7 – Detailed Site Investigation

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APOLLO FABRICATION GROUP

Detailed Site Investigation

2-20 Telegraph Road, Young NSW

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Executive Summary

Background

Mr. Caleb Jackson of Apollo Fabrication Group ('the Client') engaged EI Australia (EI) to conduct a Detailed Site Investigation for the property located at 2-20 Telegraph Road, Young NSW ('the site'). This assessment was conducted to assess the nature and degree of any potential onsite contamination associated with current and former users of the property, and to provide a conclusion about suitability of the site for proposed development. The investigation will form part of a Development Application package to Hilltop Council for site redevelopment.

This site is located approximately 1.7 km east of the Young Central Town Centre and is located within the Local Government Area of Hilltop Council (**Figure 1**). It is comprised of Lots 1-4 of DP736225; Lots 11-12 of DP1138027; Lots 1171, 1154 & 1199 of DP754611 and Lot 3 of DP374948; covering a total area of 3.4 ha, as depicted in **Figure 2**. The central-western portion of the site is currently occupied by a large commercial / industrial building with shipping container style offices in the south; the remaining areas of the site are free of all structures / have been cleared.

Based on the findings from this Detailed Site Investigation it was concluded that:

- The site was occupied by agricultural land and residential dwellings from at least 1944. A commercial / industrial warehouse building(s) was erected on the western section of the site in approximately 1985 and was upgraded to the current warehouse/factory configuration which was established by 2018. The eastern section of the site continued to be used for rural residential purposes, however, the dwelling were demolished,
- The conceptual site model identified the following potential sources of on-site contamination:
  - Fill soils of unknown origin and content;
  - Potential on-site use of pesticides across the agricultural portions of the site; Industrials processes in operation of the factory/warehouse including storage of paints, solvents and oils;
  - Oil leaks from equipment, abandoned vehicles and storage on-site
  - Weathering of galvanised materials including car bodies and scrap metal;; and
  - Fuel leakage from the underground storage tank on site.
- Analytical results for the representative soil samples collected from across the site were all below the adopted human health assessment criteria relevant for the proposed commercial / industrial development.
- Location BH123 situated adjacent to the underground storage tank did not report any petroleum hydrocarbons in shallow fill (0.1m BGL) or in deeper natural soil (0.6 m BGL). Indicating that the staining observed on the soil surface adjacent to the bowser was localised and has not significantly penetrated the sub-surface.
- Two samples (BH114_0.2 & BH120_0.2) collected from the south-western portion of the site, in the vicinity of the wrecked cars and stockpiled construction waste, were above the site specific ecological criterion for the concentration of zinc. The elevated zinc is attributed to the weathering of galvanised materials including car bodies and scrap metal. It is understood that the proposed development would involve the removal of all waste materials including the wrecked cars; therefore removing the source of contamination. It is also noted that the

proposed development does not include landscape or setback areas and so the risk to future ecological receptors is considered low.

- Zinc exceeded site specific ecological criterion (EILs), in shallow fill / top soil samples collected from the south-western portion of the site (locations BH114, BH120). The zinc concentration in the deeper underlying samples was low. The elevated zinc results were shallow and localised, and likely attributed to weathering of stockpiled scrap metal / construction waste or wrecked cars observed within these areas.
- Petroleum hydrocarbons (total recoverable hydrocarbons-F3, total recoverable hydrocarbons-F4) fractions were detected at relatively low concentration in fill soils and deeper natural soils immediately south of the warehouse building (BH120_2.0, BH121_0.2 & BH122_0.1), and sample BH120_2.0 exceeded the site specific ESLs, however the depth was 2 m below ground level. Given that large drums of oil and wrecked cars were stored in the general vicinity of these sampling locations, the TRH results may be attributed to historical leakage of fuels / oils. It is likely that historic storage / use of plant in this is responsible for the presence of remnant petroleum hydrocarbons at depth and is unlikely to present a risk.
- EI was informed by the client that a substantial amount of surface waste and scrap metal etc. has been removed from the site since site inspection by EI (see Photographs 11 & and 12, **Appendix I**).
- Zinc impact and petroleum hydrocarbon impact in soil were localised, and the sources on the ground surface had been removed. The ecological risk from zinc and petroleum hydrocarbon impact in soil was low and not unacceptable..

Based on the above findings and with due regard for the Statement of Limitations (**Section 13**), EI considers that the land is suitable for the proposed development which is equivalent to a land use setting of commercial/industrial. Recommendations provided in **Section 12** should be implemented to aid the proposed redevelopment.

1. Introduction

1.1 Background and Purpose

Mr. Caleb Jackson of Apollo Fabrication Group ('the Client') engaged EI Australia (EI) to conduct a Detailed Site Investigation (DSI) at the property with street address 2-20 Telegraph Road, Young NSW ('the site').

This DSI involved two phases of work as follows:

- A preliminary desktop assessment of the nature and degree of any potential onsite contamination associated with current and former uses of the property; and
- A detailed intrusive investigation involving the collection of soil samples followed by laboratory analysis for relevant contaminants of potential concern.

It is understood that the DSI report will form part of a Development Application package to Hilltop Council for site redevelopment.

This site is located approximately 1.7 km east of the Young Central Town Centre and is located within the Local Government Area of Hilltop Council (**Figure 1**). It is comprised of Lots 1-4 of DP736225; Lots 11-12 of DP1138027; Lots 1171, 1154 & 1199 of DP754611 and Lot 3 of DP374948; covering a total area of 3.4 ha, as depicted in **Figure 2**.

At the time of inspection, the site was occupied by a total of three main structures, as follows:

- The central-western portion of the site was occupied by a large commercial / industrial warehouse building used as an architectural steel manufacturer. The Building comprises metal clad (zinc coated steel) walls and roof with concrete paved floor;
- Immediately south of the warehouse building was a one level, office block comprised of multiple shipping containers; and
- Immediately west of warehouse was a single level residential dwelling, comprised of fibre cement walls and a corrugated tin roof.

1.2 Proposed Development

Based on the proposed development plans (Unique CAD Experience, ref: 1012, A0.1, dated 28 September 2020, **Appendix K**) provided by the client, EI understands that the site development involves demolition of all structures onsite except for the large commercial / industrial warehouse building located in the central-western portion of the site and the office block located immediately south of the warehouse building, followed by construction of two new workshop buildings with office block and addition to the existing commercial / industrial warehouse building. The footprints of proposed development are shown on **Figure 2**.

1.3 Regulatory Framework

The following regulatory framework and guidelines were considered during the preparation of this report:

- NSW Environmental Planning and Assessment Act (EP&A) 1979;
- NSW Protection of the Environment Operation (POEO) Act 1997;
- NSW Contaminated Land Management Act 1997;
- EPA (1995) Sampling Design Guidelines;

- SEPP 55 (1998) State Environment Planning Policy 55 - The Remediation of Land;
- NSW Work Health and Safety Act 2011;
- Hilltop Local Environmental Plan 2012;
- NEPC (2013) National Environmental Protection (Assessment of Site Contamination) Measure 1999 (Amendment 2013), in particular Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater and Schedule B(2) Guideline on Site Characterisation;
- EPA (2015) Contaminated Land Management: Guidelines on the Duty to Report Contamination;
- EPA (2017) Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme; and
- EPA (2020) Consultants reporting on contaminated land guidelines.

1.4 Project Objectives

The primary objectives of this DSI are to:

- Evaluate the potential for site contamination on the basis of historical land uses, anecdotal and documentary evidence of possible pollutant sources (desktop study);
- To investigate the degree of any potential contamination by means of intrusive sampling and laboratory analysis, for relevant contaminants; and
- Where site contamination is confirmed, make recommendations for the appropriate management of the contaminated media (i.e. soils, soil vapour and/or groundwater).
- Provide a conclusion regarding the suitability of the site for the proposed development.

1.5 Scope of Works

In accordance with EI fee proposal P18825.1 (20 November 2020), the following scope of works was adopted:

1.5.1 Desktop Study

- A review of relevant hydrogeological and soil landscape maps for the project area;
- Review of previous environmental reports (where available);
- Detailed site walkover inspection;
- Search of historical aerial photographs archived at the NSW Department of Land and Property Information in order to review previous site use and the historical sequence of land development onsite and in the neighbouring area;
- Site history survey involving a detailed search of Council information relating to operational site history;
- A land titles search, also conducted through NSW Land and Property Information;
- Review of existing underground services on site; and
- A search through the Land Information records archived at the NSW Environment, Energy and Science Group (formerly the Office of Environment and Heritage), within the Dept. of Planning, Industry and Environment, to confirm that there are no statutory notices current on the site under the Contaminated Land Management Act (1997).

1.5.2 Field Work & Laboratory Analysis

- Preparation of a Work Health, Environment and Safety Plan (WHSEP);
- A review of existing underground services on site, with the use of 'Dial Before You Dig' (DBYD);
- A detailed site walkover inspection;
- Soil sampling from 23, mechanically-drilled boreholes distributed across accessible areas of the Site;
- Multiple level soil sampling within fill and natural soils; and
- Laboratory analysis of selected soil samples for relevant contaminants of potential concern, as determined from the site history survey and field observations during the investigation programme.

2. Site Description

2.1 Property Identification, Location, and Physical Setting

The site identification details and associated information are presented in **Table 2-1**, while the site locality is shown in **Figure 1**.

Table 2-1 Site Identification

Attribute	Description
Street Address	2-20 Telegraph Road, Young NSW
Location Description	The site is located approx. 1.7 km east of the Young town centre and is bound by Telegraph Road (north), residential lots (east and west), and Victoria Creek (south).
Site Coordinates	North-east corner of site (GDA2020-MGA56): **Easting**: 69074.194 **Northing**: 6192746.909 (Source: http://maps.six.nsw.gov.au)
Site Area	3.4 ha (http://maps.six.nsw.gov.au)
Lot and Deposited Plan (DP)	Lots 1-4 of DP736225; Lots 11-12 of DP1138027; Lots 1171, 1154 & 1199 of DP754611; and Lot 3 of DP374948
State Survey Marks	One State Survey Mark (SSM) and two Permanent Mark (PM) are situated in close proximity (<500m) of the site: ▪ PM152358 located on Whiteman Avenue; ▪ PM65857 located on Whiteman Avenue; and ▪ SS39765 located on Whiteman Avenue. (Source: http://maps.six.nsw.gov.au)
Local Government Authority	Hilltop Council
Parish	St. Marys
County	Monteagle
Current Zoning	RU4 – Rural zone. (Hilltop Local Environment Plan 2012)

2.2 Local Land Use

The site is situated within an area of low density residential, agricultural and commercial land uses, as described in **Table 2-2**. The potential local receptors within close proximity to the site are also identified.

Table 2-2 Local Land Use

Direction Relative to Site	Land Use Description
North	Telegraph Road followed by a recreational horse training facility.
South	Victoria Creek followed by an agricultural / residential lot.
East	Low density residential
West	Low density residential followed by Whiteman Avenue.

2.3 Regional Setting

Local topography, geology, soil landscape and hydrogeological information are summarised in **Table 2-3**.

Table 2-3 Regional Setting

Attribute	Description
Topography	The site comprised gentle undulating rises with a relatively steep escarpment along the south of the site, toward Vitoria Creek. Regional topography consists of undulating low hills with slopes from 3-5% on waxing hillslopes and foot slopes (Eddie, 2000).
Site Drainage	Consistent with the general slope of the site, stormwater is assumed to flow southward, towards Victoria Creek, which runs parallel to the southern boundary of the site.
Regional Geology	Eddie (2000) indicated the site to be underlain by the Silurian Young Formation granodiorite, often porphyritic in quartz, plagioclase and more rarely, potassium-feldspar and biotite. Colluvium and alluvium derived from these parent materials occur on lower slopes with much of the upper slopes influenced by parna.
Soil Landscapes	Eddie (2000) indicated the site is underlain by soils of the Young Erosional (yo) group comprising moderately deep to deep, well drained Halpic Mesotrophic Dermosols and Halpic Mesotrophic Kandosols on mid to upper slopes. Deep, imperfectly to poorly drained Bleached-Mottled Mesotrophic Yellow to Brown Chromosols on lower slopes.
Acid Sulfate Soil (ASS) Risk	With regards to the Hilltop LEP 2012, the site lies an area undefined with regards to the Acid Sulfate risk. Given the protracted distance from the marine transgression / regression depositional environment, the risk of ASS is considered low.
Nearest Surface Water Feature(s)	Victoria Creek lies at the southern boundary of the site. Victoria Creek flows into Burrangong Creek, approximately 2km west of the site.
Anticipated Groundwater Flow Direction	Groundwater was inferred to flow to the south, towards Victoria Creek.

2.4 Site Walkover Inspection

EI staff inspected the site during intrusive investigations on 8-9 December 2020. The recorded observations are summarised below with a photographic log provided in **Appendix I**:

- The overall site was relatively level with an escarpment / steep drop at the rear southern part of the property, towards Victoria Creek
- The site consisted of two discrete portions, east and west, separated by a north-south easement running from Telegraph Road (**Figure 2**).
- The eastern portion consisted of a large paddock area and was former location of residential dwellings;
- The western portion consisted of a large factory/warehouse, a single residential dwelling immediately west of the factory/warehouse, gravel covered car parking area and stockpiled construction waste. The rear portion of the warehouse building(s) appears to have been built up / levelled, likely using soil materials from the lower lying areas at the south of the site.
- Adjacent east of the main factory/warehouse building was bare soil (former location of multiple residential dwellings) with traces of foreign materials observed on the soil surface (**Photograph 2, Appendix I**).
- During EI's inspection, the low-lying, portion of the site, south west of the factory/warehouse was occupied by abandoned car bodies disassembled automotive engines, stockpiles of scrap metal and construction waste (**Photographs 3** & **4, Appendix I**).
- **Note:** EI was informed by the client on 22 January 2021 that a substantial amount of rubbish and scrap metal etc. has been removed from the site since site inspection by EI. Two photographs were provided by the client (**Photographs 11 & 12, Appendix I**), it appears that the south west portion was cleared of any abandoned car bodies disassembled automotive engines and construction waste.
- The large warehouse building with metal clad (zinc coated steel) walls and roof and concrete flooring. The concrete slab(s) were observed to be in good / new condition with no apparent cracking. Adjacent south of the warehouse stood a two level, shipping container style, office block (**Photograph 5, Appendix I**).
- Multiple, large oil drums (200L) were observed in the rear of the main warehouse building and in the southern portion of the site. No visual evidence of leaking was observed (**Photograph 6, Appendix I**).
- The eastern side of the warehouse building was used for the storage of paints and painting of metal products, with an enclosed spraying booth adjacent the southern access door. All paints were stored on pallets above a concrete slab observed in good / new condition with no obvious cracks observed. No significant spills or leaks of paints and solvents were observed (**Photograph 7** & **8, Appendix I**).

- A single fuel pump was observed adjacent to the north-eastern roller door of the main warehouse building, with associate fill / dip points. Staining was observed on the compacted soil surface adjacent to the fuel pump. An approximate mark-up of the underground petroleum storage system (UPSS) footprint was provided by the onsite service locator. Anecdotal information provided by an employee of Apollo Fabrication Group, indicated that two underground storage tanks (USTs) were present comprising volumes of 10,000L and 500L respectively (**Photograph 9, Appendix I**), though the observed underground petroleum storage system (UPPS) infrastructure was associated with a single UST. The UST/bowser was used to fuel onsite mobile equipment.

3. Previous Investigations

EI is unaware of any previous environmental investigations having been conducted at the subject site.

4. Site History and Searches

4.1 Lotsearch Report and Historical Aerial Review

An environmental risk and planning report for the site was received from Lotsearch Pty Ltd. This report, Lotsearch Reference LS016732 EP (dated 10 Dec 2020), is presented in full in **Appendix J**. It included historical business directories (covering the period 1950-1991) and searches of various environmental resources and plans archived by statutory authorities. A summary of the relevant (historical) information follows.

4.1.1 Historical Business Directories

Based on the available historical business Directories record from Lotsearch Report LS016732 EP (**Appendix J**), there is no available record subject to the site and any property within a radius of 150m of the site. However, there are several records related to Telegraph Road, summarized in **Table 4-1**.

Table 4-1 Summary of local Business Activity along Telegraph Rd (outside of subject site)

Business Activity	Premise	Year
Lawn Mower Sales & Service	Hamlyn J. Engineering; Telegraph Road, Young NSW	1991
Bricklayers	Johnson C.C; Telegraph Road, Young NSW	1991
Mixed Business	Dawe, J. L; Telegraph Road, Young NSW	1982
Motor Garage & Engineers & Service Station	Dawe, J. L; Telegraph Road, Young NSW	1982
Bricklayers	Johnson C.C; Telegraph Road, Young NSW	1982
Mixed Business	Dawe, J. L; Telegraph Road, Young NSW	1970
Motor Service Station – Petrol, Oil	Dawe, J. L; Telegraph Road, Young NSW	1970
Bricklayers	Johnson, S. G; Telegraph Road, Young NSW	1970
Carriers & Cartage Contractors	Miller, R. J; Telegraph Road, Young NSW	1970

Table 4-1 summarises local business activities for the street identified as Telegraph Road and not specifically the subject site. A review of the available historical aerial photographs indicated that any commercial activities having taken place on Telegraph Road have occurred outside of a 150m radius of the subject site.

The historical aerial photographs reviewed as part of this Detailed Site Investigation were the following:

- NSW Aerials 2018, 2013, 2006, 1997, 1994, 1989, 1985, 1978, 1969 and 1944 (Source from Lotsearch Reference LS016732 EP, dated 10 Dec 2020)

A summary of the information these aerial photographs is provided in **Table 4-2.**

Table 4-2 Summary of Aerial Photograph History

Aerial Photograph	Site description based on historical aerial photographs	Land use
1944	The site appears mostly cleared with sparse tree coverage and two, low density residential dwellings. Majority of site appears agricultural in land-use. Surrounding land appears agricultural in use with a commercial / recreational horse racing track approximately 200m north of the subject site.	Residential / agricultural
1969	The subject site and surrounding land appears relatively unchanged from previous image. Three residential dwellings have been erected immediately east of the site.	Residential / agricultural
1978	The subject site and surrounding land appears relatively unchanged from previous image. Access road / driveway on western portion of site appears to have been paved. Discolouration / stress on vegetation apparent in the eastern portion of the site and in the low-lying area about the creek to the south of the site. Approximately six residential dwellings erected approximately 500m south-east of the site.	Residential / agricultural
1985	The western portion of the site appeared to be developed, grass has been cleared and two warehouse buildings have been erected. Discolouration / stress on vegetation no longer apparent on eastern / southern portion of the site. Two shed buildings erected in the vicinity of the Creek, south of the site.	Residential / agricultural / commercial
1989	Surrounding land and eastern portion of the site appear relatively unchanged from previous image. Commercial development continued on the western portion of the site. Soil clearing has continued and potential hardstand driveway area surrounding warehouse buildings (difficult to determine from the quality of the image).	Residential / agricultural / commercial
1994	Eastern portion of the site remains relatively unchanged. Exposed soils apparent across all of western portion of the site. Low density residential development continued along the road approximately 500m south of the site; and approximately 400m north-east of the site.	Residential / agricultural / commercial
1997	The western most warehouse buildings has been demolished and replace with a larger warehouse building in the western portion of the site. Large number of shipping containers, cars, trucks and trailers are scattered about the eastern portion of the site. The eastern portion of the site and surrounding land appear relatively unchanged.	Residential / agricultural / commercial
2006	Layout of the site appears unchanged, aggregate / gravels have been placed over exposed soils in the western portion of the site. Some of the shipping containers / trucks have been removed.	Residential / agricultural / commercial

Aerial Photograph	Site description based on historical aerial photographs	Land use
	Residential development continued in the area south of the site.	
2013	Concrete hardstand has been constructed in the area surrounding the warehouse buildings in the western portion of the site. The configuration of the warehouse buildings appear unchanged from previous image. Surrounding land appears relatively unchanged from previous image.	Residential / agricultural / commercial
2018	The warehouse buildings have been altered, with a large roof / building encapsulating all previous warehouse buildings. The industrial structures appear in their present day configuration. Eastern portion of the site appears relatively unchanged from previous image. Surrounding land appears relatively unchanged from previous image.	Residential / agricultural / commercial

In summary, review of historic aerial photography indicated that the site has been residential / agricultural since at least 1944 to date; with the western portion of the site developed into commercial / industrial from approximately 1985. The warehouse buildings constructed in 1985 was upgraded / replaced twice, with construction of the current warehouse configuration completed after 2013.

4.2 Council Information

An informal information request to access council information was submitted to Hilltop Council on 12 December 2020. EI was informed by customer service officer from Hilltop council on 17 Dec 2020 that a formal information request needs to be sent due to the scope of search. A formal information request was then sent to council on 11 January 2021. No information had been received at the time of this report. Should any information come to light that may alter the outcome of this report, the report will be amended accordingly.

4.3 EPA Online Records

4.3.1 Contaminated Land – Record of Notices under Section 58 of CLM Act (1997)

An on-line search of the contaminated land public record of EPA Notices was conducted 17 December 2020. The contaminated land public record is a searchable database of:

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

The contaminated land record search found:

- A total of four clean up notices and one Penalty notice was identified for the township of Young, however the registered address for each of the infringements were greater than 1km from the subject site. The clean up notices were not considered to be of concern for site management.

4.3.2 List of NSW contaminated sites notified to EPA

A search through the List of NSW Contaminated Sites notified to the EPA under Section 60 of the CLM Act 1997 was conducted on 17 December 2020. This list is maintained by NSW EPA and includes properties on which contamination has been identified. Not all notified land is deemed to be impacted significantly enough to warrant regulation by the NSW EPA.

The search did not identify any notified properties within 500 m of the site.

4.3.3 POEO Public Register

A search of the Protection of the Environment Operations (POEO) Act public register was conducted on 4 December 2020. The public register contains records relating to environmental protection licences, applications, notices, audits, pollution studies, and waste reduction programmes. The search POEO register identified a total of 20 licences issued within the township of Young.

- One POEO licence was identified in close proximity to the subject site. The licence is held by Ambos Pty Ltd (trading as Ambos Stockfeeds), located at 90 Telegraph Road, Young. The licence was issued on 17 December 2002 and pertains to 'general agricultural processing'. The licence has undergone a total of four variations and is classed by the NSW EPA as *Environmental Risk Level 1* which is considered "Low risk and a good environmental performer".

4.4 PFAS Assessment

4.4.1 Preliminary PFAS Screen

EPA (2017) requires that (per- and poly-fluoroalkyl substances) PFAS are considered when investigating land contamination. The probability of PFAS occurrence, which was based on considerations outlined in the *PFAS National Environmental Management Plan* (NEMP 2020), as well as the EnRisk (2016) decision tree, is reviewed in **Table 4-3.** In this instance, the potential for PFAS to be present on-site was low and subsequently PFAS sampling / analysis of soil and water was unwarranted.

Table 4-3 PFAS Decision Tree

Preliminary Screening	Probability of Occurrence[1]
Has an activity listed in NEMP (2020) [2] as being associated with PFAS contamination occurred on-site? If so, list activity.	L
Has an activity listed in NEMP (2020) [2] as being associated with PFAS contamination occurred up-gradient or adjacent to the site? If so, list activity.	L
Did fire training involving the use of suppressants occur on-site between 1970 and 2010?	L
Did fire training occur up-gradient or adjacent to the site between 1970 and 2010? [3]	L
Have "fuel" fires ever occurred on-site between 1970 and 2010? (e.g. ignition of fuel (solvent, petrol, diesel, kero) tanks?)	L
Have PFAS been used in manufacturing or stored on-site? [4]	L

Preliminary Screening	Probability of Occurrence[1]
Could PFAS have been imported to the site in fill materials from a site with an activity listed in NEMP (2020)?	L
Could PFAS-contaminated groundwater or run-off have migrated on to the site?	L
Is the site or adjacent sites listed in the NSW EPA PFAS Investigation Program? [5]	L
PFAS Screen Assessment Finding:	
If the probability is medium or high for any of the above questions, does the site analytical suite need to be optimised to include preliminary sampling and testing for PFAS in soil (incl. ASLP testing) and waters?	NO

Notes:

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

Given that the manufacturing / industrial processes taking place on the site involve cutting / welding and painting of architectural steal and do not include items or activities listed in Appendix B of the NEMP (2020); the suite of analysis does not require modification to include PFAS.

4.4.2 Emerging Chemicals

The EPA uses Chemical Control Orders (CCOs) as a primary legislative tool under the Environmentally Hazardous Chemicals Act 1985 (EHC Act) to specifically control chemicals of concern and limit their potential impact on the environment. CCOs provide the EPA a rapid and flexible mechanism for responding to emerging chemical issues.

As with PFAS compounds, EI considered chemicals controlled by Chemical Control Orders (CCOs) and other potential emerging chemicals in this PSI, as outlined in **Table 4-4**.

Table 4-4 Emerging or Controlled Chemicals

Chemicals of Concern (CCO or emerging)	Finding
Were aluminium smelter wastes used or stored on site (CCO, 1986)?	No
Do dioxin contaminated wastes (CCO, 1986) have the potential to impact the site? [1]	No
Were organotin products (CCO, 1989) used or stored on site? [2]	No
Were polychlorinated biphenyls (PCBs) used or PCB wastes (CCO, 1997) stored on-site? [3]	Possible *(waste oil drums observed onsite)*
Were scheduled chemical or wastes (CCO, 2004) used or stored [4]	Possible *(associated with steel fabrication)*
Are other emerging chemicals suspected? [5]	No
If a 'Yes' applies to any question above, the site sampling suite should be optimised to include specific sampling for	The suite of analysis includes contaminants associated with the above processes

Chemicals of Concern (CCO or emerging)	Finding
the corresponding chemicals of concern in soil, air and water	including, but not limited to, PCBs, heavy metals and pesticides (OCP / OPP)

Note 1 From burning of certain chemicals, smelting or chemical manufacturing or fire on or near the site.
Note 2 From anti-fouling paints used or removed at boat and ship yards and marinas.
Note 3 From older transformer oils and electrical capacitors.
Note 4 Twenty-four mostly organochlorine pesticides and industrial by-products.
Note 5 Other chemicals considered as 'emerging' e.g. 1,4 dioxane (associated with some chlorinated VOCs).

5. Conceptual Site Model

In accordance with NEPC (2013) *Schedule B2 – Guideline on Site Characterisation*, EI developed a conceptual site model (CSM) assessing plausible pollutant linkages between potential contamination sources, migration pathways and receptors. The CSM provides a framework for the review of the reliability and useability of the data collected and to identify data gaps in the existing site characterisation.

5.1 Contamination Sources

Base on the history review and inspection, the primary contaminant sources at the site are outlined in **Table 5-1**.

Table 5-1 Contaminant Sources

Contaminant Source	Potential Impacts
Surface filling (expected beneath slabs and building)	A wide range of potential inorganic and organic chemicals, including asbestos.
Site wide use of pesticides	Potential residual impacts from historic use of pesticides.
Contamination from on-site sources	Potential groundwater and soil contamination from historic use as industrial land (vehicle / plant movement; storage of paints, solvents and oils; leaking of UPSS; storage of construction waste, scrap metal and abandoned cars; manufacturing processes; pesticide / herbicide use) including: heavy metals (HM), total recoverable hydrocarbons (TRH), the monocyclic aromatic hydrocarbon compounds benzene, toluene, ethyl-benzene and xylenes plus the semi-volatile PAH naphthalene (BTEXN), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAH), organophosphate pesticides (OPPs) / organochlorine pesticides (OCPs) and asbestos-containing materials (ACM).
Contamination from off-site sources	Potential groundwater contamination from spills / leaks associated with the use and storage of industrial chemicals; including metals, TRH, BTEX and PAH.

5.2 Potential Contaminants

Chemicals of potential concern (COPC) at the site, along with the potential media impacts, are outlined in **Table 5-2**. For definitions and abbreviations see glossary of abbreviations at the end of this report.

Table 5-2 Potential Contaminants and Impacted Media

Contaminant (COPC)	Soil Impacts	Air Quality Impacts	Groundwater Impacts
Priority metals (As, Cd, Cr, Cu, Hg, Ni, Pb, and Zn)	M	L	M
Total recoverable hydrocarbons (TRH)	M	L	M
VOCs, including chlorinated volatile organic compounds (cVOC) and BTEXN	M	L	M
PAHs , Carcinogenic PAHs (as B(a)P TEQ)	M	L	L

Contaminant (COPC)	Soil Impacts	Air Quality Impacts	Groundwater Impacts
Phenols	M	L	M
OCPs and OPPs	L	L	L
Polychlorinated biphenyls (PCB)	M	L	L
Asbestos	M	L	N/A
LNAPL or DNAPL	M	N/A	M
PFAS	L	L	L
Other COPCs	L	L	L

Notes:
L – low risk; M – medium/moderate risk; H – high risk
N/A – not applicable

Potential contamination sources, exposure pathways and potential human and environmental receptors that were considered relevant for this DSI are summarised in **Table 5-3**.

5.3 Data Gaps

Groundwater conditions have not been assessed within the subject site however based on the findings of the CSM, the risk of impacts to groundwater is considered low and acceptable.

Table 5-3 Conceptual Site Model

Contamination Source	Impacted Media	Contaminants of Potential Concern	Transport Mechanism	Exposure Pathway	Potential Receptor
Fill soils of unknown origin. Historic pesticide application during former agricultural use. Industrial processes including storage of paints, solvents and / or oils. Leaking of UPSS. Storage of wrecked cars and scrap metal/construction waste.	Soil	Metals, Petroleum Hydrocarbons (TRH F1 to F4), PAH, OCP/OPP, PCB, BTEXN, asbestos	Disturbance of surficial and subsurface soils during site redevelopment, future site maintenance and future use of the site post redevelopment.	Ingestion Dermal contact Inhalation of dust particulates	Construction and maintenance workers Users of the site post redevelopment
			Atmospheric dispersion from soil to outdoor and indoor air spaces.	Inhalation dust particulates	
		TRH-F1 and TRH-F2, VOCs including BTEXN	Volatilisation of contamination from soil and diffusion to indoor air spaces.	Inhalation of vapours from impacted soil	
	Groundwater	HMs, TRH, VOCs including BTEXN and PAHs	Interception of water table during excavation or piling. Volatilisation of contamination from groundwater to indoor or outdoor air spaces.	Dermal contact; Ingestion; Inhalation of vapours	Construction workers and future site occupants
			Migration of dissolved phase impacts in groundwater.	Biota uptake	Aquatic ecosystems – habitat associated with Victoria Creek immediately south of the site.

6. Sample, Analysis & Quality Plan (SAQP)

The SAQP ensures that the data collected during the investigations, is representative and provides a robust basis for site assessment decisions. The SAQP for this DSI included the following:

- Data quality objectives, including a summary of the objectives of the ASI;
- Investigation methodology, including a description of intended sampling points, the media to be sampled and details of COPCs to be analysed;
- Sampling procedures;
- Field screening methods;
- Analysis Methods;
- Sample handling, preservation and storage; and
- Analytical QA/QC.

6.1 Data Quality Objective (DQO)

In accordance with the US EPA (2006) *Data Quality Assessment* and the EPA (2017) *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme*, the process of developing Data Quality Objectives (DQO) was used by the EI assessment team to determine the appropriate level of data quality needed for the specific data requirements of the project. The DQO process that was applied for this DSI is documented in **Table 6-1**.

Table 6-1 Summary of Project Data Quality Objectives

DQO Steps	Details
1. State the Problem Summarise the contamination problem that will require new environmental data, and identify the resources available to resolve the problem; develop a conceptual site model	Characterisation of the site is required as part of a Development Application (DA) to Hilltop Council. Historical information and site inspection identified the potential for contamination to be present in site soil, contributed by various potential sources listed in **Section 5.1**. In light of the information derived from the available site history information and site observations, a conceptual site model was developed (**Section 5**). The western portion of the site was primarily residential / agricultural from at least 1944 until approximately 1985 when two commercial / industrial warehouses were constructed; this portion of the site has remained predominantly commercial / industrial until present day. The eastern portion comprised residential / agricultural use from at least 1944 until present day. The proposed development is the construction of at least three new workshop buildings, one new office building with adjacent car parking on grade, two new commercial buildings of undetermined use and addition / modification to the south-western portion of the existing warehouse building. The proposed development is equivalent to a generic NEPC (2013) land use setting of commercial/industrial.
2. Identify the Goal of the Study (Identify the decisions) Identify the decisions that need to be made on the contamination problem and the new environmental data required to make them	Based on the objectives outlined in **Section 1.4** the decisions that need to be made are: ▪ Has the nature, extent and source of any soil, vapour and/or groundwater impacts onsite been defined? ▪ What impact do the site specific, geologic and hydrogeological conditions have on the fate and transport of any impacts that may be identified? ▪ Do the levels of impact warrant further investigation, to enable the vertical and lateral extent of contamination to be delineated, and the risks to identified potential human and/or environmental receptors to be evaluated? ▪ Does the collected data provide sufficient information to allow the selection and design of an appropriate remedial strategy, if necessary?

DQO Steps	Details
3. Identify Information Inputs (Identify inputs to decision) Identify the information needed to support any decision and specify which inputs require new environmental measurements	Inputs to the decision making process include: ▪ The proposed future land uses (and development concept, if available); ▪ Available site historical information; ▪ Previous investigations; ▪ Any areas of environmental concern, identified during the site inspection prior to intrusive investigations; ▪ National and NSW EPA guidelines endorsed under the *Contaminated Land Management Act 1997*; ▪ Soil and groundwater sampling and laboratory analysis for COPCs to verify the presence of onsite contamination and to evaluate the risks to potential sensitive receptors; and ▪ At the end of the investigation, a decision must be made regarding whether the soils and/or groundwater are suitable for the proposed development, or if additional investigation or remedial works are required to make the site suitable for the proposed use.
4. Define the Boundaries of the Study Specify the spatial and temporal aspects of the environmental media that the data must represent to support decision	Lateral – The boundaries of the study are defined as the sites cadastral boundaries. Vertical – From the existing ground level, fill and natural soils, and to (and including) underlying water-bearing zones. Temporal – Results are valid on the day of data and sample collection and remain valid as long as no changes occur on site or contamination (if present) does not migrate on site or on to the site from off-site sources.
5. Develop the Analytic Approach (Develop a decision rule) To define the parameter of interest, specify the action level, and integrate previous DQO outputs into a single statement that describes a logical basis for choosing from alternative actions	The decision rules for the investigation were: ▪ What are the characteristics of soil at the site? *Soil boreholes will be advanced to natural, sampled and logged to characterise underlying conditions.* ▪ What are the characteristics of groundwater at the site? *The potential risk to groundwater by onsite potential contaminant sources was considered low. Furthermore, based on the COPCs and potential pathways, the risk of contaminants associated with groundwater, to future site occupants is considered low.* ▪ Is the site contaminated by historic land use? *Soil samples will be analysed for COPCs, with the data compared to relevant screening criteria.* ▪ Is the site suitable for the proposed land use? *If the concentrations of contaminants in the soil are below the relevant human health-based and ecological criteria for the intended land use, then the site will be deemed suitable for the proposed development.*

DQO Steps	Details
6. **Specify Performance or Acceptance Criteria (Specify limits on decision errors)** Specify the decision-maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data	Specific limits for this project are to be in accordance with NEPC (2013), appropriate data quality indicators (DQIs) for assessing the useability of the data and EI standard procedures for field sampling and handling. To assess the useability of the data, pre-determined DQIs for completeness, comparability, representativeness, precision and accuracy were adopted, as presented below in **Table 6-2**. If any of the DQIs are not met, further assessment will be necessary to determine whether the non-conformance will significantly affect the useability of the data. Corrective actions may include requesting further information from samplers and/or analytical laboratories, downgrading of the quality of the data or alternatively, re-collection of samples.
7. Develop the Detailed Plan for Obtaining Data (Optimise the design for obtaining data) Identify the most resource-effective sampling and analysis design for general data that are expected to satisfy the DQOs	Site history indicates the potential for contamination to exist. To achieve the decision rules, the intrusive investigation included: ▪ Sampling of locations in a grid-based pattern across accessible parts of the site. ▪ An upper soil profile sample will be collected at each borehole location and tested for contaminants of potential concern, to assess the conditions of the fill / top soil layer, and impacts from agricultural activities. Further sampling would also be carried out at deeper soil layers. Samples will be selected based on field observations (including visual and olfactory evidence, as well as soil vapour screening in headspace samples) with consideration of subsurface stratigraphy. ▪ Review of the results will be undertaken to determine if further intrusive investigation (i.e. additional sampling) is warranted for the delineation of site contamination.

6.2 Data Quality Indicators

To ensure that the investigation data were of an acceptable quality, they were assessed against the data quality indicators (DQI) outlined in **Table 6-2**, which related to both field and laboratory-based procedures. The assessment of data quality is discussed in **Appendix H**.

