter

Method: ME-(AU)-[ENV]AN420



Method: ME-(AU)-[ENV]AN420

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Speciated Phenols in Soil (continued)

Original	Dunlicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262483.005	L B307770 023		Phenol	ma/ka	0.5	originai	0	200	0
3E202463.005	LB307770.023				0.5	0	0	200	0
			2-methyl phenol (o-cresol)	mg/kg	0.5	0	0	200	0
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	0.0232598833	0.02	200	0
			Total Cresol	mg/kg	1.5	0.0232598833	0.02	200	0
			2-chlorophenol	mg/kg	0.5	0.0232598833	0	200	0
			2,4-dimethylphenol	mg/kg	0.5	0	0	200	0
			2,6-dichlorophenol	mg/kg	0.5	0	0	200	0
			2.4-dichlorophenol	ma/ka	0.5	0	0	200	0
			4-chloro-3-methylphenol		2	0	0	200	0
				mg/kg	0.5	0	0	200	0
				iiig/kg	0.5	0	0	200	
			2-hitrophenoi	Hig/kg	0.5	0	0	200	0
			4-nitrophenol	mg/kg	1	0	0	200	0
			2,4,5-trichlorophenol	mg/kg	0.5	0	0	200	0
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	0	0	200	0
			Pentachlorophenol	mg/kg	0.5	0	0	200	0
			2,4-dinitrophenol	mg/kg	2	0.0930395332	0.08	200	0
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	3.89	4.72	30	19
			d5-phenol (Surrogate)	mg/kg	-	1.75	2.16	30	21
SE262484.010	LB307770.014		Phenol	ma/ka	0.5	<0.5	<0.5	200	0
			2-methyl phenol (o-cresol)	ma/ka	0.5	<0.5	<0.5	200	0
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	200	0
				mg/kg	1.5	<15	<15	200	0
				mg/kg	0.5	<0.5	<0.5	200	0
				mg/kg	0.5	<0.5	<0.5	200	
				IIIg/kg	0.5	<0.5	-0.5	200	0
					0.5	<0.5	<0.5	200	0
			2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	200	0
			2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-nitrophenol	mg/kg	0.5	<0.5	<0.5	200	0
			4-nitrophenol	mg/kg	1	<1	<1	200	0
			2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	200	0
			Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dinitrophenol	mg/kg	2	<2	<2	200	0
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	4.1	4.1	30	0
			d5-phenol (Surrogate)	mg/kg	-	1.4	1.7	30	18
Total Recoverable E	lomonto in Soil/Mont	e Solido/Matoriolo I	ICROES				Mothod: ME		1040/00/200
		e Solius/Materials	by ICPOES						1040//11320
Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262484.010	LB307794.014		Arsenic, As	mg/kg	1	3	2	71	12
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.5	44	33	31	30
			Copper, Cu	mg/kg	0.5	14	13	34	9
			Nickel, Ni	mg/kg	0.5	7.4	7.5	37	1
			Lead, Pb	mg/kg	1	13	13	38	6
			Zinc. Zn	ma/ka	2	16	17	42	5
TOUL (Total Deserves	- 6.1 - 1.16 - 14	- 0-"							
TRH (Total Recover	able Hydrocarbons)	in 501					Meth	оа: ме-(AU)-[EINVJAIN403
Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262483.005	LB307769.027		TRH C10-C14	mg/kg	20	6.9889313525	7.5743915705	200	0
			TRH C15-C28	mg/kg	45	76.9576378493	36.583427136	55	5
			TRH C29-C36	mg/kg	45	87.690312861	3.698140958	54	3
			TRH C37-C40	mg/kg	100	10.814354937	19.282945512	117	7
			TRH C10-C36 Total	mg/kg	110	64.647950710	30.281568095	60	4
			TRH >C10-C40 Total (F bands)	ma/ka	210	73.545838215	98.379871448	73	5
		TRH F Bands	TRH >C10-C16	ma/ka	25	5.8363065483	5.4406635103	200	0
			TRH >C10-C16 - Nanhthalene (F2)	ma/ka	25	n	0	200	0
			TPH >C16.C34 (E3)	mg/kg	20	22 122044545	30 050222600	57	5
				mg/kg	90	22.1220410105	0002222000	407	5
05000403333	1000776		TRU 2034-040 (F4)	mg/kg	120	51.423/96/003	09.320048/81	10/	5
SE262484.010	LB307769.014		TRH 010-014	mg/kg	20	<20	<20	200	0
			TKH 015-028	mg/kg	45	<45	<45	200	U
			I RH C29-C36	mg/kg	45	<45	<45	200	0



Method: ME-(AU)-IENVIAN403

Method: ME-(AU)-[ENV]AN433

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

• • • • • • • •									•
Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262484.010	LB307769.014		TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262483.006	LB307771.025	Monocyclic	Benzene	mg/kg	0.1	0	0	200	0
		Aromatic	Toluene	mg/kg	0.1	0.0068793883	0	200	0
			Ethylbenzene	mg/kg	0.1	0.0004673803	0.0004089246	200	0
			m/p-xylene	mg/kg	0.2	0.0014425259	0.0013549686	200	0
			o-xylene	mg/kg	0.1	0.0009194551	0.0012042266	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	0.0011267385	0.0010520090	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2021353199	7.7183158859	50	6
			d8-toluene (Surrogate)	mg/kg	-	8.3653271152	7.7903374523	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8648665879	8.4029653196	50	5
		Totals	Total BTEX*	mg/kg	0.6	0	0	200	0
			Total Xylenes*	mg/kg	0.3	0.0023619810	0.0025591953	200	0
SE262484.010	LB307771.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			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	-	8.3	7.4	50	11
			d8-toluene (Surrogate)	mg/kg	-	8.4	7.6	50	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	8.2	50	9
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

Volatile Petroleum	Hydrocarbons in So	I					Meth	od: ME-(AU)-	[ENV]AN433
Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE262483.006	LB307771.025		TRH C6-C10	mg/kg	25	0	0	200	0
			TRH C6-C9	mg/kg	20	0	0	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.2021353199	97.7183158859	50	6
			d8-toluene (Surrogate)	mg/kg	-	8.3653271152	27.7903374523	50	7
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8648665879	8.4029653196	50	5
		VPH F Bands	Benzene (F0)	mg/kg	0.1	0	0	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	0	0	200	0
SE262484.010	LB307771.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	7.4	50	11
			d8-toluene (Surrogate)	mg/kg	-	8.4	7.6	50	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.0	8.2	50	9
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0



Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

Mercury in Soil					I	Nethod: ME-(A	.U)-[ENV]AN312
Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB307773.002	Mercury	mg/kg	0.05	0.18	0.2	80 - 120	89

OC Pesticides in So	1					N	lethod: ME-(A	U)-[ENV]AN420
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB307769.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	124
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	120
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	121
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	117
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	113
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	111
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.11	0.15	40 - 130	76
OP Pesticides in So	1					N	lethod: ME-(A	U)-[ENV]AN420
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB307769.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.8	2	60 - 140	90
		Diazinon (Dimpylate)	mg/kg	0.5	2.1	2	60 - 140	106
		Dichlorvos	mg/kg	0.5	2.0	2	60 - 140	99
		Ethion	mg/kg	0.2	2.0	2	60 - 140	99
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	116
PAH (Polynuclear A	romatic Hydroca	arbons) in Soil				N	/lethod: ME-(A	U)-[ENV]AN420
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB307769.002		Naphthalene	mg/kg	0.1	4.0	4	60 - 140	100
		Acenaphthylene	mg/kg	0.1	4.0	4	60 - 140	101
		Acenaphthene	mg/kg	0.1	4.1	4	60 - 140	102
		Phenanthrene	mg/kg	0.1	4.0	4	60 - 140	100
		Anthracene	mg/kg	0.1	4.1	4	60 - 140	102
		Fluoranthene	mg/kg	0.1	4.2	4	60 - 140	106
		Pyrene	mg/kg	0.1	3.9	4	60 - 140	98
		Benzo(a)pyrene	mg/kg	0.1	5.6	4	60 - 140	139
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	101
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	87
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	116
PCBs in Soil						N	lethod: ME-(A	U)-[ENV]AN420

Sample Number Parameter Units LOR Result Expected Criteria % Recover							•	
	Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB307769.002 Arochlor 1260 mg/kg 0.2 0.4 0.4 60 - 140 97	LB307769.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	97

Speciated Phenols i	n Soil						Nethod: ME-(A	U)-[ENV]AN420
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB307770.002		Phenol	mg/kg	0.5	1.3	1	70 - 130	126
		2,4-dichlorophenol	mg/kg	0.5	1.1	1	70 - 130	106
		2,4,6-trichlorophenol	mg/kg	0.5	1.0	1	70 - 130	100
		Pentachlorophenol	mg/kg	0.5	1.0	1	70 - 130	100
	Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	5.0	5	40 - 130	100
		d5-phenol (Surrogate)	mg/kg	-	2.3	2	40 - 130	115
Total Recoverable E	Elements in Soil/	Naste Solids/Materials by ICPOES				Method:	ME-(AU)-[EN\	/JAN040/AN320
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB307794.002		Arsenic, As	mg/kg	1	330	318.22	80 - 120	104
		Cadmium, Cd	mg/kg	0.3	4.1	4.81	70 - 130	85
		Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	108
		Copper, Cu	mg/kg	0.5	310	290	80 - 120	107
		Nickel, Ni	mg/kg	0.5	190	187	80 - 120	102
		Lead, Pb	mg/kg	1	92	89.9	80 - 120	102
		Zinc, Zn	mg/kg	2	270	273	80 - 120	100
TRH (Total Recover	able Hydrocarbo	ons) in Soil				N	lethod: ME-(A	U)-[ENV]AN403
Sample Number		Parameter	Units	LOR				



Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in Green when within suggested criteria or Red with an appended dagger symbol (†) when outside suggested criteria.

TRH (Total Recove	erable Hydrocarbo	ns) in Soil (continued)				1	Method: ME-(A	U)-[ENV]AN403
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB307769.002		TRH C10-C14	mg/kg	20	35	40	60 - 140	88
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	87
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	88
	TRH F Bands	TRH >C10-C16	mg/kg	25	37	40	60 - 140	94
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	84
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	87
VOC's in Soil							Nethod: ME-(A	U)-[ENV]AN43
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB307771.002	Monocyclic	Benzene	mg/kg	0.1	3.9	5	60 - 140	78
	Aromatic	Toluene	mg/kg	0.1	4.1	5	60 - 140	81
		Ethylbenzene	mg/kg	0.1	3.9	5	60 - 140	79
		m/p-xylene	mg/kg	0.2	8.0	10	60 - 140	80
		o-xylene	mg/kg	0.1	4.0	5	60 - 140	80
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.0	10	70 - 130	80
		d8-toluene (Surrogate)	mg/kg	-	8.3	10	70 - 130	83
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.0	10	70 - 130	80
Volatile Petroleum	Hydrocarbons in §	Soll					Nethod: ME-(A	U)-[ENV]AN43
Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB307771.002		TRH C6-C10	mg/kg	25	64	92.5	60 - 140	69
		TRH C6-C9	mg/kg	20	55	80	60 - 140	69
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.0	10	70 - 130	80
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.0	10	70 - 130	80
	VPH F Bands	TRH C6-C10 minus BTEX (E1)	ma/ka	25	40	62.5	60 - 140	64



Method: ME-(AU)-[ENV]AN420

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						Mett	nod: ME-(AU	J)-[ENV]AN312
QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307773.004	Mercury	mg/kg	0.05	0.32	0.11	0.2	101

OC Pesticides in Soil

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307769.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.3	<0.1	0.2	132
			Heptachlor	mg/kg	0.1	0.3	<0.1	0.2	129
			Aldrin	mg/kg	0.1	0.3	<0.1	0.2	125
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	0.2	<0.2	0.2	120
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	117
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	108
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.12	-	85
OP Pesticides in	Soil						Meti	nod: ME-(AL	J)-[ENV]AN420
QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307769.004		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307769.004		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.9	<0.2	2	96
			Diazinon (Dimpylate)	mg/kg	0.5	2.1	<0.5	2	106
			Dichlorvos	mg/kg	0.5	2.0	<0.5	2	100
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	2.2	<0.2	2	112
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	8.3	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	-	90
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.6	-	120
PAH (Polynuclea	r Aromatic Hydrocarbo	ons) in Soil					Mett	nod: ME-(Al	J)-[ENV]AN420
QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307769.004		Naphthalene	mg/kg	0.1	4.1	<0.1	4	100
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.2	0.2	4	100
			Acenaphthene	mg/kg	0.1	4.1	<0.1	4	102
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-



Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

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PAH (Polynuclea	ar Aromatic Hydrocarb	ons) in Soil (cor	ntinued)				Met	hod: ME-(Al	I)-IENVIAN420
				11.14	1.0.0	D 11			
QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307769.004		Phenanthrene	mg/kg	0.1	4.5	0.8	4	92
			Anthracene	mg/kg	0.1	4.3	0.2	4	100
			- Fluoranthene	mg/kg	0.1	5.1	1.8	4	85
			Pyrene	mg/kg	0.1	4.9	1.8	4	78
			Benzo(a)anthracene	mg/kg	0.1	0.6	1.1	-	-
			Chrysene	mg/kg	0.1	0.5	0.9	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.9	1.5	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	0.3	0.5	-	-
			Benzo(a)pyrene	mg/kg	0.1	6.3	1.4	4	123
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.6	0.9	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0.2	-	-
			Benzo(ghi)perylene	mg/kg	0.1	0.3	0.5	-	-
			Carcinogenic PAHs, BaP TEQ <lor=0*< td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>6.6</td><td>2.0</td><td>-</td><td>-</td></lor=0*<>	TEQ (mg/kg)	0.2	6.6	2.0	-	-
			Carcinogenic PAHs, BaP TEQ <lor=lor 2*<="" td=""><td>TEQ (mg/kg)</td><td>0.2</td><td>6.6</td><td>2.0</td><td>-</td><td>-</td></lor=lor>	TEQ (mg/kg)	0.2	6.6	2.0	-	-
			Carcinogenic PAHs, BaP TEQ <lor=lor*< td=""><td>TEQ (mg/kg)</td><td>0.3</td><td>6.7</td><td>2.0</td><td>-</td><td>-</td></lor=lor*<>	TEQ (mg/kg)	0.3	6.7	2.0	-	-
			Total PAH (18)	mg/kg	0.8	41	12	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	108
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	-	90
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.6	-	120
PCBe in Soil							Met	hod: ME_(AI	
P ODS III OOII							Wet)-[EIW]-14420
QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307769.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.4	<0.2	0.4	91
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	-	85
Speciated Pheno	ols in Soil						Met	hod: ME-(Al	J)-IENVIAN420
OC Comple	Comple Number		Devemator	Linita		Decult	Ovining	Cuilco	Decessory (9/
QC Sample	Sample Number		Parameter	Units	LUR	Result	Original	Spike	Recovery %
SE262484.001	LB307770.004			mg/kg	0.5	1.1	<0.5	1	114
			2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	-	-
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	-	-
			Total Cresol	mg/kg	1.5	<1.5	<1.5	-	-
			2-chlorophenol	mg/kg	0.5	<0.5	<0.5	-	-
			2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	-	-
			2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	-	-
			2,4-dichlorophenol	mg/kg	0.5	1.0	<0.5	1	98
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	-	-
			2,4,6-trichlorophenol	mg/kg	0.5	0.9	<0.5	1	90
			2-nitrophenol	mg/kg	0.5	<0.5	<0.5	-	-
			4-nitrophenol	mg/kg	1	<1	<1	-	-
			2,4,5-trichlorophenol	mg/kg	0.5	0.8	<0.5	-	-
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	-	-
			Pentachlorophenol	mg/kg	0.5	0.9	<0.5	1	92
			2,4-dinitrophenol	mg/kg	2	<2	<2	-	-
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	4.2	3.8	-	85
			d5-phenol (Surrogate)	mg/kg	-	1.9	1.7	-	96
Total Recoverab	le Elements in Soil/Wa	ste Solids/Mate	arials by ICPOES				Method: ME	E-(AU)-IENV	1AN040/AN320
OC Samula	Sample Number		Poromotor	Unite		Booult	Original	Spille	Poor ware the
QC Sample				Units	LOR	Result	Original	Spike	- Recovery%
SE262484.001	LB307794.004		Arsenic, As	mg/kg	1	50	5	50	90
				mg/kg	0.3	42	0.5	50	83
			Chromium, Cr	mg/kg	0.5	74	27	50	94
			Copper, Cu	mg/kg	0.5	85	42	50	86
1			NICKEL NI	ma/ka	0.5	52	67	50	91



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.

00.0	O a man la Niuma la d		- · · · ·	11-24-		Descult	Oniminal	0	
QC Sample	Sample Numbe	r	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307794.004			mg/kg	1	250	220	50	42 ④
			Zinc, Zn	mg/kg	2	490	460	50	61 ④
TRH (Total Reco	overable Hydrocarbo	ons) in Soil					Met	hod: ME-(Al	J)-[ENV]AN403
QC Sample	Sample Numbe	r	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307769.004		TRH C10-C14	mg/kg	20	51	<20	40	117
			TRH C15-C28	mg/kg	45	230	55	40	438
			TRH C29-C36	mg/kg	45	120	49	40	182
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	400	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	350	<210	-	-
		TRH F	TRH >C10-C16	mg/kg	25	61	<25	40	139
		Bands	TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	61	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	290	98	40	487 (9)
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-
VOC's in Soil							Met	hod: ME-(Al	J)-[ENV]AN433
QC Sample	Sample Numbe	r	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307771.004	Monocyclic	Benzene	mg/kg	0.1	4.9	<0.1	5	98
		Aromatic	Toluene	mg/kg	0.1	5.1	<0.1	5	102
			Ethylbenzene	mg/kg	0.1	5.0	<0.1	5	100
			m/p-xylene	mg/kg	0.2	10	<0.2	10	102
			o-xylene	mg/kg	0.1	5.2	<0.1	5	103
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	7.8	10	83
			d8-toluene (Surrogate)	mg/kg	-	8.3	7.8	10	83
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	9.0	10	85
		Totals	Total BTEX*	mg/kg	0.6	30	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	15	<0.3	-	-
Volatile Petroleu	m Hydrocarbons in	Soil					Met	hod: ME-(Al	J)-[ENV]AN433
QC Sample	Sample Numbe	r	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE262484.001	LB307771.004		TRH C6-C10	mg/kg	25	76	<25	92.5	82
			TRH C6-C9	mg/kg	20	66	<20	80	81
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.3	7.8	10	83
			d8-toluene (Surrogate)	mg/kg	-	8.3	7.8	10	83
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	9.0	-	85
		VPH F	Benzene (F0)	mg/kg	0.1	4.9	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	ma/ka	25	46	<25	62.5	72



Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: MAD = 100 x SDL / Mean + LR

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in Green when within suggested criteria or Red with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.



Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~/media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf

- * NATA accreditation does not cover the performance of this service.
- ** Indicative data, theoretical holding time exceeded.
- *** Indicates that both * and ** apply.
- Sample not analysed for this analyte.
- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.
- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
- ④ Recovery failed acceptance criteria due to matrix interference.
- 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.
- ¹ LOR was raised due to dilution of significantly high concentration of analyte in sample.
- Image: Image:
- Recovery failed acceptance criteria due to sample heterogeneity.
- [®] LOR was raised due to high conductivity of the sample (required dilution).
- t Refer to relevant report comments for further information.

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ANALYTICAL REPORT



- CLIENT DETAILS		LABORATORY DETAI	LS
Contact Client Address	Leonardo Baeza LANTERRA CONSULTING PTY LTD PO BOX 3626 ACT 2611	Manager Laboratory Address	Huong Crawford SGS Alexandria Environmental Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	0412 823 931	Telephone	+61 2 8594 0400
Facsimile	(Not specified)	Facsimile	+61 2 8594 0499
Email	leonardo.baeza@lanterra.com.au	Email	au.environmental.sydney@sgs.com
Project	P24032 - PSI	SGS Reference	SE262484 R0
Order Number	P24032	Date Received	20 Mar 2024
Samples	9	Date Reported	27 Mar 2024

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique. Asbestos analysed by Approved Identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin

SIGNATORIES -

C

Yusuf KUTHPUDIN Asbestos Analyst

SGS Australia Pty Ltd ABN 44 000 964 278 Environment, Health and Safety

Unit 16 33 Maddox St PO Box 6432 Bourke Rd BC Alexandria NSW 2015 Alexandria NSW 2015 Australiat +61 2 8594 0400Australiaf +61 2 8594 0499

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ANALYTICAL REPORT

RESULTS _							
Fibre Identifica	tion in soil					Method AN602	
Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Date Analysed	Fibre Identification	Est.%w/w*
SE262484.001	BH1 0.0-0.1	Soil	407g Clay, Sand, Soil, Rocks	19 Mar 2024	27 Mar 2024	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE262484.002	BH1 0.5-0.6	Soil	368g Clay, Sand, Soil, Rocks	19 Mar 2024	27 Mar 2024	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE262484.003	BH2 1.0-1.1	Soil	291g Clay, Sand, Rocks	19 Mar 2024	27 Mar 2024	No Asbestos Found at RL of 0.1g/kg	<0.01
SE262484.005	BH3 0.0-0.1	Soil	322g Clay, Sand, Soil, Rocks	19 Mar 2024	27 Mar 2024	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE262484.007	BH4 0.0-0.1	Soil	350g Clay, Sand, Rocks	19 Mar 2024	27 Mar 2024	No Asbestos Found at RL of 0.1g/kg	<0.01
SE262484.009	BH5 0.0-0.1	Soil	514g Clay, Sand, Soil, Rocks	19 Mar 2024	27 Mar 2024	No Asbestos Found at RL of 0.1g/kg	<0.01
SE262484.011	BH6 0.0-0.1	Soil	331g Clay, Sand, Rocks	19 Mar 2024	27 Mar 2024	No Asbestos Found at RL of 0.1g/kg	<0.01
SE262484.014	BH7 0.0-0.1	Soil	329g Clay, Sand, Rocks	19 Mar 2024	27 Mar 2024	No Asbestos Found at RL of 0.1g/kg	<0.01



ANALYTICAL REPORT

SE262484 R0

Fibre ID in bulk	k materials					Method S4964	
Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Date Analysed	Fibre Identification	Est.%w/w*
SE262484.015	ACM	Other	45x20x4mm Cement Sheet Fragment	19 Mar 2024	26 Mar 2024	Chrysotile Asbestos Detected	



METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602/AS4964	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/AS4964	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602/AS4964	The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-
	 (a) no trace asbestos fibres have been detected (i.e. no 'respirable ' fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES -Amosite Brown Asbestos NA Not Analysed White Asbestos Chrysotile INR Listed. Not Required --Crocidolite Blue Asbestos * -NATA accreditation does not cover the performance of this service . ** Amosite and/or Crocidolite Indicative data, theoretical holding time exceeded. Amphiboles *** Indicates that both * and ** apply. -

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining. Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining. Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos -containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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BH4 2.0-2.1 BH4 1.0-1.1 BH4 0.5-0.6 BH4 0.0-0.1 BH3 2.0-2.1 BH3 1.0-1.1 BH3 0.5-0.6 BH3 0.0-0.1 BH2 2.0-2.1 BH2 1.0-1.1 BH2 0.5-0.6 BH2 0.0-0.1 BH1 2.0-2.1 BH1 1.0-1.1 BH1 0.5-0.6 BH1 0.0-0.1 Email: au.samplereceipt.sydney@sgs.com Facsimile No: (02) 85940499 Alexandria NSW 2015 SGS Environmental Services Telephone No: (02) 85940400 Unit 16, 33 Maddox Street Client Sample ID 19/03/2024 19/03/2024 19/03/2024 Date Sampled 19/03/2024 19/03/2024 19/03/2024 19/03/2024 19/03/2024 19/03/2024 19/03/2024 19/03/2024 19/03/2024 19/03/2024 19/03/2024 19/03/2024 19/03/2024 Lab Sample ID 5 w op J 6 C P Company Name: -Contact Name: Address: LIQUID × × × × × × × × × × × × × × × × SOIL CHAIN OF CUSTODY & ANALYSIS REQUEST Unit 13/ 71 Leichhardt Street, Kingston ACT 2604 Katie Boulton Lanterra Consulting Pty Limited PRESERVATIVE --N N -N N N N N -N -N N N NO OF CONTAINERS × × × × × × × × **CL15** × × × × × Asbestos ID × × × × × × × × HOLD CL10 Combination 3 Asbestos in construction material Purchase Order No: Project Name/No: Email Results: **Results Required By** Facsimile: Telephone: Standard TAT katie@lanterra.com.au; P24032 - PSI SGS EHS Sydney COC SE262484 leonardo@lanterra.com.au Page 1 of 2

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-				nents:	Comr		
Laboratory Quotation No: 305438	Sample Cooler Sealed: Yes/ No	bé	ent / Chille	erature: Ambi	Temp	0	Samples Intact: Yes N
Date/Time	Received By: 1 1)	Time:	Date/		Relinquished By:
Date/Time 20/03/24 @10.25	Received By: AS A Kubawa		24	Time: 19/03/20	Date/	lton	Relinquished By: K. Bou
Please Forward to Envirolab	×		-	×		19/03/2024	QC2
	×			×	16	19/03/2024	QC1
	×				5	19/03/2024	ACM
		×	-	×		19/03/2024	BH7 2.0-2.1
		×	2	×		19/03/2024	BH7 1.0-1.1
		×	2	×		19/03/2024	BH7 0.5-0.6
		×	2 X	×	14	19/03/2024	BH7 0.0-0.1
2			1 X	×	13	19/03/2024	BH6 2.0-2.1
			1 X	×	12	19/03/2024	BH6 1.0-1.1
		×	2	×		19/03/2024	BH6 0.5-0.6
		×	N	×	=	19/03/2024	BH6 0.0-0.1
		×	-	×		19/03/2024	BH5 2.0-2.1
			1 X	×	10	19/03/2024	BH5 1.0-1.1
		×	N	×		19/03/2024	BH5 0.5-0.6
		×	2 X	×	9	19/03/2024	BH5 0.0-0.1



SAMPLE RECEIPT ADVICE

- CLIENT DETAIL	S	LABORATORY DETA	ILS	
Contact	Leonardo Baeza	Manager	Huong Crawford	
Client	LANTERRA CONSULTING PTY LTD	Laboratory	SGS Alexandria Environmental	
Address	PO BOX 3626 ACT 2611	Address	Unit 16, 33 Maddox St Alexandria NSW 2015	
Telephone	0412 823 931	Telephone	+61 2 8594 0400	
Facsimile	(Not specified)	Facsimile	+61 2 8594 0499	
Email	leonardo.baeza@lanterra.com.au	Email	au.environmental.sydney@sgs.com	
Project	P24032 - PSI	Samples Received	Wed 20/3/2024	
Order Number	P24032	Report Due	Wed 27/3/2024	
Samples	16	SGS Reference	SE262484	

- SUBMISSION DETAILS

This is to confirm that 16 samples were received on Wednesday 20/3/2024. Results are expected to be ready by COB Wednesday 27/3/2024. Please quote SGS reference SE262484 when making enquiries. Refer below for details relating to sample integrity upon receipt.

- Sample counts by matrix Date documentation received Samples received without headspace Sample container provider Samples received in correct containers Sample cooling method Complete documentation received
- 15 Soil, 1 Material 20/3/2024 Yes SGS Yes Ice Bricks Yes

Type of documentation received Samples received in good order Sample temperature upon receipt Turnaround time requested Sufficient sample for analysis Samples clearly labelled COC Yes 17.3°C Standard Yes Yes

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

COMMENTS -

BH7 2.0-2.1 not received.

13 Soil 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 LANTERRA CONSULTING PTY LTD

Project P24032 - PSI

SUMMAR	Y OF ANALYSIS								
No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Speciated Phenols in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BH1 0.0-0.1	30	14	26	11	18	10	11	7
002	BH1 0.5-0.6	30	14	26	11	18	10	11	7
003	BH2 1.0-1.1	30	14	26	11	18	10	11	7
004	BH2 2.0-2.1	30	14	26	11	18	10	11	7
005	BH3 0.0-0.1	30	14	26	11	18	10	11	7
006	BH3 2.0-2.1	30	14	26	11	18	10	11	7
007	BH4 0.0-0.1	30	14	26	11	18	10	11	7
008	BH4 0.5-0.6	30	14	26	11	18	10	11	7
009	BH5 0.0-0.1	30	14	26	11	18	10	11	7
010	BH5 1.0-1.1	30	14	26	11	18	10	11	7
012	BH6 1.0-1.1	30	14	26	11	18	10	11	7
013	BH6 2.0-2.1	30	14	26	11	18	10	11	7
014	BH7 0.0-0.1	30	14	26	11	18	10	11	7
016	QC1	-	-	26	-	-	10	11	7

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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 -

- SUMMARY OF ANALYSIS -

Client LANTERRA CONSULTING PTY LTD

Project P24032 - PSI

No.	Sample ID	Fibre ID in bulk materials	Fibre Identification in soil	Mercury in Soil	Moisture Content	Total Recoverable Elements in Soil/Waste
001	BH1 0.0-0.1	-	3	1	1	7
002	BH1 0.5-0.6	-	3	1	1	7
003	BH2 1.0-1.1	-	3	1	1	7
004	BH2 2.0-2.1	-	-	1	1	7
005	BH3 0.0-0.1	-	3	1	1	7
006	BH3 2.0-2.1	-	-	1	1	7
007	BH4 0.0-0.1	-	3	1	1	7
008	BH4 0.5-0.6	-	-	1	1	7
009	BH5 0.0-0.1	-	3	1	1	7
010	BH5 1.0-1.1	-	-	1	1	7
011	BH6 0.0-0.1	-	3	-	-	-
012	BH6 1.0-1.1	-	-	1	1	7
013	BH6 2.0-2.1	-	-	1	1	7
014	BH7 0.0-0.1	-	3	1	1	7
015	АСМ	2	-	-	-	-
016	QC1	-	-	1	1	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 .
Lotsearch Environmental Risk Report

Appendix D



Date: 11 Mar 2024 17:17:29 Reference: LS053599 EP Address: 26 Lithgow Street, Goulburn, NSW 2580

Disclaimer:

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

Dataset Listing

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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Customer Service - Spatial Services	04/01/2024	04/01/2024	Quarterly	-	-	-	-
Topographic Data	NSW Department of Customer Service - Spatial Services	22/08/2022	22/08/2022	Annually	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	29/02/2024	09/02/2024	Monthly	1000m	0	0	7
Contaminated Land Records of Notice	Environment Protection Authority	26/02/2024	26/02/2024	Monthly	1000m	0	0	2
Former Gasworks	Environment Protection Authority	24/01/2024	14/07/2021	Quarterly	1000m	0	0	1
Notices under the POEO Act 1997	Environment Protection Authority	17/01/2024	17/01/2024	Monthly	1000m	0	0	1
National Waste Management Facilities Database	Geoscience Australia	26/05/2022	07/03/2017	Annually	1000m	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	20/09/2023	07/09/2020	Annually	1000m	0	0	4
EPA PFAS Investigation Program	Environment Protection Authority	04/03/2024	21/11/2032	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	06/03/2024	06/03/2024	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	06/03/2024	06/03/2024	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	06/03/2024	06/03/2024	Monthly	2000m	0	0	0
Defence Controlled Areas	Department of Defence	12/01/2024	12/01/2024	Quarterly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	24/01/2024	02/09/2022	Quarterly	2000m	0	0	0
National Unexploded Ordnance (UXO)	Department of Defence	12/01/2024	12/01/2024	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	13/11/2023	15/12/2022	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	04/03/2024	04/03/2024	Monthly	1000m	0	0	2
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	04/03/2024	04/03/2024	Monthly	1000m	0	0	1
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	04/03/2024	04/03/2024	Monthly	1000m	0	0	3
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	2	40	113
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	16	72
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	3	71
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	1	11
Points of Interest	NSW Department of Customer Service - Spatial Services	13/11/2023	13/11/2023	Quarterly	1000m	0	0	48
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	13/11/2023	13/11/2023	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	13/11/2023	13/11/2023	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Customer Service - Spatial Services	31/01/2024	31/01/2024	Quarterly	1000m	0	0	12
State Forest	Forestry Corporation of NSW	12/12/2023	11/12/2023	Annually	1000m	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	16/02/2023	31/12/2022	Annually	1000m	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	06/02/2024	19/08/2019	Annually	1000m	1	1	1

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	09/05/2023	23/02/2018	Annually	1000m	0	0	0
National Groundwater Information System (NGIS) Boreholes	Bureau of Meteorology; Water NSW	18/04/2023	13/07/2022	Annually	2000m	0	0	70
NSW Seamless Geology Single Layer: Rock Units	Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	2	2	7
NSW Seamless Geology – Single Layer: Trendlines	Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	0	0	0
NSW Seamless Geology – Single Layer: Geological Boundaries and Faults	Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	0	0	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Annually	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	12/01/2024	17/02/2011	Annually	1000m	1	1	2
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	12/12/2023	27/07/2020	Annually	1000m	1	1	3
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	02/02/2024	01/09/2023	Monthly	500m	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	12/01/2024	21/02/2013	Annually	1000m	1	1	1
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	Annually	1000m	0	0	0
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	24/01/2024	24/01/2024	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Industry	06/03/2024	06/03/2024	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Industry	06/03/2024	06/03/2024	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	06/03/2024	06/03/2024	Monthly	1000m	3	3	4
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	02/02/2024	08/09/2023	Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	02/02/2024	19/01/2024	Monthly	1000m	1	2	26
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	20/10/2023	13/04/2022	Annually	500m	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	20/10/2023	13/04/2022	Annually	500m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	24/01/2024	24/11/2023	Quarterly	500m	0	0	1
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	02/02/2024	19/01/2024	Monthly	500m	1	6	139
Bush Fire Prone Land	NSW Rural Fire Service	26/02/2024	20/11/2023	Monthly	1000m	0	0	0
NSW Native Vegetation Type Map	NSW Department of Planning and Environment	26/05/2023	12/12/2022	Quarterly	1000m	1	1	4
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	09/05/2023	01/11/2022	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	0	1
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	0	1
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	29/11/2023	29/11/2023	Weekly	10000m	-	-	-

Site Diagram

26 Lithgow Street, Goulburn, NSW 2580





Contaminated Land







Contaminated Land

26 Lithgow Street, Goulburn, NSW 2580

List of NSW contaminated sites notified to EPA

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

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
523	Former Mobil Service Station Goulburn	422-426 Auburn Street	Goulburn	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	113m	South East
519	Caltex Service Station	315 Auburn, corner Bradley Street	Goulburn	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	193m	South East
524	Former Shell Autoport Service Station	Corner Bruce Street and Lagoon Street	Goulburn	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	367m	East
520	Caltex Service Station	68 Goldsmith Street	Goulburn	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	395m	South West
522	Former Goulburn Gasworks	1 Blackshaw Road	Goulburn	Gasworks	Ongoing maintenance required to manage residual contamination (CLM Act)	Current EPA List	Premise Match	600m	South East
527	Mobil Service Station	129 Lagoon Street	Goulburn	Service Station	Contamination formerly regulated under the CLM Act	Current EPA List	Premise Match	903m	East
525	Goulburn Tannery	13 Gibson Street	Goulburn	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	966m	North

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

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).