Table 6-2 Data Quality Indicators

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

7. Assessment Methodology

7.1 Sampling Rationale

With reference to the CSM described in **Section 5**, soil investigation works were planned in accordance with the following rationale:

- Sampling fill and natural soils from 23 test-bore locations, distributed in a generally systematic pattern in accessible areas of the site. Though some locations were placed to target identified areas of concern:
  - Sample locations BH111-BH115 were targeted near stockpiles of scrap metal and abandoned vehicles,
  - Location BH123 was placed as close as practical (approx. 0.2 m) to the inferred location of the UST. Location BH101) was approximately 12m downgradient south of the UST.
  - Locations BH102-BH110 were placed in the eastern section within the footprint of former residential areas and the broader rural use area.
- The sample location density was approximately half that recommended for in EPA (1995) Sampling Design Guidelines for a 3.4 ha site. The sample location density was higher in the western portion where the factory/warehouse was located and there was a history of commercial/industrial use. The sampling density was considered satisfactory with respect to site history and proposed commercial/industrial use; and
- Laboratory analysis of representative soil samples for the identified contaminants of potential concern (COPC).

7.2 Investigation Constraints

All test bores drilled during the investigation phase achieved the planned scope described in **Section 1.5**.

7.3 Assessment Criteria

The assessment criteria proposed for this project are outlined in **Table 7-1**. These were selected from available published guidelines that are endorsed by national and/or state regulatory authorities, with due consideration of the exposure scenario that is expected for various parts of the site, the likely exposure pathways and the identified potential receptors.

Table 7-1 Adopted Investigation Levels for Soil and Groundwater

Environmental Media	Adopted Guidelines	Rationale
Soil	NEPC (2013) Soil HILs, HSLs, EILs / ESLs and Management Limits for TRHs	**Soil Health-based Investigation Levels (HILs)** Site-wide soils: NEPC (2013) Schedule B1, HIL-D for Commercial / Industrial site. **Soil Health-based Screening Levels (HSLs)** Site-wide basement footprint: NEPC (2013) Schedule B1, HSL-D for Commercial / Industrial site.

	Asbestos HSLs The NEPC (2013) HSLs (WADoH (2009)) for asbestos were referred to, noting that soil samples were screened for asbestos on a presence/absence basis. **Ecological Investigation / Screening Levels (EILs / ESLs)** Setback / Landscaping areas: NEPC (2013) Schedule B(5)c, Soil quality guidelines for arsenic, chromium III, copper, DDT, lead, naphthalene, nickel and zinc. The derived EIL criteria were based on the addition of the most conservative Added Contaminant Limit (ACL) and the Ambient Background Concentration (ACL) for aged soils. For selected petroleum hydrocarbons and TRH fractions, the NEPC (2013) ESLs for protection of terrestrial ecosystems on residential sites were adopted. The EIL for benzo(a)pyrene was sourced from CRC Care (2017) Technical Report No. 39 *Risk-based management and remediation guidance for benzo(a)pyrene .* EIL and ESLs apply to the top 2m of soil (the root zone). **Management Limits for Petroleum Hydrocarbons** Where the HSLs and ESLs for petroleum hydrocarbons were exceeded, samples were also assessed against the NEPC (2013) *Management Limits* for the TRH fractions F1 – F4, to assess propensity for phase-separated hydrocarbons (PSH), fire and explosive hazards and adverse effects on buried infrastructure.

For the purposes of this investigation, the adopted soil assessment criteria are referred to as the Soil Investigation Levels (SILs). SILs are presented alongside the analytical results in the corresponding summary tables, which are discussed in **Section 9**.

7.4 Soil Investigation

The soil investigation works conducted at the site are described in **Table 7-2**. Test bore locations are illustrated in **Figure 2**.

Table 7-2 Summary of Soil Investigation Methodology

Activity/Item	Details
Fieldwork	The borehole drilling works were conducted on 8-9 December 2020. All test bores were able to be completed to the target depth or refusal within the natural soil profile.
Drilling Method	All test bores were advanced using a ute-mounted, mechanical solid flight auger drilling rig to a maximum depth of 4.0 mBGL.
Soil Logging	Soil types encountered during drilling were classified in the field for lithological characteristics and evaluated on a qualitative basis for odour and visual signs of contamination. Soil classifications and descriptions were based on Australian Standard (AS) 1726:2017. Bore logs are presented in **Appendix C**.

Activity/Item	Details
Field Observations (including visual and olfactory signs of potential contamination)	A summary of field observations is provided, as follows: ▪ Top soil occurred from approximately 0.0 - 0.6 mBGL; ▪ Localised fill occurred from approximately 0.0 - 0.9; ▪ Reworked natural soils / fill occurred from approximately 0.0 - 0.3; ▪ Natural alluvial Gravelly SAND occurred from approximately 0.2 – 2.7+ mBGL; ▪ Natural residual Silty CLAY occurred from approximately 0.5 - 1.1+ mBGL. ▪ No water seepage was observed during drilling (maximum depth 4 m BGL)
Soil Sampling	▪ Samples were collected by dry grab method (unused, dedicated nitrile gloves) and placed into laboratory-supplied, acid-washed, solvent-rinsed glass jars ▪ For each sample, a small aliquot was placed into a zip-lock bag for in-field screening of VOCs using a portable Photo-ionisation Detector (PID). ▪ For each fill sample, an aliquot was placed in a zip-lock bag for asbestos analysis.
Management of Soil Cuttings	Soil cuttings were used as backfill for completed boreholes.
Decontamination Procedures	Dedicated gloves were used for the collection of each sample. Sampling equipment (i.e. trowel and shovel) was decontaminated between uses by washing in a solution of potable water and Decon 90, and then rinsed with potable water.
Sample Preservation and Transport	Samples were stored in a refrigerated (ice-filled) chest, whilst on-site and in transit to the laboratory (SGS Australia (SGS). All samples were transported under strict Chain-of-Custody (COC) conditions and COC certificates and laboratory sample receipt documentation were provided to EI for confirmation purposes (**Appendix E**).
Quality Control and Laboratory Analysis	Soil samples were analysed by SGS for the identified COPCs. QA/QC testing comprised a rinsate blank, trip spike / blank samples and intra-laboratory (blind field) duplicates tested by SGS, as well as an inter-laboratory (split field) duplicate tested by Envirolab (secondary laboratory). All corresponding laboratory analytical reports are presented in **Appendix F**.

8. Data Quality Assessment

The assessment of data quality is defined as the scientific and statistical evaluation of environmental data to determine if they meet the objectives of the project (US EPA, 2006). Data quality assessment includes an evaluation of the compliance of the field sampling and laboratory analytical procedures and an assessment of the accuracy and precision of these data from the laboratory quality control measurements.

The data quality assessment for this DSI included a review of analytical procedures to confirm compliance with established laboratory protocols and an evaluation of the accuracy and precision of the analytical data from a range of quality control measurements, as summarised in **Table 8-1**.

Table 8-1 Quality Control Process

Data Quality	Control	Conformance [Yes, Part, No]	Report Sections
Preliminaries	Data Quality Objectives established	Yes	See DQO/DQI
Field work	Suitable documentation of fieldwork observations including borehole logs, sample register, field notes, calibration forms	Yes	See Appendices C / D
Sampling Plan	Use of relevant and appropriate sampling plan (density, type, and location)	Yes	See **Section 7.2.**
	All media sampled and duplicates collected	Yes	Soil vapour not required
	Use of approved and appropriate sampling methods (soil, groundwater, air quality)	Yes	See methodology
	Selection of soil samples according to field PID readings (where VOCs are present)	Yes	See methodology
	Preservation and storage of samples upon collection and during transport to the laboratory	Yes	See methodology
	Appropriate Rinsate, Field and Trip Blanks taken	Yes	See methodology
	Completed field and analytical laboratory sample COC procedures and documentation	Yes	See laboratory reports
Laboratory	Sample holding times within acceptable limits	Yes	See laboratory QA
	Use of appropriate analytical procedures and NATA-accredited laboratories	Yes	See laboratory report
	LOR/PQL low enough to meet adopted criteria	Yes	See laboratory appendix
	Laboratory blanks	Yes	See laboratory QA/QC

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

The findings of the data quality assessment are discussed in detail in **Appendix H**. QA/QC policies and DQOs are presented in **Appendix G**.

On the basis of the analytical data validation procedure employed, the overall quality of the soil and groundwater analytical data produced for the site were considered to be of an acceptable standard for interpretive use.

9. Results

9.1 Soil Field Results

9.1.1 Subsurface Conditions

The general site lithology encountered during the drilling of the boreholes was observed as a shallow layer of top soil and localised fill, overlying natural sandy clay, silty clay and sandy silt, then sand. No water seepage was observed. More detailed description is summarised in **Table 9-1** and borehole logs from the works are presented in **Appendix C**.

Table 9-1 Generalised Subsurface Profile

Layer	Description	Approx. depth to top & bottom of layer (mBGL)
Fill / Topsoil	Clayey SAND (SC): coarse grained, angular, poorly graded, dark brown with trace fine grained, angular gravels, moist, no odour.	0.0-0.5
	SILT (ML): low plasticity, light brown with trace sub-angular gravels, dry, no odour.	0.0-0.6
Re-worked Natural / Fill	Gravelly SAND (SP): coarse grained, angular, poorly graded, dark red, dry, no odour.	0.0-0.3
Natural	Sandy CLAY (CL): low plasticity, dark red, with trace fine grained, sub-angular gravels moist, no odour	0.1-0.9+
	Silty CLAY (CL): medium to low plasticity, brown, with some fine grained, sub-angular sand and trace angular gravels, moisture < plasticity limit, no odour.	0.5-1.1+
	Sandy SILT (ML): low plasticity, light brown, with sub-angular sand, dry, no odour.	0.4-1.3+
	Gravelly SAND (SP): coarse grained, angular, poorly graded, dark orange, with sub-rounded gravels, moist, no odour.	1.8+
Bedrock	Not encountered+	-

Notes:
+ Termination depth of borehole

9.1.2 General Observations

Soil samples were obtained from the test bores at various depths ranging between 0.0-2.0 mBGL. All examined soil samples were evaluated on a qualitative basis for odour and visual

signs of contamination (e.g. hydrocarbon odours, oil staining, petrochemical filming, asbestos fragments, ash, and charcoal).

The following observations were made in the subsurface during soil sampling:

- No odour or staining or other evidence of chemical contamination was observed in soil samples
- No foreign materials were observed.
- There was no evidence of asbestos containing material (ACM).

9.2 Laboratory Analytical Results

9.2.1 Soil Analytical Results

A summary of the laboratory analytical results for the tested soil samples is presented in **Table 9-2**. A more detailed tabulation with concentrations for individual samples alongside the adopted SILs is presented in **Table B.1** in **Appendix B**.

Table 9-2 Summary of Soil Analytical Results

No. of primary samples	Analyte	Min. Conc. (mg/kg)	Max. Conc. (mg/kg)	Sample locations exceeding investigation levels
Hydrocarbons				
31	F1	<25	<25	None
31	F2	<25	39	None
31	F3	<90	1900	**ESLs BH120_0.2**
31	F4	<120	480	None
31	Benzene	<0.1	<0.1	None
31	Toluene	<0.1	<0.1	None
31	Ethyl benzene	<0.1	<0.1	None
31	Total xylenes	<0.3	<0.3	None
PAHs				
31	Carcinogenic PAHs (as B(α)p TEQ)	<0.3	<0.3	None
31	Total PAH	<0.8	<0.8	None
31	Naphthalene	<0.1	3.6	None
OCPs				
24	Total OCPs	<1	<1	None
OPPs				
24	Total OPPs	<1.7	<1.7	None
PCBs				
24	Total PCBs	<1	<1	None
Metals				
31	Arsenic	1	9	None
31	Cadmium	<0.3	<0.3	None
31	Chromium	9.9	35	None
31	Copper	4	67	None

No. of primary samples	Analyte	Min. Conc. (mg/kg)	Max. Conc. (mg/kg)	Sample locations exceeding investigation levels
31	Lead	9	84	None
31	Mercury	<0.05	0.16	None
31	Nickel	5.3	14	None
31	Zinc	8.9	630	**EILs BH114_0.2, BH120_0.2**
Asbestos				
24	Asbestos	Not detected	Not detected	None

Human Health Assessment Criteria

All analytes were below the applicable human health assessment criteria. Asbestos was not detected in any of the soil samples analysed.

Ecological Assessment Criteria

Two samples (BH114_0.2 & BH120_0.2) were found to exceed the site specific EILs for the concentration of zinc.

One sample (BH120_2.0) was found to exceed the site specific ESLs for the concentration of TRH-F3.

10. Site Characterisation

10.1 Soil Characterisation

The site consisted of two discrete sections separated by a north-south easement running from Telegraph Road (**Figure 3**):

- The eastern portion consisted of a large paddock area and former location of residential dwellings;
- The western portion consisted of a large factory/warehouse, a single residential dwelling, gravel covered car parking area and stockpiled construction waste.

The majority of the site lies at a similar height and topography to that of Telegraph Road, which runs along the northern perimeter of the site. The regolith in the topographical higher sections of the site is characterised by residual clays with traces of alluvial gravels attributed to the local flood zone. The topographical lower points, in the south of the site, are comprised of alluvial sands with gravels.

The eastern portion of the site comprised exposed soils in the former residential dwelling(s) footprints with traces of foreign materials in the form of demolition waste observed on the ground surface.

Elevated zinc results, above the site specific EILs, were reported for shallow fill / top soil samples collected from the south-western portion of the site. The zinc concentration in the underlying samples was low. The elevated zinc results are localised likely attributed to weathering of stockpiled scrap metal / construction waste or wrecked cars observed within these areas.

Petroleum hydrocarbons (TRH-F3, TRH-F4)were detected at relatively low concentration in fill soils and deeper soils immediately south of the warehouse building (BH120_2.0, BH121_0.2 & BH122_0.1). Sample BH120_2.0 exceeded the site specific ESLs, however the depth was 2 m BGL. Given that large drums of oil and wrecked cars were stored in the general vicinity of these sampling locations, the TRH results may be attributed to historical leakage of fuels / oils. Furthermore, anecdotal information provided by site occupants, coupled with site observations indicated that the area had been built-up and levelled for construction of ancillary buildings for the commercial site. It is likely that historic storage / use of plant in this is responsible for the presence of remnant petroleum hydrocarbons at depth. Given the depth and localised nature of petroleum hydrocarbon in soil (TRH-F3 at 2 m BGL), the ESL exceedance is not likely to pose an unacceptable risk to neither receptors of the proposed development nor any local ecological receptors.

Location BH123 situated adjacent to the UST did not report any petroleum hydrocarbons in shallow fill (0.1m BGL) or in deeper natural soil (0.6 m BGL). Indicating that the staining observed on the soil surface adjacent the bowser was localised and has not significantly penetrated the sub-surface.

All analytes were below the applicable human health assessment criteria for a commercial / industrial land use setting. The ecological risk from zinc at two shallow locations and petroleum hydrocarbons (TRH-F3) at one deeper location (2 m BGL) was low and acceptable.

10.2 Review of Conceptual Site Model

Based on investigation findings, the CSM discussed in **Section 5** was considered to appropriately identify contamination sources, migration mechanisms and exposure pathways, as well as potential

onsite and offsite receptors. Concentrations of contaminants were identified which indicated accuracy of the model, and adequate characterisation of the site.

The site walkover inspection identified a number of potential contamination sources in the form of commercial activities at the site; storage of construction materials, oil drums, paints and wrecked cars; underground storage tank (UST) and associated fuel bowser. With the exception of surficial oil staining adjacent the fuel bowser, the identified potential contamination sources do not appear to have grossly impacted the site.

Note: EI was informed by the client that a substantial amount of surface waste and scrap metal etc. has since been removed from the site since site inspection by EI (see Photographs 11 & and 12, **Appendix I**)

11. Conclusion

Mr. Caleb Jackson of Apollo Fabrication Group ('the Client') engaged EI Australia (EI) to conduct a Detailed Site Investigation for the property located at 2-20 Telegraph Road, Young NSW ('the site').This assessment was conducted to assess the nature and degree of any potential onsite contamination associated with current and former users of the property. The investigation will form part of a Development Application package to Hilltop Council for site redevelopment.

Based on the findings from this DSI it was concluded that:

- The site was occupied by agricultural land and residential dwellings from at least 1944. A commercial / industrial warehouse building(s) was erected on the western section of the site in approximately 1985 and was upgraded to the current warehouse/factory configuration which was established by 2018. The eastern section of the site continued to be used for rural residential purposes, however, the dwelling were demolished,
- The CSM identified the following potential sources of on-site contamination:
  - Fill soils of unknown origin and content;
  - Potential on-site use of pesticides across the agricultural portions of the site; Industrials processes in operation of the factory/warehouse including storage of paints, solvents and oils;
  - Oil leaks from equipment, abandoned vehicles and storage on-site;
  - Weathering of galvanised materials including car bodies and scrap metal; and
  - Fuel leakage from the UST on site.
- Analytical results for the representative soil samples collected from across the site were all below the adopted human health assessment criteria relevant for the proposed commercial / industrial development.
- Location BH123 situated adjacent to the UST did not report any petroleum hydrocarbons in shallow fill (0.1m BGL) or in deeper natural soil (0.6 m BGL). Indicating that the staining observed on the soil surface adjacent to the bowser was localised and has not significantly penetrated the sub-surface.
- Two samples (BH114_0.2 & BH120_0.2) collected from the south-western portion of the site, in the vicinity of the wrecked cars and stockpiled construction waste, were above the site specific ecological criterion for the concentration of zinc. The elevated zinc is attributed to the weathering of galvanised materials including car bodies and scrap metal. It is understood that the proposed development would involve the removal of all waste materials including the wrecked cars; therefore removing the source of contamination. It is also noted that the proposed development does not include landscape or setback areas and so the risk to future ecological receptors is considered low.
- Zinc exceeded site specific ecological criterion (EILs), in shallow fill / top soil samples collected from the south-western portion of the site (locations BH114, BH120). The zinc concentration in the deeper underlying samples was low. The elevated zinc results were shallow and localised, and likely attributed to weathering of stockpiled scrap metal / construction waste or wrecked cars observed within these areas.
- Petroleum hydrocarbons (TRH-F3, TRH-F4) fractions were detected at relatively low concentration in fill soils and deeper natural soils immediately south of the warehouse building

(BH120_2.0, BH121_0.2 & BH122_0.1), and sample BH120_2.0 exceeded the site specific ESLs, however the depth was 2 m BGL. Given that drums of oil and wrecked cars were stored in the general vicinity of these sampling locations, the TRH results may be attributed to historical leakage of fuels / oils. It is likely that historic storage / use of plant in this is responsible for the presence of remnant petroleum hydrocarbons at depth and is unlikely to present a risk.

- EI was informed by the client that a substantial amount of surface waste and scrap metal etc. has been removed from the site since site inspection by EI (see Photographs 11 & and 12, **Appendix I**).
- Zinc impact and petroleum hydrocarbon impact in soil were localised, and the sources on the ground surface had been removed. . , The ecological risk from zinc and petroleum hydrocarbon impact in soil was low and not unacceptable..

Based on the above findings and with due regard for the Statement of Limitations (**Section 13**), EI considers that the land is suitable for the proposed development which is equivalent to a land use setting of commercial/industrial. Recommendations provided in **Section 12** should be implemented to aid the proposed redevelopment.

12. Recommendations

Based on the findings of this DSI, the following recommendations should be implemented to ensuring the site is made suitable for the proposed development:

- The shallow soil materials in the vicinity of the fuel bowser, that has been impacted by surficial oil staining, should be classified in accordance with the NSW EPA (2014) *Waste Classification Guidelines*, and disposed of at an appropriately licenced waste receiving facility;
- Should it be desirable to (temporarily) store waste oil drums or construction waste on the site. These materials should be stored on a concrete hardstand with appropriate leak / spill protection measures in place.
- Any material being removed from the site as part of the proposed redevelopment, including surplus fill and potentially impacted soils, and virgin excavated natural materials (VENM), is required to undergo waste classification assessment to inform off-site disposal in accordance the NSW EPA (2014) *Waste Classification Guidelines*; and
- Any material being imported to the site should be assessed for potential contamination in accordance with NSW EPA Guidelines, as being suitable for the intended land use.

13. Statement of Limitations

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

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

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

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

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

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

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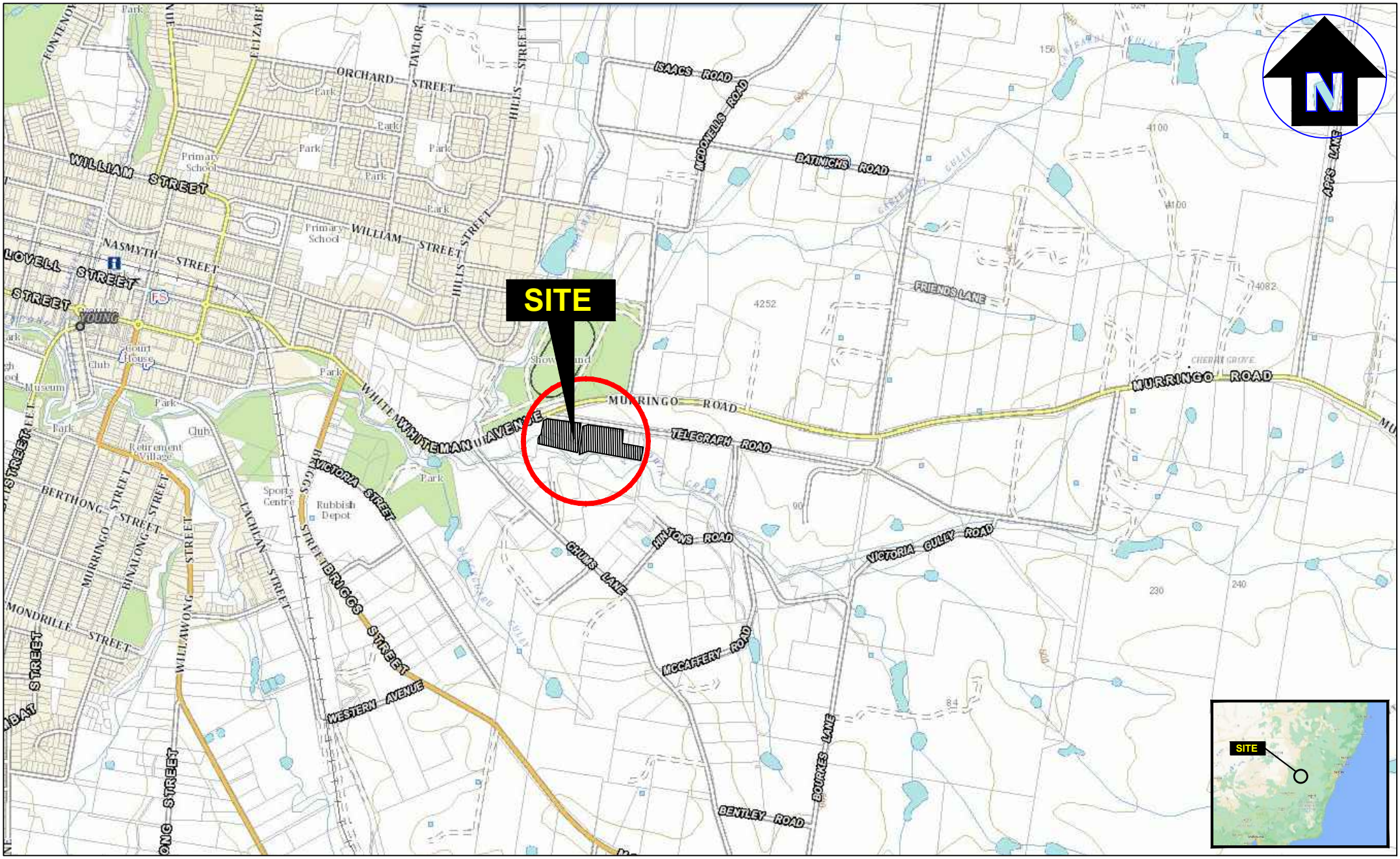
Abbreviations

ASS	Acid sulfate soils
B(a)P	Benzo(a)Pyrene (a PAH compound), - B(a)P TEQ Toxicity Equivalent Quotient
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
COC	Chain of Custody
CVOCs	Chlorinated Volatile Organic Compounds (a sub-set of the VOC analysis suite)
DEC	Department of Environment and Conservation, NSW (see OEH)
DECC	Department of Environment and Climate Change, NSW (see OEH)
DECCW	Department of Environment, Climate Change and Water, NSW (see OEH)
DA	Development Application
DP	Deposited Plan
EPA	Environment Protection Authority
F1	TRH C_6 – C_{10} less the sum of BTEX concentrations (Ref. NEPM 2013, Schedule B1)
F2	TRH >C_{10} – C_{16} less the concentration of naphthalene (Ref. NEPM 2013, Schedule B1)
GIL	Groundwater Investigation Level
GME	Groundwater Monitoring Event
HIL	Health-based Investigation Level
HSL	Health-based Screening Level
km	Kilometres
LNAPL	Light, non-aqueous phase liquid (also referred to as PSH)
DNAPL	Dense, non-aqueous phase liquid
EIL	Ecological Investigation Level
ESL	Ecological Screening Level
m	Metres
mAHD	Metres Australian Height Datum
mBGL	Metres Below Ground Level
mg/L	Milligrams per litre
µg/L	Micrograms per litre
mV	Millivolts
NATA	National Association of Testing Authorities, Australia
NEPC	National Environmental Protection Council
NSW	New South Wales
OEH	Office of Environment and Heritage, NSW (formerly DEC, DECC, DECCW)
PAHs	Polycyclic Aromatic Hydrocarbons
pH	Measure of the acidity or basicity of an aqueous solution
PSH	Phase-separated hydrocarbons (also referred to as LNAPL)
PQL	Practical Quantitation Limit (limit of detection for respective laboratory instruments)
QA/QC	Quality Assurance / Quality Control
SILs	Screening Investigations Levels
SRA	Sample receipt advice (document confirming laboratory receipt of samples)
SWL	Standing Water Level
TDS	Total dissolved solids (a measure of water salinity)
TPH	Total Petroleum Hydrocarbons (superseded term equivalent to TRH)
TRH	Total Recoverable Hydrocarbons (non-specific analysis of organic compounds)
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds (specific organic compounds which are volatile)

Appendix A - Figures



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Drawn:	L.C.
Approved:	-
Date:	08-12-20
Scale:	Not To Scale

Apollo Fabrication Group

Preliminary Site Investigation

2-20 Telegraph Rd, Young NSW

Site Locality Plan

Figure: 1

Project: E24959 E01_Rev0

Map Source: SixMap, Imagery Dated 10/01/2021

LEGEND

- Site Boundary
- Location of exposed soils with foreign materials
- Location of waste oil drums
- Location of UPSS
- Location of stored wrecked cars
- Location of stockpiled construction waste

*All Locations are approximate

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Apollo Fabrication Group
Detailed Site Investigation
2-20 Telegraph Rd, Young NSW

Site Layout Plan

Figure: 2

Project: E24959.E02

LEGEND

- Site boundary
- Approximate borehole location

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Detailed Site Investigation
2-20 Telegraph Rd, Young NSW

Site Layout Plan

Figure: 3

Project: E24959.E02

Appendix B – Tables

Table 1 - Summary of Soil Analytical results

E24959.E02 - Young

Sample ID	Date of sampling	Material description	Heavy Metals								PAHs			BTEX						TRH				Pestices		PCBs	Asbestos
			As	Cd	Cr (total)	Cu	Pb	Hg	Ni	Zn	Carcinogenic PAHs (as B(a)P TEQ)	Naphthalene	Total PAHs	Benzene	Toluene	Ethylbenzene	o-Xylene	m/p-Xylene	Total Xylenes	F1	F2	F3	F4	OCPs	OPPs	Total	Identification
BH101_0.2	8/12/2020	Top Soil	2	<0.3	11	7	18	<0.05	6.3	43	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH101_0.7		Natrual: Sandy CLAY	2	<0.3	20	7	13	<0.05	7.0	13	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH102_0.2		Top Soil	2	<0.3	16	7	10	<0.05	7.0	14	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH103_0.2		Top Soil	2	<0.3	22	6	10	<0.05	7.9	20	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH104_0.3		Top Soil	2	<0.3	16	7	11	<0.05	7.7	16	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH105_0.3		Top Soil	3	<0.3	28	10	12	<0.05	12	20	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH106_0.3		Top Soil	2	<0.3	13	5	10	<0.05	7.0	8.9	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH107_0.3		Top Soil	3	<0.3	18	7	11	<0.05	7.9	15	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH108_0.2		Top Soil	1	<0.3	10	7	20	0.07	6.7	49	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH108_0.7		Natrual: Sandy SILT	2	<0.3	12	5	12	<0.05	6.7	24	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH109_0.3		Top Soil	2	<0.3	15	4	9	<0.05	5.3	10	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH110_0.2		Top Soil	2	<0.3	17	5	11	<0.05	6.6	14	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH111_0.2		Top Soil	1	<0.3	11	6	15	<0.05	5.8	25	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH111_0.7		Natrual: Sandy CLAY	1	<0.3	9.9	5	10	<0.05	6.9	11	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH112_0.2		Top Soil	2	<0.3	20	6	15	<0.05	9.2	22	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH113_0.2		Top Soil	2	<0.3	29	14	22	<0.05	14	54	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH113_1.2		Top Soil	3	<0.3	28	7	15	<0.05	11	33	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH114_0.2		Top Soil	9	<0.3	22	61	60	<0.05	7.6	630	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH114_0.7		Natrual: Sandy CLAY	2	<0.3	25	7	15	<0.05	11	47	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH115_0.2		Top Soil	4	<0.3	31	67	53	<0.05	12	310	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH116_0.2		Top Soil	3	<0.3	20	8	12	<0.05	7.7	14	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH117_0.2	9/12/2020	Top Soil	3	<0.3	17	7	12	<0.05	7.0	15	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH118_0.3		Top Soil	1	<0.3	15	7	12	<0.05	6.3	39	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH118_0.8		Natural: Gravelly SAND	2	<0.3	22	9	12	<0.05	7.2	37	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
BH119_0.2		Top Soil	2	<0.3	35	15	84	0.16	5.6	130	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH120_0.2		Top Soil	3	<0.3	23	21	26	<0.05	14	540	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH120_2.0		Natural: Gravelly SAND	2	<0.3	20	10	22	<0.05	7.5	55	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	39	1900	480	NA	NA	NA	NA
BH121_0.2		Top Soil	2	<0.3	21	13	19	<0.05	12	360	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	120	<120	<1	<1.7	<1	No
BH122_0.1		Top Soil	4	<0.3	13	10	9	<0.05	6.9	59	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	25	<90	<120	<1	<1.7	<1	No
BH123_0.1		Top Soil	2	<0.3	14	8	22	<0.05	9.0	30	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	<1	<1.7	<1	No
BH123_0.6		Natural: Gravelly SAND	2	<0.3	14	7	11	<0.05	6.7	13	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	<25	<90	<120	NA	NA	NA	NA
Statistical Analysis																											
Maximum concentration			9	<0.3	35	67	84	0.16	14	630	<0.3	<0.1	<0.8	<0.1	<0.1	<0.1	<0.1	<0.2	<0.3	<25	39	1,900	480	<1	<1.7	<1	No
95% UCL - Fill / Top Soil			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
95% UCL - Natural Soils			NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
SILs																											
HIL D - Commercial / Industrial *Table 1A(1)*			3000	900	3600 Cr(VI)	240,000	1,500	730	6,000	400,000	40		4,000											3600		7	
HSL D - Commercial / Industrial Soil texture classification – Sand [1] *Table 1A(3)*	0 m to <1 m													3	NL	NL	230	260	NL								
	1 m to <2 m													3	NL	NL	NL	370	NL								
	2 m to <4 m													3	NL	NL	NL	630	NL								
	4 m +													3	NL	NL	NL	NL	NL								
Management Limits - Residential, parkland and public open space, coarse grained soil texture [1] *Table 1B(7)*																		700	1,000	2500	10,000						
Asbestos contamination HSL-D Bonded ACM (%w/w) *Table 7*																											0.01
Asbestos contamination HSL-A Non Bonded / Friable Asbestos (%w/w) *Table 7*																											0.001
Asbestos contamination HSL-D All forms of asbestos on soil surface *Table 7*																											NVA
Site Specific Ecological Investigation Levels (EILs) / Ecological Screening Levels (ESLs)[2]			160		540	160	1800	4	60	480		170		50	85	70		105	180	120	300	2,800		640			

Notes: All results are reported in mg/kg (unless otherwise stated).

Highlighted values indicates concentration exceeds Human Health Based Soil Criteria (HSL / HIL).

Highlighted values indicates concentration exceeds Ecological Based Soil Criteria (ESL / EIL).

Highlighted indicates the adopted criteria exceeded.

The indicated criteria does not address these contaminant parameters

SILs Soil Investigation levels from Schedule B1 (table reference indicated) of the National Environmental Protection Measure 1999 - Amendment 2013

HSL A NEPC 2013 'HSL D' Health Based Screening Levels applicable for residential setting (with soil access).

NA 'Not Analysed' i.e. the sample was not analysed.

NC Not Calculated'

NL 'Not Limiting' - The soil vapour limit exceeds the soil concentration at which the pore water phase cannot dissolve any more of the individual chemical.

ND Not Detected

NVA No Visible Asbestos

F1 To obtain F1 subtract the sum of BTEX concentrations from the C6-C10 fraction.

F2 To obtain F2 subtract Naphthalene from the >C10-C16 fraction.

F3 (>C16-C34)

F4 (>C34-C40)

Table H6 - Summary of Soil RPD Data

Sample identification	Description	TRH				BTEX				Heavy Metals							
		F1*	F2**	F3 (>C_{16} - C_{34})	F4 (>C_{34} - C_{40})	Benzene	Toluene	Ethylbenzene	Xylene (total)	Arsenic	Cadmium	Chromium (Total)	Copper	Lead	Mercury	Nickel	Zinc
Intra-laboratory Duplicate - Soil Investigation																	
BH123_0.6	Natural: CLAY	< 25	< 25	110	< 120	<0.1	<0.1	<0.1	<0.3	2	<0.3	14	6.8	11	<0.05	6.7	13
QD-1	BFD	< 25	< 25	120	< 120	<0.1	<0.1	<0.1	<0.3	2	<0.3	13	5.3	11	<0.05	5.6	11
RPD		***0.00***	***0.00***	***8.70***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***0.00***	***7.41***	***24.79***	***0.00***	***0.00***	***17.89***	***16.67***
Inter-Laboratory Duplicate - Soil Investigation																	
BH123_0.6	Natural: CLAY	< 25	< 25	110	< 120	<0.1	<0.1	<0.1	<0.3	2	<0.3	14	6.8	11	<0.05	6.7	13
QT-1	BFT	< 25	<50	<100	< 100	<0.2	<0.5	<1	<2	<4	<0.4	15	8	12	<0.1	7	13
RPD		***0.00***	***NA***	***9.52***	***NA***	***NA***	***NA***	***NA***	***NA***	**66.67**	***NA***	***6.90***	***16.22***	***8.70***	***NA***	***4.38***	***0.00***
Trip Spike																	
TS	Soil	-	-	-	-	91%	89%	89%	90%	-	-	-	-	-	-	-	-
Trip Blank																	
TB	Soil	-	-	-	-	<0.1	<0.1	<0.1	<0.3	-	-	-	-	-	-	-	-
Rinsate Blanks																	
QR1	De-ionised water	<50	<60	<500	<500	<0.5	<0.5	<0.5	<1.5	<1	<0.3	<0.5	<1	<1	<0.05	<0.5	<5

NOTE: All results are reported in mg/kg (soil) or µg/L (water)

66.67	RPD calculated by halving detection limit exceeds 30-50% range referenced from AS4482.1 (2005)
52.87	RPD exceeds 30-50% range referenced from AS4482.1 (2005)

Appendix C – Borehole Logs

BOREHOLE: BH101

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0					-	FILL: Clayey SAND; coarse grained, angular, poorly graded, dark brown, with trace fine grained gravels, no odour.			FILL
					BH101_0.2 ES							
				0.30				CL	Sandy CLAY; low plasticity, dark red-brown, with trace fine grained, sub-rounded gravels, no odour.	M	-	NATURAL
			0.5		BH101_0.7 ES							
			1.0	1.00					Hole Terminated at 1.00 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH102

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Contamination | Remediation | Geotechnical

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0	0.10				-	TOPSOIL: Clayey SAND; coarse grained, angular, poorly graded, dark brown, with trace fine grained gravels, no odour.			TOPSOIL
					BH101_0.7 ES			CL	Sandy CLAY; low plasticity, dark red-brown, with trace fine grained, sub-rounded gravels, no odour.	M	-	NATURAL
			0.5	1.00								
			1.0						Hole Terminated at 1.00 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH103

Project	Detailed Site Investigation		
Location	2-20 Telegraph Rd, Young NSW	Sheet	1 OF 1
Position	Refer to Figure 2	Date Started	8/12/20
Job No.	E24959.E02	Date Completed	9/12/20
Client	Apollo Fabrication Group	Logged	JT
Contractor	STS GeoEnvironmental Pty Ltd	Checked	
Drill Rig	UTE-mounted Drilling Rig		
Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH103_0.2 ES			-	TOPSOIL: Clayey SAND; coarse grained, angular, poorly graded, dark brown, with trace fine grained gravels, no odour.	M	-	TOPSOIL
				0.50								
			0.5		BH103_0.2 ES			CL	Sandy CLAY; low plasticity, dark red-brown, with trace fine grained, sub-rounded gravels, no odour.			NATURAL
				0.90								
			1.0						Hole Terminated at 0.90 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH104

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 3			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0	0.10	BH104_0.3 ES			-	TOPSOIL: Clayey SAND; coarse grained, angular, poorly graded, dark brown, with trace fine grained gravels, no odour.			TOPSOIL
								CL	Sandy CLAY; low plasticity, dark red-brown, with trace fine grained, sub-rounded gravels, no odour.	D	-	NATURAL
			0.5	0.80								
									Hole Terminated at 0.80 mBGL; Target Depth Reached.			
			1.0									
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH105

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0	0.10	BH105_0.3 ES			-	TOPSOIL: Clayey SAND; coarse grained, angular, poorly graded, dark brown, with trace fine grained gravels, no odour.	D	-	TOPSOIL
			0.5	0.90				CL	Sandy CLAY; low plasticity, dark red-brown, with trace fine grained, sub-rounded gravels, no odour.			NATURAL
			1.0						Hole Terminated at 0.90 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH106

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0					CL	Sandy CLAY; low plasticity, dark red, with trace fine grained and sub-angular gravels, no odour.			NATURAL
					BH106_0.3 ES							
			0.5	*0.50*				CL-CI	Silty CLAY; low to medium plasticity, with some sub-angular sand and trace gravels, no odour.	M	-	
					BH106_0.8 ES							
			1.0	*1.10*					Hole Terminated at 1.10 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH107

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0	*0.10*				-	TOPSOIL: Clayey SAND; coarse grained, angular, poorly graded, dark brown, with trace fine grained gravels, no odour.	D		TOPSOIL
			0.5		BH107_0.3 ES			CL	Sandy CLAY; low plasticity, dark red, with trace fine grained, sub-angular gravels, with trace sub-rounded quartzose gravel, no odour.	M	-	NATURAL
			1.0	*1.40*								
			1.5						Hole Terminated at 1.40 mBGL; Target Depth Reached.			
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH108

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH108_0.2 ES			-	FILL: SILT; low plasticity, light brown with trace sub-angular gravels, no odour.	D	-	FILL
				0.40				MS	Sandy SILT; low plasticity, light brown, with sub-angular sand, no odour.			NATURAL
			0.5		BH108_0.7 ES							
			1.0									
				1.30					Hole Terminated at 1.30 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH109

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0					-	FILL: SILT; low plasticity, light brown with trace sub-angular gravels, no odour.	D	-	FILL
			0.5		BH109_0.3 ES							
				0.60								
								CL	Sandy CLAY; low plasticity, dark red, with trace fine grained and sub-angular gravels, no odour.			NATURAL
			1.0		BH109_0.8 ES							
				1.10					Hole Terminated at 1.10 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH110

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH110_0.2 ES			-	FILL: Clayey SAND; coarse grained, angular, poorly graded, dark brown, with trace fine grained gravels, no odour.			FILL
				0.40								
			0.5		BH110_0.7 ES			CL	Sandy CLAY; low plasticity, dark red, with trace fine grained, sub-angular gravels, with sub-rounded quartzose gravels, no odour.	M	-	NATURAL
			1.0	1.20								
			1.5						Hole Terminated at 1.20 mBGL; Target Depth Reached.			
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH111

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH111_0.2 ES			-	FILL: Clayey SAND; coarse grained, angular, poorly graded, dark brown, with trace fine grained gravels, no odour.	D		FILL
				0.40								
			0.5		BH111_0.7 ES			CL	Sandy CLAY; low plasticity, dark red, with trace fine grained, sub-angular gravels, with sub-rounded quartzose gravels, no odour.	M	-	NATURAL
			1.0	*1.00*					Hole Terminated at 1.00 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH112

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH112_0.2 ES			-	FILL: Clayey SAND; coarse grained, angular, poorly graded, dark brown, with trace fine grained gravels, no odour.			FILL
				0.40				CL	Sandy CLAY; low plasticity, dark red, with trace fine grained, sub-angular gravels, no odour.	M	-	NATURAL
			0.5		BH112_0.7 ES							
			1.0	*1.10*					Hole Terminated at 1.10 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH113

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 2			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0					-	FILL: Sandy CLAY; low plasticity, dark brown, with sub-angular gravels, no odour.			FILL
					BH113_0.2 ES							
				0.30				CL	Sandy CLAY; low plasticity, dark red, with trace fine grained and sub-angular gravels, no odour.	M	-	NATURAL
			0.5		BH113_0.7 ES							
				1.00				CH	Silty CLAY; high plasticity, dark grey, no odour.	M<PL		
			1.0									
				1.50					Hole Terminated at 1.50 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH114

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 4			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH114_0.2 ES			-	FILL: Clayey SAND; coarse grained, angular, poorly graded, light brown, with trace fine grained gravels and concrete, no odour.	M	-	FILL
				0.30				CL	Sandy CLAY; low plasticity, light brown, with fine grained pyritic gravels, no odour.			NATURAL
			0.5		BH114_0.7 ES							
			1.0	1.10					Hole Terminated at 1.10 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH115

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 5			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0					-	FILL: Clayey SAND; coarse grained, angular, poorly graded, dark brown, with trace fine grained gravels, no odour.	D		FILL
				0.20								
					BH115_0.2 ES			CL	Sandy CLAY; low plasticity, dark red, with trace fine grained, sub-angular gravels, no odour.	M	-	NATURAL
			0.5		BH115_0.7 ES							
				0.90								
									Hole Terminated at 0.90 mBGL; Target Depth Reached.			
			1.0									
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH116

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 6			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0					-	FILL: Gravelly SAND; coarse grained, angular, poorly graded, dark red, no odour.			FILL
					BH116_0.2 ES							
				0.30				CL	Sandy CLAY; low plasticity, dark red, with trace fine grained, sub-angular gravels, no odour.	D	-	NATURAL
			0.5		BH116_0.7 ES							
			1.0	1.00					Hole Terminated at 1.00 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH117

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 7			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH117_0.2 ES			-	FILL: Gravelly SAND; coarse grained, angular, poorly graded, dark red, with coarse grained, angular gravels, no odour.	D	-	FILL
				0.30				CL	Sandy CLAY; low plasticity, dark red, with trace fine grained, sub-angular gravels, no odour.			NATURAL
			0.5		BH117_0.7 ES					M		
			1.0	*1.10*					Hole Terminated at 1.10 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH118

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	8/12/20
Position	Refer to Figure 8			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH118_0.3 ES			-	Gravelly SAND; coarse grained, angular, poorly graded, dark red, with sub-rounded gravels, with trace aggregate , no odour.			FILL
				0.50								
			0.5					S	Gravelly SAND; coarse grained, angular, poorly graded, dark red to brown, with sub-rounded gravels, with some low plasticity clay, no odour.	M	-	NATURAL
					BH118_0.8 ES							
			1.0									
				1.20					Hole Terminated at 1.20 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH119

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	9/12/20
Position	Refer to Figure 9			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
			0.0					-	Gravelly SAND; coarse grained, angular, poorly graded, dark red, with sub-rounded gravels, with trace aggregate , no odour.			FILL
				0.20								
AD	-	GWNE	0.5		BH119_0.2 ES			S	Gravelly SAND; coarse grained, angular, poorly graded, dark red to brown, with sub-rounded gravels, with some low plasticity clay, no odour.	M	-	NATURAL
			1.0		BH119_0.7 ES							
			1.5	1.50					Hole Terminated at 1.50 mBGL; Target Depth Reached.			
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH120

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	9/12/20
Position	Refer to Figure 10			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH120_0.2 ES			-	FILL: Gravelly SAND; coarse grained, angular, poorly graded, dark grey to brown, with sub-rounded gravels, with some medium to low plasticity clay, no odour.	M	-	FILL
			0.5		BH120_0.7 ES							
			1.0		BH120_1.2 ES							
			1.5	*1.80*								
			2.0		BH120_2.0 ES			S	Gravelly SAND; coarse grained, angular, poorly graded, dark orange, with sub-rounded gravels, no odour.			NATURAL
			2.5	*2.70*								
			3.0						Hole Terminated at 2.70 mBGL; Target Depth Reached.			

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

BOREHOLE: BH121

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Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	9/12/20
Position	Refer to Figure 11			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH121_0.2 ES			-	FILL: Gravelly SAND; coarse grained, angular, poorly graded, dark grey to brown, with sub-rounded gravels, with some medium to low plasticity clay, no odour.	D	-	FILL
			0.5		BH121_0.7 ES							
				0.90				S	Gravelly SAND; coarse grained, poorly graded, angular, dark orange, with sub-rounded gravels, no odour.			NATURAL
			1.0		BH121_1.20 ES							
			1.5									
				1.80					Hole Terminated at 1.80 mBGL; Target Depth Reached.			
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH122

Project	Detailed Site Investigation			Sheet	1 OF 1
Location	2-20 Telegraph Rd, Young NSW			Date Started	9/12/20
Position	Refer to Figure 12			Date Completed	9/12/20
Job No.	E24959.E02	Contractor	STS GeoEnvironmental Pty Ltd	Logged	JT
Client	Apollo Fabrication Group	Drill Rig	UTE-mounted Drilling Rig	Checked	
		Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	*DEPTH* RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0		BH122_0.1 ES			-	TOPSOIL: Clayey SAND; fine grained, angular, well graded, dark brown, no odour.	D	-	FILL
				0.20				S	Gravelly SAND; coarse grained, angular, poorly graded, dark red to brown, with sub-rounded gravels, with some low plasticity clay, with trace quartzose cobbles, no odour.			NATURAL
			0.5		BH122_0.6 ES					D	-	
			1.0	*1.20*								
			1.5						Hole Terminated at 1.20 mBGL; Target Depth Reached.			
			2.0									
			2.5									
			3.0									

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

BOREHOLE: BH123

Project	Detailed Site Investigation		
Location	2-20 Telegraph Rd, Young NSW	Sheet	1 OF 1
Position	Refer to Figure 13	Date Started	9/12/20
Job No.	E24959.E02	Date Completed	9/12/20
Client	Apollo Fabrication Group	Logged	JT
Contractor	STS GeoEnvironmental Pty Ltd	Checked	
Drill Rig	UTE-mounted Drilling Rig		
Inclination	-90°		

Drilling					Sampling		Field Material Description					
METHOD	PENETRATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED	GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY DENSITY	STRUCTURE AND ADDITIONAL OBSERVATIONS
AD	-	GWNE	0.0	0.10				-	Gravelly SAND; coarse grained, angular, poorly graded, dark red to brown, with sub-rounded gravels, with some low plasticity clay, with trace aggregate, no odour.			NATURAL
					BH123_0.1 ES			S	Gravelly SAND; coarse grained, angular, poorly graded, dark red to brown, with sub-rounded gravels, with some low plasticity clay, with trace cobbles, no odour.			
			0.5									
					BH123_0.6 ES					D	-	
			1.0	1.20								
									Hole Terminated at 1.20 mBGL; Target Depth Reached.			
			1.5									
			2.0									
			2.5									
			3.0									

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

Appendix D – Field Data Sheets and Calibration Certificates

Site Inspection Card - CLM Projects
Form OP 005 (Rev 2)

eiaustralia

EI Australia
Suite 6.01, 55 Miller Street
PYRMONT, NSW, 2009
ABN 42 909 129 957
E service@eiaustralia.com.au
W www.eiaustralia.com.au
T 02 9516 0722

Project Number:	E24959	Engineer Name:	J. T
Date:	9.12.20	Time ON Site:	08:00
Travel Time:	4.5 hr	Time OFF Site:	11:00

Site Address/Location: 2-20 Telegraph Rd, Young

Climatic Conditions: Clear

Current Site Uses: Structural steal manufacturer

Surrounding Land Uses:

North: Telegraph Rd followed by ag land

South: Creek followed by ag land / res

East: low dense res followed by Road

West: low dense res / ag land

Current Site Condition

Buildings Structures:

☑ slab on ground ☐ suspended slab ☐ basement ..... Level(s) ☐ sub-stations ☐ service pits / sumps

☐ potential ACM ☐ potential lead paint ☐ accessible soils (locations)

☐ Other (please decsribe):

Soil / Vegetation (overgrown, distressed, bare soil patches):

bare soil in corner location of res dwellings (E portion of site)

Condition of concrete, bitumen roading, flooring etc.:

Slab in building & rear of building in good condition

Evidence of USTs / UPSS Infrastructure:

2x Tank (1x 10000 L & 1x 500L) front of property, adjacent main factory door. + Bowser

Evidence of Groundwater Monitoring Wells:

NA

Presence of Waste / Rubbish / Stockpiles:

multiple stockpiles of rubbish & waste oil drums + car wrecks in rear of property

Unusual Odours:

Signed: Name: J. Thomas Date: 9.12.20

Site Inspection Card - CLM Projects
Form OP-005 (Rev 2)

EI Australia
Suite 6.01, 55 Miller Street
PYRMONT, NSW, 2009
ABN 42 909 129 957
E service@eiaustralia.com.au
W www.eiaustralia.com.au
T 02 9516 0722

Site Topography (slope of site, surface water, drainage, closest receptor etc.)

Generally level w/ rear of property sloping steeply toward creek.

Hazardous materials / activities: (presence of asbestos, solid or liquid hazardous materials, infrastructure)

HC staining in vicinity of petrol bowser

Anecdotal Information:

Res dwellings in E of site contained ACM
↳ clearance provided following demo

Notes:

Signed:	Name:	Date:

Appendix E – Chain of Custody and Sample Receipt Forms

Sheet 1 of 5

Site: 2-20 Telegraph Rd, Young NSW

Project No: E24959

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

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM[A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM[A] /TRH/BTEX/PAHs	HM[A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	HOLD			TCLP HM[B] / PAH
BH101_0.2	1	J, ZLB	8.12.20	AM		X		X															
101_0.7	2	↓	↓	↓		X			X														
102_0.2	3					X		X															
103_0.2	4					X		X															
103_0.7						X														X			
104_0.3	5					X		X															
105_0.3	6					X		X															
106_0.3	7					X		X															
106_0.8						X														X			
107_0.3	8					X		X															
108_0.2	9					X		X															
108_0.7	10	↓	↓	↓		X			X														

SGS EHS Sydney COC
SE214668

Comments

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

HM[B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

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

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

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

Report with EI Waste Classification Table [ ]

Sampler's Name (EI):	Received by (SGS):
Print: J. Thomas	Print: Suba
Signature:	Signature:
Date: 10.12.20	Date: 10/12/20 @4:30

Sampler's Comments:
please forward 'QT-1' to Enviro lab
cc: Linda.Xiao@EIAustralia.com.au

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

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

Sheet 2 of 5

Site: see page 1

Project No: E24959

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

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM[A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM[A] /TRH/BTEX/PAHs	HM[A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	HOLD			TCLP HM[B] / PAH
BH109_0.3	11	J,ZLB	8.12.20	PM		X		X															
↓ 109_0.8						X														X			
BH110_0.2	12					X		X															
110_0.7						X														X			
111_0.2	13					X		X															
111_0.7	14					X			X														
112_0.2	15					X		X															
112_0.7						X														X			
113_0.2	16					X		X															
113_0.7						X														X			
113_1.2	17					X			X														
↓ 114_0.2	18	↓	↓	↓		X		X															

Comments

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

HM[B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

LABORATORY TURNAROUND

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

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

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

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (SGS):
Print	Print Suba
Signature	Signature
Date	Date 10/12/20 @4:30

Sampler's Comments:

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

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

Sheet 3 of 5

Site: See page 1

Project No: E24959

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

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	HOLD			TCLP HM [B] / PAH
BH 114 - 0.7	19	J, ZLB	8.12.20	PM					X									·					
115 - 0.2	20	↓	↓	↓				X															
115 - 0.7																				X			
116 - 0.2	21							X															
116 - 0.7			↓	↓																X			
117 - 0.2	22		9.12.20	AM				X										·					
117 - 0.7																				X			
118 - 0.3	23							X															
118 - 0.8	24								X														
119 - 0.2	25							X															
119 - 0.7																		·		X			
120 - 0.2	26	↓	↓	↓				X															

Comments

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

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

LABORATORY TURNAROUND

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

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

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

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (SGS):
Print	Print: Suba
Signature	Signature:
Date	Date: 10/12/20 @ 4:30

Sampler's Comments:
·

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

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

Sheet 4 of 5

Site: see page 1

Project No: E24959

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

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHER	Analysis: HM A /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM A /TRH/BTEX/PAHs	HM A /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	Sulphates	Chlorides	HOLD	TCLP HM A / PAH
BH120-0.7						X																X	
120-1.2						X																X	
120-2.0	27					X			X														
BH121-0.2	28					X		X															
121-0.7						X																X	
121-1.2						X																X	
122-0.1	29					X		X															
122-0.6						X																X	
123-0.1	30					X		X															
123-0.6	31					X			X														
QD-1	32					X				X													
QR-1	33				X					X													

Comments

HM A
Arsenic
Cadmium
Chromium
Copper
Lead
Mercury
Nickel

HM B
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

LABORATORY TURNAROUND

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

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

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

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (SGS):
Print: J. Thomas	Print: Suba
Signature:	Signature:
Date: 10.12.20	Date: 10/12/20 @ 4:30

Sampler's Comments:
see page 1

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

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

Sheet 5 of 5

Site: See page 1

Project No: E24959

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

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	HOLD			TCLP HM [B] / PAH
QRB-1		S,P,VC	9.12.20	AM	X															X			
Trip Blank	34	lab prep				X					X												
Trip Spike	35	lab prep				X					X												

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

Comments

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

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

LABORATORY TURNAROUND

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

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

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (SGS):
Print: J. Thomas	Print: Suba
Signature:	Signature:
Date: 10.12.20	Date: 10/12/20 @ 4:30

Sampler's Comments:
cc: Linda.Xiao@EIAustralia

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

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

SAMPLE RECEIPT ADVICE

SE214668

CLIENT DETAILS

Contact	Linda Xiao
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	Linda.Xiao@eiaustralia.com.au
Project	**E24959 2-20 Telegraph Rd, Young NSW**
Order Number	**E24959**
Samples	35

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Thu 10/12/2020
Report Due	Thu 17/12/2020
SGS Reference	**SE214668**

SUBMISSION DETAILS

This is to confirm that 35 samples were received on Thursday 10/12/2020. Results are expected to be ready by COB Thursday 17/12/2020.
Please quote SGS reference SE214668 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	32 Soil, 2 Sand, 1 Water
Date documentation received	10/12/2020	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	5.6°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

COMMENTS

1 soil and 1 water samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.

SAMPLE RECEIPT ADVICE

SE214668

CLIENT DETAILS

Client EI AUSTRALIA

Project E24959 2-20 Telegraph Rd, Young NSW

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BH101_0.2	29	14	26	11	7	10	11	7
002	BH101_0.7	-	-	26	-	7	10	11	7
003	BH102_0.2	29	14	26	11	7	10	11	7
004	BH103_0.2	29	14	26	11	7	10	11	7
005	BH104_0.3	29	14	26	11	7	10	11	7
006	BH105_0.3	29	14	26	11	7	10	11	7
007	BH106_0.3	29	14	26	11	7	10	11	7
008	BH107_0.3	29	14	26	11	7	10	11	7
009	BH108_0.2	29	14	26	11	7	10	11	7
010	BH108_0.7	-	-	26	-	7	10	11	7
011	BH109_0.3	29	14	26	11	7	10	11	7
012	BH110_0.2	29	14	26	11	7	10	11	7
013	BH111_0.2	29	14	26	11	7	10	11	7
014	BH111_0.7	-	-	26	-	7	10	11	7
015	BH112_0.2	29	14	26	11	7	10	11	7
016	BH113_0.2	29	14	26	11	7	10	11	7
017	BH113_1.2	-	-	26	-	7	10	11	7
018	BH114_0.2	29	14	26	11	7	10	11	7
019	BH114_0.7	-	-	26	-	7	10	11	7
020	BH115_0.2	29	14	26	11	7	10	11	7
021	BH116_0.2	29	14	26	11	7	10	11	7
022	BH117_0.2	29	14	26	11	7	10	11	7
023	BH118_0.3	29	14	26	11	7	10	11	7
024	BH118_0.8	-	-	26	-	7	10	11	7

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE214668

CLIENT DETAILS

Client EI AUSTRALIA

Project E24959 2-20 Telegraph Rd, Young NSW

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	BH119_0.2	29	14	26	11	7	10	11	7
026	BH120_0.2	29	14	26	11	7	10	11	7
027	BH120_2.0	-	-	26	-	7	10	11	7
028	BH121_0.2	29	14	26	11	7	10	11	7
029	BH122_0.1	29	14	26	11	7	10	11	7
030	BH123_0.1	29	14	26	11	7	10	11	7
031	BH123_0.6	-	-	26	-	7	10	11	7
032	QD-1	-	-	-	-	7	10	11	7
034	Trip Blank	-	-	-	-	-	-	11	-
035	Trip Spike	-	-	-	-	-	-	11	-

CONTINUED OVERLEAF

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SAMPLE RECEIPT ADVICE

SE214668

CLIENT DETAILS

Client EI AUSTRALIA

Project E24959 2-20 Telegraph Rd, Young NSW

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
001	BH101_0.2	2	1	1
002	BH101_0.7	-	1	1
003	BH102_0.2	2	1	1
004	BH103_0.2	2	1	1
005	BH104_0.3	2	1	1
006	BH105_0.3	2	1	1
007	BH106_0.3	2	1	1
008	BH107_0.3	2	1	1
009	BH108_0.2	2	1	1
010	BH108_0.7	-	1	1
011	BH109_0.3	2	1	1
012	BH110_0.2	2	1	1
013	BH111_0.2	2	1	1
014	BH111_0.7	-	1	1
015	BH112_0.2	2	1	1
016	BH113_0.2	2	1	1
017	BH113_1.2	-	1	1
018	BH114_0.2	2	1	1
019	BH114_0.7	-	1	1
020	BH115_0.2	2	1	1
021	BH116_0.2	2	1	1
022	BH117_0.2	2	1	1
023	BH118_0.3	2	1	1
024	BH118_0.8	-	1	1

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE214668

CLIENT DETAILS

Client EI AUSTRALIA

Project E24959 2-20 Telegraph Rd, Young NSW

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
025	BH119_0.2	2	1	1
026	BH120_0.2	2	1	1
027	BH120_2.0	-	1	1
028	BH121_0.2	2	1	1
029	BH122_0.1	2	1	1
030	BH123_0.1	2	1	1
031	BH123_0.6	-	1	1
032	QD-1	-	1	1
034	Trip Blank	-	-	1

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE214668

CLIENT DETAILS

Client EI AUSTRALIA

Project E24959 2-20 Telegraph Rd, Young NSW

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Trace Metals (Dissolved) in Water by ICPMS	TRH (Total Recoverable Hydrocarbons) in Water	VOCs in Water	Volatile Petroleum Hydrocarbons in Water
033	QR-1	1	7	9	11	7

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

Sheet 1 of 1

Site: 2-20 Telegraph Rd, Young NSW

Project No:

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

Sample ID	Laboratory ID	Container Type	Sampling Date	Sampling Time	Sample Matrix: WATER	SOIL	OTHERS (i.e. Fibro, Paint, etc.)	Analysis: HM [A] /TRH/BTEX/PAHs OCP/OP/PCB/Asbestos	HM [A] /TRH/BTEX/PAHs	HM [A] /TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS			TCLP HM [B] / PAH
2T-1	(1)	J	9.12.20	AM		X				X												

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

Job No: 258089
Date Received: 11/12/2020
Time Received: 15:23
Received By:
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

11-2

Comments

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

HM [B]
Arsenic
Cadmium
Chromium
Lead
Mercury
Nickel

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

LABORATORY TURNAROUND

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

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

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

Report with EI Waste Classification Table ☐

Sampler's Name (EI):	Received by (Envirolab)
Print: J. Thomas	Print: R. Khazeen
Signature:	Signature:
Date: 10.12.20	Date: 11/12/2020 1523

Sampler's Comments:
cc: Linda.Xiao@EIAustralia.com.au

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

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

Appendix F – Laboratory Analytical Reports

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Linda Xiao
Client	EI AUSTRALIA
Address	SUITE 6.01 55 MILLER STREET PYRMONT NSW 2009
Telephone	61 2 95160722
Facsimile	(Not specified)
Email	Linda.Xiao@eiaustralia.com.au
Project	**E24959 2-20 Telegraph Rd, Young NSW**
Order Number	**E24959**
Samples	35

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE214668 R0**
Date Received	10/12/2020
Date Reported	18/12/2020

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam .

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Dong LIANG
Metals/Inorganics Team Leader

Kamrul AHSAN
Senior Chemist

Ly Kim HA
Organic Section Head

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

Shane MCDERMOTT
Inorganic/Metals Chemist

VOC's in Soil [AN433] Tested: 14/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH101_0.7 SOIL - 8/12/2020 SE214668.002	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH105_0.3 SOIL - 8/12/2020 SE214668.006	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH108_0.7 SOIL - 8/12/2020 SE214668.010
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH111_0.7 SOIL - 8/12/2020 SE214668.014	BH112_0.2 SOIL - 8/12/2020 SE214668.015
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH113_1.2 SOIL - 8/12/2020 SE214668.017	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH114_0.7 SOIL - 8/12/2020 SE214668.019	BH115_0.2 SOIL - 8/12/2020 SE214668.020
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

VOC's in Soil [AN433] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH118_0.8 SOIL - 9/12/2020 SE214668.024	BH119_0.2 SOIL - 9/12/2020 SE214668.025
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH120_0.2 SOIL - 9/12/2020 SE214668.026	BH120_2.0 SOIL - 9/12/2020 SE214668.027	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH123_0.6 SOIL - 9/12/2020 SE214668.031	QD-1 SOIL - 9/12/2020 SE214668.032	Trip Blank SAND - 9/12/2020 SE214668.034	Trip Spike SAND - 9/12/2020 SE214668.035
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	[91%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	[89%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	[89%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	[90%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	[89%]
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	-
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	-
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	-

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 14/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH101_0.7 SOIL - 8/12/2020 SE214668.002	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH105_0.3 SOIL - 8/12/2020 SE214668.006	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH108_0.7 SOIL - 8/12/2020 SE214668.010
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH111_0.7 SOIL - 8/12/2020 SE214668.014	BH112_0.2 SOIL - 8/12/2020 SE214668.015
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH113_1.2 SOIL - 8/12/2020 SE214668.017	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH114_0.7 SOIL - 8/12/2020 SE214668.019	BH115_0.2 SOIL - 8/12/2020 SE214668.020
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH118_0.8 SOIL - 9/12/2020 SE214668.024	BH119_0.2 SOIL - 9/12/2020 SE214668.025
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH120_0.2 SOIL - 9/12/2020 SE214668.026	BH120_2.0 SOIL - 9/12/2020 SE214668.027	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH123_0.6 SOIL - 9/12/2020 SE214668.031	QD-1 SOIL - 9/12/2020 SE214668.032
TRH C6-C9	mg/kg	20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 14/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH101_0.7 SOIL - 8/12/2020 SE214668.002	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH105_0.3 SOIL - 8/12/2020 SE214668.006	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH108_0.7 SOIL - 8/12/2020 SE214668.010
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

PARAMETER	UOM	LOR	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH111_0.7 SOIL - 8/12/2020 SE214668.014	BH112_0.2 SOIL - 8/12/2020 SE214668.015
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH113_1.2 SOIL - 8/12/2020 SE214668.017	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH114_0.7 SOIL - 8/12/2020 SE214668.019	BH115_0.2 SOIL - 8/12/2020 SE214668.020
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH118_0.8 SOIL - 9/12/2020 SE214668.024	BH119_0.2 SOIL - 9/12/2020 SE214668.025
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	**46**
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH120_0.2 SOIL - 9/12/2020 SE214668.026	BH120_2.0 SOIL - 9/12/2020 SE214668.027	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	**1100**	**66**	<45	<45
TRH C29-C36	mg/kg	45	**48**	**1100**	**93**	<45	<45
TRH C37-C40	mg/kg	100	<100	**200**	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	**39**	<25	**25**	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	**39**	<25	**25**	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	**1900**	**120**	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	**480**	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	**2200**	**160**	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	**2400**	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH123_0.6 SOIL - 9/12/2020 SE214668.031	QD-1 SOIL - 9/12/2020 SE214668.032
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 14/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH101_0.7 SOIL - 8/12/2020 SE214668.002	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH105_0.3 SOIL - 8/12/2020 SE214668.006	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH108_0.7 SOIL - 8/12/2020 SE214668.010
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH111_0.7 SOIL - 8/12/2020 SE214668.014	BH112_0.2 SOIL - 8/12/2020 SE214668.015
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH113_1.2 SOIL - 8/12/2020 SE214668.017	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH114_0.7 SOIL - 8/12/2020 SE214668.019	BH115_0.2 SOIL - 8/12/2020 SE214668.020
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH118_0.8 SOIL - 9/12/2020 SE214668.024	BH119_0.2 SOIL - 9/12/2020 SE214668.025
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH120_0.2 SOIL - 9/12/2020 SE214668.026	BH120_2.0 SOIL - 9/12/2020 SE214668.027	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH123_0.6 SOIL - 9/12/2020 SE214668.031
Naphthalene	mg/kg	0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Pyrene	mg/kg	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 14/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005	BH105_0.3 SOIL - 8/12/2020 SE214668.006
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<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

OC Pesticides in Soil [AN420] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<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

OC Pesticides in Soil [AN420] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH112_0.2 SOIL - 8/12/2020 SE214668.015	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH115_0.2 SOIL - 8/12/2020 SE214668.020
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<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

OC Pesticides in Soil [AN420] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH119_0.2 SOIL - 9/12/2020 SE214668.025	BH120_0.2 SOIL - 9/12/2020 SE214668.026
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<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

OC Pesticides in Soil [AN420] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
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	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

OP Pesticides in Soil [AN420] Tested: 14/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005	BH105_0.3 SOIL - 8/12/2020 SE214668.006
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH112_0.2 SOIL - 8/12/2020 SE214668.015	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH115_0.2 SOIL - 8/12/2020 SE214668.020
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

OP Pesticides in Soil [AN420] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH119_0.2 SOIL - 9/12/2020 SE214668.025	BH120_0.2 SOIL - 9/12/2020 SE214668.026
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
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: 14/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005	BH105_0.3 SOIL - 8/12/2020 SE214668.006
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH112_0.2 SOIL - 8/12/2020 SE214668.015	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH115_0.2 SOIL - 8/12/2020 SE214668.020
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PCBs in Soil [AN420] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH119_0.2 SOIL - 9/12/2020 SE214668.025	BH120_0.2 SOIL - 9/12/2020 SE214668.026
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 14/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH101_0.7 SOIL - 8/12/2020 SE214668.002	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005
Arsenic, As	mg/kg	1	2	2	2	2	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	11	20	16	22	16
Copper, Cu	mg/kg	0.5	6.9	6.5	6.9	5.8	6.5
Lead, Pb	mg/kg	1	18	13	10	10	11
Nickel, Ni	mg/kg	0.5	6.3	7.0	7.0	7.9	7.7
Zinc, Zn	mg/kg	2	43	13	14	20	16

PARAMETER	UOM	LOR	BH105_0.3 SOIL - 8/12/2020 SE214668.006	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH108_0.7 SOIL - 8/12/2020 SE214668.010
Arsenic, As	mg/kg	1	3	2	3	1	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	28	13	18	10	12
Copper, Cu	mg/kg	0.5	9.6	4.6	6.8	6.6	5.3
Lead, Pb	mg/kg	1	12	10	11	20	12
Nickel, Ni	mg/kg	0.5	12	7.0	7.9	6.7	6.7
Zinc, Zn	mg/kg	2	20	8.9	15	49	24

PARAMETER	UOM	LOR	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH111_0.7 SOIL - 8/12/2020 SE214668.014	BH112_0.2 SOIL - 8/12/2020 SE214668.015
Arsenic, As	mg/kg	1	2	2	1	1	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	15	17	11	9.9	20
Copper, Cu	mg/kg	0.5	4.0	5.2	6.0	5.0	6.4
Lead, Pb	mg/kg	1	9	11	15	10	15
Nickel, Ni	mg/kg	0.5	5.3	6.6	5.8	6.9	9.2
Zinc, Zn	mg/kg	2	10	14	25	11	22

PARAMETER	UOM	LOR	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH113_1.2 SOIL - 8/12/2020 SE214668.017	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH114_0.7 SOIL - 8/12/2020 SE214668.019	BH115_0.2 SOIL - 8/12/2020 SE214668.020
Arsenic, As	mg/kg	1	2	3	9	2	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	29	28	22	25	31
Copper, Cu	mg/kg	0.5	14	7.4	61	7.1	67
Lead, Pb	mg/kg	1	22	15	60	15	53
Nickel, Ni	mg/kg	0.5	14	11	7.6	11	12
Zinc, Zn	mg/kg	2	54	33	630	47	310

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 14/12/2020 (continued)

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH118_0.8 SOIL - 9/12/2020 SE214668.024	BH119_0.2 SOIL - 9/12/2020 SE214668.025
Arsenic, As	mg/kg	1	3	3	1	2	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	20	17	15	22	35
Copper, Cu	mg/kg	0.5	8.0	6.8	7.1	9.2	15
Lead, Pb	mg/kg	1	12	12	12	12	84
Nickel, Ni	mg/kg	0.5	7.7	7.0	6.3	7.2	5.6
Zinc, Zn	mg/kg	2	14	15	39	37	130

PARAMETER	UOM	LOR	BH120_0.2 SOIL - 9/12/2020 SE214668.026	BH120_2.0 SOIL - 9/12/2020 SE214668.027	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
Arsenic, As	mg/kg	1	3	2	2	4	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	23	20	21	13	14
Copper, Cu	mg/kg	0.5	21	9.9	13	10	8.3
Lead, Pb	mg/kg	1	26	22	19	9	22
Nickel, Ni	mg/kg	0.5	14	7.5	12	6.9	9.0
Zinc, Zn	mg/kg	2	540	55	360	59	30

PARAMETER	UOM	LOR	BH123_0.6 SOIL - 9/12/2020 SE214668.031	QD-1 SOIL - 9/12/2020 SE214668.032
Arsenic, As	mg/kg	1	2	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	14	13
Copper, Cu	mg/kg	0.5	6.8	5.3
Lead, Pb	mg/kg	1	11	11
Nickel, Ni	mg/kg	0.5	6.7	5.6
Zinc, Zn	mg/kg	2	13	11

Mercury in Soil [AN312] Tested: 14/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH101_0.7 SOIL - 8/12/2020 SE214668.002	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH105_0.3 SOIL - 8/12/2020 SE214668.006	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH108_0.7 SOIL - 8/12/2020 SE214668.010
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	**0.07**	<0.05

PARAMETER	UOM	LOR	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH111_0.7 SOIL - 8/12/2020 SE214668.014	BH112_0.2 SOIL - 8/12/2020 SE214668.015
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH113_1.2 SOIL - 8/12/2020 SE214668.017	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH114_0.7 SOIL - 8/12/2020 SE214668.019	BH115_0.2 SOIL - 8/12/2020 SE214668.020
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH118_0.8 SOIL - 9/12/2020 SE214668.024	BH119_0.2 SOIL - 9/12/2020 SE214668.025
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	**0.16**

PARAMETER	UOM	LOR	BH120_0.2 SOIL - 9/12/2020 SE214668.026	BH120_2.0 SOIL - 9/12/2020 SE214668.027	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH123_0.6 SOIL - 9/12/2020 SE214668.031	QD-1 SOIL - 9/12/2020 SE214668.032
Mercury	mg/kg	0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 14/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH101_0.7 SOIL - 8/12/2020 SE214668.002	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005
% Moisture	%w/w	1	9.3	8.4	9.0	7.7	13.6

PARAMETER	UOM	LOR	BH105_0.3 SOIL - 8/12/2020 SE214668.006	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH108_0.7 SOIL - 8/12/2020 SE214668.010
% Moisture	%w/w	1	11.7	6.3	7.3	3.3	3.4

PARAMETER	UOM	LOR	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH111_0.7 SOIL - 8/12/2020 SE214668.014	BH112_0.2 SOIL - 8/12/2020 SE214668.015
% Moisture	%w/w	1	2.4	7.1	7.2	5.9	7.0

PARAMETER	UOM	LOR	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH113_1.2 SOIL - 8/12/2020 SE214668.017	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH114_0.7 SOIL - 8/12/2020 SE214668.019	BH115_0.2 SOIL - 8/12/2020 SE214668.020
% Moisture	%w/w	1	4.8	14.7	3.5	12.9	12.9

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH118_0.8 SOIL - 9/12/2020 SE214668.024	BH119_0.2 SOIL - 9/12/2020 SE214668.025
% Moisture	%w/w	1	7.9	8.9	10.8	11.0	6.8

PARAMETER	UOM	LOR	BH120_0.2 SOIL - 9/12/2020 SE214668.026	BH120_2.0 SOIL - 9/12/2020 SE214668.027	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
% Moisture	%w/w	1	10.5	8.5	8.9	7.2	5.4

PARAMETER	UOM	LOR	BH123_0.6 SOIL - 9/12/2020 SE214668.031	QD-1 SOIL - 9/12/2020 SE214668.032	Trip Blank SAND - 9/12/2020 SE214668.034
% Moisture	%w/w	1	7.6	5.2	<1.0

Fibre Identification in soil [AN602] Tested: 16/12/2020

PARAMETER	UOM	LOR	BH101_0.2 SOIL - 8/12/2020 SE214668.001	BH102_0.2 SOIL - 8/12/2020 SE214668.003	BH103_0.2 SOIL - 8/12/2020 SE214668.004	BH104_0.3 SOIL - 8/12/2020 SE214668.005	BH105_0.3 SOIL - 8/12/2020 SE214668.006
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH106_0.3 SOIL - 8/12/2020 SE214668.007	BH107_0.3 SOIL - 8/12/2020 SE214668.008	BH108_0.2 SOIL - 8/12/2020 SE214668.009	BH109_0.3 SOIL - 8/12/2020 SE214668.011	BH110_0.2 SOIL - 8/12/2020 SE214668.012
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH111_0.2 SOIL - 8/12/2020 SE214668.013	BH112_0.2 SOIL - 8/12/2020 SE214668.015	BH113_0.2 SOIL - 8/12/2020 SE214668.016	BH114_0.2 SOIL - 8/12/2020 SE214668.018	BH115_0.2 SOIL - 8/12/2020 SE214668.020
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH116_0.2 SOIL - 8/12/2020 SE214668.021	BH117_0.2 SOIL - 9/12/2020 SE214668.022	BH118_0.3 SOIL - 9/12/2020 SE214668.023	BH119_0.2 SOIL - 9/12/2020 SE214668.025	BH120_0.2 SOIL - 9/12/2020 SE214668.026
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH121_0.2 SOIL - 9/12/2020 SE214668.028	BH122_0.1 SOIL - 9/12/2020 SE214668.029	BH123_0.1 SOIL - 9/12/2020 SE214668.030
Asbestos Detected	No unit	-	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01

VOCs in Water [AN433] Tested: 15/12/2020

PARAMETER	UOM	LOR	QR-1 WATER - 9/12/2020 SE214668.033
Benzene	µg/L	0.5	<0.5
Toluene	µg/L	0.5	<0.5
Ethylbenzene	µg/L	0.5	<0.5
m/p-xylene	µg/L	1	<1
o-xylene	µg/L	0.5	<0.5
Total Xylenes	µg/L	1.5	<1.5
Total BTEX	µg/L	3	<3
Naphthalene	µg/L	0.5	<0.5

Volatile Petroleum Hydrocarbons in Water [AN433] Tested: 15/12/2020

PARAMETER	UOM	LOR	QR-1 WATER - 9/12/2020 SE214668.033
TRH C6-C9	µg/L	40	<40
Benzene (F0)	µg/L	0.5	<0.5
TRH C6-C10	µg/L	50	<50
TRH C6-C10 minus BTEX (F1)	µg/L	50	<50

TRH (Total Recoverable Hydrocarbons) in Water [AN403] Tested: 16/12/2020

PARAMETER	UOM	LOR	QR-1 WATER - 9/12/2020 SE214668.033
TRH C10-C14	µg/L	50	<50
TRH C15-C28	µg/L	200	<200
TRH C29-C36	µg/L	200	<200
TRH C37-C40	µg/L	200	<200
TRH >C10-C16	µg/L	60	<60
TRH >C10-C16 - Naphthalene (F2)	µg/L	60	<60
TRH >C16-C34 (F3)	µg/L	500	<500
TRH >C34-C40 (F4)	µg/L	500	<500
TRH C10-C40	µg/L	320	<320

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 14/12/2020

PARAMETER	UOM	LOR	QR-1 WATER - 9/12/2020 SE214668.033
Arsenic, As	µg/L	1	<1
Cadmium, Cd	µg/L	0.1	<0.1
Chromium, Cr	µg/L	1	<1
Copper, Cu	µg/L	1	<1
Lead, Pb	µg/L	1	<1
Nickel, Ni	µg/L	1	<1
Zinc, Zn	µg/L	5	<5

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 14/12/2020

PARAMETER	UOM	LOR	QR-1 WATER - 9/12/2020 SE214668.033
Mercury	mg/L	0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents.
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.

AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

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

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

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

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

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

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

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

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

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

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Project	**E24959 2-20 Telegraph Rd, Young NSW**
Order Number	**E24959**
Samples	23

LABORATORY DETAILS

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SGS Reference	**SE214668 R0**
Date Received	10 Dec 2020
Date Reported	18 Dec 2020

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam .

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Kamrul AHSAN
Senior Chemist

Ly Kim HA
Organic Section Head

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE214668.001	BH101_0.2	Soil	321g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.003	BH102_0.2	Soil	131g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.004	BH103_0.2	Soil	135g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.005	BH104_0.3	Soil	143g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.006	BH105_0.3	Soil	264g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.007	BH106_0.3	Soil	158g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.008	BH107_0.3	Soil	128g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.009	BH108_0.2	Soil	144g Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.011	BH109_0.3	Soil	134g Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.012	BH110_0.2	Soil	184g Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.013	BH111_0.2	Soil	104g Sand,Soil	08 Dec 2020	No Asbestos Found	<0.01
SE214668.015	BH112_0.2	Soil	113g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.016	BH113_0.2	Soil	226g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.018	BH114_0.2	Soil	171g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.020	BH115_0.2	Soil	180g Clay,Sand,Rocks	08 Dec 2020	No Asbestos Found	<0.01
SE214668.021	BH116_0.2	Soil	109g Clay,Sand	08 Dec 2020	No Asbestos Found	<0.01
SE214668.022	BH117_0.2	Soil	132g Clay,Sand,Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214668.023	BH118_0.3	Soil	183g Clay,Sand,Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214668.025	BH119_0.2	Soil	171g Clay,Sand,Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214668.026	BH120_0.2	Soil	176g Clay,Sand,Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214668.028	BH121_0.2	Soil	170g Clay,Sand,Rocks	09 Dec 2020	No Asbestos Found	<0.01

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE214668.029	BH122_0.1	Soil	231g Clay,Sand,Rocks	09 Dec 2020	No Asbestos Found	<0.01
SE214668.030	BH123_0.1	Soil	232g Clay,Sand,Rocks	09 Dec 2020	No Asbestos Found	<0.01

METHOD SUMMARY

SE214668 R0

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

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

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

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

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

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

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

Appendix G – Laboratory QA/QC Policies and DQOs

STATEMENT OF QA/QC PERFORMANCE

SE214668 R0

CLIENT DETAILS

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Project	**E24959 2-20 Telegraph Rd, Young NSW**
Order Number	**E24959**
Samples	35

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
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SGS Reference	**SE214668 R0**
Date Received	10 Dec 2020
Date Reported	18 Dec 2020

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	VOC's in Soil	1 item
	Volatile Petroleum Hydrocarbons in Soil	1 item
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

HOLDING TIME SUMMARY

SE214668 R0

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

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

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

Fibre Identification in soil

Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH102_0.2	SE214668.003	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH103_0.2	SE214668.004	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH104_0.3	SE214668.005	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH105_0.3	SE214668.006	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH106_0.3	SE214668.007	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH107_0.3	SE214668.008	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH108_0.2	SE214668.009	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH109_0.3	SE214668.011	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH110_0.2	SE214668.012	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH111_0.2	SE214668.013	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH112_0.2	SE214668.015	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH113_0.2	SE214668.016	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH114_0.2	SE214668.018	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH115_0.2	SE214668.020	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH116_0.2	SE214668.021	LB215760	08 Dec 2020	10 Dec 2020	08 Dec 2021	16 Dec 2020	08 Dec 2021	17 Dec 2020
BH117_0.2	SE214668.022	LB215760	09 Dec 2020	10 Dec 2020	09 Dec 2021	16 Dec 2020	09 Dec 2021	17 Dec 2020
BH118_0.3	SE214668.023	LB215760	09 Dec 2020	10 Dec 2020	09 Dec 2021	16 Dec 2020	09 Dec 2021	17 Dec 2020
BH119_0.2	SE214668.025	LB215760	09 Dec 2020	10 Dec 2020	09 Dec 2021	16 Dec 2020	09 Dec 2021	17 Dec 2020
BH120_0.2	SE214668.026	LB215760	09 Dec 2020	10 Dec 2020	09 Dec 2021	16 Dec 2020	09 Dec 2021	17 Dec 2020
BH121_0.2	SE214668.028	LB215760	09 Dec 2020	10 Dec 2020	09 Dec 2021	16 Dec 2020	09 Dec 2021	17 Dec 2020
BH122_0.1	SE214668.029	LB215760	09 Dec 2020	10 Dec 2020	09 Dec 2021	16 Dec 2020	09 Dec 2021	17 Dec 2020
BH123_0.1	SE214668.030	LB215760	09 Dec 2020	10 Dec 2020	09 Dec 2021	16 Dec 2020	09 Dec 2021	17 Dec 2020

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR-1	SE214668.033	LB215506	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	14 Dec 2020

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH101_0.7	SE214668.002	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH102_0.2	SE214668.003	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH103_0.2	SE214668.004	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH104_0.3	SE214668.005	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH105_0.3	SE214668.006	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH106_0.3	SE214668.007	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH107_0.3	SE214668.008	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH108_0.2	SE214668.009	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH108_0.7	SE214668.010	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH109_0.3	SE214668.011	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH110_0.2	SE214668.012	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH111_0.2	SE214668.013	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH111_0.7	SE214668.014	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH112_0.2	SE214668.015	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH113_0.2	SE214668.016	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH113_1.2	SE214668.017	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH114_0.2	SE214668.018	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH114_0.7	SE214668.019	LB215542	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH115_0.2	SE214668.020	LB215544	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH116_0.2	SE214668.021	LB215544	08 Dec 2020	10 Dec 2020	05 Jan 2021	14 Dec 2020	05 Jan 2021	17 Dec 2020
BH117_0.2	SE214668.022	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020
BH118_0.3	SE214668.023	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020
BH118_0.8	SE214668.024	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020
BH119_0.2	SE214668.025	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020
BH120_0.2	SE214668.026	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020
BH120_2.0	SE214668.027	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020
BH121_0.2	SE214668.028	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020
BH122_0.1	SE214668.029	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020
BH123_0.1	SE214668.030	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020

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

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

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

Mercury in Soil (continued)

Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH123_0.6	SE214668.031	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020
QD-1	SE214668.032	LB215544	09 Dec 2020	10 Dec 2020	06 Jan 2021	14 Dec 2020	06 Jan 2021	17 Dec 2020

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH101_0.7	SE214668.002	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH102_0.2	SE214668.003	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH103_0.2	SE214668.004	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH104_0.3	SE214668.005	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH105_0.3	SE214668.006	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH106_0.3	SE214668.007	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH107_0.3	SE214668.008	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH108_0.2	SE214668.009	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH108_0.7	SE214668.010	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH109_0.3	SE214668.011	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH110_0.2	SE214668.012	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH111_0.2	SE214668.013	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH111_0.7	SE214668.014	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH112_0.2	SE214668.015	LB215560	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	16 Dec 2020
BH113_0.2	SE214668.016	LB215561	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH113_1.2	SE214668.017	LB215561	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH114_0.2	SE214668.018	LB215561	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH114_0.7	SE214668.019	LB215561	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH115_0.2	SE214668.020	LB215561	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH116_0.2	SE214668.021	LB215561	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH117_0.2	SE214668.022	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH118_0.3	SE214668.023	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH118_0.8	SE214668.024	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH119_0.2	SE214668.025	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH120_0.2	SE214668.026	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH120_2.0	SE214668.027	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH121_0.2	SE214668.028	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH122_0.1	SE214668.029	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH123_0.1	SE214668.030	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
BH123_0.6	SE214668.031	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
QD-1	SE214668.032	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020
Trip Blank	SE214668.034	LB215561	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	19 Dec 2020	17 Dec 2020

OC Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH101_0.7	SE214668.002	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH102_0.2	SE214668.003	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH103_0.2	SE214668.004	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH104_0.3	SE214668.005	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH105_0.3	SE214668.006	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH106_0.3	SE214668.007	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH107_0.3	SE214668.008	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH108_0.2	SE214668.009	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH108_0.7	SE214668.010	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH109_0.3	SE214668.011	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH110_0.2	SE214668.012	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH111_0.2	SE214668.013	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH111_0.7	SE214668.014	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH112_0.2	SE214668.015	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH113_0.2	SE214668.016	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH113_1.2	SE214668.017	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH114_0.2	SE214668.018	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH114_0.7	SE214668.019	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH115_0.2	SE214668.020	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020

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

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

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

OC Pesticides in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH116_0.2	SE214668.021	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH117_0.2	SE214668.022	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH118_0.3	SE214668.023	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH118_0.8	SE214668.024	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH119_0.2	SE214668.025	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH120_0.2	SE214668.026	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH120_2.0	SE214668.027	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH121_0.2	SE214668.028	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH122_0.1	SE214668.029	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH123_0.1	SE214668.030	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH123_0.6	SE214668.031	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
QD-1	SE214668.032	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020

OP Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH101_0.7	SE214668.002	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH102_0.2	SE214668.003	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH103_0.2	SE214668.004	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH104_0.3	SE214668.005	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH105_0.3	SE214668.006	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH106_0.3	SE214668.007	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH107_0.3	SE214668.008	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH108_0.2	SE214668.009	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH108_0.7	SE214668.010	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH109_0.3	SE214668.011	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH110_0.2	SE214668.012	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH111_0.2	SE214668.013	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH111_0.7	SE214668.014	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH112_0.2	SE214668.015	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH113_0.2	SE214668.016	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH113_1.2	SE214668.017	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH114_0.2	SE214668.018	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH114_0.7	SE214668.019	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH115_0.2	SE214668.020	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH116_0.2	SE214668.021	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH117_0.2	SE214668.022	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH118_0.3	SE214668.023	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH118_0.8	SE214668.024	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH119_0.2	SE214668.025	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH120_0.2	SE214668.026	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH120_2.0	SE214668.027	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH121_0.2	SE214668.028	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH122_0.1	SE214668.029	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH123_0.1	SE214668.030	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH123_0.6	SE214668.031	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
QD-1	SE214668.032	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH101_0.7	SE214668.002	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH102_0.2	SE214668.003	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH103_0.2	SE214668.004	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH104_0.3	SE214668.005	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH105_0.3	SE214668.006	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH106_0.3	SE214668.007	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH107_0.3	SE214668.008	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH108_0.2	SE214668.009	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH108_0.7	SE214668.010	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH109_0.3	SE214668.011	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020

HOLDING TIME SUMMARY

SE214668 R0

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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH110_0.2	SE214668.012	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH111_0.2	SE214668.013	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH111_0.7	SE214668.014	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH112_0.2	SE214668.015	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH113_0.2	SE214668.016	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH113_1.2	SE214668.017	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH114_0.2	SE214668.018	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH114_0.7	SE214668.019	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH115_0.2	SE214668.020	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH116_0.2	SE214668.021	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH117_0.2	SE214668.022	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH118_0.3	SE214668.023	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH118_0.8	SE214668.024	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH119_0.2	SE214668.025	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH120_0.2	SE214668.026	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH120_2.0	SE214668.027	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH121_0.2	SE214668.028	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH122_0.1	SE214668.029	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH123_0.1	SE214668.030	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH123_0.6	SE214668.031	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
QD-1	SE214668.032	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020

PCBs in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH101_0.7	SE214668.002	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH102_0.2	SE214668.003	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH103_0.2	SE214668.004	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH104_0.3	SE214668.005	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH105_0.3	SE214668.006	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH106_0.3	SE214668.007	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH107_0.3	SE214668.008	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH108_0.2	SE214668.009	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH108_0.7	SE214668.010	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH109_0.3	SE214668.011	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH110_0.2	SE214668.012	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH111_0.2	SE214668.013	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH111_0.7	SE214668.014	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH112_0.2	SE214668.015	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH113_0.2	SE214668.016	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH113_1.2	SE214668.017	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH114_0.2	SE214668.018	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH114_0.7	SE214668.019	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH115_0.2	SE214668.020	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH116_0.2	SE214668.021	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH117_0.2	SE214668.022	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH118_0.3	SE214668.023	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH118_0.8	SE214668.024	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH119_0.2	SE214668.025	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH120_0.2	SE214668.026	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH120_2.0	SE214668.027	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH121_0.2	SE214668.028	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH122_0.1	SE214668.029	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH123_0.1	SE214668.030	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH123_0.6	SE214668.031	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
QD-1	SE214668.032	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH101_0.7	SE214668.002	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020

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

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

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

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH102_0.2	SE214668.003	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH103_0.2	SE214668.004	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH104_0.3	SE214668.005	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH105_0.3	SE214668.006	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH106_0.3	SE214668.007	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH107_0.3	SE214668.008	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH108_0.2	SE214668.009	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH108_0.7	SE214668.010	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH109_0.3	SE214668.011	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH110_0.2	SE214668.012	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH111_0.2	SE214668.013	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH111_0.7	SE214668.014	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH112_0.2	SE214668.015	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH113_0.2	SE214668.016	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH113_1.2	SE214668.017	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH114_0.2	SE214668.018	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH114_0.7	SE214668.019	LB215534	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH115_0.2	SE214668.020	LB215535	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH116_0.2	SE214668.021	LB215535	08 Dec 2020	10 Dec 2020	06 Jun 2021	14 Dec 2020	06 Jun 2021	17 Dec 2020
BH117_0.2	SE214668.022	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020
BH118_0.3	SE214668.023	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020
BH118_0.8	SE214668.024	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020
BH119_0.2	SE214668.025	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020
BH120_0.2	SE214668.026	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020
BH120_2.0	SE214668.027	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020
BH121_0.2	SE214668.028	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020
BH122_0.1	SE214668.029	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020
BH123_0.1	SE214668.030	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020
BH123_0.6	SE214668.031	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020
QD-1	SE214668.032	LB215535	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	17 Dec 2020

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR-1	SE214668.033	LB215512	09 Dec 2020	10 Dec 2020	07 Jun 2021	14 Dec 2020	07 Jun 2021	15 Dec 2020

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH101_0.7	SE214668.002	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH102_0.2	SE214668.003	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH103_0.2	SE214668.004	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH104_0.3	SE214668.005	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH105_0.3	SE214668.006	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH106_0.3	SE214668.007	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH107_0.3	SE214668.008	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH108_0.2	SE214668.009	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH108_0.7	SE214668.010	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH109_0.3	SE214668.011	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH110_0.2	SE214668.012	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH111_0.2	SE214668.013	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH111_0.7	SE214668.014	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH112_0.2	SE214668.015	LB215550	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	16 Dec 2020
BH113_0.2	SE214668.016	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH113_1.2	SE214668.017	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH114_0.2	SE214668.018	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH114_0.7	SE214668.019	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH115_0.2	SE214668.020	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH116_0.2	SE214668.021	LB215551	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH117_0.2	SE214668.022	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH118_0.3	SE214668.023	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020

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

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH118_0.8	SE214668.024	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH119_0.2	SE214668.025	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH120_0.2	SE214668.026	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH120_2.0	SE214668.027	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH121_0.2	SE214668.028	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH122_0.1	SE214668.029	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH123_0.1	SE214668.030	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
BH123_0.6	SE214668.031	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020
QD-1	SE214668.032	LB215551	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	17 Dec 2020

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR-1	SE214668.033	LB215735	09 Dec 2020	10 Dec 2020	16 Dec 2020	16 Dec 2020	25 Jan 2021	17 Dec 2020

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH101_0.7	SE214668.002	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH102_0.2	SE214668.003	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH103_0.2	SE214668.004	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH104_0.3	SE214668.005	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH105_0.3	SE214668.006	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH106_0.3	SE214668.007	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH107_0.3	SE214668.008	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH108_0.2	SE214668.009	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH108_0.7	SE214668.010	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH109_0.3	SE214668.011	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH110_0.2	SE214668.012	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH111_0.2	SE214668.013	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH111_0.7	SE214668.014	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH112_0.2	SE214668.015	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH113_0.2	SE214668.016	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH113_1.2	SE214668.017	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH114_0.2	SE214668.018	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH114_0.7	SE214668.019	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH115_0.2	SE214668.020	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH116_0.2	SE214668.021	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH117_0.2	SE214668.022	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH118_0.3	SE214668.023	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH118_0.8	SE214668.024	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH119_0.2	SE214668.025	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH120_0.2	SE214668.026	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH120_2.0	SE214668.027	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH121_0.2	SE214668.028	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH122_0.1	SE214668.029	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH123_0.1	SE214668.030	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH123_0.6	SE214668.031	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
QD-1	SE214668.032	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
Trip Blank	SE214668.034	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
Trip Spike	SE214668.035	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020

VOCs in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR-1	SE214668.033	LB215647	09 Dec 2020	10 Dec 2020	16 Dec 2020	15 Dec 2020	24 Jan 2021	18 Dec 2020

Volatile Petroleum Hydrocarbons in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH101_0.2	SE214668.001	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH101_0.7	SE214668.002	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH102_0.2	SE214668.003	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020

HOLDING TIME SUMMARY

SE214668 R0

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

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

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

Volatile Petroleum Hydrocarbons in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH103_0.2	SE214668.004	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH104_0.3	SE214668.005	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH105_0.3	SE214668.006	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH106_0.3	SE214668.007	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH107_0.3	SE214668.008	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH108_0.2	SE214668.009	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH108_0.7	SE214668.010	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH109_0.3	SE214668.011	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH110_0.2	SE214668.012	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH111_0.2	SE214668.013	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH111_0.7	SE214668.014	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH112_0.2	SE214668.015	LB215541	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH113_0.2	SE214668.016	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH113_1.2	SE214668.017	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH114_0.2	SE214668.018	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH114_0.7	SE214668.019	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH115_0.2	SE214668.020	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH116_0.2	SE214668.021	LB215543	08 Dec 2020	10 Dec 2020	22 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH117_0.2	SE214668.022	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH118_0.3	SE214668.023	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH118_0.8	SE214668.024	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH119_0.2	SE214668.025	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH120_0.2	SE214668.026	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH120_2.0	SE214668.027	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH121_0.2	SE214668.028	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH122_0.1	SE214668.029	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH123_0.1	SE214668.030	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
BH123_0.6	SE214668.031	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
QD-1	SE214668.032	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
Trip Blank	SE214668.034	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020
Trip Spike	SE214668.035	LB215543	09 Dec 2020	10 Dec 2020	23 Dec 2020	14 Dec 2020	23 Jan 2021	18 Dec 2020

Volatile Petroleum Hydrocarbons in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QR-1	SE214668.033	LB215647	09 Dec 2020	10 Dec 2020	16 Dec 2020	15 Dec 2020	24 Jan 2021	18 Dec 2020

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH101_0.2	SE214668.001	%	60 - 130%	88
	BH102_0.2	SE214668.003	%	60 - 130%	95
	BH103_0.2	SE214668.004	%	60 - 130%	91
	BH104_0.3	SE214668.005	%	60 - 130%	85
	BH105_0.3	SE214668.006	%	60 - 130%	87
	BH106_0.3	SE214668.007	%	60 - 130%	92
	BH107_0.3	SE214668.008	%	60 - 130%	91
	BH108_0.2	SE214668.009	%	60 - 130%	91
	BH109_0.3	SE214668.011	%	60 - 130%	89
	BH110_0.2	SE214668.012	%	60 - 130%	91
	BH111_0.2	SE214668.013	%	60 - 130%	92
	BH112_0.2	SE214668.015	%	60 - 130%	92
	BH113_0.2	SE214668.016	%	60 - 130%	94
	BH114_0.2	SE214668.018	%	60 - 130%	97
	BH115_0.2	SE214668.020	%	60 - 130%	94
	BH116_0.2	SE214668.021	%	60 - 130%	93
	BH117_0.2	SE214668.022	%	60 - 130%	94
	BH118_0.3	SE214668.023	%	60 - 130%	93
	BH119_0.2	SE214668.025	%	60 - 130%	96
	BH120_0.2	SE214668.026	%	60 - 130%	91
	BH121_0.2	SE214668.028	%	60 - 130%	93
	BH122_0.1	SE214668.029	%	60 - 130%	91
	BH123_0.1	SE214668.030	%	60 - 130%	95

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH101_0.2	SE214668.001	%	60 - 130%	86
	BH102_0.2	SE214668.003	%	60 - 130%	74
	BH103_0.2	SE214668.004	%	60 - 130%	79
	BH104_0.3	SE214668.005	%	60 - 130%	86
	BH105_0.3	SE214668.006	%	60 - 130%	87
	BH106_0.3	SE214668.007	%	60 - 130%	79
	BH107_0.3	SE214668.008	%	60 - 130%	89
	BH108_0.2	SE214668.009	%	60 - 130%	73
	BH109_0.3	SE214668.011	%	60 - 130%	73
	BH110_0.2	SE214668.012	%	60 - 130%	81
	BH111_0.2	SE214668.013	%	60 - 130%	80
	BH112_0.2	SE214668.015	%	60 - 130%	82
	BH113_0.2	SE214668.016	%	60 - 130%	82
	BH114_0.2	SE214668.018	%	60 - 130%	82
	BH115_0.2	SE214668.020	%	60 - 130%	77
	BH116_0.2	SE214668.021	%	60 - 130%	83
	BH117_0.2	SE214668.022	%	60 - 130%	91
	BH118_0.3	SE214668.023	%	60 - 130%	86
	BH119_0.2	SE214668.025	%	60 - 130%	86
	BH120_0.2	SE214668.026	%	60 - 130%	87
	BH121_0.2	SE214668.028	%	60 - 130%	92
	BH122_0.1	SE214668.029	%	60 - 130%	82
	BH123_0.1	SE214668.030	%	60 - 130%	84
d14-p-terphenyl (Surrogate)	BH101_0.2	SE214668.001	%	60 - 130%	84
	BH102_0.2	SE214668.003	%	60 - 130%	111
	BH103_0.2	SE214668.004	%	60 - 130%	93
	BH104_0.3	SE214668.005	%	60 - 130%	77
	BH105_0.3	SE214668.006	%	60 - 130%	93
	BH106_0.3	SE214668.007	%	60 - 130%	89
	BH107_0.3	SE214668.008	%	60 - 130%	78
	BH108_0.2	SE214668.009	%	60 - 130%	84
	BH109_0.3	SE214668.011	%	60 - 130%	79
	BH110_0.2	SE214668.012	%	60 - 130%	77
	BH111_0.2	SE214668.013	%	60 - 130%	76
	BH112_0.2	SE214668.015	%	60 - 130%	78

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

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

OP Pesticides in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d14-p-terphenyl (Surrogate)	BH113_0.2	SE214668.016	%	60 - 130%	101
	BH114_0.2	SE214668.018	%	60 - 130%	95
	BH115_0.2	SE214668.020	%	60 - 130%	101
	BH116_0.2	SE214668.021	%	60 - 130%	82
	BH117_0.2	SE214668.022	%	60 - 130%	90
	BH118_0.3	SE214668.023	%	60 - 130%	91
	BH119_0.2	SE214668.025	%	60 - 130%	89
	BH120_0.2	SE214668.026	%	60 - 130%	87
	BH121_0.2	SE214668.028	%	60 - 130%	104
	BH122_0.1	SE214668.029	%	60 - 130%	92
	BH123_0.1	SE214668.030	%	60 - 130%	96

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH101_0.2	SE214668.001	%	70 - 130%	86
	BH101_0.7	SE214668.002	%	70 - 130%	81
	BH102_0.2	SE214668.003	%	70 - 130%	74
	BH103_0.2	SE214668.004	%	70 - 130%	79
	BH104_0.3	SE214668.005	%	70 - 130%	86
	BH105_0.3	SE214668.006	%	70 - 130%	87
	BH106_0.3	SE214668.007	%	70 - 130%	79
	BH107_0.3	SE214668.008	%	70 - 130%	89
	BH108_0.2	SE214668.009	%	70 - 130%	73
	BH108_0.7	SE214668.010	%	70 - 130%	78
	BH109_0.3	SE214668.011	%	70 - 130%	73
	BH110_0.2	SE214668.012	%	70 - 130%	81
	BH111_0.2	SE214668.013	%	70 - 130%	80
	BH111_0.7	SE214668.014	%	70 - 130%	83
	BH112_0.2	SE214668.015	%	70 - 130%	82
	BH113_0.2	SE214668.016	%	70 - 130%	82
	BH113_1.2	SE214668.017	%	70 - 130%	96
	BH114_0.2	SE214668.018	%	70 - 130%	82
	BH114_0.7	SE214668.019	%	70 - 130%	81
	BH115_0.2	SE214668.020	%	70 - 130%	77
	BH116_0.2	SE214668.021	%	70 - 130%	83
	BH117_0.2	SE214668.022	%	70 - 130%	91
	BH118_0.3	SE214668.023	%	70 - 130%	86
	BH118_0.8	SE214668.024	%	70 - 130%	83
	BH119_0.2	SE214668.025	%	70 - 130%	86
	BH120_0.2	SE214668.026	%	70 - 130%	87
	BH120_2.0	SE214668.027	%	70 - 130%	91
	BH121_0.2	SE214668.028	%	70 - 130%	92
	BH122_0.1	SE214668.029	%	70 - 130%	82
	BH123_0.1	SE214668.030	%	70 - 130%	84
	BH123_0.6	SE214668.031	%	70 - 130%	92
d14-p-terphenyl (Surrogate)	BH101_0.2	SE214668.001	%	70 - 130%	84
	BH101_0.7	SE214668.002	%	70 - 130%	77
	BH102_0.2	SE214668.003	%	70 - 130%	111
	BH103_0.2	SE214668.004	%	70 - 130%	93
	BH104_0.3	SE214668.005	%	70 - 130%	77
	BH105_0.3	SE214668.006	%	70 - 130%	93
	BH106_0.3	SE214668.007	%	70 - 130%	89
	BH107_0.3	SE214668.008	%	70 - 130%	78
	BH108_0.2	SE214668.009	%	70 - 130%	84
	BH108_0.7	SE214668.010	%	70 - 130%	82
	BH109_0.3	SE214668.011	%	70 - 130%	79
	BH110_0.2	SE214668.012	%	70 - 130%	77
	BH111_0.2	SE214668.013	%	70 - 130%	76
	BH111_0.7	SE214668.014	%	70 - 130%	79
	BH112_0.2	SE214668.015	%	70 - 130%	78
	BH113_0.2	SE214668.016	%	70 - 130%	101

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)	BH113_1.2	SE214668.017	%	70 - 130%	103
	BH114_0.2	SE214668.018	%	70 - 130%	95
	BH114_0.7	SE214668.019	%	70 - 130%	86
	BH115_0.2	SE214668.020	%	70 - 130%	101
	BH116_0.2	SE214668.021	%	70 - 130%	82
	BH117_0.2	SE214668.022	%	70 - 130%	90
	BH118_0.3	SE214668.023	%	70 - 130%	91
	BH118_0.8	SE214668.024	%	70 - 130%	91
	BH119_0.2	SE214668.025	%	70 - 130%	89
	BH120_0.2	SE214668.026	%	70 - 130%	87
	BH120_2.0	SE214668.027	%	70 - 130%	92
	BH121_0.2	SE214668.028	%	70 - 130%	104
	BH122_0.1	SE214668.029	%	70 - 130%	92
	BH123_0.1	SE214668.030	%	70 - 130%	96
	BH123_0.6	SE214668.031	%	70 - 130%	102
d5-nitrobenzene (Surrogate)	BH101_0.2	SE214668.001	%	70 - 130%	91
	BH101_0.7	SE214668.002	%	70 - 130%	92
	BH102_0.2	SE214668.003	%	70 - 130%	92
	BH103_0.2	SE214668.004	%	70 - 130%	89
	BH104_0.3	SE214668.005	%	70 - 130%	89
	BH105_0.3	SE214668.006	%	70 - 130%	87
	BH106_0.3	SE214668.007	%	70 - 130%	84
	BH107_0.3	SE214668.008	%	70 - 130%	89
	BH108_0.2	SE214668.009	%	70 - 130%	86
	BH108_0.7	SE214668.010	%	70 - 130%	86
	BH109_0.3	SE214668.011	%	70 - 130%	91
	BH110_0.2	SE214668.012	%	70 - 130%	87
	BH111_0.2	SE214668.013	%	70 - 130%	88
	BH111_0.7	SE214668.014	%	70 - 130%	88
	BH112_0.2	SE214668.015	%	70 - 130%	88
	BH113_0.2	SE214668.016	%	70 - 130%	102
	BH113_1.2	SE214668.017	%	70 - 130%	122
	BH114_0.2	SE214668.018	%	70 - 130%	101
	BH114_0.7	SE214668.019	%	70 - 130%	98
	BH115_0.2	SE214668.020	%	70 - 130%	97
	BH116_0.2	SE214668.021	%	70 - 130%	108
	BH117_0.2	SE214668.022	%	70 - 130%	106
	BH118_0.3	SE214668.023	%	70 - 130%	107
	BH118_0.8	SE214668.024	%	70 - 130%	106
	BH119_0.2	SE214668.025	%	70 - 130%	102
	BH120_0.2	SE214668.026	%	70 - 130%	102
	BH120_2.0	SE214668.027	%	70 - 130%	115
	BH121_0.2	SE214668.028	%	70 - 130%	98
	BH122_0.1	SE214668.029	%	70 - 130%	88
	BH123_0.1	SE214668.030	%	70 - 130%	90
	BH123_0.6	SE214668.031	%	70 - 130%	100

PCBs in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH101_0.2	SE214668.001	%	60 - 130%	88
	BH102_0.2	SE214668.003	%	60 - 130%	95
	BH103_0.2	SE214668.004	%	60 - 130%	91
	BH104_0.3	SE214668.005	%	60 - 130%	85
	BH105_0.3	SE214668.006	%	60 - 130%	87
	BH106_0.3	SE214668.007	%	60 - 130%	92
	BH107_0.3	SE214668.008	%	60 - 130%	91
	BH108_0.2	SE214668.009	%	60 - 130%	91
	BH109_0.3	SE214668.011	%	60 - 130%	89
	BH110_0.2	SE214668.012	%	60 - 130%	91
	BH111_0.2	SE214668.013	%	60 - 130%	92
	BH112_0.2	SE214668.015	%	60 - 130%	92

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

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

PCBs in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH113_0.2	SE214668.016	%	60 - 130%	94
	BH114_0.2	SE214668.018	%	60 - 130%	97
	BH115_0.2	SE214668.020	%	60 - 130%	94
	BH116_0.2	SE214668.021	%	60 - 130%	93
	BH117_0.2	SE214668.022	%	60 - 130%	94
	BH118_0.3	SE214668.023	%	60 - 130%	93
	BH119_0.2	SE214668.025	%	60 - 130%	96
	BH120_0.2	SE214668.026	%	60 - 130%	91
	BH121_0.2	SE214668.028	%	60 - 130%	93
	BH122_0.1	SE214668.029	%	60 - 130%	91
	BH123_0.1	SE214668.030	%	60 - 130%	95

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH101_0.2	SE214668.001	%	60 - 130%	116
	BH101_0.7	SE214668.002	%	60 - 130%	113
	BH102_0.2	SE214668.003	%	60 - 130%	113
	BH103_0.2	SE214668.004	%	60 - 130%	112
	BH104_0.3	SE214668.005	%	60 - 130%	113
	BH105_0.3	SE214668.006	%	60 - 130%	112
	BH106_0.3	SE214668.007	%	60 - 130%	114
	BH107_0.3	SE214668.008	%	60 - 130%	116
	BH108_0.2	SE214668.009	%	60 - 130%	121
	BH108_0.7	SE214668.010	%	60 - 130%	117
	BH109_0.3	SE214668.011	%	60 - 130%	104
	BH110_0.2	SE214668.012	%	60 - 130%	101
	BH111_0.2	SE214668.013	%	60 - 130%	117
	BH111_0.7	SE214668.014	%	60 - 130%	116
	BH112_0.2	SE214668.015	%	60 - 130%	117
	BH113_0.2	SE214668.016	%	60 - 130%	78
	BH113_1.2	SE214668.017	%	60 - 130%	76
	BH114_0.2	SE214668.018	%	60 - 130%	72
	BH114_0.7	SE214668.019	%	60 - 130%	73
	BH115_0.2	SE214668.020	%	60 - 130%	74
	BH116_0.2	SE214668.021	%	60 - 130%	77
	BH117_0.2	SE214668.022	%	60 - 130%	70
	BH118_0.3	SE214668.023	%	60 - 130%	74
	BH118_0.8	SE214668.024	%	60 - 130%	69
	BH119_0.2	SE214668.025	%	60 - 130%	71
	BH120_0.2	SE214668.026	%	60 - 130%	71
	BH120_2.0	SE214668.027	%	60 - 130%	64
	BH121_0.2	SE214668.028	%	60 - 130%	72
	BH122_0.1	SE214668.029	%	60 - 130%	58 ①
	BH123_0.1	SE214668.030	%	60 - 130%	69
	BH123_0.6	SE214668.031	%	60 - 130%	69
	QD-1	SE214668.032	%	60 - 130%	71
	Trip Blank	SE214668.034	%	60 - 130%	73
	Trip Spike	SE214668.035	%	60 - 130%	71
d4-1,2-dichloroethane (Surrogate)	BH101_0.2	SE214668.001	%	60 - 130%	122
	BH101_0.7	SE214668.002	%	60 - 130%	113
	BH102_0.2	SE214668.003	%	60 - 130%	111
	BH103_0.2	SE214668.004	%	60 - 130%	112
	BH104_0.3	SE214668.005	%	60 - 130%	119
	BH105_0.3	SE214668.006	%	60 - 130%	97
	BH106_0.3	SE214668.007	%	60 - 130%	108
	BH107_0.3	SE214668.008	%	60 - 130%	118
	BH108_0.2	SE214668.009	%	60 - 130%	115
	BH108_0.7	SE214668.010	%	60 - 130%	110
	BH109_0.3	SE214668.011	%	60 - 130%	114
	BH110_0.2	SE214668.012	%	60 - 130%	89
	BH111_0.2	SE214668.013	%	60 - 130%	113