EPA site management class	Explanation
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

 $\ensuremath{\mathbb{C}}$ State of New South Wales through the Environment Protection Authority

Contaminated Land

26 Lithgow Street, Goulburn, NSW 2580

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
122	Former Goulburn Gasworks	1 Blackshaw Road	Goulburn	2 current and 10 former	3323	Premise Match	600m	South East
123	Mobil Service Station	129 Lagoon Street	Goulburn	7 former	3260	Premise Match	903m	East

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

Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
52	Blackshaw Road, Goulburn	Goulburn Mulwaree Council	Contact council	Premise Match	600m	South East

Former Gasworks Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Contaminated Land

26 Lithgow Street, Goulburn, NSW 2580

EPA Notices

Penalty Notices, s.91 & s.92 Clean up Notices and s.96 Prevention Notices within the dataset buffer:

Number	Туре	Name	Address	Status	Issued Date	Act	Offence	Offence Date	Loc Conf	Dist	Dir
3085767630	Penalty Notice	PACIFIC NATIONAL (NSW) PTY LTD	Along rail corridor between Bango, Goulburn and Moss Vale, GOULBURN, NSW 2580	Issued	04/02/2013	Protection of the Environme nt Operations Act 1997 - 120(1)	Pollute waters - Corporation	18/10/2012	Network of Features	582m	South East

NSW EPA Notice Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Waste Management & Liquid Fuel Facilities

26 Lithgow Street, Goulburn, NSW 2580



Waste Management & Liquid Fuel Facilities

26 Lithgow Street, Goulburn, NSW 2580

National Waste Management Site Database

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

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

Waste Management Facilities Data Source: Geoscience Australia

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National Liquid Fuel Facilities

National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
4759	Caltex	Caltex Goulburn	315 Auburn Street	Goulburn	Petrol Station	Operational		25/07/2011	Premise Match	193m	South East
4760	AMPOL	AMPOL GOULBURN	68 GOLDSMITH STREET	GOULBURN	PETROL STATION	Operational		25/07/2011	Premise Match	395m	South West
5532	BP	BP GOULBURN (MERINO FUELS)	70 CLIFFORD STREET	GOULBURN	PETROL STATION	OPERATION AL			Premise Match	609m	South West
3407	MOBIL	MOBIL GOULBURN	129 LAGOON STREET	GOULBURN	PETROL STATION	Operational		13/07/2012	Premise Match	903m	East

National Liquid Fuel Facilities Data Source: Geoscience Australia

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PFAS Investigation & Management Programs

26 Lithgow Street, Goulburn, NSW 2580

EPA PFAS Investigation Program

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

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

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

Defence PFAS Investigation Program

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

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

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

Defence PFAS Management Program

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

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

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

Airservices Australia National PFAS Management Program

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

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

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites and Unexploded Ordnance

26 Lithgow Street, Goulburn, NSW 2580

Defence Controlled Areas (DCA)

Defence Controlled Areas provided by the Department of Defence within the dataset buffer:

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

Defence Controlled Areas, Data Custodian: Department of Defence, Australian Government

Defence 3 Year Regional Contamination Investigation Program (RCIP)

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

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

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

National Unexploded Ordnance (UXO)

Sites which have been assessed by the Department of Defence for the potential presence of unexploded ordnance within the dataset buffer:

Site ID	Location Name	Category	Area Description	Additional Information	Commonwealth	Loc Conf	Dist	Dir
N/A	No records in buffer							

National Unexploded Ordnance (UXO), Data Custodian: Department of Defence, Australian Government

EPA Other Sites with Contamination Issues

26 Lithgow Street, Goulburn, NSW 2580

EPA Other Sites with Contamination Issues

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

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

Sites within the dataset buffer:

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

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

Current EPA Licensed Activities

26 Lithgow Street, Goulburn, NSW 2580

Legend

Scale:



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2024

600

400

Meters

Date: 11 March 2024

Coordinate System: GDA 1994 MGA Zone 56

EPA Activities

26 Lithgow Street, Goulburn, NSW 2580

Licensed Activities under the POEO Act 1997

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

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
3142	AUSTRALIAN RAIL TRACK CORPORATION LIMITED		AUSTRALIAN RAIL TRACK CORPORATION (ARTC) NETWORK, SYDNEY, NSW 2001		Railway systems activities	Network of Features	586m	South East
13421	UGL REGIONAL LINX PTY LTD		COUNTRY REGIONAL NETWORK, ORANGE, NSW 2800		Railway systems activities	Network of Features	858m	East

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

26 Lithgow Street, Goulburn, NSW 2580





EPA Activities

26 Lithgow Street, Goulburn, NSW 2580

Delicensed Activities still regulated by the EPA

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

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
10923	GREATER SOUTHERN AREA HEALTH SERVICE	GOULBURN BASE HOSPITAL	130 GOLDSMITH STREET	GOULBURN	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	666m	West

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

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

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

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	686m	South East
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	686m	South East
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	686m	South East

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

Historical Business Directories

26 Lithgow Street, Goulburn, NSW 2580





Historical Business Directories

26 Lithgow Street, Goulburn, NSW 2580

Business Directory Records 1950-1991 Premise or Road Intersection Matches

Potentially contaminative business activities extracted from Universal Business Directories from years 1991, 1982, 1970, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	CARRIER & CARTAGE CONTRACTOR	Kerr Bros., 26 Lithgow St., Goulburn	186058	1950	Premise Match	0m	On-site
	WOOD MERCHANTS	Kerr Bros., 26 Lithgow St., Goulburn	186957	1950	Premise Match	0m	On-site
2	TAXIS	Madden's Taxi Service, 257 Bourke St., Goulburn	186885	1950	Premise Match	0m	South West
3	PAINTERS, PAPERHANGERS & DECORATORS	Marsh, L., 25 Lithgow St. Goulburn 2580	574147	1970	Premise Match	30m	North
	PAINTERS, PAPERHANGERS & DECORATORS	Marsh, L., 25 Lithgow St., Goulburn	205509	1961	Premise Match	30m	North
4	ENGINEERS - PRECISION.	Goulburn Engineering Co., North St, Goulburn 2580	147152	1991	Premise Match	38m	South
	ENGINEERS-FABRICATING.	Goulburn Engineering Co., North St, Goulburn 2580	147144	1991	Premise Match	38m	South
	ENGINEERS-GENERAL.	Goulburn Engineering Co., North St, Goulburn 2580	147147	1991	Premise Match	38m	South
	ENGINEERS-STRUCTURAL	Goulburn Engineering Co., North St, Goulburn 2580	147155	1991	Premise Match	38m	South
	SHEET METAL WORKERS.	Goulburn Engineering Co., North St, Goulburn 2580	147762	1991	Premise Match	38m	South
	WELDERS	Goulburn Engineering Co., North St, Goulburn 2580	147923	1991	Premise Match	38m	South
	ENGINEERS - FABRICATING	Goulburn Engineering Co., North St., Goulburn 2580	155657	1982	Premise Match	38m	South
	ENGINEERS - GENERAL &/ OR MANUFACTURING &/OR MECHANICAL	Goulburn Engineering Co., North St., Goulburn 2580	155660	1982	Premise Match	38m	South
	ENGINEERS - PRECISION	Goulburn Engineering Co., North St., Goulburn 2580	155665	1982	Premise Match	38m	South
	ENGINEERS - STRUCTURAL	Goulburn Engineering Co., North St., Goulburn 2580	155669	1982	Premise Match	38m	South
5	CARRIER & CARTAGE CONTRACTOR	Drover, G., 66 Citizen St., Goulburn	186050	1950	Premise Match	55m	North East
	CARRIER & CARTAGE CONTRACTOR	G. Drover 66 Citizen Street, Goulburn	186047	1950	Premise Match	55m	North East
6	CARRIERS & CARTAGE CONTRACTORS	Emmerton, N. A., 8 Lithgow St., Goulburn	204683	1961	Premise Match	67m	South East
7	SHEARING CONTRACTORS	Rowe, Arthur, 243 Bourke St., Goulburn	186817	1950	Premise Match	68m	South West
8	DELICATESSENS	Martin's Corner Store, 264 Bourke St., Goulburn	204765	1961	Premise Match	71m	West
9	GLASS MERCHANTS &/OR GLAZIERS.	Brians Auto Screens & Glass 434 Auburn Street., Goulburn 2580	147235	1991	Premise Match	90m	South East
	GLASS MERCHANTS &/OR GLAZIERS.	Brian's Auto Screens & Glass., 434 Auburn St, Goulburn 2580	147237	1991	Premise Match	90m	South East
	WINDSCREEN REPLACEMENTS &/OR REPAIRS.	Brian's Auto Screens & Glass., 434 Auburn St, Goulburn 2580	147935	1991	Premise Match	90m	South East
	MOTOR WINDSCREENS.	Brian's Autoscreens & Glass., 434 Auburn Street Goulburn 2580	146792	1991	Premise Match	90m	South East
	MOTOR CAR &/OR TRUCK DEALERS - NEW &/OR USED	Lilac City Cars Pty. Ltd., 434 Auburn St., Goulburn 2580	155920	1982	Premise Match	90m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
10	MOTOR BRAKE SPECIALISTS.	O'Neil Brake & Motor Rapairs Pty. Ltd., 440 Auburn St, Goulburn 2580	147464	1991	Premise Match	92m	South East
	HYDRAULIC HOSE MFRS. &/OR DISTS.	O'Neil Brake & Motor Repairs Pty. Ltd., 440 Auburn St, Goulburn 2580	147344	1991	Premise Match	92m	South East
	MOTOR BRAKE LINING MFRS. &/OR DISTS	O'Neil Brake & Motor Repairs Pty. Ltd., 440 Auburn St, Goulburn 2580	147461	1991	Premise Match	92m	South East
	MOTOR ENGINEERS.	O'Neil Brake & Motor Repairs Pty. Ltd., 440 Auburn St, Goulburn 2580	147505	1991	Premise Match	92m	South East
	MOTOR GARAGES & SERVICE STATIONS.	O'Neil Brake & Motor Repairs Pty. Ltd., 440 Auburn St, Goulburn 2580	147537	1991	Premise Match	92m	South East
	HYDRAULIC HOSE MFRS. &/OR DISTS.	O'Neil Brake & Motor Repairs, 440 Auburn Street., Goulburn 2580	147342	1991	Premise Match	92m	South East
	MOTOR CLUTCH SPECIALISTS.	O'Neil Brake Motor Repairs Pty. Ltd., 440 Auburn St, Goulburn 2580	147483	1991	Premise Match	92m	South East
	MOTOR ENGINEERS	O'Neill's Brake And Motor Repairs Pty Ltd., 442 Auburn Street Goulburn 2580	146796	1991	Premise Match	92m	South East
	HYDRAULIC HOSE MFRS. &/OR DISTS.	Pirtek Fluid Connectors., 440 Auburn St, Goulburn 2580	147345	1991	Premise Match	92m	South East
	MOTOR BRAKE SERVICES	O'Neill's Motors Pty. Ltd., 442 Auburn St. Goulburn 2580	574013	1970	Premise Match	92m	South East
	MOTOR GARAGES & ENGINEERS	O'Neill's Motors Pty. Ltd., 442 Auburn St. Goulburn 2580	574065	1970	Premise Match	92m	South East
	MOTOR BRAKE SERVICES	O'Neill's Motors Pty. Ltd., 442 Auburn St., Goulburn	205356	1961	Premise Match	92m	South East
	MOTOR CAR & TRUCK DEALERS-NEW & USED	O'Neill's Motors Pty. Ltd., 442 Auburn St., Goulburn	205372	1961	Premise Match	92m	South East
	MOTOR GARAGES & ENGINEERS	O'Neill's Motors Pty. Ltd., 442 Auburn St., Goulburn	205412	1961	Premise Match	92m	South East
11	BUILDERS & CONTRACTORS	Davis, L., 5 Beppo St., Goulburn	204571	1961	Premise Match	99m	North West
12	PAINTERS, PAPERHANGERS & DECORATORS	Blewitt, R. A., 2 Beppo St. Goulburn 2580	574145	1970	Premise Match	105m	West
	PAINTERS, PAPERHANGERS & DECORATORS	Blewitt & O'Grady, 2 Beppo St., Goulburn	205504	1961	Premise Match	105m	West
13	MOTOR ENGINEERS.	Pooley John Automotive., 53 Bradley St, Goulburn 2580	147506	1991	Premise Match	108m	South
	MOTOR GARAGES & SERVICE STATIONS.	Pooley John Automotive., 53 Bradley St, Goulburn 2580	147539	1991	Premise Match	108m	South
	ENGINEERS-FABRICATING	Goulburn Engineering Co., 53 Bradley St. Goulburn 2580	573649	1970	Premise Match	108m	South
	ENGINEERS-GENERAL & MANUFACTURING & MECHANICAL	Goulburn Engineering Co., 53 Bradley St. Goulburn 2580	573652	1970	Premise Match	108m	South
	ENGINEERS-PRECISION	Goulburn Engineering Co., 53 Bradley St. Goulburn 2580	573657	1970	Premise Match	108m	South
	ENGINEERS-STRUCTURAL	Goulburn Engineering Co., 53 Bradley St. Goulburn 2580	573661	1970	Premise Match	108m	South
	AGRICULTURAL MACHINERY DEALERS	Goulburn Engineering Works, 53 Bradley St., Goulburn	204477	1961	Premise Match	108m	South
	ENGINEERS-GENERAL & MANUFACTURING & MECHANICAL	Goulburn Engineering Works, 53 Bradley St., Goulburn	204855	1961	Premise Match	108m	South
	BLACKSMITHS & FARRIERS	Broadhurst, R., 53 Bradley St., Goulburn	186015	1950	Premise Match	108m	South
	MOTOR BODY BUILDERS	Broadhurst, R., 53 Bradley St., Goulburn	186556	1950	Premise Match	108m	South
14	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Nazer's Smash Repairs., 51 Bradley St, Goulburn 2580	147553	1991	Premise Match	116m	South
	WINDSCREEN REPLACEMENTS &/OR REPAIRS.	Nazer's Smash Repairs., 51 Bradley St, Goulburn 2580	147936	1991	Premise Match	116m	South
	MOTOR PAINTERS &/OR PANEL BEATERS	Nazer's Smash Repairs, 51 Bradley St., Goulburn 2580	155972	1982	Premise Match	116m	South
	BUILDERS &/OR BUILDING CONTRACTORS	Harding & Hay Pty. Ltd., 51 Bradley St. Goulburn 2580	573485	1970	Premise Match	116m	South

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
14	JOINERY MANUFACTURERS	Harding & Hay Pty. Ltd., 51 Bradley St. Goulburn 2580	573878	1970	Premise Match	116m	South
	ELECTRICAL CONTRACTORS & ELECTRICIANS	Lee and Thomas, 51 Bradley St., Goulburn	186154	1950	Premise Match	116m	South
	MOTOR RADIATOR SPECIALISTS	Lee and Thomas, 51 Bradley St., Goulburn	186647	1950	Premise Match	116m	South
	WELDERS	Lee and Thomas, 51 Bradley St., Goulburn	186941	1950	Premise Match	116m	South
15	ELECTRICAL SUPPLIES &/OR APPLIANCES - MFRS. &/OR W/SALERS.	TLE Electrical Wholesalers., 424 Auburn St, Goulburn 2580	147129	1991	Premise Match	120m	South East
	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	BP Victor Service Station, 422 Auburn St., Goulburn 2580	155930	1982	Premise Match	120m	South East
	MOTOR GARAGES & ENGINEERS	Victor Service Station, 422-426 Auburn St., Goulburn	205421	1961	Premise Match	120m	South East
	MOTOR SERVICE STATIONS- PETROL, OIL, ETC.	Victor Service Station, 422-426 Auburn St., Goulburn	205455	1961	Premise Match	120m	South East
	AERATED WATER &/OR CORDIAL MANUFACTURERS	Sandoz, F. J. and Co., 424 Auburn St., Goulburn	185945	1950	Premise Match	120m	South East
16	PLUMBERS, GASFITTERS & DRAINLAYERS	Unwin, J. H., 75 Bradley St., Goulburn	205555	1961	Premise Match	128m	South West
17	AUTO ELECTRICIANS.	Lee & Thomas., 412 Auburn St, Goulburn 2580	146893	1991	Premise Match	135m	South
	BATTERY SALES &/OR SERVICE.	Lee & Thomas., 412 Auburn St, Goulburn 2580	146912	1991	Premise Match	135m	South
	ELECTRIC MOTOR WINDING &/OR REWINDING SPECIALISTS	Lee & Thomas., 412 Auburn St, Goulburn 2580	147119	1991	Premise Match	135m	South
	MOTOR ACCESSORIES- RETAIL.	Lee & Thomas., 412 Auburn St, Goulburn 2580	147452	1991	Premise Match	135m	South
	MOTOR RADIATOR SPECIALISTS &/OR REPAIRERS.	Lee & Thomas., 412 Auburn St, Goulburn 2580	147558	1991	Premise Match	135m	South
	ARMATURE WINDERS	Lee & Thomas, 412 Auburn St., Goulburn 2580	155419	1982	Premise Match	135m	South
	ELECTRIC MOTOR WINDING &/OR REWINDING SPECIALISTS	Lee & Thomas, 412 Auburn St., Goulburn 2580	155636	1982	Premise Match	135m	South
	MOTOR ACCESSORIES &/OR SPARE PARTS -RETAIL	Lee & Thomas, 412 Auburn St., Goulburn 2580	155905	1982	Premise Match	135m	South
	MOTOR ELECTRICIANS	Lee & Thomas, 412 Auburn St., Goulburn 2580	155926	1982	Premise Match	135m	South
	MOTOR RADIATOR SPECIALISTS &/OR REPAIRERS.	Lee & Thomas, 412 Auburn St., Goulburn 2580	155977	1982	Premise Match	135m	South
	BATTERY SALES &/OR SERVICE.	Lee & Thomas. 412 Auburn St., Goulburn 2580	155480	1982	Premise Match	135m	South
	ARMATURE WINDERS	Lee & Thomas, 412-414 Auburn St. Goulburn 2580	573347	1970	Premise Match	135m	South
	BATTERY SALES & SERVICE	Lee & Thomas, 412-414 Auburn St. Goulburn 2580	573446	1970	Premise Match	135m	South
	ELECTRIC MOTOR WINDING & REWINDING SPECIALISTS	Lee & Thomas, 412-414 Auburn St. Goulburn 2580	573623	1970	Premise Match	135m	South
	MOTOR ACCESSORIES & SPARE PARTS DEALERS	Lee & Thomas, 412-414 Auburn St. Goulburn 2580	574004	1970	Premise Match	135m	South
	MOTOR ELECTRICIANS	Lee & Thomas, 412-414 Auburn St. Goulburn 2580	574036	1970	Premise Match	135m	South
	MOTOR RADIATOR SPECIALISTS & REPAIRERS	Lee & Thomas, 412-414 Auburn St. Goulburn 2580	574094	1970	Premise Match	135m	South
	ARMATURE WINDERS	Lee & Thomas Pty. Ltd., 412-414 Auburn St., Goulburn	204493	1961	Premise Match	135m	South
	BATTERY DISTRIBUTORS	Lee & Thomas Pty. Ltd., 412-414 Auburn St., Goulburn	204529	1961	Premise Match	135m	South
	ELECTRIC MOTOR WINDING & REWINDING SPECIALISTS	Lee & Thomas Pty. Ltd., 412-414 Auburn St., Goulburn	204813	1961	Premise Match	135m	South