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

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

VOC's in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	BH111_0.7	SE214668.014	%	60 - 130%	115
	BH112_0.2	SE214668.015	%	60 - 130%	105
	BH113_0.2	SE214668.016	%	60 - 130%	89
	BH113_1.2	SE214668.017	%	60 - 130%	88
	BH114_0.2	SE214668.018	%	60 - 130%	92
	BH114_0.7	SE214668.019	%	60 - 130%	89
	BH115_0.2	SE214668.020	%	60 - 130%	90
	BH116_0.2	SE214668.021	%	60 - 130%	93
	BH117_0.2	SE214668.022	%	60 - 130%	85
	BH118_0.3	SE214668.023	%	60 - 130%	91
	BH118_0.8	SE214668.024	%	60 - 130%	86
	BH119_0.2	SE214668.025	%	60 - 130%	88
	BH120_0.2	SE214668.026	%	60 - 130%	88
	BH120_2.0	SE214668.027	%	60 - 130%	81
	BH121_0.2	SE214668.028	%	60 - 130%	88
	BH122_0.1	SE214668.029	%	60 - 130%	74
	BH123_0.1	SE214668.030	%	60 - 130%	88
	BH123_0.6	SE214668.031	%	60 - 130%	88
	QD-1	SE214668.032	%	60 - 130%	91
	Trip Blank	SE214668.034	%	60 - 130%	95
	Trip Spike	SE214668.035	%	60 - 130%	88
d8-toluene (Surrogate)	BH101_0.2	SE214668.001	%	60 - 130%	121
	BH101_0.7	SE214668.002	%	60 - 130%	110
	BH102_0.2	SE214668.003	%	60 - 130%	108
	BH103_0.2	SE214668.004	%	60 - 130%	110
	BH104_0.3	SE214668.005	%	60 - 130%	121
	BH105_0.3	SE214668.006	%	60 - 130%	96
	BH106_0.3	SE214668.007	%	60 - 130%	107
	BH107_0.3	SE214668.008	%	60 - 130%	116
	BH108_0.2	SE214668.009	%	60 - 130%	116
	BH108_0.7	SE214668.010	%	60 - 130%	115
	BH109_0.3	SE214668.011	%	60 - 130%	125
	BH110_0.2	SE214668.012	%	60 - 130%	92
	BH111_0.2	SE214668.013	%	60 - 130%	113
	BH111_0.7	SE214668.014	%	60 - 130%	113
	BH112_0.2	SE214668.015	%	60 - 130%	104
	BH113_0.2	SE214668.016	%	60 - 130%	88
	BH113_1.2	SE214668.017	%	60 - 130%	88
	BH114_0.2	SE214668.018	%	60 - 130%	94
	BH114_0.7	SE214668.019	%	60 - 130%	88
	BH115_0.2	SE214668.020	%	60 - 130%	90
	BH116_0.2	SE214668.021	%	60 - 130%	91
	BH117_0.2	SE214668.022	%	60 - 130%	84
	BH118_0.3	SE214668.023	%	60 - 130%	91
	BH118_0.8	SE214668.024	%	60 - 130%	85
	BH119_0.2	SE214668.025	%	60 - 130%	88
	BH120_0.2	SE214668.026	%	60 - 130%	88
	BH120_2.0	SE214668.027	%	60 - 130%	81
	BH121_0.2	SE214668.028	%	60 - 130%	88
	BH122_0.1	SE214668.029	%	60 - 130%	73
	BH123_0.1	SE214668.030	%	60 - 130%	87
	BH123_0.6	SE214668.031	%	60 - 130%	89
	QD-1	SE214668.032	%	60 - 130%	92
	Trip Blank	SE214668.034	%	60 - 130%	95
	Trip Spike	SE214668.035	%	60 - 130%	87

VOCs in Water

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QR-1	SE214668.033	%	40 - 130%	101
d4-1,2-dichloroethane (Surrogate)	QR-1	SE214668.033	%	40 - 130%	94
d8-toluene (Surrogate)	QR-1	SE214668.033	%	40 - 130%	96

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 — **Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH101_0.2	SE214668.001	%	60 - 130%	116
	BH101_0.7	SE214668.002	%	60 - 130%	113
	BH102_0.2	SE214668.003	%	60 - 130%	113
	BH103_0.2	SE214668.004	%	60 - 130%	112
	BH104_0.3	SE214668.005	%	60 - 130%	113
	BH105_0.3	SE214668.006	%	60 - 130%	112
	BH106_0.3	SE214668.007	%	60 - 130%	114
	BH107_0.3	SE214668.008	%	60 - 130%	116
	BH108_0.2	SE214668.009	%	60 - 130%	121
	BH108_0.7	SE214668.010	%	60 - 130%	117
	BH109_0.3	SE214668.011	%	60 - 130%	104
	BH110_0.2	SE214668.012	%	60 - 130%	101
	BH111_0.2	SE214668.013	%	60 - 130%	117
	BH111_0.7	SE214668.014	%	60 - 130%	116
	BH112_0.2	SE214668.015	%	60 - 130%	117
	BH113_0.2	SE214668.016	%	60 - 130%	78
	BH113_1.2	SE214668.017	%	60 - 130%	76
	BH114_0.2	SE214668.018	%	60 - 130%	72
	BH114_0.7	SE214668.019	%	60 - 130%	73
	BH115_0.2	SE214668.020	%	60 - 130%	74
	BH116_0.2	SE214668.021	%	60 - 130%	77
	BH117_0.2	SE214668.022	%	60 - 130%	70
	BH118_0.3	SE214668.023	%	60 - 130%	74
	BH118_0.8	SE214668.024	%	60 - 130%	69
	BH119_0.2	SE214668.025	%	60 - 130%	71
	BH120_0.2	SE214668.026	%	60 - 130%	71
	BH120_2.0	SE214668.027	%	60 - 130%	64
	BH121_0.2	SE214668.028	%	60 - 130%	72
	BH122_0.1	SE214668.029	%	60 - 130%	58 ①
	BH123_0.1	SE214668.030	%	60 - 130%	69
	BH123_0.6	SE214668.031	%	60 - 130%	69
	QD-1	SE214668.032	%	60 - 130%	71
d4-1,2-dichloroethane (Surrogate)	BH101_0.2	SE214668.001	%	60 - 130%	122
	BH101_0.7	SE214668.002	%	60 - 130%	113
	BH102_0.2	SE214668.003	%	60 - 130%	111
	BH103_0.2	SE214668.004	%	60 - 130%	112
	BH104_0.3	SE214668.005	%	60 - 130%	119
	BH105_0.3	SE214668.006	%	60 - 130%	97
	BH106_0.3	SE214668.007	%	60 - 130%	108
	BH107_0.3	SE214668.008	%	60 - 130%	118
	BH108_0.2	SE214668.009	%	60 - 130%	115
	BH108_0.7	SE214668.010	%	60 - 130%	110
	BH109_0.3	SE214668.011	%	60 - 130%	114
	BH110_0.2	SE214668.012	%	60 - 130%	89
	BH111_0.2	SE214668.013	%	60 - 130%	113
	BH111_0.7	SE214668.014	%	60 - 130%	115
	BH112_0.2	SE214668.015	%	60 - 130%	105
	BH113_0.2	SE214668.016	%	60 - 130%	89
	BH113_1.2	SE214668.017	%	60 - 130%	88
	BH114_0.2	SE214668.018	%	60 - 130%	92
	BH114_0.7	SE214668.019	%	60 - 130%	89
	BH115_0.2	SE214668.020	%	60 - 130%	90
	BH116_0.2	SE214668.021	%	60 - 130%	93
	BH117_0.2	SE214668.022	%	60 - 130%	85
	BH118_0.3	SE214668.023	%	60 - 130%	91
	BH118_0.8	SE214668.024	%	60 - 130%	86
	BH119_0.2	SE214668.025	%	60 - 130%	88
	BH120_0.2	SE214668.026	%	60 - 130%	88
	BH120_2.0	SE214668.027	%	60 - 130%	81
	BH121_0.2	SE214668.028	%	60 - 130%	88
	BH122_0.1	SE214668.029	%	60 - 130%	74

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

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

Volatile Petroleum Hydrocarbons in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	BH123_0.1	SE214668.030	%	60 - 130%	88
	BH123_0.6	SE214668.031	%	60 - 130%	88
	QD-1	SE214668.032	%	60 - 130%	91
d8-toluene (Surrogate)	BH101_0.2	SE214668.001	%	60 - 130%	121
	BH101_0.7	SE214668.002	%	60 - 130%	110
	BH102_0.2	SE214668.003	%	60 - 130%	108
	BH103_0.2	SE214668.004	%	60 - 130%	110
	BH104_0.3	SE214668.005	%	60 - 130%	121
	BH105_0.3	SE214668.006	%	60 - 130%	96
	BH106_0.3	SE214668.007	%	60 - 130%	107
	BH107_0.3	SE214668.008	%	60 - 130%	116
	BH108_0.2	SE214668.009	%	60 - 130%	116
	BH108_0.7	SE214668.010	%	60 - 130%	115
	BH109_0.3	SE214668.011	%	60 - 130%	125
	BH110_0.2	SE214668.012	%	60 - 130%	92
	BH111_0.2	SE214668.013	%	60 - 130%	113
	BH111_0.7	SE214668.014	%	60 - 130%	113
	BH112_0.2	SE214668.015	%	60 - 130%	104
	BH113_0.2	SE214668.016	%	60 - 130%	88
	BH113_1.2	SE214668.017	%	60 - 130%	88
	BH114_0.2	SE214668.018	%	60 - 130%	94
	BH114_0.7	SE214668.019	%	60 - 130%	88
	BH115_0.2	SE214668.020	%	60 - 130%	90
	BH116_0.2	SE214668.021	%	60 - 130%	91
	BH117_0.2	SE214668.022	%	60 - 130%	84
	BH118_0.3	SE214668.023	%	60 - 130%	91
	BH118_0.8	SE214668.024	%	60 - 130%	85
	BH119_0.2	SE214668.025	%	60 - 130%	88
	BH120_0.2	SE214668.026	%	60 - 130%	88
	BH120_2.0	SE214668.027	%	60 - 130%	81
	BH121_0.2	SE214668.028	%	60 - 130%	88
	BH122_0.1	SE214668.029	%	60 - 130%	73
	BH123_0.1	SE214668.030	%	60 - 130%	87
	BH123_0.6	SE214668.031	%	60 - 130%	89
	QD-1	SE214668.032	%	60 - 130%	92

Volatile Petroleum Hydrocarbons in Water — **Method: ME-(AU)-[ENV]AN433**

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	QR-1	SE214668.033	%	40 - 130%	101
d4-1,2-dichloroethane (Surrogate)	QR-1	SE214668.033	%	60 - 130%	94
d8-toluene (Surrogate)	QR-1	SE214668.033	%	40 - 130%	96

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

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

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB215506.001	Mercury	mg/L	0.0001	<0.0001

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result
LB215542.001	Mercury	mg/kg	0.05	<0.05
LB215544.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215550.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<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
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	100
LB215551.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<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
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

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

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215550.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	109
		d14-p-terphenyl (Surrogate)	%	-	111
LB215551.001		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	90
		d14-p-terphenyl (Surrogate)	%	-	94

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215550.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	126
		2-fluorobiphenyl (Surrogate)	%	-	109
		d14-p-terphenyl (Surrogate)	%	-	111
LB215551.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB215551.001		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	94
		2-fluorobiphenyl (Surrogate)	%	-	90
		d14-p-terphenyl (Surrogate)	%	-	94

PCBs in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215550.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	100
LB215551.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result
LB215534.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0
LB215535.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB215512.001	Arsenic, As	µg/L	1	<1
	Cadmium, Cd	µg/L	0.1	<0.1
	Chromium, Cr	µg/L	1	<1
	Copper, Cu	µg/L	1	<1
	Lead, Pb	µg/L	1	<1
	Nickel, Ni	µg/L	1	<1
	Zinc, Zn	µg/L	5	<5

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB215550.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110
LB215551.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result
LB215735.001	TRH C10-C14	µg/L	50	<50
	TRH C15-C28	µg/L	200	<200
	TRH C29-C36	µg/L	200	<200
	TRH C37-C40	µg/L	200	<200

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215541.001	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	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	97
		d8-toluene (Surrogate)	%	-	95
		Bromofluorobenzene (Surrogate)	%	-	82
	Totals	Total BTEX	mg/kg	0.6	<0.6
LB215543.001	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	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	98
		d8-toluene (Surrogate)	%	-	95
		Bromofluorobenzene (Surrogate)	%	-	89
	Totals	Total BTEX	mg/kg	0.6	<0.6

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result
LB215647.001	Monocyclic Aromatic	Benzene	µg/L	0.5	<0.5
	Hydrocarbons	Toluene	µg/L	0.5	<0.5
		Ethylbenzene	µg/L	0.5	<0.5
		m/p-xylene	µg/L	1	<1
		o-xylene	µg/L	0.5	<0.5
	Polycyclic VOCs	Naphthalene	µg/L	0.5	<0.5
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	95
		d8-toluene (Surrogate)	%	-	96
		Bromofluorobenzene (Surrogate)	%	-	103

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB215541.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	97
LB215543.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	98

Volatile Petroleum Hydrocarbons in Water

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

Sample Number	Parameter	Units	LOR

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

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

Volatile Petroleum Hydrocarbons in Water (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB215647.001		TRH C6-C9	µg/L	40	<40
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	95
		d8-toluene (Surrogate)	%	-	96
		Bromofluorobenzene (Surrogate)	%	-	103

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.

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214678.009	LB215506.014	Mercury	µg/L	0.0001	<0.0001	<0.0001	200	0
SE214736.001	LB215506.016	Mercury	µg/L	0.0001	-0.00054	0.00086	200	178

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.010	LB215542.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE214668.019	LB215542.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE214668.024	LB215544.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE214668.032	LB215544.023	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215560.011	% Moisture	%w/w	1	13.6	13.5	37	1
SE214668.015	LB215560.022	% Moisture	%w/w	1	7.0	6.7	45	4
SE214668.025	LB215561.011	% Moisture	%w/w	1	6.8	6.4	45	6
SE214668.034	LB215561.020	% Moisture	%w/w	1	<1.0	<1.0	200	0

OC Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215550.014		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.13	0.16	30	24
SE214668.015	LB215550.027		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0

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.

OC Pesticides in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.015	LB215550.027		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
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.16	30	17
SE214668.025	LB215551.014		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	30	2

OP Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215550.014		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	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	1

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

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

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

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

OP Pesticides in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215550.014	Surrogates	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	4
SE214668.015	LB215550.027		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
SE214668.025	LB215551.014		Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Azinphos-methyl (Guthion)	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	-	0.4	0.5	30	12

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215550.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	0
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	1
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	4
SE214668.015	LB215550.027		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<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.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.015	LB215550.027		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	TEQ (mg/kg)	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	5
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
SE214668.025	LB215551.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
				TEQ (mg/kg)	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
				TEQ (mg/kg)	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
				TEQ (mg/kg)	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.6	30	10
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	12

PCBs in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215550.014	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0

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.

PCBs in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215550.014		Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	24
SE214668.015	LB215550.027		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	17
SE214668.025	LB215551.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	2

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.010	LB215534.014	Arsenic, As	mg/kg	1	2	2	86	28
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	12	14	34	16
		Copper, Cu	mg/kg	0.5	5.3	5.4	39	2
		Nickel, Ni	mg/kg	0.5	6.7	6.9	37	3
		Lead, Pb	mg/kg	1	12	14	38	19
		Zinc, Zn	mg/kg	2	24	21	39	12
SE214668.019	LB215534.024	Arsenic, As	mg/kg	1	2	2	83	6
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	25	24	32	6
		Copper, Cu	mg/kg	0.5	7.1	7.7	37	8
		Nickel, Ni	mg/kg	0.5	11	10	35	12
		Lead, Pb	mg/kg	1	15	14	37	6
		Zinc, Zn	mg/kg	2	47	40	35	16
SE214668.024	LB215535.014	Arsenic, As	mg/kg	1	2	1	95	7
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	22	22	32	1
		Copper, Cu	mg/kg	0.5	9.2	8.9	36	4
		Nickel, Ni	mg/kg	0.5	7.2	7.1	37	2
		Lead, Pb	mg/kg	1	12	13	38	5
		Zinc, Zn	mg/kg	2	37	37	35	0
SE214668.032	LB215535.023	Arsenic, As	mg/kg	1	2	2	85	3
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	13	13	34	1
		Copper, Cu	mg/kg	0.5	5.3	5.4	39	2
		Nickel, Ni	mg/kg	0.5	5.6	5.7	39	2
		Lead, Pb	mg/kg	1	11	12	39	12
		Zinc, Zn	mg/kg	2	11	11	48	1

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214678.005	LB215512.014	Arsenic, As	µg/L	1	<1	<1	184	0
		Cadmium, Cd	µg/L	0.1	<0.1	<0.1	200	0
		Chromium, Cr	µg/L	1	<1	<1	200	0
		Copper, Cu	µg/L	1	<1	<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.

Trace Metals (Dissolved) in Water by ICPMS (continued)

Method: ME-(AU)-[ENV]AN318

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214678.005	LB215512.014		Lead, Pb	µg/L	1	<1	<1	200	0
			Zinc, Zn	µg/L	5	170	160	18	2
SE214736.001	LB215512.031		Arsenic, As	µg/L	1	1.504	1.486	82	1
			Cadmium, Cd	µg/L	0.1	0.011	0.012	200	0
			Chromium, Cr	µg/L	1	0.121	0.12	200	0
			Copper, Cu	µg/L	1	1.393	1.481	85	6
			Lead, Pb	µg/L	1	0.443	0.485	200	0
			Nickel, Ni	µg/L	1	10.162	10.272	25	1
			Zinc, Zn	µg/L	5	66.136	65.341	23	1

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215550.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE214668.015	LB215550.027		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE214668.025	LB215551.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	46	77	103	50
			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	94	164	4
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE214668.030	LB215551.023		TRH C10-C14	mg/kg	20	<20	20	178	0
			TRH C15-C28	mg/kg	45	<45	0	200	0
			TRH C29-C36	mg/kg	45	<45	0	200	0
			TRH C37-C40	mg/kg	100	<100	0	200	0
			TRH C10-C36 Total	mg/kg	110	<110	20	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	0	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	0	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	0	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	0	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	0	200	0

VOC's in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215541.014	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	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.9	11.2	50	5

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

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

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

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

VOC's in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215541.014	Surrogates	d8-toluene (Surrogate)	mg/kg	-	12.1	10.9	50	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.3	11.6	50	2
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE214668.015	LB215541.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			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	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.5	11.3	50	8
			d8-toluene (Surrogate)	mg/kg	-	10.4	11.6	50	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.7	9.5	50	20
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE214668.025	LB215543.014	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	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	9.2	50	4
			d8-toluene (Surrogate)	mg/kg	-	8.8	9.2	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.1	7.4	50	4
		Totals	Total Xylenes	mg/kg	0.3	<0.3	<0.3	200	0
			Total BTEX	mg/kg	0.6	<0.6	<0.6	200	0
SE214668.032	LB215543.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	0.0030668524	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	0.0024724862	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	0.0004089512	200	0
			m/p-xylene	mg/kg	0.2	<0.2	0.0012473797	200	0
			o-xylene	mg/kg	0.1	<0.1	0.0005915041	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	0.0013508529	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.1	8.8779000362	50	2
			d8-toluene (Surrogate)	mg/kg	-	9.2	8.8915973371	50	3
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.1	6.8588932311	50	3
		Totals	Total Xylenes	mg/kg	0.3	<0.3	0.0018388839	200	0
			Total BTEX	mg/kg	0.6	<0.6	0	200	0

Volatile Petroleum Hydrocarbons in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.005	LB215541.014		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	-	11.9	11.2	30	5
			d8-toluene (Surrogate)	mg/kg	-	12.1	10.9	30	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.3	11.6	30	2
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE214668.015	LB215541.025		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	-	10.5	11.3	30	8
			d8-toluene (Surrogate)	mg/kg	-	10.4	11.6	30	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.7	9.0	30	25
		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
SE214668.025	LB215543.014		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	-	8.8	9.2	30	4
			d8-toluene (Surrogate)	mg/kg	-	8.8	9.2	30	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.1	7.4	30	4
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

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.

Volatile Petroleum Hydrocarbons in Soil (continued) — **Method: ME-(AU)-[ENV]AN433**

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE214668.032	LB215543.025		TRH C6-C10	mg/kg	25	<25	0	200	0
			TRH C6-C9	mg/kg	20	<20	0	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.1	8.8779000362	30	2
			d8-toluene (Surrogate)	mg/kg	-	9.2	8.8915973371	30	3
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.1	6.8588932311	30	3
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	0.0030668524	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	0	200	0

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

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

Mercury in Soil

Method: ME-(AU)-[ENV]AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215542.002	Mercury	mg/kg	0.05	0.21	0.2	70 - 130	106
LB215544.002	Mercury	mg/kg	0.05	0.21	0.2	70 - 130	104

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215550.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	114
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	110
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	106
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	110
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	105
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	92
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	99
LB215551.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	104
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	92
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	95
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	92
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	94
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	98
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130	92

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215550.002		Dichlorvos	mg/kg	0.5	2.3	2	60 - 140	115
		Diazinon (Dimpylate)	mg/kg	0.5	2.5	2	60 - 140	125
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.3	2	60 - 140	116
		Ethion	mg/kg	0.2	1.7	2	60 - 140	86
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	85
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	79
LB215551.002		Dichlorvos	mg/kg	0.5	2.4	2	60 - 140	120
		Diazinon (Dimpylate)	mg/kg	0.5	2.4	2	60 - 140	122
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.5	2	60 - 140	123
		Ethion	mg/kg	0.2	1.8	2	60 - 140	92
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	90
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	86

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215550.002		Naphthalene	mg/kg	0.1	4.8	4	60 - 140	119
		Acenaphthylene	mg/kg	0.1	4.7	4	60 - 140	117
		Acenaphthene	mg/kg	0.1	5.0	4	60 - 140	124
		Phenanthrene	mg/kg	0.1	4.8	4	60 - 140	120
		Anthracene	mg/kg	0.1	4.7	4	60 - 140	117
		Fluoranthene	mg/kg	0.1	4.2	4	60 - 140	105
		Pyrene	mg/kg	0.1	4.9	4	60 - 140	122
		Benzo(a)pyrene	mg/kg	0.1	4.0	4	60 - 140	101
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	93
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	85
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	79
LB215551.002		Naphthalene	mg/kg	0.1	5.0	4	60 - 140	124
		Acenaphthylene	mg/kg	0.1	5.2	4	60 - 140	131
		Acenaphthene	mg/kg	0.1	4.6	4	60 - 140	115
		Phenanthrene	mg/kg	0.1	4.8	4	60 - 140	119
		Anthracene	mg/kg	0.1	4.8	4	60 - 140	119
		Fluoranthene	mg/kg	0.1	4.8	4	60 - 140	120
		Pyrene	mg/kg	0.1	4.9	4	60 - 140	122
		Benzo(a)pyrene	mg/kg	0.1	4.8	4	60 - 140	119
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	88
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	90
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	86

PCBs in Soil

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

Sample Number	Parameter	Units	LOR

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

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

PCBs in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215550.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	106
LB215551.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	107

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215534.002	Arsenic, As	mg/kg	1	360	318.22	80 - 120	115
	Cadmium, Cd	mg/kg	0.3	4.7	5.41	80 - 120	86
	Chromium, Cr	mg/kg	0.5	41	38.31	80 - 120	107
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	106
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	103
	Lead, Pb	mg/kg	1	94	89.9	80 - 120	104
	Zinc, Zn	mg/kg	2	290	273	80 - 120	104
LB215535.002	Arsenic, As	mg/kg	1	360	318.22	80 - 120	114
	Cadmium, Cd	mg/kg	0.3	4.4	5.41	80 - 120	82
	Chromium, Cr	mg/kg	0.5	40	38.31	80 - 120	105
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	107
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	103
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	103
	Zinc, Zn	mg/kg	2	280	273	80 - 120	104

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215512.002	Arsenic, As	µg/L	1	19	20	80 - 120	95
	Cadmium, Cd	µg/L	0.1	21	20	80 - 120	105
	Chromium, Cr	µg/L	1	22	20	80 - 120	109
	Copper, Cu	µg/L	1	22	20	80 - 120	112
	Lead, Pb	µg/L	1	19	20	80 - 120	95
	Nickel, Ni	µg/L	1	22	20	80 - 120	109
	Zinc, Zn	µg/L	5	21	20	80 - 120	107

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215550.002		TRH C10-C14	mg/kg	20	41	40	60 - 140	103
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	88
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	100
	TRH F Bands	TRH >C10-C16	mg/kg	25	39	40	60 - 140	98
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	100
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	80
LB215551.002		TRH C10-C14	mg/kg	20	44	40	60 - 140	110
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	98
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	80
	TRH F Bands	TRH >C10-C16	mg/kg	25	44	40	60 - 140	110
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	88
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	80

TRH (Total Recoverable Hydrocarbons) in Water

Method: ME-(AU)-[ENV]AN403

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215735.002		TRH C10-C14	µg/L	50	790	1200	60 - 140	66
		TRH C15-C28	µg/L	200	1100	1200	60 - 140	90
		TRH C29-C36	µg/L	200	1300	1200	60 - 140	105
	TRH F Bands	TRH >C10-C16	µg/L	60	1200	1200	60 - 140	102
		TRH >C16-C34 (F3)	µg/L	500	1300	1200	60 - 140	106
		TRH >C34-C40 (F4)	µg/L	500	620	600	60 - 140	104

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215541.002	Monocyclic Aromatic	Benzene	mg/kg	0.1	4.0	5	60 - 140	81
		Toluene	mg/kg	0.1	4.0	5	60 - 140	81
		Ethylbenzene	mg/kg	0.1	4.4	5	60 - 140	88
		m/p-xylene	mg/kg	0.2	8.8	10	60 - 140	88
		o-xylene	mg/kg	0.1	4.4	5	60 - 140	88
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.1	10	70 - 130	101

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

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

VOC's in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215541.002	Surrogates	d8-toluene (Surrogate)	mg/kg	-	10.1	10	70 - 130	101
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.1	10	70 - 130	91
LB215543.002	Monocyclic	Benzene	mg/kg	0.1	3.6	5	60 - 140	71
	Aromatic	Toluene	mg/kg	0.1	3.6	5	60 - 140	71
		Ethylbenzene	mg/kg	0.1	3.9	5	60 - 140	77
		m/p-xylene	mg/kg	0.2	7.8	10	60 - 140	78
		o-xylene	mg/kg	0.1	3.9	5	60 - 140	77
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
		d8-toluene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.6	10	70 - 130	86

VOCs in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215647.002	Monocyclic	Benzene	µg/L	0.5	48	45.45	60 - 140	106
	Aromatic	Toluene	µg/L	0.5	48	45.45	60 - 140	106
		Ethylbenzene	µg/L	0.5	48	45.45	60 - 140	106
		m/p-xylene	µg/L	1	96	90.9	60 - 140	106
		o-xylene	µg/L	0.5	49	45.45	60 - 140	108
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.3	10	60 - 140	103
		d8-toluene (Surrogate)	µg/L	-	10.3	10	70 - 130	103
		Bromofluorobenzene (Surrogate)	µg/L	-	10.3	10	70 - 130	103

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215541.002		TRH C6-C10	mg/kg	25	77	92.5	60 - 140	83
		TRH C6-C9	mg/kg	20	66	80	60 - 140	83
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.1	10	70 - 130	101
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.1	10	70 - 130	91
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	51	62.5	60 - 140	82
LB215543.002		TRH C6-C10	mg/kg	25	78	92.5	60 - 140	84
		TRH C6-C9	mg/kg	20	66	80	60 - 140	83
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	10	70 - 130	92
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.6	10	70 - 130	86
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	55	62.5	60 - 140	88

Volatile Petroleum Hydrocarbons in Water

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB215647.002		TRH C6-C10	µg/L	50	990	946.63	60 - 140	105
		TRH C6-C9	µg/L	40	880	818.71	60 - 140	107
	Surrogates	d4-1,2-dichloroethane (Surrogate)	µg/L	-	10.3	10	60 - 140	103
		d8-toluene (Surrogate)	µg/L	-	10.3	10	70 - 130	103
		Bromofluorobenzene (Surrogate)	µg/L	-	10.3	10	70 - 130	103
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	µg/L	50	700	639.67	60 - 140	110

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

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

Mercury (dissolved) in Water

Method: ME-(AU)-[ENV]AN311(Perth)/AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214668.033	LB215506.004	Mercury	mg/L	0.0001	0.0017	<0.0001	0.008	86

OC Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214668.016	LB215551.004		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	111
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	99
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	102
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	99
			Endrin	mg/kg	0.2	<0.2	<0.2	0.2	98
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	100
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.14	-	91
SE214745.021	LB215550.004		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	123
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	117
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	115
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	0.2	<0.2	0.2	115
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	112
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	-	-
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	91
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-

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

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

OC Pesticides in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214745.021	LB215550.004		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	-	108

OP Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214668.016	LB215551.004		Dichlorvos	mg/kg	0.5	1.6	<0.5	2	79
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Diazinon (Dimpylate)	mg/kg	0.5	2.1	<0.5	2	103
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.5	<0.2	2	125
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.7	<0.2	2	87
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	7.9	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	81
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	77
SE214745.021	LB215550.004		Dichlorvos	mg/kg	0.5	2.2	<0.5	2	108
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Diazinon (Dimpylate)	mg/kg	0.5	2.3	<0.5	2	113
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.3	<0.2	2	116
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.8	<0.2	2	90
			Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	8.5	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	90
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	83

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214668.016	LB215551.004		Naphthalene	mg/kg	0.1	3.8	<0.1	4	95
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	3.8	<0.1	4	96
			Acenaphthene	mg/kg	0.1	3.8	<0.1	4	94
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	3.5	<0.1	4	88
			Anthracene	mg/kg	0.1	3.6	<0.1	4	90
			Fluoranthene	mg/kg	0.1	4.2	<0.1	4	104
			Pyrene	mg/kg	0.1	3.8	<0.1	4	96
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	3.6	<0.1	4	89
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	3.6	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	3.7	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	3.6	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	30	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	100
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	81
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	77

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214745.021	LB215550.004		Naphthalene	mg/kg	0.1	4.7	0.1	4	113
			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	4.9	0.2	4	117
			Acenaphthene	mg/kg	0.1	4.9	<0.1	4	123
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.6	0.5	4	103
			Anthracene	mg/kg	0.1	4.9	0.3	4	115
			Fluoranthene	mg/kg	0.1	4.4	1.8	4	66
			Pyrene	mg/kg	0.1	5.4	2.1	4	82
			Benzo(a)anthracene	mg/kg	0.1	0.4	1.0	-	-
			Chrysene	mg/kg	0.1	0.5	1.2	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.6	1.6	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	0.4	0.5	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.6	1.1	4	87
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.3	0.6	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	0.3	0.5	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.8	1.5	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.9	1.6	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.8	1.5	-	-
			Total PAH (18)	mg/kg	0.8	41	11	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	-	96
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	90
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	83

PCBs in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214668.016	LB215551.004		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	106
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	-	91
SE214745.021	LB215550.004		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	109
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	-	108

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214668.001	LB215534.004	Arsenic, As	mg/kg	1	47	2	50	90
		Cadmium, Cd	mg/kg	0.3	42	<0.3	50	84
		Chromium, Cr	mg/kg	0.5	56	11	50	89
		Copper, Cu	mg/kg	0.5	50	6.9	50	85
		Nickel, Ni	mg/kg	0.5	51	6.3	50	89
		Lead, Pb	mg/kg	1	80	18	50	124
		Zinc, Zn	mg/kg	2	76	43	50	66 ④
SE214748.001	LB215535.004	Arsenic, As	mg/kg	1	53	5.93566205384	50	94
		Cadmium, Cd	mg/kg	0.3	45	0.05098230490	50	91

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

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214748.001	LB215535.004	Chromium, Cr	mg/kg	0.5	58	10.05814787507	50	96
		Copper, Cu	mg/kg	0.5	65	19.50545220810	50	91
		Nickel, Ni	mg/kg	0.5	56	9.91653036146	50	93
		Lead, Pb	mg/kg	1	60	15.84416742286	50	89
		Zinc, Zn	mg/kg	2	77	38.91507656533	50	76

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214668.033	LB215512.004	Arsenic, As	µg/L	1	19	<1	20	97
		Cadmium, Cd	µg/L	0.1	21	<0.1	20	105
		Chromium, Cr	µg/L	1	23	<1	20	112
		Copper, Cu	µg/L	1	24	<1	20	115
		Lead, Pb	µg/L	1	19	<1	20	95
		Nickel, Ni	µg/L	1	22	<1	20	111
		Zinc, Zn	µg/L	5	24	<5	20	110
SE214736.001	LB215512.030	Arsenic, As	µg/L	1	26	1.504	20	122
		Cadmium, Cd	µg/L	0.1	21	0.011	20	106
		Chromium, Cr	µg/L	1	22	0.121	20	108
		Copper, Cu	µg/L	1	22	1.393	20	101
		Lead, Pb	µg/L	1	19	0.443	20	93
		Nickel, Ni	µg/L	1	30	10.162	20	100
		Zinc, Zn	µg/L	5	86	66.136	20	99

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214668.016	LB215551.004		TRH C10-C14	mg/kg	20	44	<20	40	110
			TRH C15-C28	mg/kg	45	<45	<45	40	108
			TRH C29-C36	mg/kg	45	<45	<45	40	98
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	46	<25	40	115
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	46	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	103
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-
SE214745.021	LB215550.004		TRH C10-C14	mg/kg	20	46	<20	40	115
			TRH C15-C28	mg/kg	45	48	<45	40	120
			TRH C29-C36	mg/kg	45	<45	<45	40	105
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	43	<25	40	108
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	38	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	130
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214668.016	LB215543.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	3.6	<0.1	5	73
			Toluene	mg/kg	0.1	3.6	<0.1	5	72
			Ethylbenzene	mg/kg	0.1	3.9	<0.1	5	78
			m/p-xylene	mg/kg	0.2	7.9	<0.2	10	78
			o-xylene	mg/kg	0.1	3.9	<0.1	5	78
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	8.9	10	92
			d8-toluene (Surrogate)	mg/kg	-	9.2	8.8	10	92
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	7.8	10	83
		Totals	Total Xylenes	mg/kg	0.3	12	<0.3	-	-
			Total BTEX	mg/kg	0.6	23	<0.6	-	-
SE214745.021	LB215541.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	3.7	<0.1	5	73
			Toluene	mg/kg	0.1	3.7	<0.1	5	73
			Ethylbenzene	mg/kg	0.1	4.0	<0.1	5	80

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

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

VOC's in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214745.021	LB215541.004	Monocyclic	m/p-xylene	mg/kg	0.2	8.1	<0.2	10	80
		Aromatic	o-xylene	mg/kg	0.1	4.0	<0.1	5	80
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.3	9.3	10	93
			d8-toluene (Surrogate)	mg/kg	-	9.3	9.3	10	93
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	7.8	10	83
		Totals	Total Xylenes	mg/kg	0.3	12	<0.3	-	-
			Total BTEX	mg/kg	0.6	23	<0.6	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE214668.016	LB215543.004		TRH C6-C10	mg/kg	25	80	<25	92.5	86
			TRH C6-C9	mg/kg	20	68	<20	80	85
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.2	8.9	10	92
			d8-toluene (Surrogate)	mg/kg	-	9.2	8.8	10	92
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	7.8	-	83
		VPH F	Benzene (F0)	mg/kg	0.1	3.6	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	57	<25	62.5	91
SE214745.021	LB215541.004		TRH C6-C10	mg/kg	25	72	<25	92.5	77
			TRH C6-C9	mg/kg	20	62	<20	80	77
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.3	9.3	10	93
			d8-toluene (Surrogate)	mg/kg	-	9.3	9.3	10	93
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	7.8	-	83
		VPH F	Benzene (F0)	mg/kg	0.1	3.7	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	48	<25	62.5	77

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

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

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

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

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

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

Appendix H – QA/QC Assessment

H1 QUALITY CONTROL PROGRAM

H1.1 PROJECT QA/QC PROTOCOLS

The overall quality assurance comprises an assessment of the reliability of the field procedures and the laboratory results against standard industry practices, documented sampling and analysis plans or remediation action plans. A summary of the project QA/QC protocols to be followed during the investigation works is presented in **Table H-1.**

Table H-1 QA/QC Protocols

Task	Description	Project
Field QA/QC		
General	Work was undertaken following standard field procedures which are based on industry accepted standard practice.	Soil samples were generally collected directly off the drilling rods or hand auger. Soil samples were placed in 250 gram glass jars, which were filled to minimise headspace, and sealed using Teflon-coated lids.
	All fieldwork was supervised by a suitably qualified and experienced scientist or engineer.	Yes
Soil screening with PID	The PID was serviced and calibrated as per the manufacturer requirements. PID calibrated at the beginning and end of each day of fieldwork.	Yes
Rinsate Samples	One rinsate blank would be collected per sampling event and analysed for the primary contaminants. All results should be non-detect.	The results for rinsate samples were reported below laboratory LOR.
Transport	Samples were stored in ice-brick cooled cooler box and transported to the primary and secondary laboratories. To ensure the integrity of the samples from collection to receipt by the analytical laboratory, samples were sent by courier to the laboratories under 'chain of custody' describing sample preservation, and transport duration.	Yes
Trip Blanks	Trip blank samples were prepared and analysed by the primary laboratory for BTEX and naphthalene. Analytical results for trip blank samples below the laboratory PQLs, indicate that ideal sample transport and handling conditions are achieved.	Yes

Task	Description	Project
Trip Spikes	Trip spike samples were prepared and analysed by the primary laboratory for BTEX. Acceptance criteria of BTEX spike recoveries are between 70% - 130%.	Yes
QA samples	Field and laboratory QA samples analysed as follows: Intra-laboratory and inter-laboratory duplicate samples will be collected at a rate of 1 pair per 20 primary samples	Yes See **Table H-2** Calculated RPD (**Table B.3**) values between most primary and field duplicate samples are within the acceptance criteria (**Section H1.2**) with the exception of the following: **<u>Soil - Blind Field Triplicate (BFT):</u>** - Arsenic: 66.67% For the arsenic values analytical results for both the Primary and BFD were less than ten times the laboratory PQL, therefore the RPD exceedances are deemed acceptable.
Laboratory QA/QC		
Laboratory analysis	The laboratories selected are NATA accredited for the analytes selected and perform their own internal QA/QC programs	Yes SGS - primary laboratory Envirolab - secondary laboratory The laboratory QA/QC reports are included in **Appendix G.**
	Appropriate detection limits were used for the analyses to be undertaken.	Practical Quantitation Limits for all tested parameters during the assessment of soils are presented in summary tables **Table B.1**
	Methods followed are generally in accordance with the requirements of NEPM (2013).	Yes
Holding Times	Holding times are the maximum permissible elapsed time in days from the collection of the sample to its extraction and/or analysis. All extraction and analyses should be completed within standard guidelines.	Yes

Task	Description	Project
Laboratory Duplicates	Laboratory duplicates are field samples that are split in the laboratory and subsequently analysed as part of a batched set of samples. These sub-samples are selected by the laboratory to assess the accuracy and precision of the analytical method. The selected laboratories undertake QA/QC procedures such as calibration standards, laboratory control samples, surrogates, reference materials, sample duplicates and matrix spikes. Intra-laboratory duplicates should be performed at a frequency of at least 1 per 20 primary samples.	The Laboratory duplicate samples for the analysis batches showed calculated RPDs were within acceptable ranges
Laboratory Control Standard	A laboratory control standard is a standard reference material used in preparing primary standards. The concentration should be equivalent to a mid-range standard to confirm the primary calibration. Laboratory control samples should be performed on a frequency of 1 per 20 samples or at least one per analytical batch.	The Laboratory Control Samples for the analysis batches were within acceptable ranges.
Matrix Spikes / Matrix Spike Duplicates (MS/MSD)	MS/MSDs are field samples to which a predetermined stock solution of known concentration has been added. The samples are then analysed for recovery of the known addition. Recoveries should be within the stated laboratory control limits of 70 to 130% and duplicates should have RPDs of less than 50%.	Most MS / MSD for the analysis batches were within acceptable ranges. One sample exceeded the acceptance criteria due to matrix interference.
Surrogate Spikes	Surrogate spikes provide a means of checking, for every analysis that no gross errors have occurred at any stage of the procedure leading to significant analyte loss. Recoveries should be within the stated laboratory control limits of 70 to 130%.	A total of two samples exceeded the acceptance criteria. Surrogate spikes for the analysis batches were within acceptable ranges.
QA/QC Conclusion	The QA/QC indicators should either all comply with the required standards or showed no variations that would have no significant effect on the quality of the data.	EI considers that the data confirms that the analytical results for the various phases of laboratory testing were valid and useable for interpretation purposes.

H1.2 CALCULATION OF RELATIVE PERCENTAGE DIFFERENCE (RPD)

The RPD values were calculated using the following equation:

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

Where:

C_O = Concentration obtained for the primary sample; and

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

Data precision would be deemed acceptable if RPDs are found to be less than 30%. RPDs that exceed this range may be considered acceptable where:

- Results are less than 10 times the limits of reporting (LOR);
- Results are less than 20 times the LOR and the RPD is less than 50%; or
- Heterogeneous materials or volatile compounds are encountered.

In cases where RPD value was considered unacceptable, the analytical results of primary and duplicate samples were both reviewed against the adopted assessment criteria. If the review indicates the variations in data between the primary and duplicate samples would result in a different conclusion (e.g. the higher concentration is failing the assessment criteria), the need for re-sampling / validation would be considered.

H2 FIELD QA/QC DATA PROGRAM

H2.1 FIELD QA SAMPLING PROGRAM

The field quality assurance/quality control (QA/QC) samples collected during the investigation works are summarised on **Table H-2.** Inter-lab duplicates were analysed by the secondary laboratory, Eurofins. Analytical results of the Field QA samples are tabulated in **Table H-3**, alongside calculated RPDs between the primary and field duplicate samples.

Table H-2 Field QA Sampling Program

Activity	Matrix	No. Primary Samples	Primary Sample ID	Intra-Lab Duplicate ID	Inter-Lab Duplicate ID	No. of Duplicates	Duplicate Ratio
Field QA Samples - Duplicates							
Soil Investigation	Soil	31	BH123_0.6	QD-1	QT-1	2	1:15.5
Other Field QA Samples							
Soil Investigation	Soil	QTB1 – trip blank QTS1 – trip spike					
	Water	QR1 – rinsate					

H2.2 FIELD DATA QUALITY INDICATORS

A discussion of the field data quality indicators is presented below.

Table H-4 Field Data Quality Indicators

QA/QC Measures	Field Data Quality Indicators	Conformance / Comments
Precision – A quantitative measure of the variability (or reproducibility) of data	Standard operation procedures appropriate and complied with	Yes
Completeness – A measure of the amount of useable data from a data collection activity	Each critical location sampled	Yes
	Samples collected at targeted locations and depth	Yes
	SAQP appropriate and complied with	Yes
	Experienced sampler	Yes
	Field documentation correct	Yes
Comparability – The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event	Same sampling method used on each occasion/location	Yes
	Experienced sampler	Yes
	Climatic conditions (temperature, rainfall, wind)	Climate conditions were recorded to be fine. These climatic conditions unlikely had significant influence on the results of the investigation.
	Same type of samples collected (filtered, size, fractions)	Yes
Representativeness – The confidence (expressed qualitatively) that data are representative of each medium present onsite	Appropriate media sampled according to SAQP	Yes
	Each media identified in SAQP sampled	Yes
	Appropriate sample collection methodologies, handling, storage and preservation techniques used	Yes
	Consistency between field observations and laboratory results.	Yes
Accuracy – A quantitative measure of the closeness of reported data to the “true” value	Standard operation procedures appropriate and complied with	Yes
	Calibration of instruments against known standards	Yes

H2.3 CONCLUSION FOR THE FIELD QA/QC

Based on the above review of the field QA/QC data EI considered the field QA/QC programme carried out during the investigations to be appropriate and the results to be acceptable.

H3 LABORATORY QA/QC

H3.1 LABORATORY ACCREDITATION

Primary and intra-laboratory duplicate samples were analysed by SGS Alexandria Environmental, NSW; inter-laboratory triplicate samples were analysed by Envirolab, Artarmon NSW; all laboratories are accredited by NATA for the analyses undertaken.

A discussion of the laboratory DQIs is presented below.

Table H-5 Lab Data Quality Indicators

QA/QC Measures	Laboratory Data Quality Indicators	Conformance/Comments
Completeness – A measure of the amount of useable data from a data collection activity	All critical samples analysed according to SAQP and proposal	Yes
	All analytes analysed according to SAQP in proposal	Yes
	Appropriate methods and PQLs	Yes
	Sample documentation complete	Yes
	Sample holding times complied with	Yes
Comparability – The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event	Same sample analytical methods used (including clean-up)	Yes
	Same Sample PQLs	Yes
	Same laboratories (NATA-accredited)	Yes
	Same units	Yes
Representativeness – The confidence (expressed qualitatively) that data are representative of each medium present onsite	All key samples analysed according to SAQP in the proposal.	Yes
	Analysis of laboratory-prepared volatile trip spikes and trip blanks	Yes
Precision – A quantitative measure of the variability (or reproducibility) of data	Analysis of laboratory and inter-laboratory duplicates	Yes
	Analysis of field duplicates	Yes
Accuracy – A quantitative measure of the closeness of reported data to the “true” value	Analysis of rinsate blanks	Yes
	Analysis of reagent blanks	Not applicable
	Analysis of method blanks	Yes
	Analysis of matrix spikes (MS)	Yes
	Analysis of matrix spike duplicates (MSD)	Yes

QA/QC Measures	Laboratory Data Quality Indicators	Conformance/Comments
	Analysis of surrogate spikes	Yes
	Analysis of reference materials	Not performed / applicable
	Analysis of laboratory control samples	Yes
	Analysis of laboratory-prepared spikes	Yes

Overall, it is considered that the laboratory data quality objectives for this project have been attained.

H3.2 CONCLUSIONS ON LAB QA/QC

Based on the laboratory QA/QC results EI considers that the data generally confirms that the analytical results for the various phases of laboratory testing were valid and useable for interpretation purposes.

H4 SUMMARY OF PROJECT QA/QC

The sampling methods (including sample preservation, transport and decontamination procedures) and laboratory methods followed during this investigation works were mostly consistent with EI protocols and meeting the DQOs for this project. Some discrepancies from the DQOs were reported however they were considered to not be detrimental to the validity of collected data. It is therefore considered that the data is sufficiently precise and accurate and that the results can be relied upon for interpretation.

Appendix I – Site Photographs

Photograph 1: Image of general site conditions, street view of main warehouse building, during intrusive investigations, facing south (8 December 2020).

Photograph 2: Image of exposed soil with traces of foreign materials in former location of residential dwellings, adjacent east of main factory building, facing north (8 December 2020).

Photograph 3: Image of abandoned cars and disassembled automotive engines in south-western portion of site, facing west (8 November 2020).

Photograph 4: Image of stockpiled construction waste and scrap metal in south-western portion of site, facing south (8 November 2020).

Photograph 5: Image of rear of main warehouse building with shipping container-style and demountable offices (8 December 2020).

Photograph 6: Image of stockpiled oil drums in southern portion of site, shipping container offices behind; facing west (8 December 2020).

Photograph 7: Image of stored paint and metal painting area, no apparent cracking in slab, no obvious signs of spills / leaks observed, facing north (8 December 2020).

Photograph 8: Image of paint spraying booth adjacent south-eastern access door, facing south (8 December 2020).

Photograph 9: Image of fuel pump with associate fill / dip points and approximate mark-up of tank footprint; hydrocarbon staining apparent on soil surface, facing south (8 December 2020). Location BH123 situated near inferred location of UST

Photograph 10: Image of natural soil materials encountered within borehole 'BH113' (8 December 2020).

Photograph 11: Image of the southwest portion after the clean. This photograph is provided by the client on 22 January 2021

Photograph 12: Image of the southwest portion after the clean. This photograph is provided by the client on 22 January 2021

Appendix J – LotSearch

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 10 Dec 2020 10:19:06

Reference: LS016732 EP

Address: 2-20 Telegraph Road, Young, NSW 2594

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 Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	13/11/2020	13/11/2020	Quarterly	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	25/06/2019	25/06/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	18/11/2020	13/11/2020	Monthly	1000	0	0	2
Contaminated Land Records of Notice	Environment Protection Authority	03/12/2020	03/12/2020	Monthly	1000	0	0	2
Former Gasworks	Environment Protection Authority	10/12/2020	11/10/2017	Monthly	1000	0	0	0
National Waste Management Facilities Database	Geoscience Australia	12/11/2020	07/03/2017	Quarterly	1000	0	0	1
National Liquid Fuel Facilities	Geoscience Australia	12/11/2020	13/07/2012	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	12/11/2020	07/05/2020	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	08/12/2020	08/12/2020	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	08/12/2020	08/12/2020	Monthly	2000	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	07/12/2020	07/12/2020	Monthly	2000	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	16/11/2020	16/11/2020	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	04/02/2020	13/12/2018	Annually	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	10/12/2020	10/12/2020	Monthly	1000	0	0	4
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	10/12/2020	10/12/2020	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	10/12/2020	10/12/2020	Monthly	1000	3	3	3
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150	-	9	9
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	2	2
Points of Interest	NSW Department of Finance, Services & Innovation	30/03/2020	30/03/2020	Quarterly	1000	0	0	8
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	30/03/2020	30/03/2020	Quarterly	1000	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	30/03/2020	30/03/2020	Quarterly	1000	0	0	0
Major Easements	NSW Department of Finance, Services & Innovation	30/03/2020	30/03/2020	Quarterly	1000	0	0	0
State Forest	Forestry Corporation of NSW	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	21/01/2020	30/09/2019	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	26/10/2020	21/02/2018	As required	1000	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000	0	0	124
Geological Units 1:250,000	NSW Department of Planning, Industry and Environment	20/08/2014		None planned	1000	1	-	1
Geological Structures 1:250,000	NSW Department of Planning, Industry and Environment	20/08/2014		None planned	1000	0	-	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	As required	1000	1	1	1
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	14/10/2020	27/07/2020	Annually	1000	1	-	1
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	04/12/2020	03/07/2020	Monthly	500	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	1
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	2	2	2
Dryland Salinity Potential of Western Sydney	NSW Department of Planning, Industry and Environment	12/05/2017	01/01/2002	None planned	1000	-	-	-
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	30/03/2020	30/03/2020	Quarterly	1000	0	0	0
Current Mining Titles	NSW Department of Industry	07/12/2020	07/12/2020	Monthly	1000	0	0	0
Mining Title Applications	NSW Department of Industry	07/12/2020	07/12/2020	Monthly	1000	0	0	0
Historic Mining Titles	NSW Department of Industry	07/12/2020	07/12/2020	Monthly	1000	5	5	5
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	04/12/2020	07/12/2018	Monthly	1000	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	04/12/2020	27/11/2020	Monthly	1000	3	4	10
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	24/11/2020	20/11/2019	Quarterly	1000	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	24/11/2020	20/11/2019	Quarterly	1000	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	12/11/2020	02/07/2020	Quarterly	1000	0	0	1
Environmental Planning Instrument Heritage	NSW Department of Planning, Industry and Environment	04/12/2020	27/11/2020	Monthly	1000	0	5	7
Bush Fire Prone Land	NSW Rural Fire Service	03/12/2020	28/11/2020	Weekly	1000	0	0	1
Ramsar Wetlands of Australia	Department of the Agriculture, Water and the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	2	2	3
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	5	5	11
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	08/12/2020	08/12/2020	Weekly	10000	-	-	-

Site Diagram

2-20 Telegraph Road, Young, NSW 2594

Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 34260m^2

Total Perimeter: 1195m

Scale: 0 25 50 100 Meters

Data Sources: Aerial Imagery © NSW Department of Finance, Services & Innovation

Disclaimers:

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

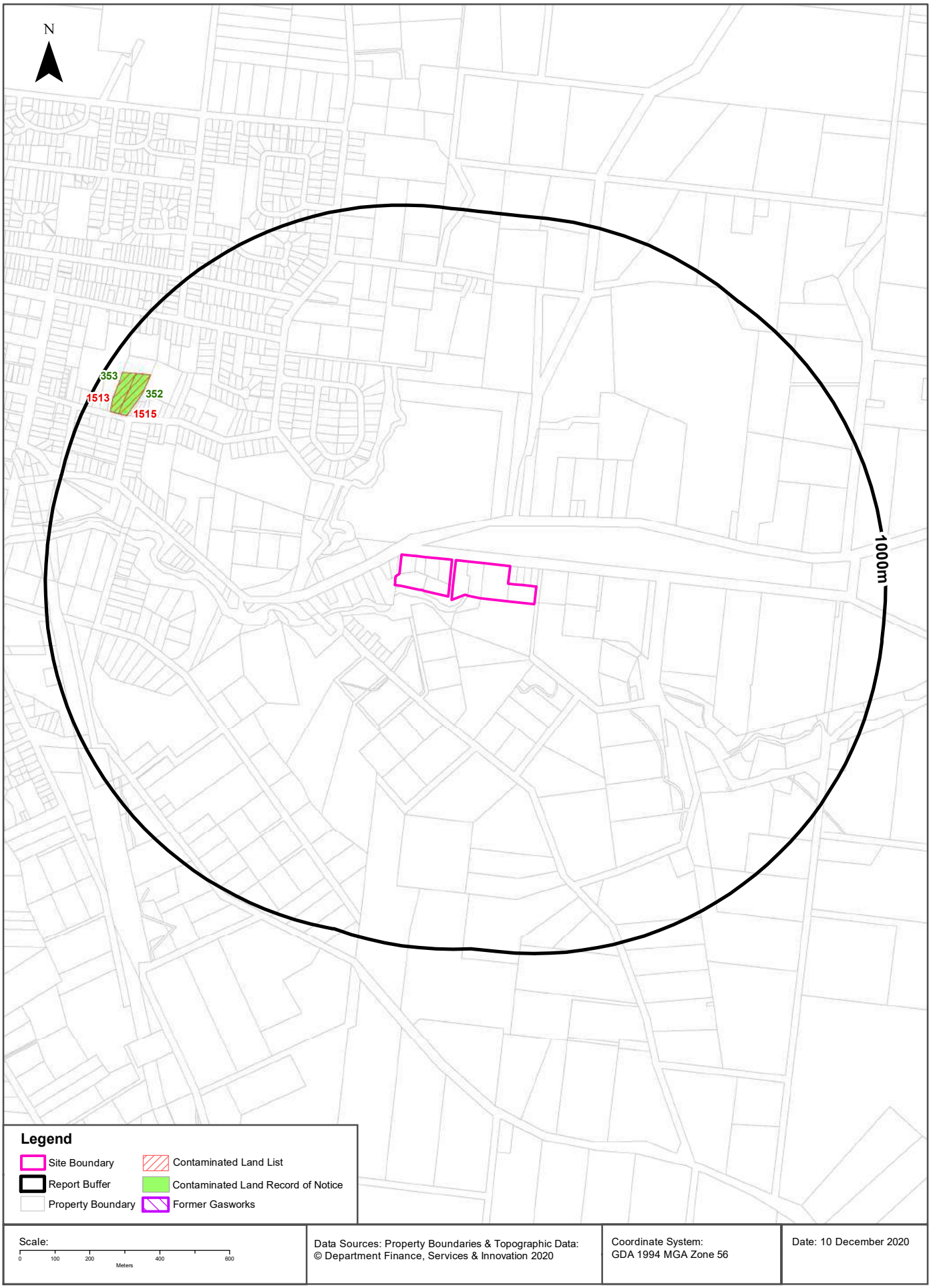
Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Coordinate System: GDA 1994 MGA Zone 56

Date: 10 December 2020

Contaminated Land

2-20 Telegraph Road, Young, NSW 2594



Contaminated Land

2-20 Telegraph Road, Young, NSW 2594

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 (m)	Direction
1515	Former battery recycler	45 Nasmyth Street	Young	Metal Industry	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	875m	North West
1513	Adjacent to former battery recycler	47 Nasmyth Street	Young	Metal Industry	Contamination formerly regulated under the CLM Act	Current EPA List	Premise Match	907m	North West

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

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

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

Contaminated Land

2-20 Telegraph Road, Young, NSW 2594

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
352	Former battery recycler	45 Nasmyth Street	Young	2 current	3279	Premise Match	875m	North West
353	Adjacent to Former Battery Recycler	47 Nasmyth Street	Young	2 former	3275	Premise Match	907m	North West

Contaminated Land Records of Notice Data Source: Environment Protection Authority

Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm

Former Gasworks

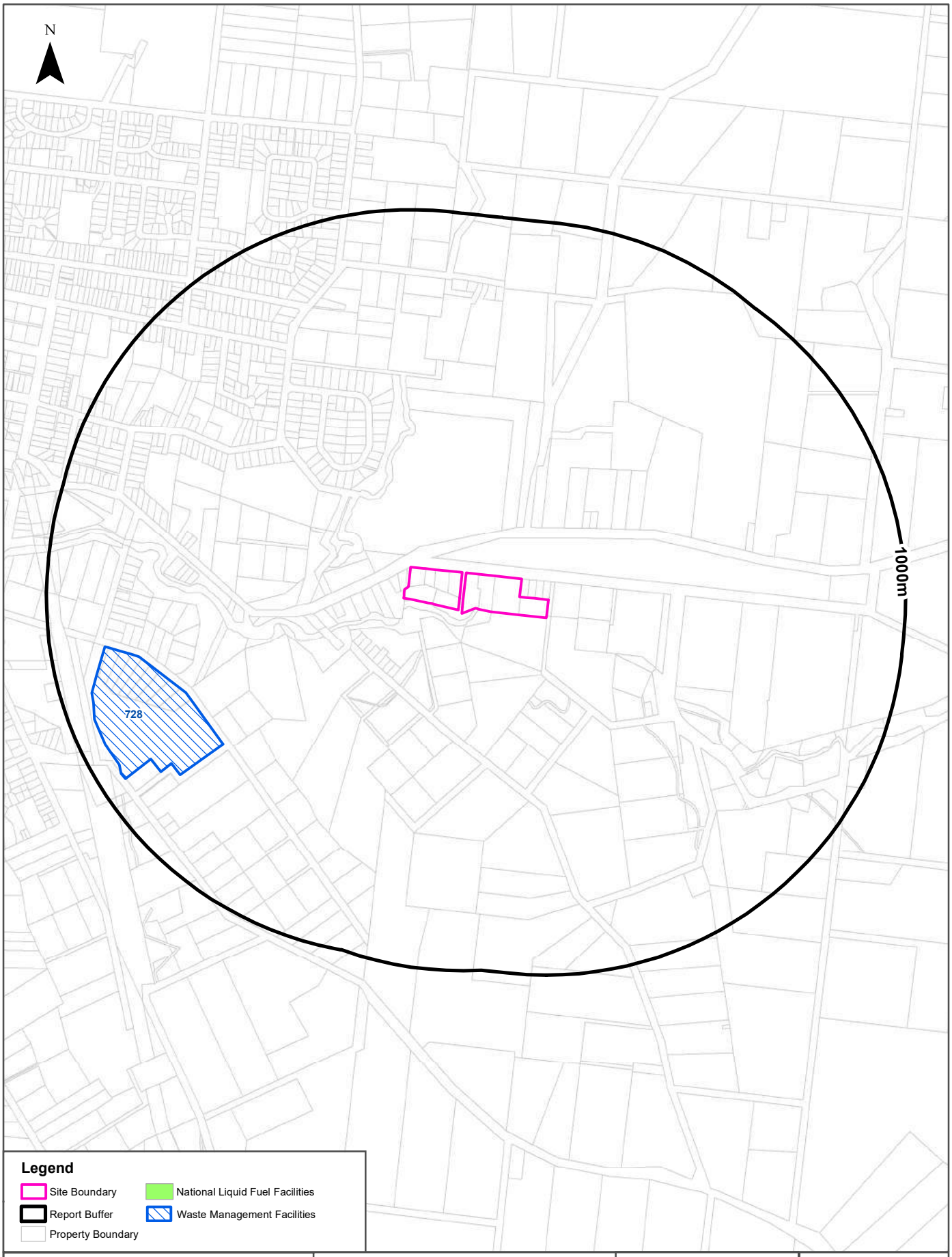
Former Gasworks within the dataset buffer:

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

Former Gasworks Data Source: Environment Protection Authority

Waste Management & Liquid Fuel Facilities

2-20 Telegraph Road, Young, NSW 2594



Waste Management & Liquid Fuel Facilities

2-20 Telegraph Road, Young, NSW 2594

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 (m)	Direction
728	Young Shire Council	Victoria Street Transfer Station	Victoria Street	Young	Multi-Purpose	Operational		Operational		Premise Match	650 m	West

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 (m)	Direction
N/A	No records in buffer										

PFAS Investigation & Management Programs

2-20 Telegraph Road, Young, NSW 2594

EPA PFAS Investigation Program

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

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

EPA PFAS Investigation Program: 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

2-20 Telegraph Road, Young, NSW 2594

Defence 3 Year Regional Contamination Investigation Program

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

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

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

EPA Other Sites with Contamination Issues

2-20 Telegraph Road, Young, NSW 2594

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

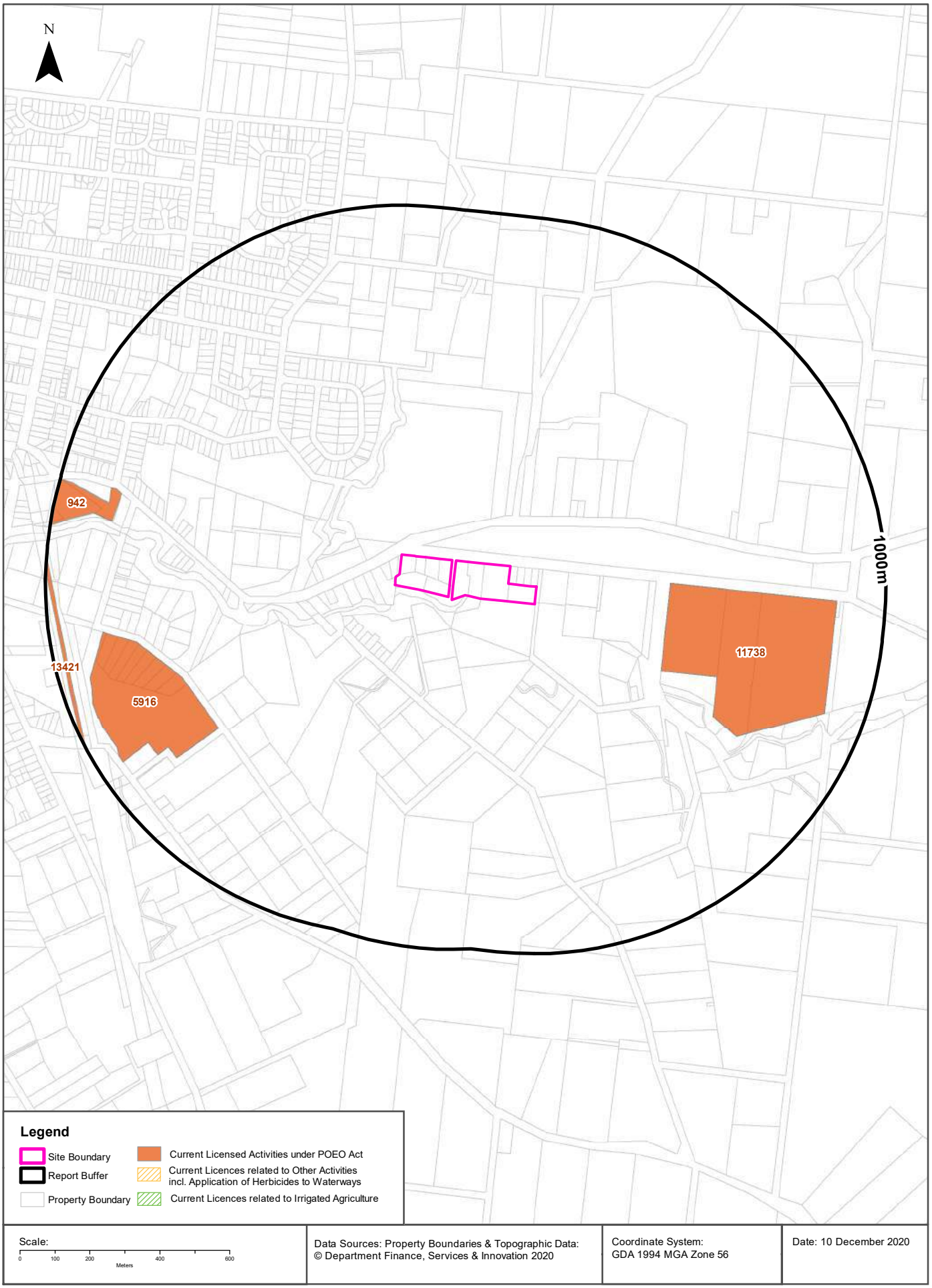
Sites within the dataset buffer:

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

Current EPA Licensed Activities

2-20 Telegraph Road, Young, NSW 2594



EPA Activities

2-20 Telegraph Road, Young, NSW 2594

Licensed Activities under the POEO Act 1997

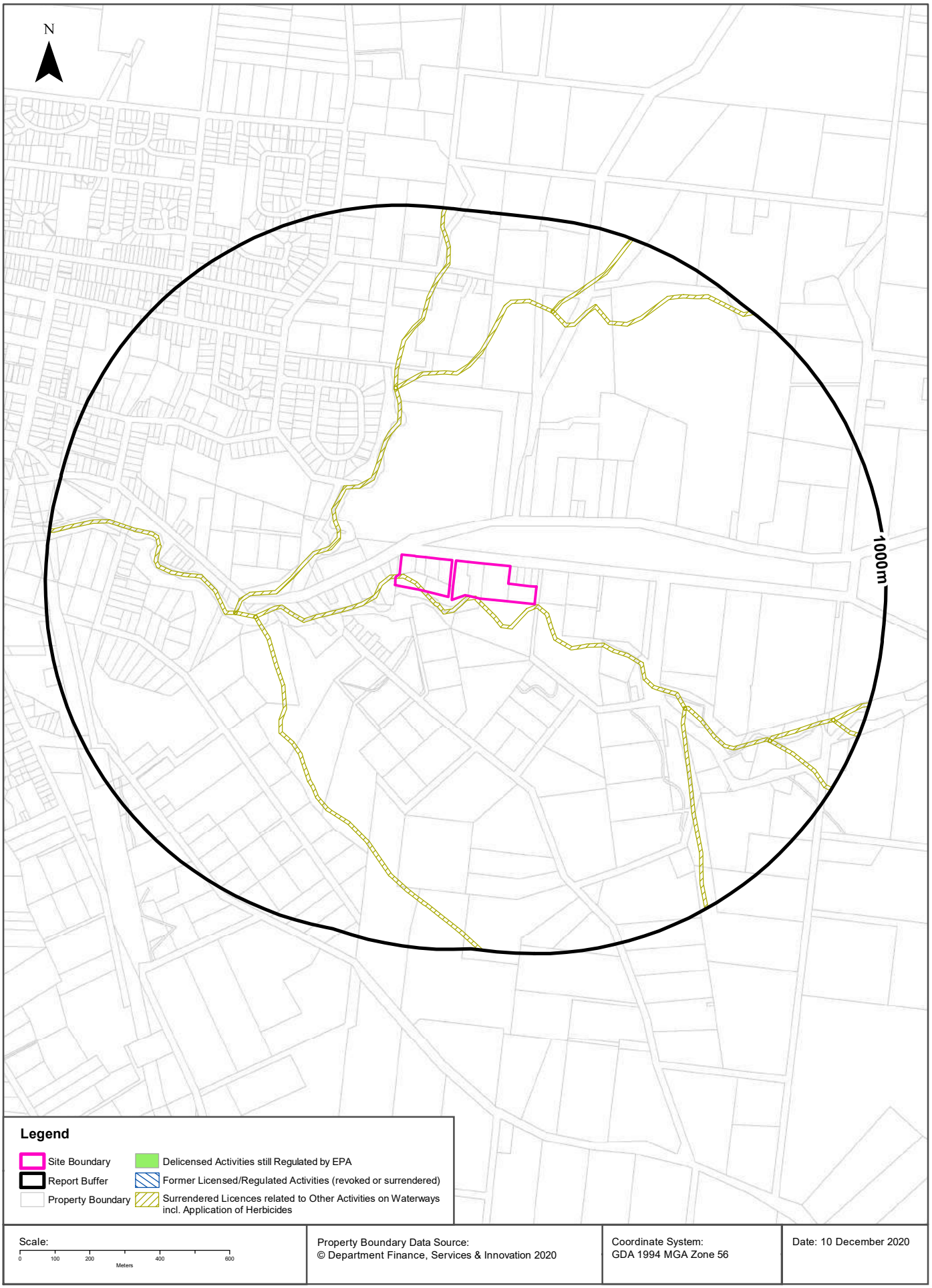
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
11738	AMBOS PTY. LIMITED	AMBOS STOCKFEEDS	90 TELEGRAPH ROAD	YOUNG	General agricultural processing	Premise Match	377m	East
5916	HILLTOPS COUNCIL	VICTORIA LANDFILL	VICTORIA STREET	YOUNG	Waste disposal by application to land	Premise Match	650m	West
942	CAUSMAG ORE COMPANY PROPRIETARY LIMITED	CAUSMAG INTERNATIONAL	2 PARK AVE	YOUNG	Metal processing	Premise Match	821m	West
13421	JOHN HOLLAND RAIL PTY LTD		JOHN HOLLAND RAIL NETWORK, PARRAMATTA, NSW 2124		Railway systems activities	Network of Features	963m	West

POEO Licence Data Source: Environment Protection Authority

Delicensed & Former Licensed EPA Activities

2-20 Telegraph Road, Young, NSW 2594



EPA Activities

2-20 Telegraph Road, Young, NSW 2594

Delicensed Activities still regulated by the EPA

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

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

Delicensed Activities Data Source: Environment Protection Authority

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

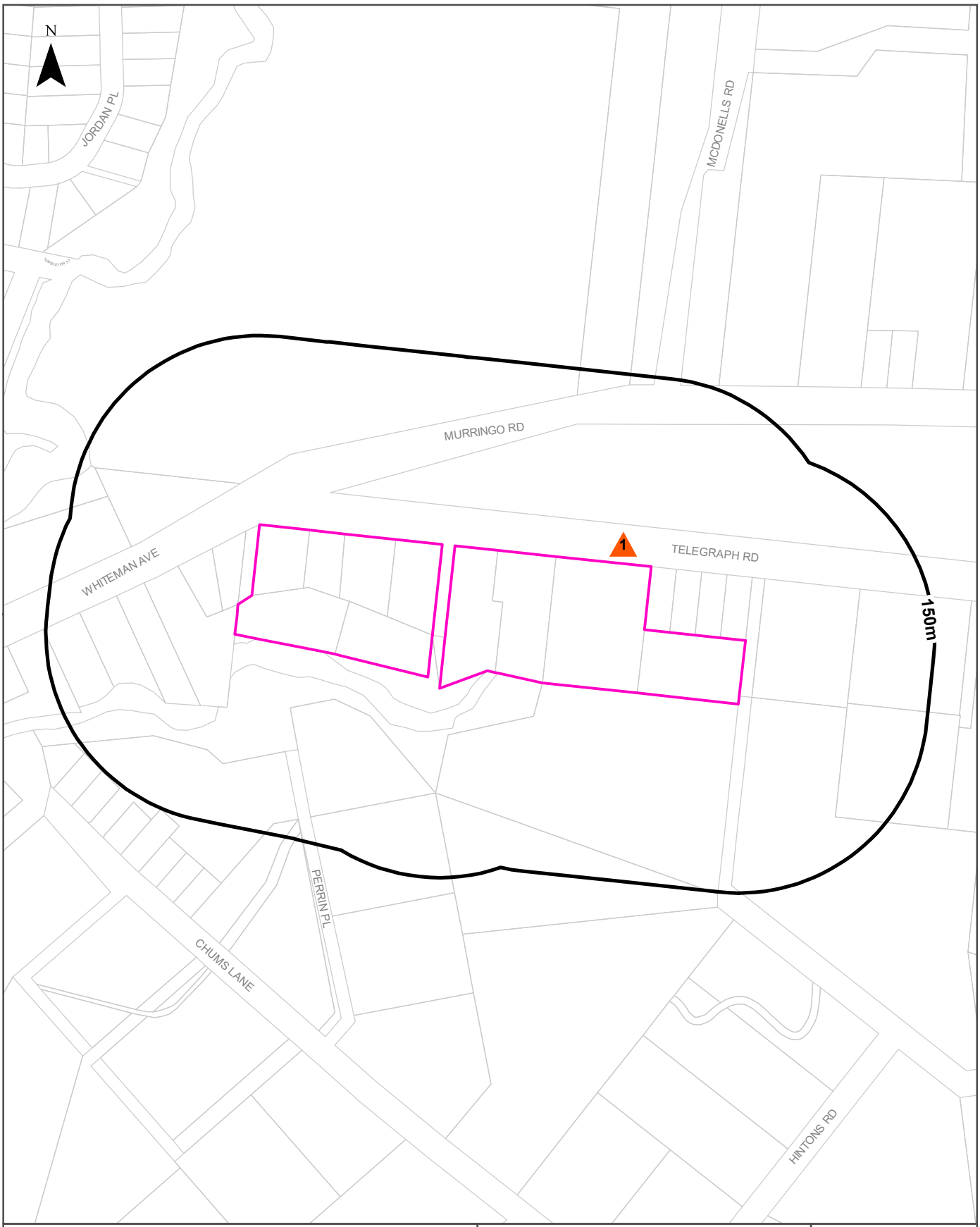
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