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
17	MOTOR ELECTRICIANS	Lee & Thomas Pty. Ltd., 412-414 Auburn St., Goulburn	205383	1961	Premise Match	135m	South
	MOTOR RADIATOR SPECIALISTS & REPAIRERS	Lee & Thomas Pty. Ltd., 412-414 Auburn St., Goulburn	205439	1961	Premise Match	135m	South
	ELECTRICAL SUPPLIES & APPLIANCES RETAILERS	Lee and Thomas, 412-414 Auburn St., Goulburn	204836	1961	Premise Match	135m	South
	MOTOR ACCESSORIES & SPARE PARTS DEALERS	Lee. & Thomas Pty. Ltd., 412-414 Auburn St., Goulburn	205349	1961	Premise Match	135m	South
	BOOT & SHOE REPAIRERS	Travis, W. H., 414 Auburn St., Goulburn	186032	1950	Premise Match	135m	South
18	MESSENGER SERVICES	Druetts Messenger Service, 77 Citizen St., Goulburn	186493	1950	Premise Match	146m	North
19	MOTOR ACCESSORIES- RETAIL.	Southern Ford., 410 Auburn St, Goulburn 2580	147456	1991	Premise Match	148m	South
	MOTOR CAR DEALERS- NEW&/OR USED.	Southern Ford., 410 Auburn St, Goulburn 2580	147474	1991	Premise Match	148m	South
	MOTOR CAR &/OR TRUCK DEALERS - NEW &/OR USED	Southern Motors (Goulburn) Ford Pty. Ltd., 410 Auburn St., Goulburn 2580	155922	1982	Premise Match	148m	South
	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Southern Motors (Goulburn) Ford Pty. Ltd., 410 Auburn St., Goulburn 2580	155954	1982	Premise Match	148m	South
	MOTOR ACCESSORIES &/OR SPARE PARTS -RETAIL	Southern Motors(Goulburn) Ford Pty. Ltd., 410 Auburn St., Goulburn 2580	155907	1982	Premise Match	148m	South
	MOTOR ACCESSORIES & SPARE PARTS DEALERS	Southern Motors Pty. Ltd., 410 Auburn St. Goulburn 2580	574008	1970	Premise Match	148m	South
	MOTOR CAR & TRUCK DEALERS-NEW & USED	Southern Motors Pty. Ltd., 410 Auburn St. Goulburn 2580	574025	1970	Premise Match	148m	South
	MOTOR GARAGES & ENGINEERS	Southern Motors Pty. Ltd., 410 Auburn St. Goulburn 2580	574067	1970	Premise Match	148m	South
	MOTOR PAINTERS & PANEL BEATERS	Southern Motors Pty. Ltd., 410 Auburn St. Goulburn 2580	574090	1970	Premise Match	148m	South
	MOTOR TOWING SERVICE	Southern Motors Pty. Ltd., 410 Auburn St. Goulburn 2580	574112	1970	Premise Match	148m	South
	MOTOR ACCESSORIES & SPARE PARTS DEALERS	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	205353	1961	Premise Match	148m	South
	MOTOR CAR & TRUCK DEALERS-NEW & USED	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	205374	1961	Premise Match	148m	South
	MOTOR GARAGES & ENGINEERS	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	205415	1961	Premise Match	148m	South
	MOTOR TOWING SERVICE	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	205459	1961	Premise Match	148m	South
	MOTOR GARAGES & ENGINEERS	Southern Motors Pty. Ltd. Cnr. Auburn & Bradley Sts., Goulburn	186597	1950	Premise Match	148m	South
	MOTOR CAR & TRUCK DEALERS	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	186586	1950	Premise Match	148m	South
	MOTOR GARAGES & ENGINEERS	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	186617	1950	Premise Match	148m	South
	MOTOR PAINTERS & PANEL BEATERS	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	186644	1950	Premise Match	148m	South
	MOTOR TRIMMERS	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	186658	1950	Premise Match	148m	South
	TYRE DEALERS & RETREADERS	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	186928	1950	Premise Match	148m	South
	WELDERS	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	186944	1950	Premise Match	148m	South

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Business Directory Records 1950-1991 Road or Area Matches

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

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
20	NEWSPAPER PUBLISHERS &/OR PRINTERS	Argyle Press Pty. Ltd., Lithgow St., Goulburn 2580	155999	1982	Road Match	0m
	PRINTERS - LETTERPRESS	Argyle Press Pty. Ltd., Lithgow St., Goulburn 2580	156028	1982	Road Match	0m
	BUILDERS &/OR BUILDING CONTRACTORS	Salmon, A. G. Pty. Ltd., Off Lithgow St. Goulburn 2580	573491	1970	Road Match	0m
	JOINERY MANUFACTURERS	Salmon, A. G. Pty. Ltd., Off Lithgow St. Goulburn 2580	573879	1970	Road Match	0m
	BUILDERS & CONTRACTORS	Salmon, A. G. Pty. Ltd., Off Lithgow St., Goulburn	204598	1961	Road Match	0m
	JOINERY MANUFACTURERS	Salmon, A. G. Pty. Ltd., Off Lithgow St., Goulburn	205194	1961	Road Match	0m
	PLUMBERS, GASFITTERS & DRAINLAYERS	Salmon, A. G. Pty. Ltd., Off Lithgow St., Goulburn	205554	1961	Road Match	0m
	ARTISTS-COMMERCIAL	Robertson, Gordon, Lithgow St., Goulburn	185963	1950	Road Match	0m
21	DENTISTS	MacCullock, R. D. D, Bourke St., Goulburn 2580	155624	1982	Road Match	40m
	MOTOR SERVICE STATIONS- PETROL, OIL, Etc.	Armstrong, T. G. & N., Bourke St. Goulburn 2580	574095	1970	Road Match	40m
	TAXIS & HIRE CARS	Boyle, P., Off Bourke St., Goulburn	205699	1961	Road Match	40m
	CARRIERS & CARTAGE CONTRACTORS	McClelland, F. E., Bourke St., Goulburn	204695	1961	Road Match	40m
	SOAP MANUFACTURERS	Pioneer Manufacturing Co. Pty, Ltd., Bourke St., Goulburn	186828	1950	Road Match	40m
	HOUSEHOLD REQUISITES MANUFACTURERS	Pioneer Manufacturing Co. Pty. Ltd., Bourke St., Goulburn	186372	1950	Road Match	40m
22	BUTCHERS - RETAIL.	Cope W T., Citizen St, Goulburn 2580	146959	1991	Road Match	84m
	BUTCHERS - RETAIL	Cope, W. T., Citizen St., Goulburn 2580	155514	1982	Road Match	84m
23	SCHOOLS & COLLEGES- PRIVATE & PUBLIC	Women's College of Home Science, Bradley St. Goulburn 2580	574234	1970	Road Match	130m
	SCHOOLS & COLLEGES- PRIVATE & PUBLIC	Women's College of Home Science, Bradley St., Goulburn	205626	1961	Road Match	130m
	MOTOR BUS SERVICES	Goulburn Bus Service (A. E. Packer Pty. Ltd.), Bradley St., Goulburn	186559	1950	Road Match	130m
	MOTOR BUS SERVICES	Goulburn Bus Service., Bradley Street, Goulburn	186560	1950	Road Match	130m
	JOINERS	Pidoux, R. W., Bradley St., Goulburn	186438	1950	Road Match	130m
	BLACKSMITHS & FARRIERS	Rankin, N. R., Bradley St., Goulburn	186017	1950	Road Match	130m
	SCHOOLS & COLLEGES	Women's College of Home Science, Bradley St., Goulburn	186805	1950	Road Match	130m
24	TYPESETTERS.	Argyla Press Goulburn., Auburn St, Goulburn 2580	147880	1991	Road Match	149m
	PRINTERS - BUSINESS FORMS.	Argyle Press Goulburn., Auburn St, Goulburn 2580	147631	1991	Road Match	149m
	PRINTERS - LITHOGRAPHIC.	Argyle Press Goulburn., Auburn St, Goulburn 2580	147635	1991	Road Match	149m
	RUBBER STAMP MFRS. &/OR DISTS.	Argyle Press Goulburn., Auburn St, Goulburn 2580	147722	1991	Road Match	149m
	CERAMICS MFRS. &/OR	Brushed Possum The., Shop 6 Central Arc Auburn St. Goulburn 2580	147026	1991	Road Match	149m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
24	BAKERS.	Dakao Hot Bread Shop., Shop 1 Central Arc Auburn St, Goulburn 2580	146898	1991	Road Match	149m
	MOTOR GARAGES & SERVICE STATIONS.	Dazzler Motors (Service Station), Auburn St, Goulburn 2580	147516	1991	Road Match	149m
	LOCAL BODIES	Goulburn City Council., Auburn St, Goulburn 2580	147403	1991	Road Match	149m
	CAKE SHOPS &/OR PASTRYCOOKS.	Milligan's Cakes & Pies., 116 Auburn Street Goulburn 2580	146784	1991	Road Match	149m
	SCHOOLS &/OR COLLEGES - PRIVATE &/OR PUBLIC	South Goulburn Primary School., Auburn St, Goulburn 2580	147742	1991	Road Match	149m
	ELECTRICAL CONTRACTORS.	Southern Tablelands County Council., Auburn St, Goulburn 2580	147125	1991	Road Match	149m
	ELECTRICAL SUPPLIES &/OR APPLIANCES -RETAIL.	Southern Tablelands County Council., Auburn St, Goulburn 2580	147136	1991	Road Match	149m
	LOCAL BODIES	Southern Tablelands County Council., Auburn St, Goulburn 2580	147406	1991	Road Match	149m
	CERAMICS MFRS. &/OR SUPPLIERS.	The Brushed Possum., Shop 6 Central Arcade Auburn Street Goulburn 2580	147025	1991	Road Match	149m
	LOCAL BODIES	Goulburn City Council, Auburn St., Goulburn 2580	155845	1982	Road Match	149m
	LAUNDRIES &/OR LAUNDRETTES	Laundromat, Auburn St., Goulburn 2580	155839	1982	Road Match	149m
	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Quiggs Motors Pty. Ltd., Auburn St., Goulburn 2580	155952	1982	Road Match	149m
	SCHOOLS &/ OR COLLEGES - PRIVATE &/OR PUBLIC	South Goulburn Primary School. Auburn St., Goulburn 2580	156106	1982	Road Match	149m
	ELECTRICAL CONTRACTORS - LICENSED	Southern Tablelands County Council, Auburn St., Goulburn 2580	155642	1982	Road Match	149m
	ELECTRICAL SUPPLIES &/OR APPLIANCES - RETAIL	Southern Tablelands County Council, Auburn St., Goulburn 2580	155649	1982	Road Match	149m
	LOCAL BODIES	Southern Tablelands County Council, Auburn St., Goulburn 2580	155848	1982	Road Match	149m
	MOTOR SERVICE STATIONS- PETROL, OIL, Etc.	BP Sign Post Service Station, Auburn St. Goulburn 2580	574096	1970	Road Match	149m
	MOTOR ACCESSORIES & SPARE PARTS DEALERS	C.F.V. Sales & Service Pty. Ltd., Auburn St. Goulburn 2580	573994	1970	Road Match	149m
	MOTOR CAR & TRUCK DEALERS-NEW & USED	C.F.V. Sales & Service Pty. Ltd., Auburn St. Goulburn 2580	574017	1970	Road Match	149m
	MOTOR ELECTRICIANS	C.F.V. Sales & Service Pty. Ltd., Auburn St. Goulburn 2580	574033	1970	Road Match	149m
	MOTOR GARAGES & ENGINEERS	C.F.V. Sales & Service Pty. Ltd., Auburn St. Goulburn 2580	574047	1970	Road Match	149m
	MOTOR PAINTERS & PANEL BEATERS	C.F.V. Sales & Service Pty. Ltd., Auburn St. Goulburn 2580	574082	1970	Road Match	149m
	BOOT & SHOE REPAIRERS	Central Boot Repairs, 197 Auburn St. Goulburn 2580	573458	1970	Road Match	149m
	MOTOR GARAGES & ENGINEERS	Esso Servicenter, Auburn St. Goulburn 2580	574051	1970	Road Match	149m
	OPTOMETRISTS-REGISTERED	Gibb and Beeman Ltd., 197 Auburn St. Goulburn 2580	574133	1970	Road Match	149m
	LOCAL BODIES	Goulburn City Council, Council Chamb., Auburn St. Goulburn 2580	573910	1970	Road Match	149m
	CHEMISTS-PHARMACEUTICAL	Learmont, T. R., Auburn St. Goulburn 2580	573558	1970	Road Match	149m
	SCHOOLS & COLLEGES- PRIVATE & PUBLIC	South Goulburn Public School, Auburn St. Goulburn 2580	574230	1970	Road Match	149m
	MOTOR ACCESSORIES & SPARE PARTS DEALERS	C.F.V. Sales & Service Pty. Ltd., Auburn St., Goulburn	205344	1961	Road Match	149m
	MOTOR CAR & TRUCK DEALERS-NEW & USED	C.F.V. Sales & Service Pty. Ltd., Auburn St., Goulburn	205362	1961	Road Match	149m
	MOTOR ELECTRICIANS	C.F.V. Sales & Service Pty. Ltd., Auburn St., Goulburn	205381	1961	Road Match	149m
	MOTOR GARAGES & ENGINEERS	C.F.V. Sales & Service Pty. Ltd., Auburn St., Goulburn	205394	1961	Road Match	149m
	MOTOR PAINTERS & PANEL BEATERS	C.F.V. Sales & Service Pty. Ltd., Auburn St., Goulburn	205429	1961	Road Match	149m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
24	OPTOMETRISTS & OPTICIANS	Gibb and Beeman Ltd., 197 Auburn St., Goulburn	205488	1961	Road Match	149m
	NEWSPAPER PUBLISHERS & PRINTERS	Goulburn Advocate, Auburn St., Goulburn	205477	1961	Road Match	149m
	LOCAL BODIES	Goulburn City Council, Town Hall, Auburn St., Goulburn	205232	1961	Road Match	149m
	TAXIS & HIRE CARS	Grunsell, B., Auburn St., Goulburn	205703	1961	Road Match	149m
	CHAIN STORES	Woolworths, Auburn St., Goulburn	204717	1961	Road Match	149m
	FURNITURE & FURNISHINGS- RETAIL	Fossey's Pty. Ltd., Auburn St., Goulburn	186225	1950	Road Match	149m
	OPTOMETRISTS	Gibb and Beeman Ltd., 197 Auburn St. Goulburn	186676	1950	Road Match	149m
	BILLIARD SALOONS	Goulburn Billiards Club (J. Williams, Propr.), Auburn St., Goulburn	186012	1950	Road Match	149m
	PRODUCE MERCHANTS- RETAIL	Goulburn Produce Co. Pty. Ltd., Auburn St., Goulburn	202844	1950	Road Match	149m
	WINE & SPIRIT MERCHANTS	Hunt, L. De V. and Co., Auburn St., Goulburn	186945	1950	Road Match	149m
	FUNERAL DIRECTORS	Jones, W. E., 319 Auburn St., Goulburn	186223	1950	Road Match	149m

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Dry Cleaners, Motor Garages & Service Stations







Historical Business Directories

26 Lithgow Street, Goulburn, NSW 2580

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

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

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	MOTOR GARAGES & SERVICE STATIONS.	O'Neil Brake & Motor Repairs Pty. Ltd., 440 Auburn St, Goulburn 2580	147537	1991	Premise Match	92m	South East
	MOTOR GARAGES & ENGINEERS	O'Neill's Motors Pty. Ltd., 442 Auburn St. Goulburn 2580	574065	1970	Premise Match	92m	South East
	MOTOR GARAGES & ENGINEERS	O'Neill's Motors Pty. Ltd., 442 Auburn St., Goulburn	205412	1961	Premise Match	92m	South East
2	MOTOR GARAGES & SERVICE STATIONS.	Pooley John Automotive., 53 Bradley St, Goulburn 2580	147539	1991	Premise Match	108m	South
3	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	BP Victor Service Station, 422 Auburn St., Goulburn 2580	155930	1982	Premise Match	120m	South East
	MOTOR GARAGES & ENGINEERS	Victor Service Station, 422-426 Auburn St., Goulburn	205421	1961	Premise Match	120m	South East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Victor Service Station, 422-426 Auburn St., Goulburn	205455	1961	Premise Match	120m	South East
4	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Southern Motors (Goulburn) Ford Pty. Ltd., 410 Auburn St., Goulburn 2580	155954	1982	Premise Match	148m	South
	MOTOR GARAGES & ENGINEERS	Southern Motors Pty. Ltd., 410 Auburn St. Goulburn 2580	574067	1970	Premise Match	148m	South
	MOTOR GARAGES & ENGINEERS	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	205415	1961	Premise Match	148m	South
	MOTOR GARAGES & ENGINEERS	Southern Motors Pty. Ltd. Cnr. Auburn & Bradley Sts., Goulburn	186597	1950	Premise Match	148m	South
	MOTOR GARAGES & ENGINEERS	Southern Motors Pty. Ltd., 410 Auburn St., Goulburn	186617	1950	Premise Match	148m	South
5	MOTOR SERVICE STATIONS-PETROL, OIL, Etc.	Grant, K. S. & J. A, Auburn & Bradley Sts. Goulburn 2580	574100	1970	Road Intersection	224m	South
6	MOTOR GARAGES & SERVICE STATIONS.	Geissler Motors (Holden Isuzu), 279 Auburn St, Goulburn 2580	147520	1991	Premise Match	242m	South
	MOTOR GARAGES & SERVICE STATIONS.	Geissler Motors (N.R.M.A.), 279 Auburn St, Goulburn 2580	147521	1991	Premise Match	242m	South
	MOTOR GARAGES & SERVICE STATIONS	Geissler Motors., 279 Auburn Street, Goulburn 2580	146793	1991	Premise Match	242m	South
	MOTOR GARAGES & SERVICE STATIONS.	Mackenzie Les Motors., 267 Auburn St, Goulburn 2580	147534	1991	Premise Match	242m	South
	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Eric Brown Motors, 267 Auburn St., Goulburn 2580	155935	1982	Premise Match	242m	South
	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Geissler Motors, 279 Auburn St., Goulburn 2580	155938	1982	Premise Match	242m	South
	DRY CLEANERS & PRESSERS	J. & J. Dry Cleaners, 271 Auburn St., Goulburn 2580	155633	1982	Premise Match	242m	South
	MOTOR GARAGES & ENGINEERS	Geissler Motors 279-303 Auburn St., Goulburn 2580	574045	1970	Premise Match	242m	South
	MOTOR GARAGES & ENGINEERS	Geissler Motors, 279 Auburn St. Goulburn 2580	574055	1970	Premise Match	242m	South