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

Former Licensed Activities Data Source: Environment Protection Authority

Historical Business Directories

2-20 Telegraph Road, Young, NSW 2594



Legend

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

Scale: 0 50 100 150 200 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 10 December 2020

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

Historical Business Directories

2-20 Telegraph Road, Young, NSW 2594

Business Directory Records 1950-1991
Premise or Road Intersection Matches

Universal Business Directory records 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
	No records in buffer						

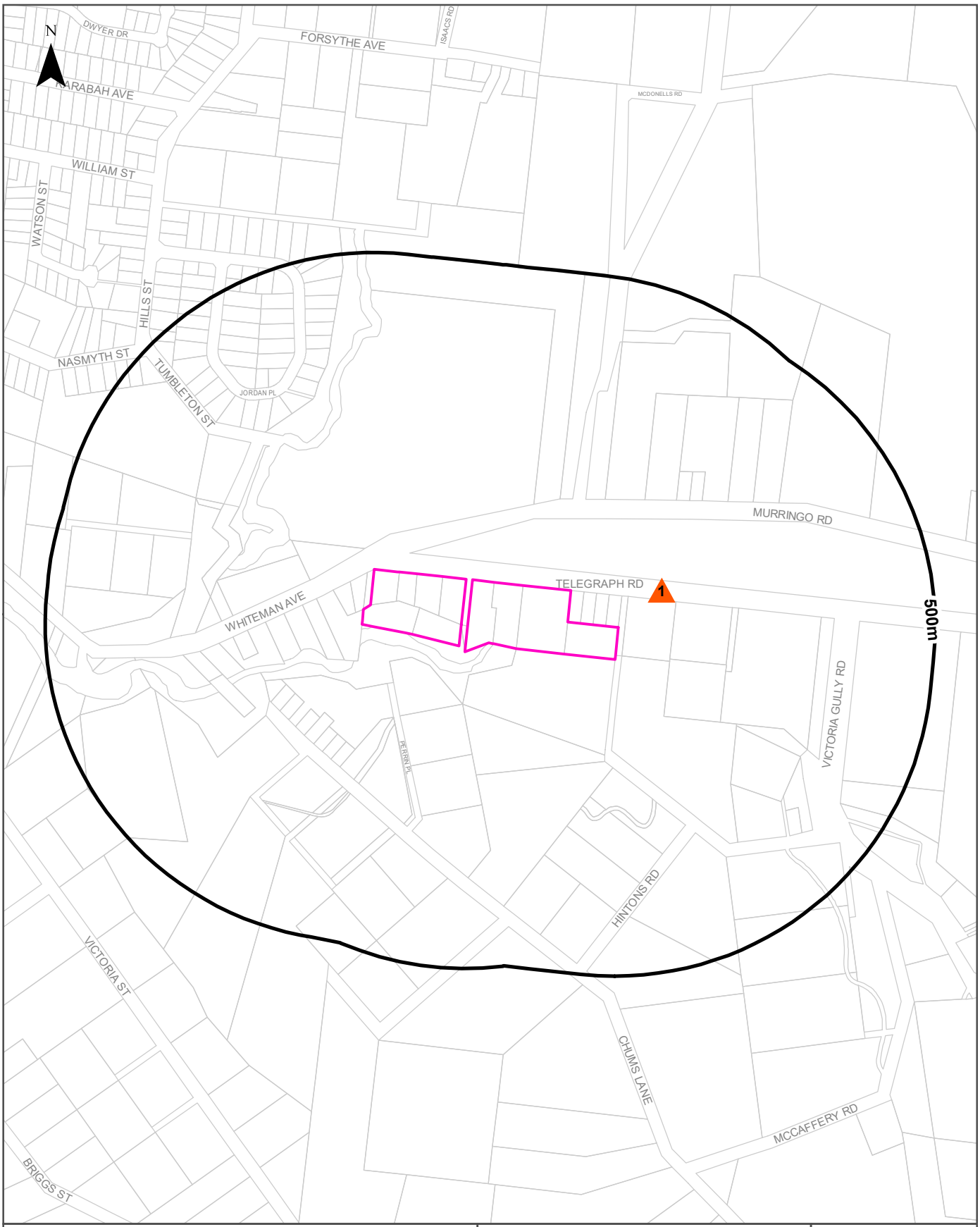
Business Directory Records 1950-1991
Road or Area Matches

Universal Business Directory records 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
1	LAWN MOWER SALES &/OR SERVICE.	Hamlyn J. Engineering., Telegraph Rd, Young	150746	1991	Road Match	0m
	BRICKLAYERS.	Johnson C. C., Telegraph Rd, Young	150497	1991	Road Match	0m
	MIXED BUSINESSES	Dawe, J. L., Telegraph Rd., Young	158769	1982	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS	Dawe, J. L., Telegraph Rd., Young	158812	1982	Road Match	0m
	BRICKLAYERS &/OR BRICKLAYING CONTRACTORS	Johnson, C. C., Telegraph Rd., Young	158526	1982	Road Match	0m
	MIXED BUSINESSES	Dawes, J. L., Telegraph Rd. Young	589452	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Dawes, J. L., Telegraph Rd. Young	589549	1970	Road Match	0m
	BRICKLAYERS & BRICKLAYING CONTRACTORS	Johnson, S. G., Telegraph Rd. Young	588995	1970	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Miller, R. J., Telegraph Rd. Young	589073	1970	Road Match	0m

Dry Cleaners, Motor Garages & Service Stations

2-20 Telegraph Road, Young, NSW 2594



Legend

- Site Boundary
- Buffer 500m
- Property Boundary
- Business directory records mapped to a specific premise
- Business directory records mapped to a road intersection
- Business directory records mapped to a road corridor
- Business directory records mapped to a general area

Scale: 0 110 220 330 440 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 10 December 2020

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

Historical Business Directories

2-20 Telegraph Road, Young, NSW 2594

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
	No records in buffer						

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
1	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS	Dawe, J. L., Telegraph Rd., Young	158812	1982	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Dawes, J. L., Telegraph Rd. Young	589549	1970	Road Match	0m

Aerial Imagery 2018

2-20 Telegraph Road, Young, NSW 2594

Scale:
0 50 100 150 200
Meters

Data Source Aerial Imagery: © 2020 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 56

Date: 14 December 2020

Aerial Imagery 2013

2-20 Telegraph Road, Young, NSW 2594

Scale: 0 50 100 150 200 Meters

Data Source Aerial Imagery: © 2020 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System: GDA 1994 MGA Zone 56

Date: 10 December 2020

Aerial Imagery 2006

2-20 Telegraph Road, Young, NSW 2594

Scale: 0 50 100 150 200 Meters

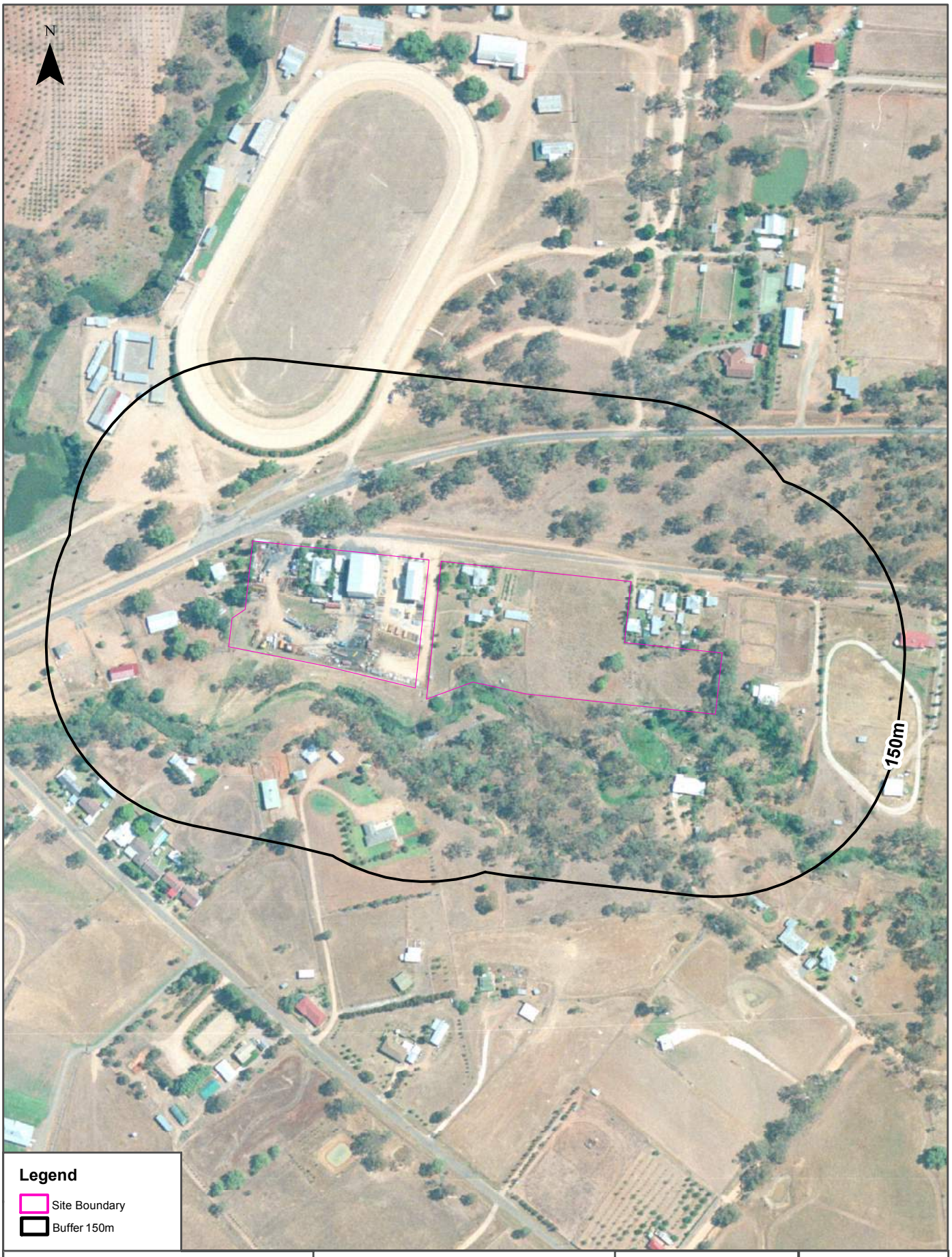
Data Source Aerial Imagery: © 2020 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System: GDA 1994 MGA Zone 56

Date: 10 December 2020

Aerial Imagery 1997

2-20 Telegraph Road, Young, NSW 2594

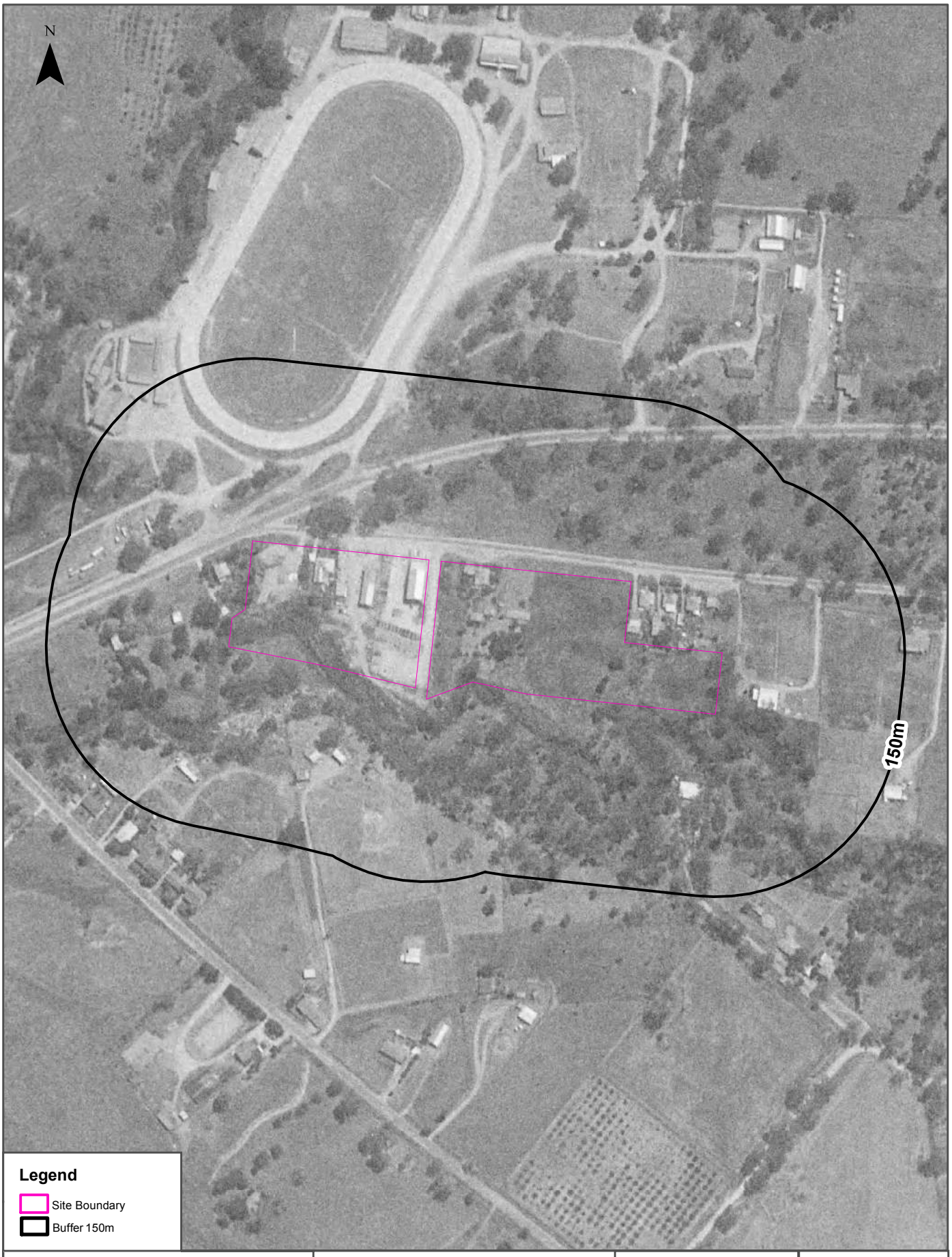


Aerial Imagery 1994

2-20 Telegraph Road, Young, NSW 2594

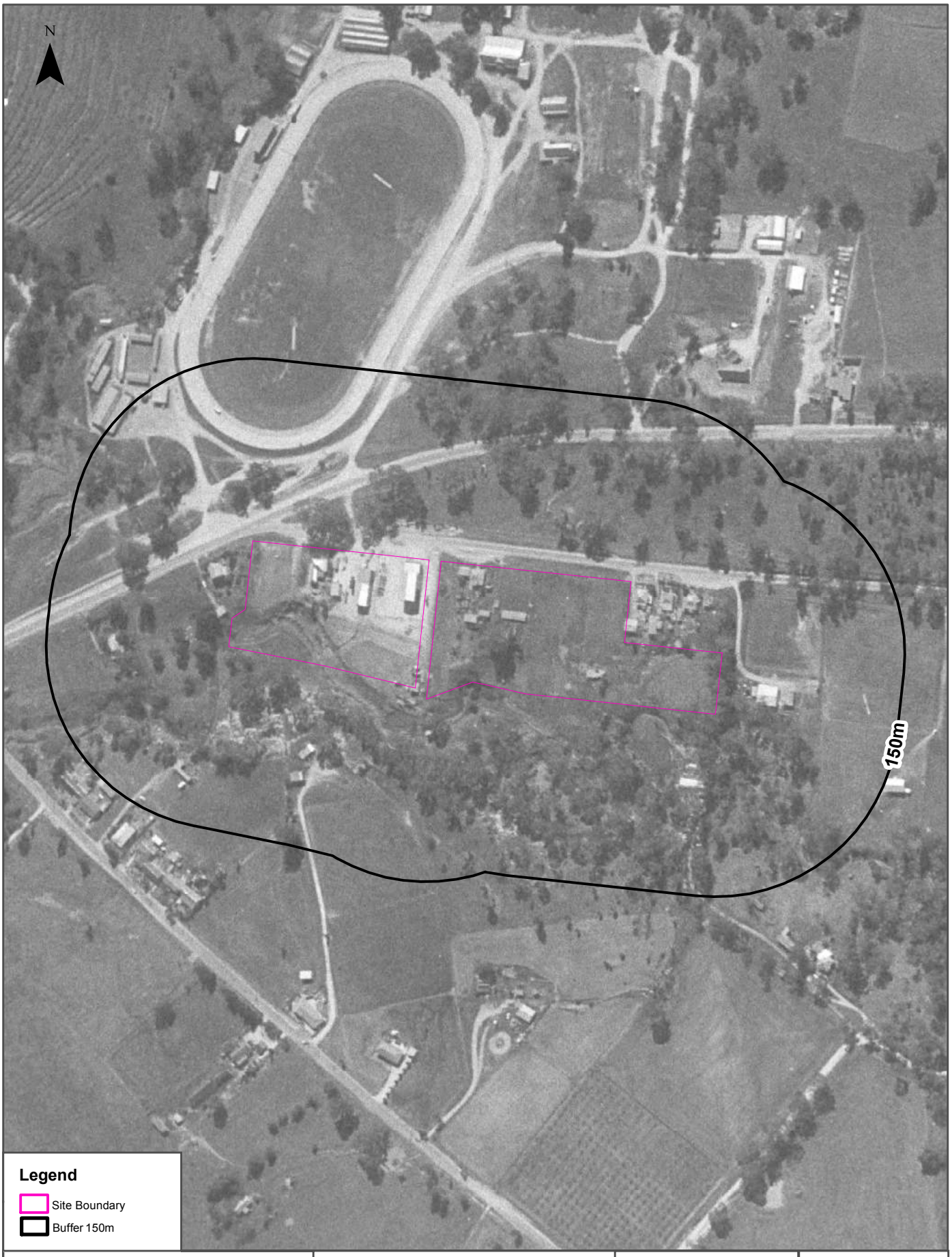
Aerial Imagery 1989

2-20 Telegraph Road, Young, NSW 2594



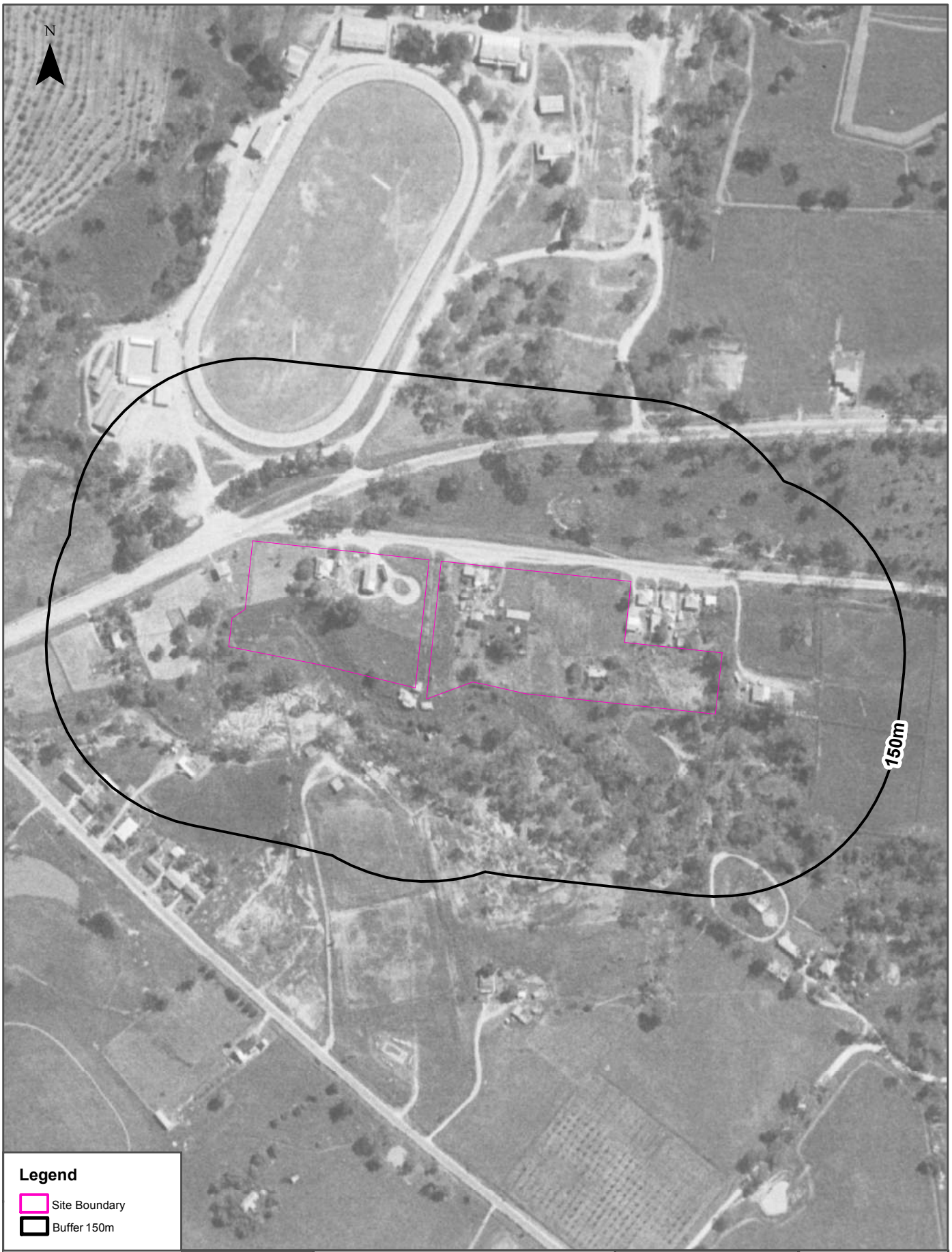
Aerial Imagery 1985

2-20 Telegraph Road, Young, NSW 2594



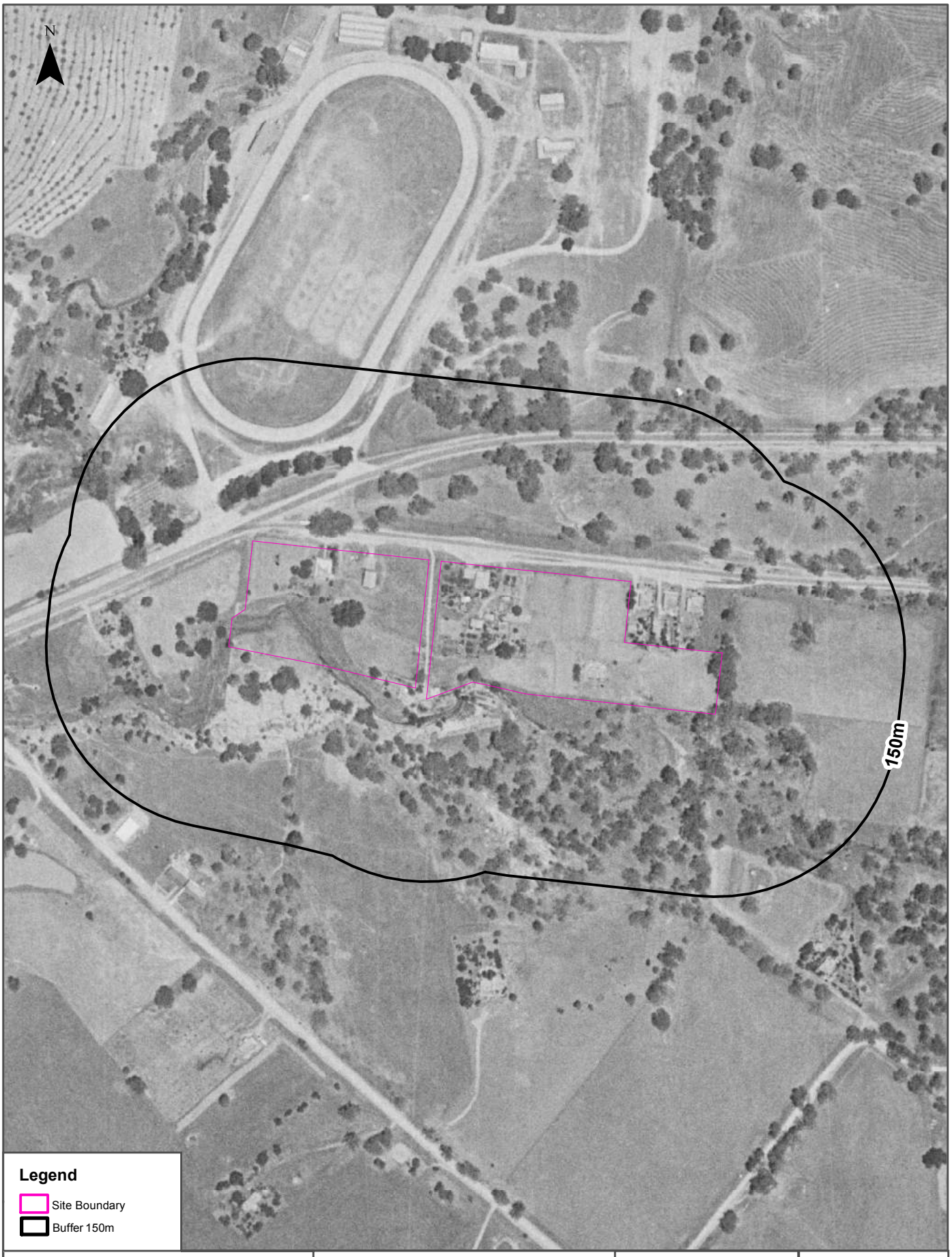
Aerial Imagery 1978

2-20 Telegraph Road, Young, NSW 2594



Aerial Imagery 1969

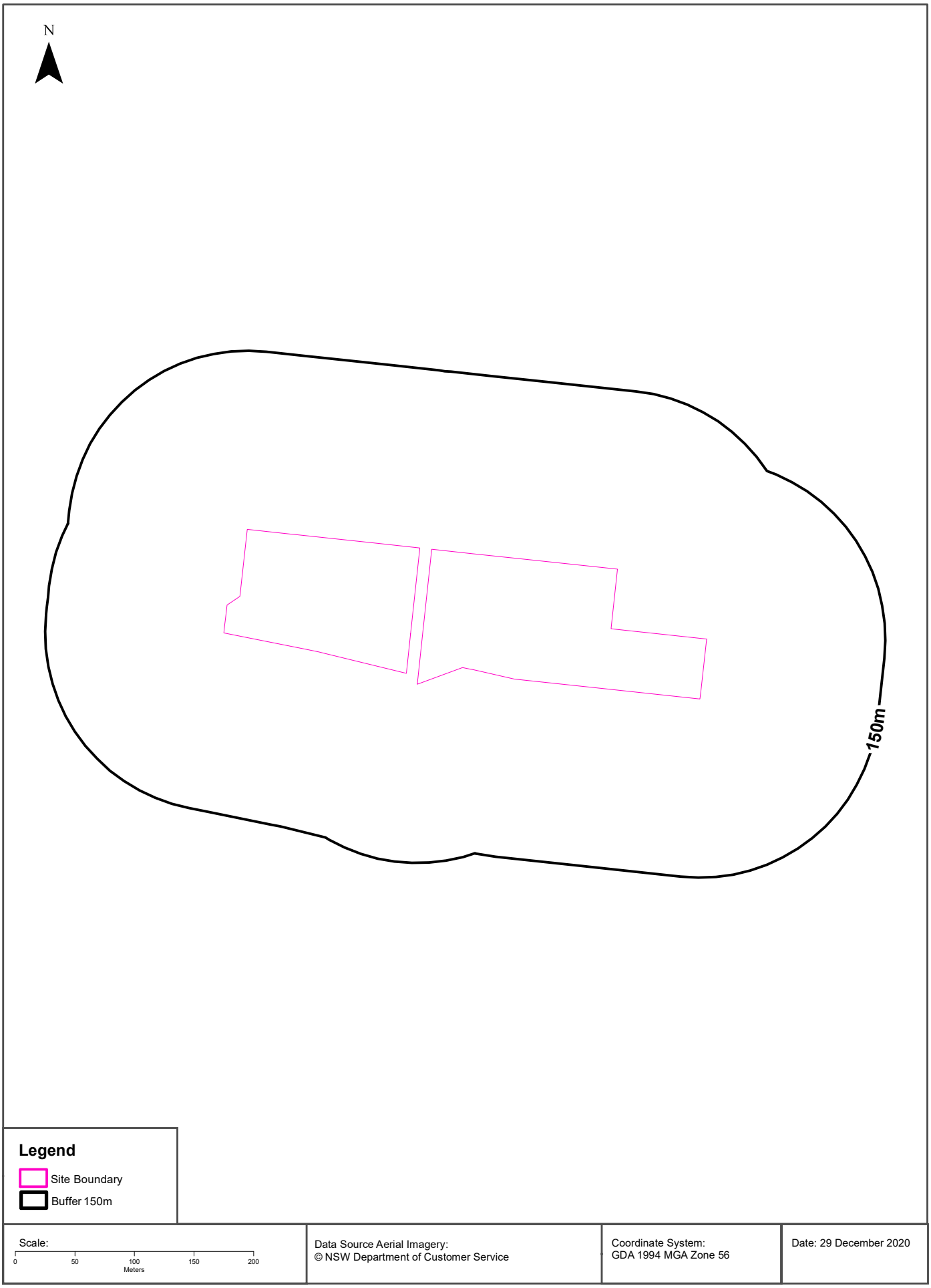
2-20 Telegraph Road, Young, NSW 2594



Aerial Imagery 1944

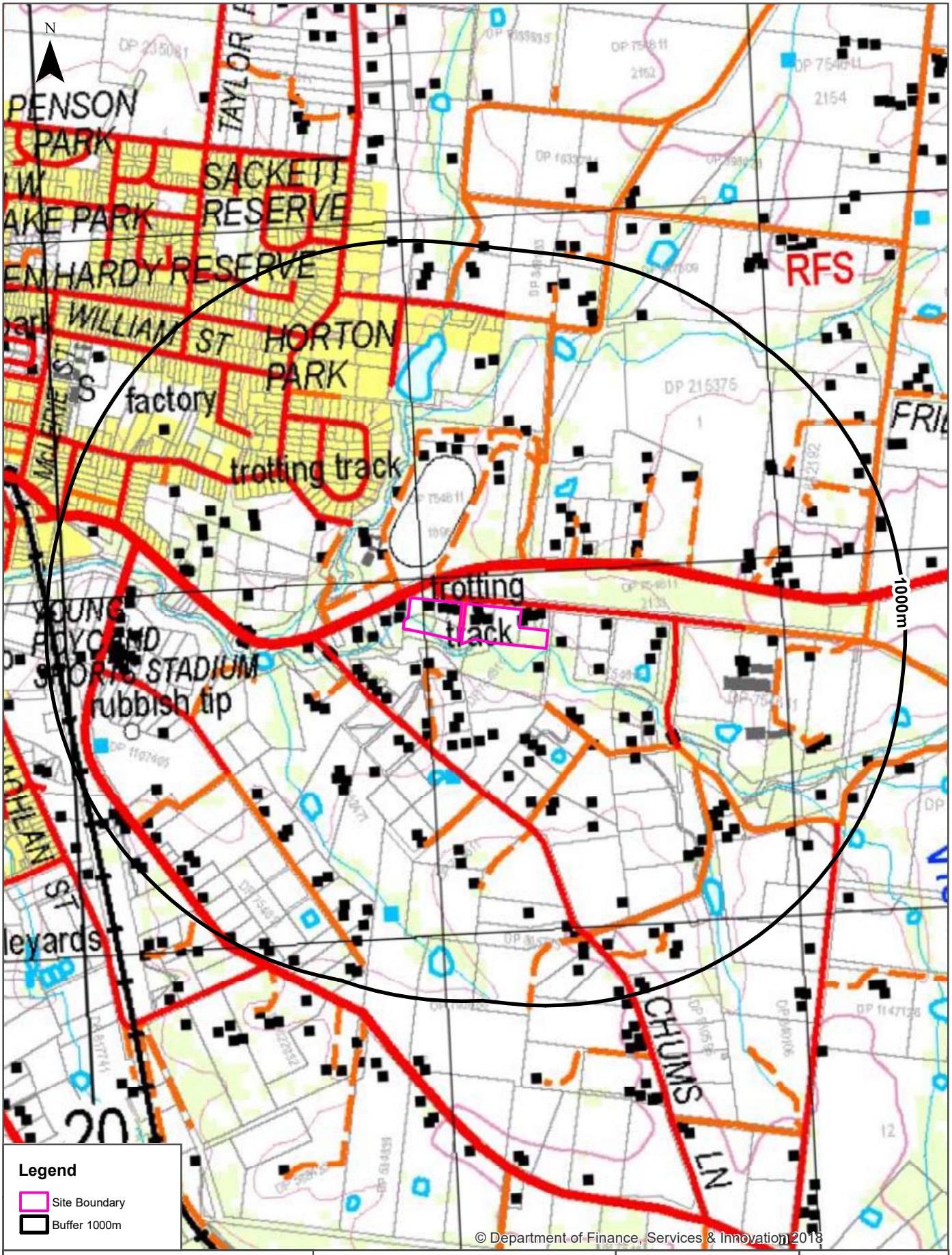
2-20 Telegraph Road, Young, NSW 2594

[redacted]



Topographic Map 2015

2-20 Telegraph Road, Young, NSW 2594



Legend

- Site Boundary
- Buffer 1000m

Scale: 0 100 200 400 600 Meters

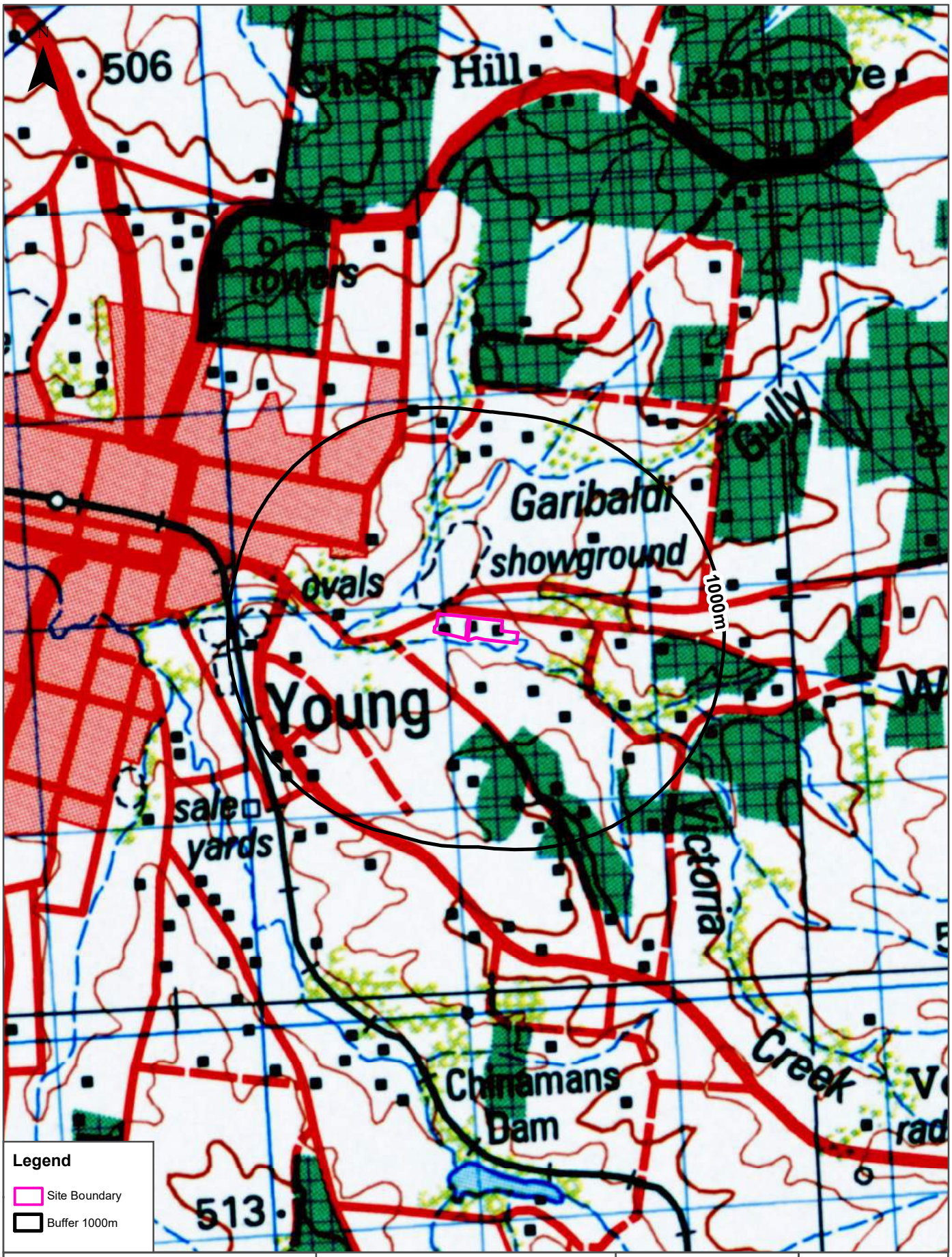
Data Sources: Topographic Map Data © NSW Land and Property Information