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
6	DRY CLEANERS, PRESSERS & DYERS	R. & R. Laundry & Dry Cleaning (Goulburn) Pty. Ltd., 271 Auburn St., Goulburn 2580	573614	1970	Premise Match	242m	South
	MOTOR GARAGES & ENGINEERS	Geissler Motors, 279 Auburn St., Goulburn	205401	1961	Premise Match	242m	South
	DRY CLEANERS, PRESSERS & DYERS	Modern Laundry and Dry Cleaners, 271-275 Auburn St., Goulburn	204797	1961	Premise Match	242m	South
	MOTOR GARAGES & ENGINEERS	Star Service Station, 291-293 Auburn St., Goulburn	205417	1961	Premise Match	242m	South
	MOTOR GARAGES & ENGINEERS	Dorsett's Garage, 279 Auburn St., Goulburn	186603	1950	Premise Match	242m	South
	DRY CLEANERS, PRESSERS & DYERS	Modern Laundry and Dry Cleaners, 271-275 Auburn St., Goulburn	186140	1950	Premise Match	242m	South
7	DRY CLEANERS & PRESSERS.	Goulburn Dry Cleaners., 27 Bradley St, Goulburn 2580	147115	1991	Premise Match	287m	South East
	DRY CLEANERS & PRESSERS	Goulburn Dry Cleaners, 27 Bradley St., Goulburn 2580	155632	1982	Premise Match	287m	South East
	DRY CLEANERS, PRESSERS & DYERS	Goulburn Dry Cleaners, 27 Bradley St., Goulburn	204795	1961	Premise Match	287m	South East
	DRY CLEANERS, PRESSERS & DYERS	Goulburn Dry Cleaners, 27 Bradley St, Goulburn	186137	1950	Premise Match	287m	South East
8	MOTOR GARAGES & ENGINEERS	Thorburns Garage Pty. Ltd., 277 Auburn St., Goulburn	205419	1961	Premise Match	319m	South
	MOTOR GARAGES & ENGINEERS	Thorburn, L. W., 277 Auburn St., Goulburn	186619	1950	Premise Match	319m	South
9	MOTOR GARAGES & SERVICE STATIONS.	Gouibum Mitsubishi-Honda., 38 Bradley St, Goulburn 2580	147525	1991	Premise Match	323m	South
	MOTOR GARAGES & SERVICE STATIONS.	Lilac City Cars., 38 Bradley St, Goulburn 2580	147533	1991	Premise Match	323m	South
	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Kingsway Motors Pty. Ltd., 38 Bradley St., Goulburn 2580	155948	1982	Premise Match	323m	South
	MOTOR GARAGES & ENGINEERS	Kingsway, Motors, 38 Bradley St. Goulburn 2580	574061	1970	Premise Match	323m	South
	MOTOR GARAGES & ENGINEERS	Lionel Nomchong Motors, 38 Bradley St., Goulburn	205405	1961	Premise Match	323m	South
10	MOTOR GARAGES & SERVICE STATIONS.	Ayliffe S. M & Son., 33 Lagoon St, Goulburn 2580	147512	1991	Premise Match	335m	East
	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Ayliffe, S. M. & Son, 33 Lagoon St., Goulburn 2580	155928	1982	Premise Match	335m	East
	MOTOR GARAGES & ENGINEERS	Ayliffe, S. M. and Son, 33 Lagoon St. Goulburn 2580	574046	1970	Premise Match	335m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Ayliffe, S. M. & Son, 33 Lagoon St., Goulburn	205443	1961	Premise Match	335m	East
	MOTOR GARAGES & ENGINEERS	Ayliffe, S. M. and Son, 33 Lagoon St, Goulburn	205393	1961	Premise Match	335m	East
	MOTOR GARAGES & ENGINEERS	Ayliffe, S. M. and Son, 33 Lagoon St., Goulburn	186598	1950	Premise Match	335m	East
11	MOTOR GARAGES & ENGINEERS	Murray, K., 224 Bourke St., Goulburn	186610	1950	Premise Match	338m	South West
12	MOTOR GARAGES & SERVICE STATIONS.	Goulburn Auto Port., 45 Lagoon St, Goulburn 2580	147523	1991	Premise Match	367m	East
	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Goulburn Auto Port, 45 Lagoon St., Goulburn 2580	155940	1982	Premise Match	367m	East
	MOTOR GARAGES & ENGINEERS	Goulburn Auto Port, 45 Lagoon St. Goulburn 2580	574056	1970	Premise Match	367m	East
	MOTOR GARAGES & ENGINEERS	Goulburn Auto Port, 45 Lagoon St., Goulburn	205402	1961	Premise Match	367m	East
13	DRY CLEANERS, PRESSERS & DYERS	Goulburn Dry Cleaners, 259a Auburn St., Goulburn	186138	1950	Premise Match	380m	South
14	MOTOR GARAGES & SERVICE STATIONS.	Goulburn Fair Go Service Centre., 193 Bourke St, Goulburn 2580	147524	1991	Premise Match	395m	South West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
14	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	McDonald, K. & L. Holdings Pty. Ltd., 193 Bourke St., Goulburn 2580	155950	1982	Premise Match	395m	South West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Armstrong, T. G. & M., Cnr. Bourke & Goldsmith Sts., Goulburn	205442	1961	Premise Match	395m	South West
15	MOTOR GARAGES & ENGINEERS	Flood, R. J., 306 Sloane St., Goulburn	205399	1961	Premise Match	401m	South
16	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Harco Motors, 7 Goldsmith St., Goulburn 2580	155944	1982	Premise Match	415m	South
	MOTOR GARAGES & ENGINEERS	Harco Motors, 7-9 Goldsmith St. Goulburn 2580	574059	1970	Premise Match	415m	South
17	MOTOR GARAGES & ENGINEERS	Harden, L., 19 Goldsmith St., Goulburn	186605	1950	Premise Match	424m	South
18	MOTOR GARAGES & SERVICE STATIONS.	Harco Motor & Caravan Centre 3 Goldsmith Street., Goulburn 2580	147510	1991	Premise Match	438m	South
	MOTOR GARAGES & SERVICE STATIONS.	Harco Motor & Caravan Centre., 3 Goldsmith St, Goulburn 2580	147529	1991	Premise Match	438m	South
19	MOTOR GARAGES & ENGINEERS	Thorburn's Garage Pty. Ltd., 217 Auburn St. Goulburn 2580	574069	1970	Premise Match	452m	South
	MOTOR GARAGES & ENGINEERS	Lockwood Motors Auto Service, 15-19 Clifford St., Goulburn	205406	1961	Premise Match	452m	South
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Lockwood Motors Auto Service, 15-19 Clifford St., Goulburn	205449	1961	Premise Match	452m	South
	MOTOR GARAGES & ENGINEERS	Lockwood Motors Pty. Ltd., 217 Auburn St., Goulburn	205407	1961	Premise Match	452m	South
	MOTOR GARAGES & ENGINEERS	Divall Bros., 239 Auburn St., Goulburn	186602	1950	Premise Match	452m	South
	MOTOR GARAGES & ENGINEERS	Lockwood Motors Pty. Ltd., 217 Auburn St., Goulburn	186607	1950	Premise Match	452m	South
20	DRY CLEANERS, PRESSERS & DYERS	Long's Dry Cleaners, 296 Auburn St. Goulburn 2580	573613	1970	Premise Match	474m	South
	DRY CLEANERS, PRESSERS & DYERS	Long's Dry Cleaners, 296 Auburn St., Goulburn	204796	1961	Premise Match	474m	South
	DRY CLEANERS, PRESSERS & DYERS	Long's Dry Cleaners, 296 Auburn St., Goulburn	186139	1950	Premise Match	474m	South
21	MOTOR GARAGES & ENGINEERS	Divall Bros., 1 Goldsmith St. Goulburn 2580	574050	1970	Premise Match	496m	South
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Divall Bros., 1 Goldsmith St., Goulburn	205445	1961	Premise Match	496m	South

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

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

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
22	MOTOR SERVICE STATIONS-PETROL, OIL, Etc.	Armstrong, T. G. & N., Bourke St. Goulburn 2580	574095	1970	Road Match	40m
23	MOTOR GARAGES & SERVICE STATIONS.	Dazzler Motors (Service Station), Auburn St, Goulburn 2580	147516	1991	Road Match	149m
	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Quiggs Motors Pty. Ltd., Auburn St., Goulburn 2580	155952	1982	Road Match	149m
	MOTOR SERVICE STATIONS-PETROL, OIL, Etc.	BP Sign Post Service Station, Auburn St. Goulburn 2580	574096	1970	Road Match	149m
	MOTOR GARAGES & ENGINEERS	C.F.V. Sales & Service Pty. Ltd., Auburn St. Goulburn 2580	574047	1970	Road Match	149m
	MOTOR GARAGES & ENGINEERS	Esso Servicenter, Auburn St. Goulburn 2580	574051	1970	Road Match	149m
	MOTOR GARAGES & ENGINEERS	C.F.V. Sales & Service Pty. Ltd., Auburn St., Goulburn	205394	1961	Road Match	149m
24	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Highway Lagoon Service Centre, Lagoon St., Goulburn 2580	155947	1982	Road Match	180m
25	MOTOR GARAGES &/OR ENGINEERS &/ OR SERVICE STATIONS.	Storrier, J. R., 14 Ellesmere St., Goulburn 2580	155955	1982	Road Match	398m
	MOTOR SERVICE STATIONS-PETROL, OIL, Etc.	Lubrication Specialists Pty. Ltd., 14-16 Ellesmere St. Goulburn 2580	574102	1970	Road Match	398m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Lubrication Specialists Pty. Ltd., 14-16 Ellesmere St., Goulburn	205450	1961	Road Match	398m

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Aerial Imagery 2023 26 Lithgow Street, Goulburn, NSW 2580





Aerial Imagery 2021 26 Lithgow Street, Goulburn, NSW 2580





Aerial Imagery 2018 26 Lithgow Street, Goulburn, NSW 2580





Aerial Imagery 2015 26 Lithgow Street, Goulburn, NSW 2580




Aerial Imagery 2012





Aerial Imagery 2006 26 Lithgow Street, Goulburn, NSW 2580





Aerial Imagery 1997





Aerial Imagery 1987 26 Lithgow Street, Goulburn, NSW 2580





Aerial Imagery 1975





Aerial Imagery 1967





Aerial Imagery 1961 26 Lithgow Street, Goulburn, NSW 2580





Aerial Imagery 1953 26 Lithgow Street, Goulburn, NSW 2580





Aerial Imagery 1944





Topographic Map 2015



Historical Map 1981





Historical Map c.1942





Topographic Features





Topographic Features

26 Lithgow Street, Goulburn, NSW 2580

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
488880	Park	HOWARD PARK	193m	South East
387040	General Hospital	BOURKE STREET HEALTH SERVICE GOULBURN	239m	South West
522561	Ambulance Station	GOULBURN AMBULANCE STATION	262m	South West
386929	Place Of Worship	UNITING CHURCH	350m	South West
386939	Sports Court	TENNIS COURTS	384m	East
496421	Primary School	TAMBELIN INDEPENDENT SCHOOL	424m	South East
387046	Park	KNOPP PARK	485m	East
486293	Sports Court	TENNIS COURTS	490m	East
496663	Primary School	GOULBURN PUBLIC SCHOOL	536m	South West
492201	Shopping Centre	Shopping Centre	539m	South
386919	Park	Park	567m	South East
386944	Fire Station	GOULBURN FIRE STATION	569m	South West
386928	Place Of Worship	PRESBYTERIAN CHURCH	573m	South West
517218	Place Of Worship	CHRISTIAN CHURCH	592m	South
503918	Library	GOULBURN REGIONAL LIBRARY	627m	South West
386961	Local Government Chambers	GOULBURN MULWAREE COUNCIL	653m	South West
386915	Police Station	GOULBURN POLICE STATION	654m	South
511229	Club	GOULBURN RAILWAY BOWLING CLUB	685m	South
517209	Art Gallery	Art Gallery	689m	South West
492316	Community Medical Centre	GOULBURN COMMUNITY HEALTH CENTRE	689m	West
510917	Club	GOULBURN WORKERS' CLUB	701m	South West
387033	Place Of Worship	ANGLICAN CHURCH	741m	North East
499316	Nursing Home	SOUTHERN CROSS CARE TENISON GOULBURN RESIDENTIAL AGED CARE	758m	East
387034	Place Of Worship	CATHOLIC CHURCH	774m	East
386940	Club	GOULBURN SOLDIERS CLUB	782m	South
387044	Park	LEAGUE PARK	793m	North
387021	General Hospital	GOULBURN BASE HOSPITAL	820m	West
386911	Place Of Worship	ANGLICAN CHURCH	835m	South West
386920	Park	BELMORE PARK	839m	South
451713	City	GOULBURN	846m	South
386937	Club	GOULBURN GOLF CLUB	852m	South

Map Id	Feature Type	Label	Distance	Direction
518251	Helipad	Helipad	887m	West
496580	Primary School	ST JOSEPH'S PRIMARY SCHOOL	888m	East
488879	Park	TENISON WOODS RESERVE	898m	East
386912	Place Of Worship	ANGLICAN CHURCH	911m	South West
386941	Post Office	GOULBURN POST OFFICE	912m	South
522024	Historic Site	GOULBURN POST OFFICE	912m	South
386955	Sports Field	BOWLING GREEN	923m	West
386942	Tourist Information Centre	GOULBURN VISITOR INFORMATION CENTRE	933m	South
386943	Court House	GOULBURN COURT HOUSE	941m	South
497177	High School	GOULBURN HIGH SCHOOL	953m	West
387025	Park	GOODHEW PARK	957m	North
451714	Urban Place	IFIELD	968m	North West
512692	Retirement Village	CHATSBURY GARDENS GOULBURN	975m	North East
386954	Sports Field	PRELL OVAL	981m	West
517217	Place Of Worship	BAPTIST CHURCH	993m	South West
387024	Park	GERATHY PARK	995m	North West
387043	Park	ROBERTS PARK	997m	North

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

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Topographic Features

26 Lithgow Street, Goulburn, NSW 2580

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?

Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

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

Tanks (Points)

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

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

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

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Major Easements

What Major Easements exist within the dataset buffer?

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

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120120876	Primary	Undefined		337m	West
167671561	Primary	Right of way	VAR	339m	North East
120113415	Primary	Undefined		399m	West
120119445	Primary	Undefined		429m	South East
120117210	Primary	Undefined		546m	South West
120119881	Primary	Undefined		585m	South
120121734	Primary	Undefined		643m	South West
120118717	Primary	Undefined		873m	South West
120114766	Primary	Undefined		874m	South West
120116112	Primary	Undefined		874m	South West
120116133	Primary	Undefined		883m	South West
120117988	Primary	Undefined		888m	North East

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

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Topographic Features

26 Lithgow Street, Goulburn, NSW 2580

State Forest

What State Forest exist within the dataset buffer?

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

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018) Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

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

NPWS Data Source: © NSW Department of Finance, Services & Innovation (2018) Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Elevation Contours (m AHD)





Hydrogeology & Groundwater

26 Lithgow Street, Goulburn, NSW 2580

Hydrogeology

Description of aquifers within the dataset buffer:

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

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)

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Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

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

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

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

Groundwater Boreholes





Hydrogeology & Groundwater

26 Lithgow Street, Goulburn, NSW 2580

Groundwater Boreholes

Boreholes within the dataset buffer:

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10122691	GW105234	Water Supply	Abandoned	29/11/2002	107.00		AHD				106m	South
10127719	GW107272	Water Supply	Functioning	10/06/2004	54.00		AHD		0.500	10.00	148m	North West
10098278	GW072793	Water Supply	Unknown	17/01/1995	24.40		AHD	Good			351m	East
10042319	GW113356	Monitoring	Functional	18/10/2006	9.50		AHD				366m	East
10148336	GW047748	Other	Unknown	01/04/1980	15.20		AHD	Fair			369m	South East
10020728	GW113358	Monitoring	Functional	17/10/2006	8.40		AHD				381m	East
10032833	GW113357	Monitoring	Functional	18/10/2006	7.20		AHD				384m	East
10059046	GW105655	Monitoring	Functional	19/11/2002	8.00		AHD			6.10	385m	East
10055410	GW105653	Monitoring	Functional	19/11/2002	7.90		AHD			6.60	388m	East
10022540	GW113359	Monitoring	Functional	17/02/2006	8.70		AHD				394m	East
10063478	GW105654	Monitoring	Functional	19/11/2002	7.80		AHD			6.50	399m	East
10027260	GW113360	Monitoring	Functional	17/10/2006	9.00		AHD				407m	East
10123883	GW103710	Monitoring	Unknown	23/11/2000	7.40		AHD				459m	East
10125931	GW103711	Monitoring	Unknown	23/11/2000	8.50		AHD				459m	East
10130348	GW103709	Monitoring	Unknown	23/11/2000	7.10		AHD				459m	East
10130367	GW103712	Monitoring	Unknown	23/11/2000	8.50		AHD				459m	East
10118318	GW108892	Water Supply	Unknown	02/06/2008	55.00		AHD				546m	North
10064469	GW108719	Water Supply	Unknown	27/03/2008	30.00		AHD		0.750	9.00	554m	East
10148615	GW115142	Monitoring	Functional	28/04/2011	9.00		AHD				628m	South
10001295	GW115141	Monitoring	Functional	28/04/2011	7.20		AHD				634m	South
10151270	GW115143	Monitoring	Functional	28/04/2011	7.40		AHD				640m	South
10148698	GW115144	Monitoring	Functional	28/04/2011	4.20		AHD				644m	South
10032823	GW101186	Other	Functioning	26/10/1997	91.00		AHD	522	10.000	6.00	735m	South
10124653	GW105221	Water Supply	Functioning	05/03/2003	53.00		AHD		0.151	12.00	738m	East
10093488	GW042785	Other	Unknown	01/09/1976	43.20		AHD	1001- 3000 ppm			850m	North East
10125521	GW110282	Monitoring	Unknown	06/09/2007	84.00		AHD		0.625	4.00	866m	South
10117471	GW107230	Water Supply	Functioning	23/10/2004	78.00		AHD		0.750	9.00	897m	North East
10128321	GW108150	Other	Unknown	29/04/2006	55.00		AHD		1.500	3.50	934m	South
10023790	GW036429	Exploration	Proposed	01/03/1981			AHD				1054m	North East
10000094	GW026413	Other	Unknown	01/05/1966	17.70		AHD				1060m	South East
10134159	GW110168	Water Supply	Unknown	03/02/2005	171.00		AHD	1900	5.000	100.00	1069m	East

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10054637	GW054751	Water Supply	Proposed	01/11/1980	100.60		AHD	Good			1100m	North
10091418	GW100588	Other	Unknown	31/12/1995	54.00		AHD		9.000		1111m	South
10086743	GW108869	Monitoring	Proposed	12/05/2008	80.00		AHD				1134m	North East
10052636	GW107174	Water Supply	Functioning	05/04/2005	66.00		AHD		0.500	24.00	1161m	East
10000728	GW026414	Other	Unknown	01/05/1966	20.10		AHD				1213m	South
10001806	GW026415	Other	Unknown	01/05/1966	17.70		AHD				1239m	South East
10041441	GW112620	Monitoring	Functional	19/02/2010	9.00		AHD				1247m	South
10047431	GW112619	Monitoring	Functional	19/02/2010	9.00		AHD			4.80	1251m	South
10067786	GW005036	Water Supply	Unknown	01/11/1958	18.30		AHD				1254m	East
10046087	GW112621	Monitoring	Functional	19/02/2010	9.00		AHD				1260m	South
10151302	GW026416	Other	Unknown	01/04/1966	11.30		AHD				1311m	South East
10057723	GW105017	Commercial and Industrial	Functioning	26/03/2003	61.00		AHD		0.250		1354m	South West
10099116	GW107588	Water Supply	Functioning	27/10/2005	54.00		AHD		1.750	14.00	1379m	West
10086568	GW105318	Water Supply	Unknown	25/03/2003	67.00		AHD		0.440	15.00	1418m	West
10118689	GW108115	Other	Unknown	25/10/2004	81.00		AHD		0.025		1430m	South
10126695	GW106741	Water Supply	Functioning	06/12/2004	56.00		AHD		0.379		1544m	North
10120343	GW115472	Monitoring	Functional	26/05/2011	100.00		AHD				1565m	North East
10111674	GW115471	Monitoring	Functional	26/05/2011	10.00		AHD				1570m	North East
10112550	GW115474	Monitoring	Functional	26/05/2011	10.00		AHD				1574m	North East
10087173	GW105564	Water Supply	Unknown	07/11/2003	108.00		AHD	900	0.075	16.00	1578m	North West
10112163	GW115473	Monitoring	Functional	26/05/2011	1.20		AHD				1578m	North East
10000542	GW115145	Monitoring	Functional	25/05/2011	6.70		AHD				1606m	North East
10111299	GW115470	Monitoring	Functional	26/05/2011	3.50		AHD				1607m	North East
10112402	GW115469	Monitoring	Functional	26/05/2011	4.70		AHD				1615m	North East
10002525	GW115146	Monitoring	Functional	25/05/2011	6.00		AHD				1621m	North East
10087772	GW107843	Monitoring	Unknown	27/04/2004	7.50		AHD			5.00	1650m	South
10101108	GW107842	Monitoring	Unknown	27/04/2004	7.50		AHD			5.00	1653m	South
10056984	GW052071	Water Supply	Unknown	01/08/1980	61.00		AHD	Good			1654m	East
10089530	GW107840	Monitoring	Unknown	22/04/2004	7.00		AHD			5.00	1683m	South
10098291	GW112390	Water Supply	Functioning	12/03/2013	120.00		AHD		0.125	4.00	1684m	West
10064070	GW107189	Water Supply	Functioning	31/07/2004	90.00		AHD		0.069	24.00	1697m	North
10098818	GW107841	Monitoring	Unknown	28/04/2004	5.00		AHD			1.40	1704m	South
10123752	GW111812	Water Supply	Functioning	05/02/2007	78.00		AHD	1800	0.700	15.00	1736m	West
10016990	GW108053	Water Supply	Functioning	27/05/2006	32.00		AHD		0.379		1751m	North West
10119318	GW110559	Water Supply	Unknown	02/09/2009	78.00		AHD	700	1.000	9.00	1787m	South West
10126330	GW104617	Water Supply	Functioning	18/02/2003	90.00		AHD		0.688	33.00	1915m	West

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10098650	GW071524	Monitoring	Functional	15/04/1992	6.50	624.00	AHD			5.30	1952m	South
10045779	GW114264	Water Supply	Functioning	29/11/2013	54.00		AHD	Good	1.500		1972m	South East
10064066	GW114528	Water Supply	Functioning	27/11/2013	66.00		AHD	Fresh	0.625	30.00	1989m	North West

Borehole Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 $\ensuremath{\mathbb{C}}$ Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Hydrogeology & Groundwater

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Driller's Logs

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

NGIS Bore ID	Drillers Log	Distance	Direction
10122691	0.00m-0.50m TOPSOIL 0.50m-4.00m BROWN CLAY 4.00m-6.00m GRAVEL 6.00m-8.00m BROWN CLAY 8.00m-8.50m DECOMPOSED GRANITE 8.50m-107.00m GRANITE	106m	South
10127719	0.00m-11.00m clay 11.00m-24.00m shale 24.00m-54.00m basalt	148m	North West
10098278	0.00m-0.30m Topsoil 0.30m-6.10m Clay Weathered Rock 6.10m-24.40m Hard Weathered Rock	351m	East
10148336	0.00m-0.60m Soil 0.60m-3.00m Clay 3.00m-12.00m Gravel River Water Supply 12.00m-15.24m Granite	369m	South East
10059046	0.00m-2.50m clay, brown, moderate plasticity 2.50m-4.00m clay, silty, firm, grey 4.00m-4.10m as above 4.10m-7.00m clay, gravel, non plastic 7.00m-8.00m as above, but wet gravel	385m	East
10055410	0.00m-0.10m TOPSOIL, SILTY CLAY 0.10m-1.00m CLAY, SILTY DRY, GRAVELLY,LOOSE 1.00m-2.00m CLAY, BROWN, MOIST, FIRM 2.00m-3.00m CLAY, GREY, MOIST, FIRM 3.00m-4.30m CLAY, GREY, MOIST, FIRM 4.30m-6.00m CLAY, GRAVELS, VERY STIFF, MOIST 6.00m-7.00m CLAY, GRAVELLY, WET, BROWN 7.00m-7.90m AS ABOVE	388m	East
10063478	0.00m-2.50m CLAY, SILTY, BROWN, MOSIT, FIRM 2.50m-3.80m AS ABOVE BUT STIFF, MODERATE PLASTICITY 3.80m-4.20m CLAY, SILTY, BERY STIFF, NON PLASTIC 4.20m-7.00m CLAY, GRAVEL, NON PLASTIC 7.00m-7.80m SAME AS ABOVE, WET	399m	East
10123883	0.00m-0.40m BITUMEN/FILL 0.40m-1.80m MEDIUM CLAY,ORANGE 1.80m-3.70m MEDIUM CLAY/ORANGE/BROWN 3.70m-4.40m MEDIUM CLAY:ORANGE/BROWN/MOIST 4.40m-7.40m CLAYEY SAND:ORANGE/BROWN/MOIST	459m	East
10125931	0.00m-0.10m FILL: BITUMEN 0.10m-0.60m CLAY LOAM 0.60m-1.20m MEDIUM CLAY 1.20m-4.00m MEDIUM CLAY:ORANGE 4.00m-8.50m CLAYEY SAND/SANDY CLAY:ORANGE	459m	East
10130348	0.00m-0.70m FILL 0.70m-1.20m CLAY LOAM 1.20m-2.00m MEDIUM CLAY,ORANGE 2.00m-4.00m MEDIUM CLAY,ORANGE,VERY FIRM 4.00m-4.60m CLAYEY SAND 4.60m-5.00m BOULDER LARGE 5.00m-5.80m CLAYEY SAND/SANDY CLAY 5.80m-6.00m BOULDER LARGE 6.00m-7.10m CLAYEY SAND/SANDY CLAY,ORANGE	459m	East
10130367	0.00m-0.10m CONCRETE 0.10m-0.30m FILL 0.30m-0.70m CLAY LOAM 0.70m-1.40m LIGHT CLAY:ORANGE 1.40m-2.80m MEDIUM CLAY, RED AND GREY 2.80m-4.00m MEDIUM CLAY, BROWN AND GREY 4.00m-8.50m CLAYEY SAND/SANDY CLAY	459m	East
10118318	0.00m-1.00m TOPSOIL 1.00m-9.00m CLAY 9.00m-16.00m SOFT SHALE 16.00m-49.00m SHALE 49.00m-55.00m BROKEN BASALT	546m	North

NGIS Bore ID	Drillers Log	Distance	Direction
10148615	0.00m-0.10m BITUMEN 0.10m-1.80m CLAY BROWN WITH ORANGE INCLUSIONS 1.80m-2.40m CLAY ORANGE,MOIST 2.40m-5.00m GRAVELLY CLAY 5.00m-6.00m CLAY WITH SAND 6.00m-9.00m CLAY ORANGE,MOIST,SOFT	628m	South
10001295	0.00m-0.10m BITUMEN 0.10m-0.80m CLAY BROWN WITH ORANGE INCLUSIONS 0.80m-2.00m CLAY LIGHT BROWN AND ORANGE SOFT,MIXED GRAVELS 2.00m-3.00m CLAY ORANGE, SOFT TO HARD 3.00m-3.40m NO RECOVERY 3.40m-6.20m GRAVELLY CLAY 6.20m-7.20m BEDROCK	634m	South
10151270	0.00m-0.10m BITUMEN 0.10m-1.00m CLAY WITH GRAVELS 1.00m-2.00m CLAY ORANGE AND BROWN 2.00m-5.00m GRAVELLY CLAY 5.00m-6.00m GRAVELLY SAND ORANGE AND BROWN 6.00m-7.40m GRAVELLY CLAY ORANGE,SANDS,FIRM	640m	South
10148698	0.00m-0.10m BITUMEN 0.10m-0.60m FILL CLAYEY SAND BROWN 0.60m-2.00m FILL CLAY ORANGE 2.00m-2.80m CLAY ORANGE,WITH BROWN AND GREY 2.80m-4.20m CLAY ORANGE	644m	South
10032823	0.00m-1.00m carpark fill 1.00m-11.00m red clay river gravel 11.00m-12.00m river gravel 12.00m-28.00m highly fractured to decomposing granite 28.00m-42.00m fractured green granite 42.00m-91.00m green granite with slight fractures	735m	South
10124653	0.00m-7.00m CLAY 7.00m-14.00m SOFT YELLOW CLAY 14.00m-16.00m WEATHERED GRANITE 16.00m-53.00m BLACK GRANITE	738m	East
10093488	0.00m-0.30m Topsoil 0.30m-1.52m Clay 1.52m-6.40m Clay Sand 6.40m-13.41m Clay Gravel Water Supply 13.41m-43.28m Limestone Water Supply	850m	North East
10125521	0.00m-2.00m SOIL BLACK 2.00m-6.00m CLAY BROWN 6.00m-12.00m SAND AND GRAVEL 12.00m-24.00m SHALE,SILSTSTONE,L/GREY 24.00m-84.00m SILTSTONE DARK GREY,VOLCANICS	866m	South
10117471	0.00m-6.00m soil, stick brown clay 6.00m-13.00m volcanic, brown 13.00m-78.00m volcanic, grey blue hard	897m	North East
10128321	0.00m-1.00m SOIL, LOAM 1.00m-6.00m CLAY,BROWN AND STICKY 6.00m-10.00m GRAVELS COARSE 10.00m-55.00m SILTSTONES BLACK SHALES	934m	South
10023790	0.00m-0.40m Topsoil 0.40m-4.00m Clay Yellow Grey 4.00m-6.00m Clay Sandy 6.00m-9.00m Gravel Large Sand Water Supply 9.00m-10.00m Clay Silty Stones Water Supply 10.00m-11.00m Gravel Large Clay Bands Water Bearing 11.00m-12.00m Clay Grey 12.00m-17.00m Gravel Large Clay Bands Water Bearing 17.00m-18.00m Shale Grey Sandy	1054m	North East
10000094	0.00m-1.52m Clay Sandy 1.52m-5.18m Clay Gravel 5.18m-7.92m Rock Soft Water Supply 7.92m-11.58m Rock Grey 11.58m-17.68m Rock Hard	1060m	South East
10134159	0.00m-6.00m CLAY 6.00m-70.00m BROKEN GRANITE 70.00m-171.00m GRANITE	1069m	East
10054637	0.00m-3.30m Topsoil 3.30m-5.20m Sand Gravel 5.20m-9.70m Shale Grey Soft 9.70m-18.30m Shale Grey Water Supply 18.30m-25.90m Shale Hard 25.90m-39.60m Slate 39.60m-42.70m Sandstone 42.70m-47.80m Slate 47.80m-100.60m Quartzite Water Supply	1100m	North

NGIS Bore ID	Drillers Log	Distance	Direction
10086743	0.00m-1.00m TOPSOIL 1.00m-9.00m CLAY 9.00m-14.00m GRAVEL 14.00m-16.00m SOFT SHALE 16.00m-80.00m SHALE	1134m	North East
10052636	0.00m-8.00m clay 8.00m-30.00m shale, grey 30.00m-42.00m granite 42.00m-66.00m granite, grey	1161m	East
10000728	0.00m-4.88m Clay Sandy 4.88m-8.84m Clay Sandy Gravel Water Supply 8.84m-10.97m Rock 10.97m-12.80m Rock Grey 12.80m-15.24m Rock Green Hard 15.24m-20.12m Rock Grey	1213m	South
10001806	0.00m-1.83m Soil Silty 1.83m-4.27m Clay Grey 4.27m-6.10m Clay Moist Silt 6.10m-7.92m Clay Red Gravel Water Supply 7.92m-17.68m Rock Hard	1239m	South East
10041441	0.00m-0.10m CONCRETE 0.10m-2.00m FILL, DENSE, DRY/BROWN/GREY 2.00m-4.40m CLAY,FIRM,DRY,BROWN/RED 4.40m-7.50m CLAY FIRM,MOIST,M/PLASTICITY 7.50m-9.00m CLAY,SOFT, WET,H/PLASTICITY,BROWN	1247m	South
10047431	0.00m-0.10m CONCRETE 0.10m-2.00m FILL,DENSE,DRY,GREY/BROWN 2.00m-4.00m CLAY WITH MINOR SAND M/GRAIN,FIRM,DRY 4.00m-9.00m CLAY ,MINOR SAND,M/GRAIN.FIRM,.WET	1251m	South
10067786	0.00m-0.30m Soil Sandy 0.30m-2.13m Clay Yellow Gravel Sandy 2.13m-2.74m Silt Grey 2.74m-5.18m Clay Yellow Sandy Gravel 5.18m-5.79m Clay Plastic 5.79m-7.92m Sand Fine Gravel 7.92m-8.53m Sand Coarse Gravel Water Supply 8.53m-13.72m Volcanic Rock 13.72m-17.37m Volcanic Rock Greyish Speckled Broken Formation Water Supply 17.37m-18.29m Rock Grey Or Tuff Water Supply 17.37m-18.29m Clay Some Pink Bands	1254m	East
10046087	0.00m-0.10m CONCRETE 0.10m-1.10m FILL, DENSE , DRY,GREY,BROWN 1.10m-3.40m CLAY,FIRM,MOIST,BROWN 3.40m-9.00m CLAY,SOFT,FIRM,MOIST,WET,BROWN	1260m	South
10151302	0.00m-3.66m Sand Gravel 3.66m-6.71m Rock Water Supply 6.71m-11.28m Rock Hard	1311m	South East
10057723	0.00m-1.00m TOPSOIL/CLAY 1.00m-3.00m BROWN SHALE 3.00m-17.00m YELLOW SHALE 17.00m-20.00m GREY/GREEN SHALE 20.00m-61.00m BLACK SHALE	1354m	South West
10099116	0.00m-2.00m soil, brown clay 2.00m-7.00m shale, soft brown 7.00m-13.00m shale, grey soft 13.00m-54.00m shale, grey/blue volcanics	1379m	West
10118689	0.00m-1.00m TOPSOIL 1.00m-5.00m CLAY 5.00m-11.50m GRAVEL 11.50m-54.00m HARD GREY SHALE 54.00m-81.00m HARD BLACK SHALE	1430m	South
10126695	0.00m-1.00m topsoil 1.00m-4.00m clay 4.00m-15.00m shale, soft 15.00m-56.00m granite	1544m	North
10087173	0.00m-2.00m SOIL/CLAYS 2.00m-9.00m WEATHERED VOLCANICS 9.00m-108.00m FRACTURED GREY VOLCANICS	1578m	North West
10000542	0.00m-0.10m ASPHALT 0.10m-3.80m FILL, CLAY, TRACE SANDS BROWN 3.80m-5.50m CLAY AND ROCK 5.50m-6.70m GRANITE WEATHERED	1606m	North East

NGIS Bore ID	Drillers Log	Distance	Direction
10002525	0.00m-0.10m ASPHALT 0.10m-0.80m CLAY BROWN AND ORANGE 0.80m-1.20m CLAY BROWN,TRACE OF IRONSTONE 1.20m-1.60m NO RECOVERY 1.60m-2.20m SANDY CLAY 2.20m-3.20m CLAY 3.20m-3.40m NO RECOVERY 3.40m-4.20m CLAY BROWN 4.20m-4.90m SANDY CLAY 4.90m-5.20m CLAY,FINE GRAINED SAND 5.20m-6.00m GRANITE WEATHERED	1621m	North East
10087772	0.00m-0.20m CONCRETE 0.20m-2.50m FILL 2.50m-7.50m CLAY	1650m	South
10101108	0.00m-0.20m CONCRETE 0.20m-1.50m FILL 1.50m-7.50m CLAY	1653m	South
10056984	0.00m-0.90m Loam Sandy 0.90m-23.50m Sand Gravel 23.50m-33.20m Sandstone 33.20m-43.60m Shale Hard 43.60m-61.00m Slate Water Supply	1654m	East
10089530	0.00m-0.10m BITUMEN 0.10m-2.50m FILL 2.50m-7.50m CLAY	1683m	South
10098291	0.00m-0.20m TOPSOIL 0.20m-3.00m FILL GREY CLAYS 3.00m-12.00m VOLCANICS BROWN WEATHERED 12.00m-120.00m VOLCANICS GREY ,BLACK	1684m	West
10064070	0.00m-2.00m soil, sticky clay 2.00m-9.00m shale, yellow brown 9.00m-9.00m volcanics, balck	1697m	North
10098818	0.00m-1.00m SILT 1.00m-5.00m CLAY	1704m	South
10123752	0.00m-21.00m SHALE 21.00m-78.00m BASALT	1736m	West
10016990	0.00m-1.00m topsoil 1.00m-2.00m clay 2.00m-11.00m granite, decomposed 11.00m-32.00m granite	1751m	North West
10119318	0.00m-2.00m CLAY RED 2.00m-16.00m SHALE (YELLOW) 16.00m-78.00m SHALE / SILTSTONE	1787m	South West
10126330	0.00m-6.00m SOIL/WEATHERED CLAY 6.00m-30.00m BROWN SOFT SHALE 30.00m-90.00m GREY BLUE VOLCANICS	1915m	West
10098650	0.00m-0.50m Silt, sandy, orange brown 0.50m-6.50m Silty, clayey, mottled	1952m	South
10045779	0.00m-3.00m SOIL,WEATHERED SEDIMENT 3.00m-19.00m SEDIMENT,BROWN AND WHITE,SOFT 19.00m-36.00m CLAY BROWN WEATHERED CLAYS 36.00m-54.00m SHALE,GREY AND BLACK SILTSTONES	1972m	South East
10064066	0.00m-1.00m RED CLAY 1.00m-7.00m VOLCANIC WEATHERED 7.00m-21.00m VOLCANIC GREY 21.00m-66.00m LIMESTONE GREY/BLACK	1989m	North West

Drill Log Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 $\ensuremath{\mathbb C}$ Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Geology 26 Lithgow Street, Goulburn, NSW 2580





Geology

26 Lithgow Street, Goulburn, NSW 2580

Geological Units

What are the Geological Units within the dataset buffer?

Unit Code	Unit Name	Description	Unit Stratigraphy	Age	Dominant Lithology	Distance
Q_r	Residual deposits	A weakly-consolidated regolithic residuum such as soil or saprolite mostly developed in-situ as a result of advanced weathering and/or pedogenesis.	\Residual deposits\\\\	Quaternary (base) to Now (top)	Saprolite	Om
GN_aa	Alluvial sediments	Alluvial deposits, dominantly sand & gravel; friable to unconsolidated, or cemented to sandstone or conglomerate. Massive to bedded, ranging from thin to very thick; horizontal to cross bedded. Includes some lacustrine deposits & sub-basaltic sediments.	\Alluvium\\Alluvial sediments\\	Paleogene (base) to Pleistocene (top)	Clastic sediment	Om
Smfgb	Bradfordville Volcaniclastic Member	Cream, grey-green and blue-grey, generally unstratified, crystal-rich, vitriclast-bearing rhyolitic volcanic sandstone, conglomerate and minor very fine-grained vitric tuff or mudstone; coarse- grained volcaniclastic rocks have obvious K-feldspar.	\Mount Fairy Group\ \Gundary Volcanics \Bradfordville Volcaniclastic Member\	Caudicriodus woschmidti (base) to Ozarkodina eurekaensis (top)	Sandstone	459m
Smfg_a	Gundary Volcanics - siltstone	Light grey massive to diffusely laminated siltstone and mudstone with lesser interbedded fine-grained lithic-quartz sandstone.	\Mount Fairy Group\ \Gundary Volcanics \Gundary Volcanics - siltstone\	Caudicriodus woschmidti (base) to Ozarkodina eurekaensis (top)	Siltstone	508m
Q_a	Alluvium	Unconsolidated grey to brown to beige humic (±)micaceous silty clay, quartz-(±)lithic silt, fine- to medium-grained quartz-rich to quartz-lithic sand, polymictic pebble to cobble gravel (as sporadic lenses); sporadic palaeosol horizons.	\Alluvium\\\\	Quaternary (base) to Now (top)	Clastic sediment	664m
Dtlf	Forest Lodge Quartz Monzodiorite	Dark green-grey, quartz monzodiorite. Equigranular to porphyritic in plagioclase, augite ± orthopyroxene, hornblende and rare biotite in a micrographic and granophyric groundmass. Salmon-coloured K- feldspar and green sericitised plagioclase crystals	\Turrallo Suite\\Forest Lodge Quartz Monzodiorite\\	Eognathodus kindlei (base) to Polygnathus pireneae (top)	Monzodiorite	822m
Smfr	Rhyanna Formation	Green-grey, thin- to medium-bedded, siltstone grading up from fine- grained sandstone at bed bases, interbedded with silicified vitric and fine- grained felsic tuff; rare olistostrome deposits.	\Mount Fairy Group\ \Rhyanna Formation\\	Caudicriodus woschmidti (base) to Ozarkodina eurekaensis (top)	Siltstone	959m

Linear Geological Structures

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

Map ID	Feature Description	Map Sheet Name	Distance
No Features			

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

Map ID	Boundary Type	Description	Map Sheet Name	Distance
No Features				

Geological Data Source: Statewide Seamless Geology v2.1, Department of Regional NSW Creative Commons 4.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/4.0/au/deed.en

Naturally Occurring Asbestos Potential

26 Lithgow Street, Goulburn, NSW 2580

Naturally Occurring Asbestos Potential

Naturally Occurring Asbestos Potential within the dataset buffer:

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

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

Atlas of Australian Soils





Soils

26 Lithgow Street, Goulburn, NSW 2580

Atlas of Australian Soils

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

Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Ub39	Sodosol	Undulating to hilly country: chief soils are hard neutral and acid yellow mottled soils (Dy3.42 and Dy3.41) in a general pattern as follows: (i) undulating to hilly slopes of various (Dy) and (Dr) soils, including (Dy3.41), (Dy3.42), (Dy3.2), (Dr2.2), (Dr2.4); (ii) (Dy3.42) and sometimes (Dr3.42) soils in basins which merge with unit Va21 and lower-lying sites generally; and (iii) less frequently (Gn2. 15) and (Gn2.25) soils on gently undulating areas, usually situated between (i) and (ii). As mapped, small areas of units Tb22 and Va22 are included. Data are limited.	Om	On-site
Va22	Sodosol	Valley plain: chief soils are hard alkaline yellow and yellow mottled soils (Dy2.43) and (Dy3.43). Associated are various soils, notably (Gn2.95), also (Ug5.16) and (Gn2.1), with some (Um) soils close to the stream.	267m	North East

Atlas of Australian Soils Data Source: CSIRO

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Soil Landscapes of Central and Eastern NSW





Soils

26 Lithgow Street, Goulburn, NSW 2580

Soil Landscapes of Central and Eastern NSW

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

Soil Code	Name	Distance	Direction
<u>SI5512bl</u>	Bullamalita	0m	On-site
<u>SI5512go</u>	Goulburn	528m	South East
<u>SI5512so</u>	Sooley	962m	North West

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

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Acid Sulfate Soils

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Environmental Planning Instrument - Acid Sulfate Soils

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

Soil Class	Description	EPI Name
N/A		

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

Soil Class	Description	EPI Name	Distance	Direction
N/A				

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Atlas of Australian Acid Sulfate Soils





Acid Sulfate Soils

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Atlas of Australian Acid Sulfate Soils

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

Class	Description	Distance	Direction
В	Low Probability of occurrence. 6-70% chance of occurrence.	0m	On-site

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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Dryland Salinity

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Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

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

No

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A		

Dryland Salinity Data Source : National Land and Water Resources Audit

The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.

In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Mining

26 Lithgow Street, Goulburn, NSW 2580

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

Mining Subsidence District Data Source: © Land and Property Information (2016) Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Mining & Exploration Titles



Mining

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Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

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

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

Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

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

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

Mining

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Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
EL0636	JODODEX AUSTRALIA PTY LIMITED	19731001	19741001	MINERALS	Cu Pb Zn Ag	0m	On-site
EL1358	SAMEDAN OIL CORPORATION	19800601	19800901	MINERALS		0m	On-site
EL8673	ACGH II PTY LTD	20171117	30000101	MINERALS		0m	On-site
EL6743	RIMFIRE AUSTRALIA PTY LTD	20070330	20090329	MINERALS	Au Cu	261m	South

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

State Environmental Planning Policy

26 Lithgow Street, Goulburn, NSW 2580

State Significant Precincts

What SEPP State Significant Precincts exist within the dataset buffer?

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

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EPI Planning Zones 26 Lithgow Street, Goulburn, NSW 2580





Environmental Planning Instrument

26 Lithgow Street, Goulburn, NSW 2580

Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
MU1	Mixed Use		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	0m	On-site
R1	General Residential		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	84m	North
E2	Commercial Centre		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	161m	South
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	179m	South East
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	437m	East
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	459m	East
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	510m	South East
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	613m	South East
SP2	Infrastructure	Hospital	Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	666m	West

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE2	Private Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	748m	North
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	754m	South
RU2	Rural Landscape		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	760m	South East
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	810m	West
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	824m	North
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	825m	North
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	828m	East
C2	Environmental Conservation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	842m	East
SP2	Infrastructure	School	Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	864m	West
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	877m	East
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	882m	North West

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	897m	East
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	925m	North West
RU2	Rural Landscape		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	945m	East
RU2	Rural Landscape		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	966m	North
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	979m	South East
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	24/02/2023	26/04/2023	26/04/2023	State Environmental Planning Policy Amendment (Land Use Zones) 2023	995m	East

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Heritage Items





Heritage

26 Lithgow Street, Goulburn, NSW 2580

Commonwealth Heritage List

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

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

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch Creative Commons 3.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/3.0/au/deed.en

National Heritage List

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

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

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch Creative Commons 3.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/3.0/au/deed.en

State Heritage Register - Curtilages

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

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
5045517	St Clair	318 Sloane Street Goulburn	GOULBURN MULWAREE	02/04/1999	00117	114	371m	South East

Heritage Data Source: NSW Crown Copyright - Office of Environment & Heritage Creative Commons 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

Environmental Planning Instrument - Heritage

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

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
FID2441 4	Goulburn City Conservation Area	Conservation Area - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	20/02/2009	20/02/2009	30/09/2022	0m	On-site
1188	Gothic dwelling (1892)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	72m	North West
1189	Victorian dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	73m	North West

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
1437	Single-storey semi- detached Georgian dwelling (circa 1840)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	92m	East
1438	2-storey dwelling (former shop, circa 1860)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	93m	East
1161	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	99m	North West
1436	Single-storey semi- detached Georgian dwelling (circa 1840)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	102m	South East
1228	Victorian dwelling (circa 1880)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	115m	North
1225	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	131m	North East
1140	Georgian cottage	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	135m	East
1141	Georgian cottage	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	143m	East
1142	Georgian cottage	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	150m	East
1162	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	155m	West
1143	Georgian cottage	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	156m	East
1199	Federation dwelling (1907)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	172m	West
1163	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	175m	West
1229	Dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	179m	North West
1200	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	190m	West
1166	Dwelling, former St Kilda Cottage (1862)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	193m	North West
1139	Single-storey buildings	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	198m	South
1430	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	209m	East
1164	Terrace house (circa 1882)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	214m	West
1138	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	217m	South
1227	Victorian Italianate dwelling, Hazledell	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	222m	North East
1137	Single-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	225m	South
1136	Single-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	225m	South
1201	2-storey Georgian dwelling, Lynburn	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	227m	West

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
1165	Terrace house (circa 1882)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	228m	West
1135	Single-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	229m	South
1300	Dwelling (1885)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	237m	North West
1226	Victorian Italianate dwelling, Roborough	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	241m	North East
1134	Single-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	246m	South
1133	2-storey building (circa 1907)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	249m	South
1167	Federation dwelling, Marlyn (1893)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	255m	West
1132	Single-storey building (circa 1902)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	262m	South
1204	Mansion, Carrawarra (1883)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	266m	West
1202	Single-storey Victorian terrace house	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	272m	West
1431	2-storey dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	272m	South East
1158	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	277m	North West
1332	Dwelling, Antrim House (circa 1871)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	279m	North East
1203	Single-storey Victorian terrace house	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	282m	West
1335	Uniting Church (former Methodist Church, circa 1871)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	283m	South West
1159	Federation dwelling (1873)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	289m	North West
1131	2-storey building, Landsdowne Shop (circa 1888)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	294m	South
1130	2-storey building, Landsdowne Shop (circa 1892)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	301m	South
1129	2-storey building, Landsdowne Shop (circa 1892)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	308m	South
1160	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	309m	North West
1305	Victorian Italianate dwelling, Hurstville, fences and gate (1861)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	312m	West
1128	Single-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	314m	South
1296	Victorian dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	318m	West
1113	Single-storey building (circa 1920)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	319m	South

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
1127	Single-storey building (circa 1913)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	329m	South
1196	Dwellings, Leeville Terrace (circa 1885)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	333m	South East
1126	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	333m	South
1294	Single-storey Victorian dwelling (circa 1883)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	337m	West
1187	2-storey Victorian dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	338m	South West
1125	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	343m	South
1337	2-storey Late Victorian dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	345m	South West
1304	Gothic dwelling, Rosscraig (formerly Rossneath Academy, 1870)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	345m	West
1407	Victorian dwelling (1890)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	347m	North West
1124	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	347m	South
1123	2-storey building (circa 1882)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	352m	South
1122	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	361m	South
1205	Single-storey Victorian Italianate dwelling (1933)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	368m	West
1528	Dwelling (former St Clair) used as museum (circa 1845)	Item - General	State/Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	371m	South East
1121	2-storey building and rear single- storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	373m	South
1303	Victorian dwelling, Woomerah	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	377m	West
1350	Single-storey Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	378m	South East
1409	Dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	378m	North West
1302	Victorian dwelling, Kiaburn	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	384m	West
1206	Single-storey Victorian terrace house	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	30/09/2022	30/09/2022	30/09/2022	386m	West
1358	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	388m	South East
1105	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	388m	South
1529	Commercial building (circa 1900)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	388m	South East

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
1359	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	392m	South East
1301	Victorian dwelling, Repton	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	392m	West
1338	3 attached single- storey Georgian cottages	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	395m	South West
1360	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	396m	South East
1104	2-storey bank (formerly Rural Bank of New South Wales, 1937)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	397m	South
1408	Victorian dwelling (1890)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	399m	North West
1336	Lieder Theatre (former Liedertafel Hall, 1929)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	399m	South West
1530	Commercial building and flats above (1870)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	400m	South East
1361	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	400m	South East
1186	Goulburn Public School (1868)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	400m	South West
1293	Single-storey Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	401m	West
1334	Georgian dwelling (circa 1850)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	404m	South
1440	Federation dwelling (circa 1900)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	410m	North West
1120	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	410m	South
1527	2-storey semi- detached Victorian dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	410m	South
1292	Federation dwelling, Louise (1901)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	417m	South West
1119	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	419m	South
l441	Federation dwelling (circa 1900)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	422m	North West
1118	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	423m	South
1299	Victorian Italianate dwelling, Birkless (circa 1885)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	430m	West
1363	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	431m	South East
1442	Federation dwelling (circa 1900)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	433m	North West
1117	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	434m	South
1364	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	435m	South East

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
1103	Single-storey building (circa 1930)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	435m	South
1433	Dwelling, Lawrenny (formerly Penrice, 1878)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	436m	North West
1116	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	441m	South
1115	2-storey building	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	442m	South
1365	Detached dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	443m	South East
1298	Federation dwelling (circa 1912)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	444m	West
1366	Detached dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	449m	South East
1351	Semi-detached Georgian dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	453m	South East
I410	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	456m	North West
1352	Semi-detached Georgian dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	457m	South East
1443	Late Victorian and Picturesque dwelling, Millewah (former boarding house, 1886)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	458m	North West
1519	R J Sydney Craig Funeral Directors (former Rock of Cashel Inn), 2- storey (circa 1858)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	459m	South
1207	2-storey dwelling, Rossneath (1881)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	30/09/2022	30/09/2022	30/09/2022	459m	West
1297	Federation dwelling, Formoy (circa 1920)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	459m	West
1353	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	461m	South East
1526	2-storey attached Victorian dwelling (circa 1880)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	463m	South East
1354	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	465m	South East
1525	2-storey attached Victorian dwelling (circa 1880)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	466m	South East
1524	2-storey attached Victorian dwelling (circa 1880)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	469m	South East
1355	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	470m	South East
1523	2-storey attached Victorian dwelling (circa 1880)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	472m	South East
1329	Dwelling, Hazelbrook, pair with 213 Faithfull Street (1885)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	473m	West
1522	Single-storey attached dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	475m	South East

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
1356	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	475m	South East
1185	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	476m	South West
1484	Spanish Mission dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	476m	North
1198	Single-storey semi- detached dwellings	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	480m	South East
1357	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	481m	South East
1370	Detached Georgian dwelling (circa 1850)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	481m	East
1521	Single-storey attached dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	482m	South East
1328	Dwelling, pair with 215 Faithfull Street (1885)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	483m	West
1520	Commercial Victorian property and joinery (circa 1880)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	484m	South East
1184	Semi-detached Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	484m	South West
1371	Detached brick Federation dwelling, Iona	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	489m	East
1339	Semi-detached Georgian dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	490m	West
1197	Single-storey semi- detached dwellings	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	493m	South East
l411	Federation Queen Anne dwelling, Shanklin	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	495m	West
1372	Semi-detached Victorian cottage (circa 1860)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	495m	East
1341	Federation dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	497m	West
1362	Commercial Georgian building, former Coach and Horses Inn (1849)	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	499m	South East
1182	Dwelling	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	08/10/2021	08/10/2021	30/09/2022	500m	South West

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Natural Hazards

26 Lithgow Street, Goulburn, NSW 2580

Bush Fire Prone Land

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

Bush Fire Prone Land Category	Distance	Direction
No records in buffer		

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

Ecological Constraints - Vegetation & Ramsar Wetlands





Ecological Constraints

26 Lithgow Street, Goulburn, NSW 2580

Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
977658	Not classified	(Not classified) Not classified	Not classified	0m	On-site
977855	Grassy Woodlands	(Grassy Woodlands) Goulburn Tableland Box-Gum Grassy Forest	Southern Tableland Grassy Woodlands	259m	West
977871	Grasslands	(Grasslands) Southern Tableland Red Grass-Spear Grass Grassland	Temperate Montane Grasslands	623m	South East
977848	Grassy Woodlands	(Grassy Woodlands) Southern Tableland Creekflat Ribbon Gum Forest	Tableland Clay Grassy Woodlands	665m	South East

Native Vegetation Type Map : NSW Department of Planning and Environment 2022 Creative Commons Attributions 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

Ramsar Wetlands

What Ramsar Wetland areas exist within the dataset buffer?

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

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

Ecological Constraints - Groundwater Dependent Ecosystems Atlas





Ecological Constraints

26 Lithgow Street, Goulburn, NSW 2580

Groundwater Dependent Ecosystems Atlas

Туре	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Aquatic	High potential GDE - from national assessment	Upland plains with separating strike- aligned hills, closed lake basins.	River		680m	South East

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology

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Ecological Constraints - Inflow Dependent Ecosystems Likelihood



Ecological Constraints

26 Lithgow Street, Goulburn, NSW 2580

Inflow Dependent Ecosystems Likelihood

Туре	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Aquatic	7	Upland plains with separating strike- aligned hills, closed lake basins.	River		680m	South East

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

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Ecological Constraints

26 Lithgow Street, Goulburn, NSW 2580

NSW BioNet Atlas

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

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Category 2	Critically Endangered	
Animalia	Aves	Aphelocephala leucopsis	Southern Whiteface	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Endangered	
Animalia	Aves	Calyptorhynchus Iathami Iathami	South-eastern Glossy Black- Cockatoo	Vulnerable	Category 2	Vulnerable	
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Gygis alba	White Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Thinornis cucullatus cucullatus	Eastern Hooded Dotterel	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Insecta	Keyacris scurra	Key's Matchstick Grasshopper	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Macropus dorsalis	Black-striped Wallaby	Endangered	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent- winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Notamacropus parma	Parma Wallaby	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Nyctophilus corbeni	Corben's Long- eared Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Petrogale penicillata	Brush-tailed Rock-wallaby	Endangered	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Delma impar	Striped Legless Lizard	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Suta flagellum	Little Whip Snake	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Tiliqua occipitalis	Western Blue- tongued Lizard	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Bossiaea oligosperma	Few-seeded Bossiaea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Dichanthium setosum	Bluegrass	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Diuris aequalis	Buttercup Doubletail	Endangered	Category 2	Vulnerable	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus macarthurii	Paddys River Box, Camden Woollybutt	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Leucochrysum albicans subsp. tricolor	Hoary Sunray	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Persoonia oxycoccoides		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Pomaderris delicata	Delicate Pomaderris	Critically Endangered	Not Sensitive	Critically Endangered	
Plantae	Flora	Rutidosis leptorrhynchoides	Button Wrinklewort	Endangered	Not Sensitive	Endangered	

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

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

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irrespective of how that liability arises including in contract or tort, liability under indemnity or for any other common law, equitable or statutory cause of action or otherwise.

12. These Terms are subject to New South Wales law.

Bore Logs

Appendix E

lanterra consulting							BORI	E LOG H1	PROJECT NUMBER: CLIENT NAME: AC ADDRESS: 26 Lithe	P24032 CT Geotechnical Engineers gow Street, Goulburn	
P C D H	ROJECT CONTRAC RILL ME [®] NAMETER IOLE DEP	NAME: Prelin TOR: Grour THOD: Excav R: 300 m TH: 2.1 m	ninary Site nd Control rator nm	Investiga	tion			COORDI EASTING NORTHII ELEVAT DATE DE	NATE SYSTEM: GDA G: 749,191.0 mE NG: 6,151,573.0 mN ION (APPROX): 820 RILLED: 19/03/2024	42020 / MGA zone 55 .0 AHD	
Depth (m)	Geological Unit	Sample Name	PID (ppm)	Analysed	Graphic	nscs	(Depth) Lithological	Description	Additional Observations	Elevation (AHD)
0.0	Fill -	BH1 0.0-0.1	0	Y			(0.0) Grav moist	elly Sandy S	Silt: Dark brown,	Topsoil, rounded gravel, traces of brick and plastic.	820
0.5 -		BH1 0.5-0.6	0	Y			(0.5) Grav - moist	elly Sandy S	Silt: Dark brown, dry		-
1.0 –	Natural	BH1 1.0-1.1	0	N			(1.0) Sand dry - moist	y Silty Clay	: Orange - brown,	Highly weathered rock	- 819 - - -
1.5 –	-										-
2.0 –		BH1 2.0-2.1	0	N			(2.0) Sand dry - moist	y Silty Clay	: Orange - brown,	End of hole at 2.1 m	- 818 - - -
2.5 –	-										-
30-											817

Comments	LOGGED BY	КВ
	CHECKED BY	LB

lanterra consulting							BORE	E LOG 12	PROJECT NUMBER: CLIENT NAME: A ADDRESS: 26 Lith	: P24032 CT Geotechnical Engineers gow Street, Goulburn	
P C D H	ROJECT ONTRAC RILL ME IAMETEF OLE DEF	NAME: Prelin TOR: Grour THOD: Excav R: 300 m PTH: 2.1 m	ninary Site nd Control vator nm	Investiga	tion			COORDI EASTING NORTHII ELEVAT DATE DI	NATE SYSTEM: GD/ S: 749,193.0 mE NG: 6,151,589.0 mN ION (APPROX): 820 RILLED: 19/03/2024	42020 / MGA zone 55 .0 AHD	
Depth (m)	Geological Unit	Sample Name	PID (ppm)	Analysed	Graphic	nscs	(Depth) Lithological	Description	Additional Observations	Elevation (AHD)
0.0	Fill	BH2 0.0-0.1	0	N			(0.0) Sand soft	y Silt : Dark	brown, dry - moist,		820 - - - -
0.5 -		BH2 0.5-0.6	0	N			(0.5) Grav - moist	elly Sandy S	Silt: Dark brown, dry		-
1.0 -	Natural	BH2 1.0-1.1	0	Y			(1.0) Sand dry - moist	y Silty Clay	: Orange - brown,		819 - - - -
1.5 -	-										-
2.0 -		BH2 2.0-2.1	0	Y			(2.0) Sand dry - moist	y Silty Clay	: Orange - brown,	End of hole at 2.1 m	818 - - - -
2.5 -	-										-
3.0 -											817

Sample taken adjacent to stockpile of tin and terracotta pipes.	LOGGED BY	КВ
	CHECKED BY	LB

lanterra consulting							BORE	E LOG H3	PROJECT NUMBER: CLIENT NAME: AC ADDRESS: 26 Lith	: P24032 CT Geotechnical Engineers gow Street, Goulburn	
P C D H	ROJECT ONTRAC RILL ME IAMETEF OLE DEF	NAME: Prelin TOR: Grour THOD: Excav R: 300 m PTH: 2.1 m	ninary Site nd Control vator nm	Investiga	tion			COORDI EASTING NORTHII ELEVAT DATE DE	NATE SYSTEM: GD/ G: 749,207.0 mE NG: 6,151,594.0 mN ION (APPROX): 820 RILLED: 19/03/2024	42020 / MGA zone 55 .0 AHD	
Depth (m)	Geological Unit	Sample Name	PID (ppm)	Analysed	Graphic	nscs	(Depth) Lithological	Description	Additional Observations	Elevation (AHD)
0.0	Fill	BH3 0.0-0.1	0	Y			(0.0) Sand	y Silt: Dark	brown, moist	Anthropogenic material including concrete, bricks, glass, and plastic on surface.	820
0.5 –	-	BH3 0.5-0.6	0	N			(0.5) Sand moist	y Silt: Pale	brown - grey, dry - 		-
1.0 —	Natural	BH31.0-1.1	0	N			(1.0) Sand dry - moist	y Silty Clay	: Orange - brown,		- 819 - -
1.5 –											-
2.0 –		BH3 2.0-2.1	0	Y			(2.0) Sand dry - moist	y Silty Clay	: Orange - brown,	End of hole at 2.1 m	- - - -
2.5 –	-										-
- 30 –	-										- - 817

Comments	LOGGED BY	КВ									
	CHECKED BY	LB									
lanterra consulting							BORI	BORE LOG PROJECT NUMBER: P24032 CLIENT NAME: ACT Geotechnical Engineers ADDRESS: 26 Lithgow Street, Goulburn			
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PROJECT NAME: Preliminary Site Investigation CONTRACTOR: Ground Control DRILL METHOD: Excavator DIAMETER: 300 mm HOLE DEPTH: 2.1 m								COORDINATE SYSTEM: GDA2020 / MGA zone 55 EASTING: 749,207.0 mE NORTHING: 6,151,609.0 mN ELEVATION (APPROX): 820.0 AHD DATE DRILLED: 19/03/2024			
Depth (m)	Geological Unit	Sample Name	PID (ppm)	Analysed	Graphic	nscs	(Depth	ı) Lithological	Description	Additional Observations	Elevation (AHD)
0.0	<i>Fill</i>	BH4 0.0-0.1	0	Y			(0.0) Sanc	ly Silt: Dark	brown, moist		820 - - -
0.5 -	-	BH4 0.5-0.6	0	Y			(0.5) Grav dry - moist	elly Sandy S	Silt: Brown - orange,	Gravel material consits of black nodules	-
1.0 -	Natural	BH41.0-1.1	0	N			(1.0) Sanc dry - moist	ly Silty Clay	: Orange - brown,	Fragments of highly weathered	- 819 - -
1.5 -	-										-
2.0 -	-	BH4 2.0-2.1	0	N			(2.0) Silty moist	Clay: Orang	je - brown, dry -	End of hole at 2.1 m	- 818 - - -
2.5 –	-										-
3.0 -											817

Traces of glass and plastic on surface around sample.	LOGGED BY	КВ
	CHECKED BY	LB

lanterra consulting							BORI B	BORE LOG PROJECT NUMBER: P24032 CLIENT NAME: ACT Geotechnical Engineers ADDRESS: 26 Lithgow Street, Goulburn			
PROJECT NAME: Preliminary Site Investigation CONTRACTOR: Ground Control DRILL METHOD: Excavator DIAMETER: 300 mm HOLE DEPTH: 2.1 m								COORDINATE SYSTEM: GDA2020 / MGA zone 55 EASTING: 749,221.0 mE NORTHING: 6,151,612.0 mN ELEVATION (APPROX): 820.0 AHD DATE DRILLED: 19/03/2024			
Depth (m)	Geological Unit	Sample Name	PID (ppm)	Analysed	Graphic	nscs	(Deptł	ı) Lithological	Description	Additional Observations	Elevation (AHD)
0.0		BH5 0.0-0.1	0.1	Y			(0.0) Sanc rounded bl	ly Silt: Brow ack nodules	n, moist, traces of		820 - - -
0.5 -		BH5 0.5-0.6	0.2	N			(0.5) Sanc dry - moist	ly Clayey Si	lt: Brown - orange,		- - - - -
1.5 –	ral	BH5 1.0-1.1	0	Y			(1.0) Silty	Clay: Brown	n - orange, dry - moist		-
2.0 -	Natu						(2 0) Silty	Clay: Grey	orange dry - moist		- - - - 818
2.5 -	-	BH5 2.0-2.1	0	N			(2.0) Sitty			End of hole at 2.1 m	-
30-	-										

Traces of plastic on surface arond sample location.	LOGGED BY	КВ
	CHECKED BY	LB

lanterra consulting							BORI	BORE LOG PROJECT NUMBER: P24032 CLIENT NAME: ACT Geotechnical Engineers ADDRESS: 26 Lithgow Street, Goulburn			
PROJECT NAME: Preliminary Site Investigation CONTRACTOR: Ground Control DRILL METHOD: Excavator DIAMETER: 300 mm HOLE DEPTH: 2.1 m								COORDINATE SYSTEM: GDA2020 / MGA zone 55 EASTING: 749,223.0 mE NORTHING: 6,151,629.0 mN ELEVATION (APPROX): 820.0 AHD DATE DRILLED: 19/03/2024			
Depth (m)	Geological Unit	Sample Name	PID (ppm)	Analysed	Graphic	nscs	(Depth) Lithological	Description	Additional Observations	Elevation (AHD)
0.0	Fill -	BH6 0.0-0.1	0.1	N			(0.0) Claye	ey Silt: Pale	brown, moist.	Mulch on surface	820 - - -
0.5 -		BH6 0.5-0.6	0	N			(0.5) Sand dry - moist	y Clayey Si	lt: Orange - brown,		- - - -
1.5 -	Natural	BH6 1.0-1.1	0	Y			(1.0) Silty moist.	Clay: Orang	e - brown, dry -	Weathered bedrock.	-
2.0 -	-	BH6 2.0-2.1	0	Y			(2.0) Silty	Clay: Grey -	orange, dry - moist.		- - - - 818
2.5 -	-									End of hole at 2.1 m	-
- - - -	-										- - - 817

Comments	LOGGED BY	КВ
	CHECKED BY	LB

lanterra consulting							BORE LOG PROJECT NUMBER: P24032 CLIENT NAME: ACT Geotechnical Engineers ADDRESS: 26 Lithgow Street, Goulburn					
PROJECT NAME: Preliminary Site Investigation CONTRACTOR: Ground Control DRILL METHOD: Excavator DIAMETER: 300 mm HOLE DEPTH: 2.1 m								COORDINATE SYSTEM: GDA2020 / MGA zone 55 EASTING: 749,204.0 mE NORTHING: 6,151,587.0 mN ELEVATION (APPROX): 820.0 AHD DATE DRILLED: 19/03/2024				
Depth (m)	Geological Unit	Sample Name	PID (ppm)	Analysed	Graphic	nscs	(Depth)	Lithological	Description	Additional Observations	Elevation (AHD)	
0.0		BH7 0.0-0.1	0.1	Y			(0.0) Sandy large gravel	y Silt: Dark inclusions.	brown, dry - moist,	Anthropogenic material including plastic, bricks, tile and glass on surface.	820 	
0.5 -		BH7 0.5-0.6	0	N			(0.5) Claye moist, some	y Silt: Brow ∋ plasticity.	/n - pale brown, dry -		-	
1.0 -	-	BH7 1.0-1.1	0	N			(1.0) Sandy - moist.	√ Silty Clay	: Brown - orange, dry	End of hole at 1.1 m	- 819 - - -	
1.5 -	-										-	
2.0 -											818	

Comments	LOGGED BY	KB
	CHECKED BY	LB

EIL Calculations

Appendix F

Inputs
Select contaminant from list below
As
Below needed to calculate fresh and aged
ACLs
Below needed to calculate fresh and aged
ABCs
or for fresh ABCs only
or for aged ABCs only

Outputs						
Land use Arsenic generic EILs						
	(mg contaminant	t/kg dry soil)				
	Fresh	Aged				
National parks and areas of high conservation value	20	40				
Urban residential and open public spaces	50	100				
Commercial and industrial	80	160				

Inputs
Select contaminant from list below
DDT
Below needed to calculate fresh and aged
ACLs
Palow peeded to coloulate freeh and aread
ABCs
or for fresh ABCs only
or for aged ABCs only

Outputs						
Land use	DDT generic EILs					
	(mg contaminant	t/kg dry soil)				
	Fresh	Aged				
National parks and areas of high conservation value	3	3				
Urban residential and open public spaces	180	180				
Commercial and industrial	640	640				

Inputs
Select contaminant from list below
Naphthalene
Below needed to calculate fresh and aged
ACLs
Below needed to calculate fresh and aged
ABCs
or for fresh ABCs only
or for aged ABCs only
,

Outputs		
Land use	Naphthalene generic EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	10	10
Urban residential and open public spaces	170	170
Commercial and industrial	370	370

|--|

Select contaminant from list below Ni

Below needed to calculate fresh and aged ACLs

Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)

5.5

Below needed to calculate fresh and aged ABCs

Measured background concentration (mg/kg). Leave blank if no measured value

or for fresh ABCs only

Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration 7

or for aged ABCs only

Enter State (or closest State)

NSW

Enter traffic volume (high or low)

Outputs		
Land use	Ni soil-specific EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	30	10
Urban residential and open public spaces	40	45
Commercial and industrial	50	75

Inputs
Select contaminant from list below
Pb
Below needed to calculate fresh and aged
ACLS
Below needed to calculate fresh and aged
ABCs
or for fresh ABCs only
or for aged ABCs only

Outputs		
Land use	Lead generic EILs	
	(mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	110	470
Urban residential and open public spaces	270	1100
Commercial and industrial	440	1800

Inputs Select contaminant from list below Zn

Below needed to calculate fresh and aged ACLs

Enter cation exchange capacity (silver thiourea method) (values from 0 to 100 cmolc/kg dwt)

5.5

Enter soil pH (calcium chloride method) (values from 1 to 14)

5.5

Below needed to calculate fresh and aged ABCs

Measured background concentration (mg/kg). Leave blank if no measured value

or for fresh ABCs only

Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration 7

or for aged ABCs only

Enter State (or closest State)

NSW

Enter traffic volume (high or low)

Outputs		
Land use	Zn soil-specific EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	50	120
Urban residential and open public spaces	110	270
Commercial and industrial	150	380

Inputs
Select contaminant from list below
Cr III
Below needed to calculate fresh and aged ACLs
Enter % clay (values from 0 to 100%)
10
Below needed to calculate fresh and aged
ABCs
ABCs
ABCs Measured background concentration
ABCs Measured background concentration (mg/kg). Leave blank if no measured value
ABCs Measured background concentration (mg/kg). Leave blank if no measured value or for fresh ABCs only
ABCs Measured background concentration (mg/kg). Leave blank if no measured value or for fresh ABCs only Enter iron content (aqua regia method)
ABCs Measured background concentration (mg/kg). Leave blank if no measured value or for fresh ABCs only Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration
ABCs Measured background concentration (mg/kg). Leave blank if no measured value or for fresh ABCs only Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration 7
ABCs Measured background concentration (mg/kg). Leave blank if no measured value or for fresh ABCs only Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration 7 or for aged ABCs only
ABCs Measured background concentration (mg/kg). Leave blank if no measured value or for fresh ABCs only Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration 7 or for aged ABCs only Enter State (or closest State)
ABCs Measured background concentration (mg/kg). Leave blank if no measured value or for fresh ABCs only Enter iron content (aqua regia method) (values from 0 to 50%) to obtain estimate of background concentration 7 or for aged ABCs only Enter State (or closest State) NSW

Outputs		
Land use	Cr III soil-specific EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	130	140
Urban residential and open public spaces	230	410
Commercial and industrial	340	670



Outputs			
Land use	Cu soil-specific ElLs		
	(mg contaminant/kg dry soil)		
	Fresh	Aged	
National parks and areas of high conservation value	45	50	
Urban residential and open public spaces	75	120	
Commercial and industrial	100	170	