Coordinate System: GDA 1994 MGA Zone 56

Date: 10 December 2020

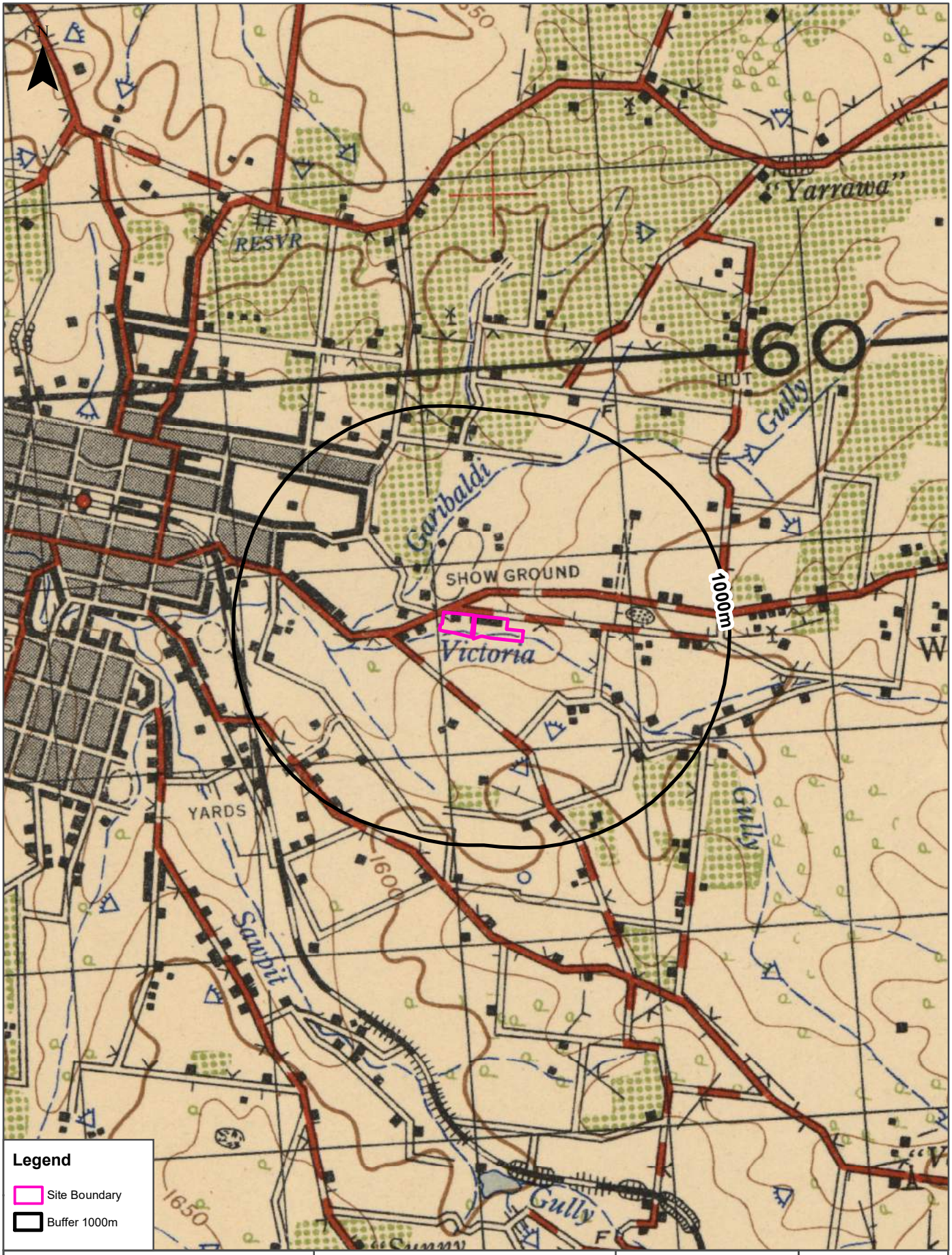
Historical Map 1999

2-20 Telegraph Road, Young, NSW 2594



Historical Map c.1957

2-20 Telegraph Road, Young, NSW 2594



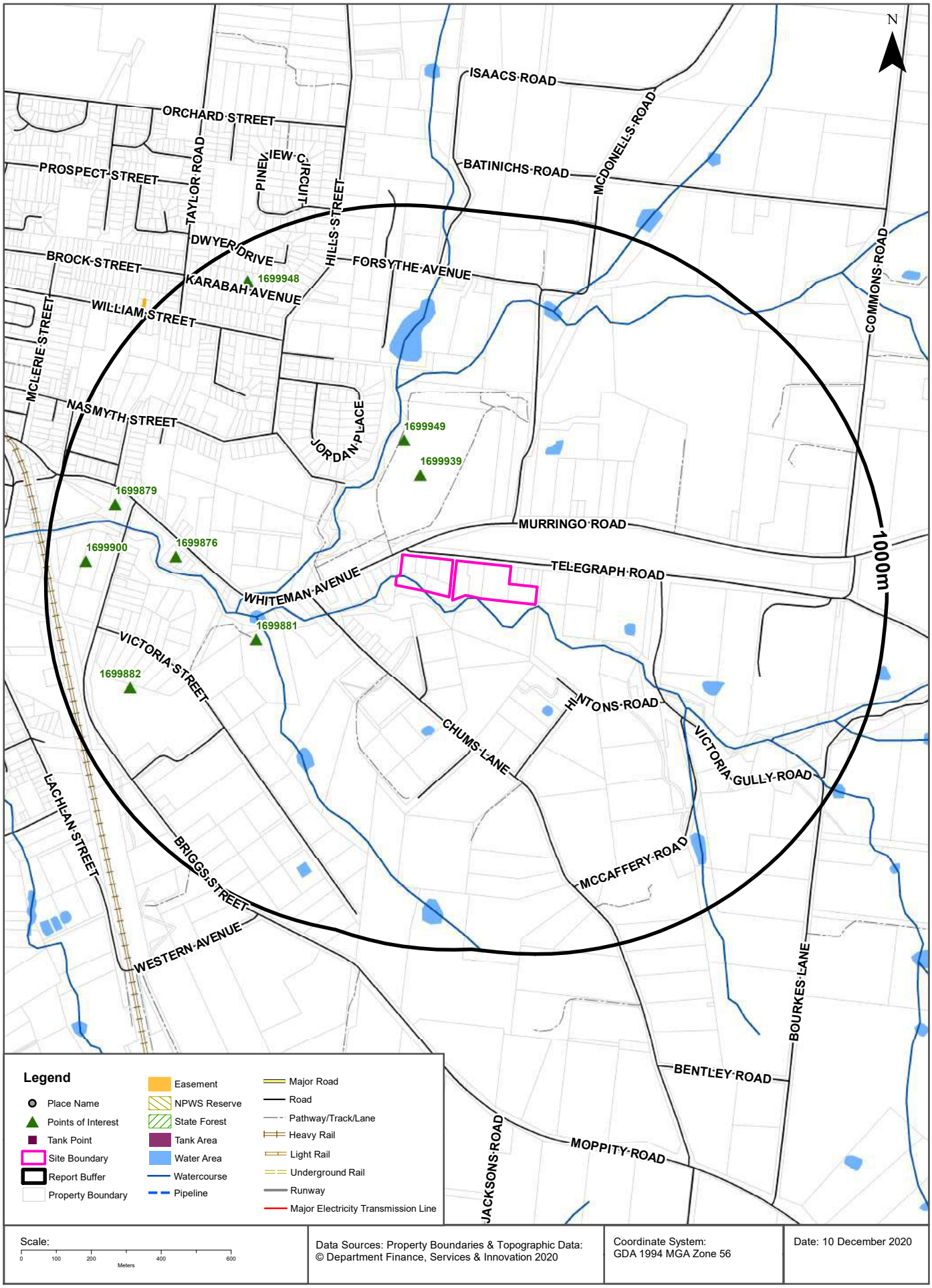
Data Sources: Australia 1:63360
Produced by Australian Section Imperial General Staff

Coordinate System:
GDA 1994 MGA Zone 56

Date: 10 December 2020

Topographic Features

2-20 Telegraph Road, Young, NSW 2594



Topographic Features

2-20 Telegraph Road, Young, NSW 2594

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
1699939	Showground	YOUNG SHOWGROUND	233m	North
1699949	Trotting Track	YOUNG HARNESS RACING CLUB	328m	North West
1699881	Park	BLACKGUARD GULLY RESERVE	428m	West
1699876	Park	JACK HOWARD RESERVE	633m	West
1699882	Rubbish Depot	YOUNG WASTE TRANSFER STATION	813m	West
1699879	Park	BETTE BOOKER PARK	830m	West
1699900	Sports Field	KEITH CULLEN OVAL	888m	West
1699948	Park	HORTON PARK	899m	North West

Topographic Features

2-20 Telegraph Road, Young, NSW 2594

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
	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
	No records in buffer					

Major Easements

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

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

Topographic Features

2-20 Telegraph Road, Young, NSW 2594

State Forest

What State Forest exist within the dataset buffer?

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

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				

Elevation Contours (m AHD)

2-20 Telegraph Road, Young, NSW 2594

Hydrogeology & Groundwater

2-20 Telegraph Road, Young, NSW 2594

Hydrogeology

Description of aquifers on-site:

Description
Fractured or fissured, extensive aquifers of low to moderate productivity

Description of aquifers within the dataset buffer:

Description
Fractured or fissured, extensive aquifers of low to moderate productivity

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

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

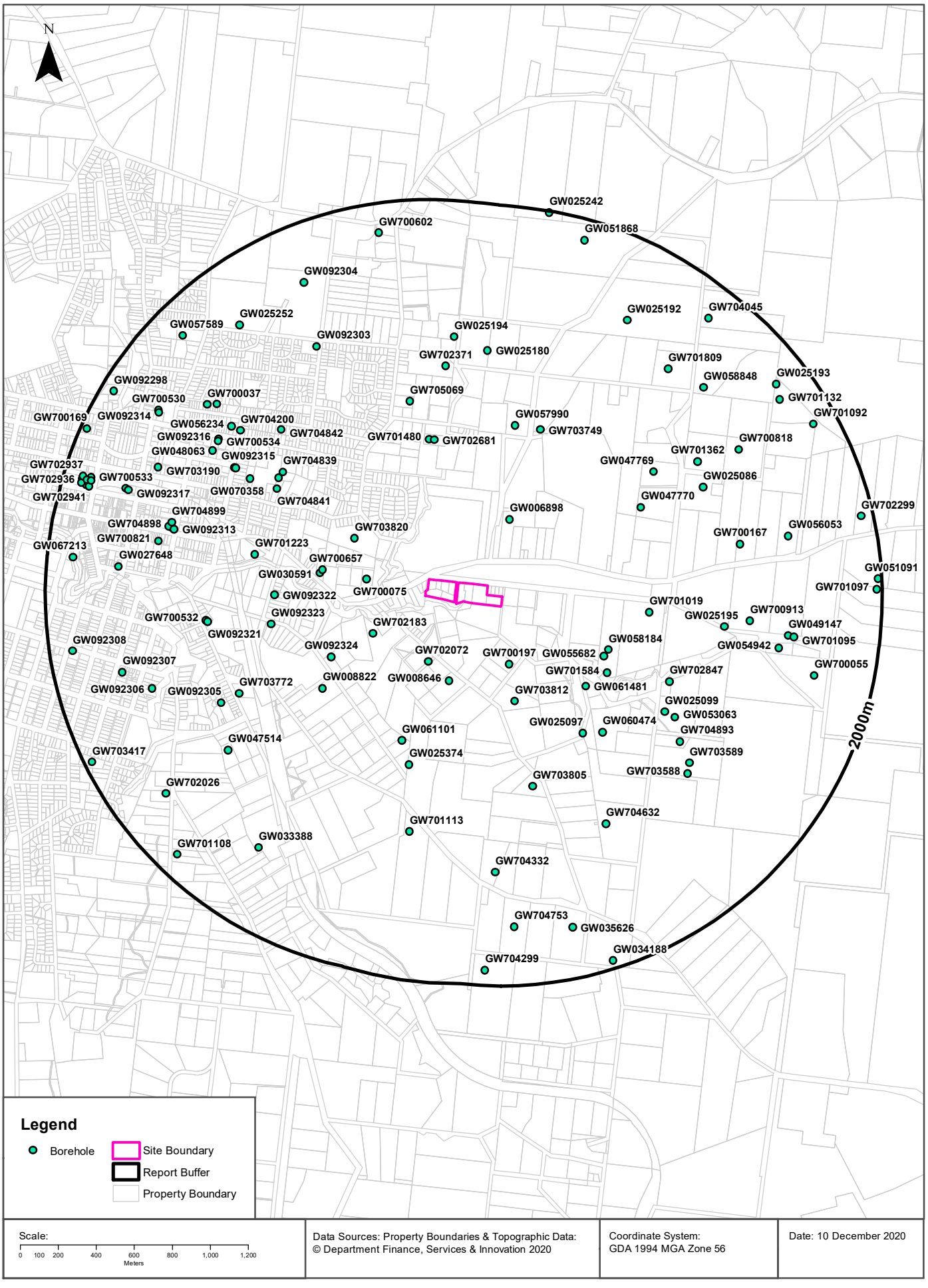
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

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

2-20 Telegraph Road, Young, NSW 2594



Hydrogeology & Groundwater

2-20 Telegraph Road, Young, NSW 2594

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW700197	70BL226255, 70WA605704	Bore	Private	Stock	Domestic, Stock		30/06/1995	33.30	33.30					309m	South East
GW700075	70BL145501, 70WA605676	Bore	Private	Domestic, Stock			04/03/1992	57.91	57.91	Good	0.60	3.440		317m	West
GW702072	70BL229136, 70WA605822	Bore	Private	Domestic, Stock	Domestic, Stock		24/03/2003	85.00	85.00		10.00	0.375		337m	South West
GW702183	70BL228424, 70WA605793	Bore	Private	Domestic	Domestic		02/05/2003	53.00	53.00			0.883		338m	South West
GW006898	70BL001590, 70WA605494	Bore open thru rock	Private	Domestic, Stock	General Use		01/08/1944	54.90	54.90	Good				366m	North East
GW008646	70BL002527, 70WA605503	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/05/1950	55.50	55.50	1001-3000 ppm				407m	South
GW703820	70BL229296	Bore	Private	Domestic, Stock	Domestic, Stock		15/06/2003	128.00			30.00	4.000		447m	North West
GW703812	70BL230156	Bore	Private	Domestic, Stock	Domestic, Stock		06/02/2004	138.00	138.00		6.00	0.500		505m	South East
GW700657	70BL227106, 70WA605725	Bore	Private	Domestic	Domestic			40.00	40.00		0.00			554m	West
GW030591	70BL026239, 70WA605546	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/09/1971	73.20	73.20	501-1000 ppm				563m	West
GW092324		Bore	Local Govt				25/02/1997	17.50	17.50		6.29			590m	South West
GW055682	70BL120946	Bore open thru rock	Private	Domestic, Stock	Farming		01/07/1981	38.40	38.40	Fair				602m	South East
GW058184	70BL126843	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/01/1983	68.50	68.50	Good				611m	East
GW061481	70BL133932, 70WA605646	Bore	Private	Domestic, Stock	Domestic, Stock		01/04/1986	14.00	14.00					614m	South East
GW701584	70BL228306, 70WA605780	Bore	Private	Stock	Stock		21/11/2001	113.00	113.00			1.390		661m	South East
GW008822	70BL002615	Bore open thru rock	Private	Domestic, Irrigation, Stock	Irrigation		01/09/1949	35.70	35.70	Brackish				728m	South West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW702681	70BL230536, 70WA605884	Bore	Private	Domestic, Stock	Domestic, Stock		30/03/2005	40.00	40.00		5.00	2.250		735m	North
GW701480	70BL228386, 70WA605790	Bore	Private	Domestic	Domestic, Stock		23/01/2002	57.00	57.00		7.50	1.260		736m	North
GW061101	70BL132766, 70WA605639	Bore	Private	Domestic, Stock	Domestic, Stock		01/05/1985	45.70	45.70	Good				771m	South
GW701019	70BL227652	Bore	Private	Domestic, Stock	Test Bore			132.00	132.00					780m	East
GW092322		Bore	Local Govt				25/02/1997	17.00	17.00		10.97			792m	West
GW025097		Bore	Private		Not Known		01/12/1967	30.50	30.80	1001-3000 ppm				797m	South East
GW092323		Bore	Local Govt				25/02/1997	17.90	17.90		6.51			824m	West
GW060474	70BL127467	Bore	Private	Domestic, Irrigation, Stock	Irrigation		01/01/1982	30.50						853m	South East
GW057990	70BL126672, 70WA605624	Bore	Private	Domestic, Stock	Irrigation		01/12/1982	24.00	24.00	1001-3000 ppm				856m	North
GW703749	70BL227611	Bore	Private	Domestic, Irrigation, Stock	Domestic, Irrigation, Stock		01/01/2004	32.00			18.00			866m	North East
GW047770	70BL107941, 70BL227518, 70CA606034	Bore		Domestic, Irrigation, Stock	Not Known		01/01/1974	30.50		Very Poor				869m	North East
GW025374		Bore open thru rock	Private		Irrigation		01/04/1969	91.40	91.40					882m	South
GW701223	70BL227959	Bore	Private	Test Bore	Test Bore		10/01/2001	90.00	90.00	Good		0.126		918m	West
GW704841	70BL233563			Monitoring Bore	Monitoring Bore		16/12/2010	19.00	19.00		17.31			929m	North West
GW705069					Domestic, Stock		06/03/2017	126.00			19.00			942m	North
GW704839	70BL233562			Monitoring Bore	Monitoring Bore		15/12/2010	13.50	13.50		9.00			951m	North West
GW704840	70BL233563			Monitoring Bore	Monitoring Bore		16/12/2010	15.30	15.30		12.76			953m	North West
GW703805	70BL229889	Bore	Private	Domestic	Domestic		01/01/2004	130.00		S.Salty	20.00	0.380		963m	South
GW702847	70BL227011	Bore	Private	Irrigation	Irrigation		31/12/1981	30.00	30.00					972m	South East
GW025099		Bore	Private		General Use		01/12/1967	30.50	30.50	1001-3000 ppm				1027m	South East
GW047769	70BL107131	Bore open thru rock	Private	Domestic, Irrigation, Stock	Irrigation		01/06/1978	45.70	45.70	Good				1035m	North East
GW070358	70BL150428, 70WA605680	Bore		Domestic	Domestic		12/08/1992	60.60	60.60					1078m	North West
GW053063	70BL117275	Bore	Private	Domestic, Irrigation, Stock	Irrigation		01/01/1981	53.00	53.30	Good				1087m	South East
GW704842	70BL233564			Monitoring Bore	Monitoring Bore		17/12/2010	20.40	20.40		15.57			1104m	North West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW703772	70BL229298	Bore	Private	Domestic, Stock	Domestic, Stock		01/07/2003	20.00						1105m	South West
GW702371	70BL230154, 70WA605866	Bore	Private	Domestic, Stock	Domestic, Stock		14/05/2004	100.00	100.00		1.00	31.250		1126m	North
GW092321		Bore	Local Govt		Monitoring Bore		22/05/1996	8.40	9.00	806	4.80			1152m	West
GW700532	70BL226552	Bore	Local Govt	Monitoring Bore	Monitoring Bore		22/05/1996	8.40	9.00	806	4.80			1159m	West
GW700531	70BL226552	Bore	Local Govt	Monitoring Bore	Monitoring Bore		23/05/1996	7.45	10.00	890	4.94			1172m	North West
GW092315		Bore	Local Govt		Monitoring Bore		23/05/1996	7.45	10.00	890	4.94			1178m	North West
GW025195		Bore open thru rock	Private		Stock		01/07/1968	61.00	61.00	1001-3000 ppm				1181m	East
GW704893	70BL226975, 70CA606088			Domestic, Irrigation, Stock	Domestic, Irrigation, Stock		11/12/1989							1184m	South East
GW025086		Bore	Private		Irrigation		01/11/1967	23.50	23.50	1001-3000 ppm				1206m	North East
GW092305		Bore	Local Govt		Monitoring Bore		26/02/1997	6.65	6.65	2560	6.10			1213m	South West
GW701113	70BL227400, 70WA605741	Bore	Private	Domestic, Stock	Domestic		05/12/1998	205.00	205.00	Salty	32.00	15.150		1223m	South
GW025180		Bore	Private		General Use		01/05/1968	24.40	24.40	501-1000 ppm				1231m	North
GW701362	70BL228455, 70CA606196	Bore	Private	Irrigation	Irrigation		18/03/2002			Good		1.000		1251m	North East
GW704200	70BL231275	Bore	Private	Domestic	Domestic, Stock		26/02/2009	31.00	31.00		3.00	0.252		1262m	North West
GW704632	70WA610528	Bore	Private	Domestic	Domestic		16/07/2013	160.00						1273m	South East
GW700167	70BL226128, 70WA605700	Bore		Domestic, Stock	Domestic		27/10/1995	75.00	75.00					1283m	East
GW025194		Bore	Private		General Use		01/06/1968	53.30	53.30	1001-3000 ppm				1283m	North
GW703589	70BL226650, 70BL226974	Bore	Private	Domestic, Irrigation, Stock	Domestic, Farming, Irrigation, Stock		10/02/1998	90.90	90.90			0.660		1292m	South East
GW700913	70BL226636, 70BL232115	Well	Private	Irrigation, Stock	Irrigation, Stock		01/01/1900	9.00	9.00		6.00	0.180		1311m	East
GW056234	70BL121951, 70WA605615	Bore	Private	Domestic	Domestic		01/11/1981	23.40	23.40	Good				1312m	North West
GW047514	70BL111321, 70WA606108	Bore open thru rock	Local Govt	Recreation (groundwater)	Recreation (groundwater)		01/07/1979	61.00	61.00					1318m	South West
GW048063	70BL107733, 70BL112698, 70WA606110	Bore	Local Govt	Recreation (groundwater)	Recreation (groundwater)		01/01/1978	20.40	20.40	Good				1322m	North West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW703588	70BL226651, 70BL226976	Bore	Private	Domestic, Irrigation, Stock	Domestic, Farming, Irrigation, Stock		18/05/1998	60.00	60.00			2.070		1322m	South East
GW700534	70BL226552	Bore	Local Govt	Monitoring Bore	Monitoring Bore		22/05/1996	13.32	14.00	2342	0.43			1324m	North West
GW092316		Bore	Local Govt		Monitoring Bore		22/05/1996	13.32	14.00	2342	0.43			1329m	North West
GW092303		Bore	Local Govt		Monitoring Bore		26/02/1997	6.30	6.30					1360m	North West
GW092313		Bore	Local Govt		Monitoring Bore		27/02/1997	9.65	9.65					1363m	West
GW704897	70BL233381			Monitoring Bore	Monitoring Bore		10/03/2010	6.00	6.00		1.80			1379m	West
GW704899	70BL233381			Monitoring Bore	Monitoring Bore		10/03/2010	6.00	6.00		2.90			1382m	West
GW704898	70BL233381			Monitoring Bore	Monitoring Bore		10/03/2010	7.50	7.50		2.90			1393m	West
GW704332	70BL231177	Bore	Private	Domestic, Stock	Domestic, Stock		19/05/2006	100.00	100.00					1402m	South
GW700821	70BL150363, 70WA605679	Bore	Private	Domestic	Domestic		17/07/1992	22.50	22.60					1428m	West
GW700039	70BL144668	Bore		Domestic	Domestic		22/11/1991	21.50	21.50					1447m	North West
GW700818	70BL145299, 70WA605673	Bore	Private	Domestic, Stock	Domestic		01/01/1992	48.00	48.00			0.880		1468m	North East
GW054942	70BL118624, 70WA605607	Bore	Private	Domestic	General Use		01/07/1981	15.80	15.80	Good				1479m	East
GW701809	70BL229486, 70WA605840	Bore	Private	Stock	Stock		17/06/2003	72.00	72.00					1484m	North East
GW700037	70BL144602, 70WA605670	Bore		Domestic			21/11/1991	24.20	24.20		7.00	0.900		1485m	North West
GW092306		Bore	Local Govt		Monitoring Bore		27/02/1997	6.00	6.00					1517m	West
GW049147	70BL107664, 70WA605576	Bore	Private	Domestic, Stock	Domestic, Stock		01/06/1978	19.80	19.80	Good				1519m	East
GW058848	70BL128262, 70WA605631	Bore	Private	Domestic, Stock	Domestic, Stock		01/12/1982	23.00						1530m	North East
GW703190	70BL231477	Bore	Private	Domestic, Stock	Domestic, Stock		20/08/2007	30.00	30.00		9.00	0.100		1540m	North West
GW056053	70BL121984, 70WA605616	Bore	Private	Domestic, Stock	Domestic, Stock		01/03/1982	48.80	48.80					1541m	East
GW701095	70BL227356, 70CA606116	Bore	Private	Irrigation	Irrigation			25.00	25.00		24.00			1550m	East
GW025192		Bore	Private		Irrigation		01/06/1968	76.20	76.20					1577m	North East
GW033388	70BL026942, 70WA605549	Bore	Private	Stock	Stock		01/09/1971	36.60	36.60					1589m	South West
GW027648	70BL021774, 70WA605536	Bore	Private	Recreation (groundwater)	Recreation (groundwater)		01/04/1968	48.80	48.80	Good				1619m	West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW092 307		Bore	Local Govt		Monitoring Bore		27/02/1997	6.10	6.50					1644m	West
GW092 317		Bore	Local Govt		Monitoring Bore		22/05/1996	9.36	11.00	548	3.84			1648m	West
GW700 533	70BL226 552	Bore	Local Govt	Monitoring Bore	Monitoring Bore		22/05/1996	9.36	11.00	856	3.84			1663m	West
GW025 252		Bore open thru rock	Private		Irrigation		01/09/1968	85.30	85.30					1667m	North West
GW092 314		Bore	Local Govt		Monitoring Bore		23/05/1996	16.18	16.18	1267	10.80			1669m	North West
GW700 530	70BL226 552	Bore	Local Govt	Monitoring Bore	Monitoring Bore		23/05/1996	16.18	16.18	1267	10.80			1678m	North West
GW700 055	70BL145 171, 70WA60 5672	Bore		Domestic, Stock	Domestic, Stock		25/01/1992	24.70	24.70					1689m	East
GW704 753	70WA61 4952	Bore	Private	Domestic, Stock	Domestic, Stock		04/03/2014	120.00	120.00			0.252		1690m	South
GW092 304		Bore	Local Govt		Monitoring Bore		26/02/1997	6.30	6.30					1694m	North West
GW702 026	70BL229 827, 70WA60 5854	Bore	Private	Domestic	Domestic		20/04/2004	92.00	92.00			0.505		1716m	South West
GW035 626	70BL102 129, 70WA60 5560	Bore open thru rock	Private	Stock	Domestic, Stock		01/09/1973	121.90	121.90	Good				1733m	South
GW701 132	70BL227 597, 70BL228 154	Bore	Private	Irrigation	Irrigation		24/02/1989	46.00	72.00		2.10	4.000		1793m	North East
GW057 589	70BL126 017, 70WA60 5622	Bore open thru rock	Private	Domestic	General Use		01/02/1983	60.00	60.00					1820m	North West
GW704 045	70BL232 773	Bore	Private	Domestic, Stock	Domestic, Stock		06/05/2009	42.00	42.00		10.00	0.126		1825m	North East
GW025 193	70BL022 458	Bore	Private	Stock	Stock		01/06/1968	30.50	30.50	1001-3000 ppm				1828m	North East
GW700 602	70BL226 780, 70WA60 5718	Bore	Private	Domestic	Domestic		26/08/1998	63.00	63.00		30.00	0.080		1843m	North
GW702 934	70BL230 628	Bore	Private	Monitoring Bore	Monitoring Bore		02/02/2005	6.00	6.00					1850m	West
GW702 935	70BL230 628	Bore	Private	Monitoring Bore	Monitoring Bore		02/02/2005	6.00	6.00					1853m	West
GW702 939	70BL230 628	Bore	Private	Monitoring Bore	Monitoring Bore		01/02/2005	8.00	8.00					1855m	West
GW067 213	70BL141 159, 70WA60 5659	Bore	Private	Domestic	Domestic			20.00	20.00				460.00	1863m	West
GW702 941	70BL230 628	Bore	Private	Monitoring Bore	Monitoring Bore		01/02/2005	5.00	5.00		1.20			1871m	West
GW702 938	70BL230 628	Bore	Private	Monitoring Bore	Monitoring Bore		02/02/2005	6.00	6.00					1873m	West
GW701 092	70BL227 376, 70WA60 5739	Bore	Private	Domestic, Stock	Domestic, Stock		01/11/1995	60.00				0.940		1875m	North East
GW092 308		Bore	Local Govt		Monitoring Bore		27/02/1997	6.20	6.20					1878m	West
GW701 108	70BL154 819, 70WA60 5690	Bore	Private	Domestic, Stock	Domestic, Farming, Stock		12/05/1993	66.40	66.40		20.00	0.370		1887m	South West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW051868	70BL107231, 70WA605574	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/01/1977	76.20	76.20	Good				1888m	North
GW702940	70BL230628	Bore	Private	Monitoring Bore	Monitoring Bore		01/02/2005	6.00	6.00		3.50			1896m	West
GW702936	70BL230628	Bore	Private	Monitoring Bore	Monitoring Bore		02/02/2005	6.00	6.00					1897m	West
GW702937	70BL230628	Bore	Private	Monitoring Bore	Monitoring Bore		02/02/2005	6.00	6.00					1898m	West
GW704299	70BL229984	Bore	Private	Domestic, Stock	Domestic, Stock		01/01/1994	67.00	67.00		6.00	0.375		1920m	South
GW092298		Bore	Local Govt		Monitoring Bore		26/02/1997	4.25	4.25	384	2.65			1929m	North West
GW702299	70BL230676	Bore	Private	Domestic, Stock	Domestic, Stock		27/05/2005	126.00	126.00					1937m	East
GW034188	70BL028909, 70WA605550	Bore open thru rock	Private	Stock	Stock		01/07/1973	99.00	99.10	Fair				1958m	South
GW703417	70BL229763	Bore	Private	Domestic, Stock	Domestic, Stock		01/01/2004	38.00	38.00					1960m	South West
GW700169	70BL226067	Bore		Domestic	Domestic, Stock		31/01/1995	38.00	38.00	Good				1965m	North West
GW701097	70BL227357, 70CA606114	Bore	Private	Irrigation	Farming, Irrigation		31/08/2000	45.00	45.00					1974m	East
GW051091	70BL108796, 70WA605582	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/06/1980	53.30	53.30					1981m	East
GW025242	70BL022793, 70BL227068, 70CA606136	Bore	Private	Domestic, Irrigation	Irrigation		01/08/1968	61.00	61.00	1001-3000 ppm				1991m	North

Hydrogeology & Groundwater

2-20 Telegraph Road, Young, NSW 2594

Driller's Logs

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

Groundwater No	Drillers Log	Distance	Direction
GW700197	0.00m-0.40m TOPSOIL 0.40m-2.00m CLAY 2.00m-10.00m DECOMPOSED GRANITE 10.00m-20.00m GRANITE 20.00m-20.50m QUARTZ GRANITE 20.50m-33.30m GRANITE	309m	South East
GW700075	0.00m-8.53m DECOMPOSED GRANITE 8.53m-57.91m GRANITE	317m	West
GW006898	0.00m-4.57m Soil 4.57m-24.38m Granite 24.38m-54.86m Granite Water Supply	366m	North East
GW008646	0.00m-6.10m Soil 6.10m-24.38m Granite 24.38m-55.02m Granite Water Supply 55.02m-55.47m Driller	407m	South
GW703812	0.00m-0.50m topsoil 0.50m-8.50m clay brown 8.50m-27.00m granite weathered 27.00m-138.00m granite black and white	505m	South East
GW030591	0.00m-1.22m Topsoil 1.22m-3.05m Granite Weathered 3.05m-73.15m Granite Water Supply	563m	West
GW055682	0.00m-0.65m Soil 0.65m-2.43m Clay 2.43m-7.62m Granite Decomposed 7.62m-38.40m Granite Water Supply	602m	South East
GW058184	0.00m-0.30m Topsoil 0.30m-5.80m Clay 5.80m-7.00m Granite Decomposed 7.00m-68.50m Granite Water Supply	611m	East
GW061481	0.00m-0.50m Topsoil 0.50m-3.00m Clay 3.00m-14.00m Granite Decomposed Water Supply	614m	South East
GW701584	0.00m-1.00m Topsoil 1.00m-10.00m Decomposed Granite 10.00m-113.00m Fresh Granite	661m	South East
GW008822	0.00m-4.88m Soil 4.88m-35.66m Granite Water Supply	728m	South West
GW702681	0.00m-1.00m Topsoil 1.00m-6.50m Clay, grey 6.50m-21.00m Granite, weathered 21.00m-40.00m Granite, black & white	735m	North
GW701480	0.00m-0.50m Topsoil 0.50m-6.00m Clay 6.00m-21.00m Weathered Granite 21.00m-57.00m Granite, blue	736m	North
GW061101	0.00m-0.30m Topsoil 0.30m-2.10m Clay 2.10m-19.20m Granite Decomposed Water Bearing 19.20m-45.70m Granite Water Bearing	771m	South
GW701019	0.00m-0.50m Topsoil 0.50m-3.00m Clay 3.00m-9.00m Granite, decomposed 9.00m-132.00m Granite	780m	East

Groundwater No	Drillers Log	Distance	Direction
GW025097	0.00m-0.30m Topsoil 0.30m-5.49m Clay Sandy 5.49m-9.14m Clay 9.14m-14.63m Granite Decomposed Water Supply 14.63m-30.78m Granite Grey	797m	South East
GW057990	0.00m-0.50m Soil 0.50m-2.00m Clay 2.00m-5.00m Clay Sandy 5.00m-10.00m Granite Decomposed 10.00m-17.00m Clay 17.00m-21.00m Sand Coarse Water Bearing 21.00m-24.00m Granite Grey Water Bearing	856m	North
GW025374	0.00m-3.05m Clay 3.05m-6.10m Clay White 6.10m-12.19m Gravel 12.19m-15.24m Granite 15.24m-16.76m Gravel 16.76m-18.90m Granite 18.90m-20.12m Gravel 20.12m-91.44m Granite	882m	South
GW701223	0.00m-9.00m FILL 9.00m-14.00m GRANITE, SOFT 14.00m-90.00m GRANTIE, HARD	918m	West
GW704841	0.00m-0.60m Fill, Sandy Clay Fill; red & brown, soft to firm, some gravel <10mm, moist 0.60m-1.80m Clay, Sandy; red & brown, brown mottled, ironstone, firm, moist 1.80m-7.00m Clay, Gravelly; orange & brown, decomposed granite, red & brown, clay inclusions, moist 7.00m-11.00m Clay, Gravelly; granite, becoming more grey in colour, hardening slightly 11.00m-19.00m (Unknown); no Page 2 of consultants log was provided	929m	North West
GW704839	0.00m-0.50m Sand, Silty; grey & brown, fine grained, organic matter, rootlets, minor gravels, moist to wet 0.50m-1.50m Sand, Clayey; orange & brown, brown mottled, firm to stiff, minor gravels, moist 1.50m-5.20m Clay, Gravelly; orange & brown, decomposed granite & clay, sub-angular granite gravels to 25mm, moist 5.20m-8.00m Clay/Gravel; grading to clayey gravel (decomposed granite), some gravels <20mm, typically less than 5mm 8.00m-13.50m Clay/Gravel; increasingly grey, hardening slightly	951m	North West
GW704840	0.00m-0.40m Sand, Silty; grey & brown topsoil, fine grained, rootlets, gravels 0.40m-1.50m Sand, Clayey; orange & brown, brown mottled, firm, some ironstone gravels 1.50m-4.00m Clay, Gravelly; orange & brown, decomposed granite & clay, moist 4.00m-8.00m Clay, Gravelly; orange & brown, increasing gravel content 8.00m-9.00m Clay, Gravelly; increasingly grey in colour 9.00m-11.00m Clay, Gravelly; weathered/decomposed, light grey to grey, granite with clay inclusions, moist 11.00m-15.30m (Unknown); no page 2 of consultants log provided	953m	North West
GW025099	0.00m-4.27m Clay Grey Sticky 4.27m-16.46m Granite Decomposed 16.46m-20.42m Wash Gravel Water Supply 20.42m-28.65m Granite 28.65m-29.57m Quartz Granitic Water Supply 29.57m-30.48m Granite	1027m	South East
GW047769	0.00m-0.30m Topsoil 0.30m-1.50m Clay 1.50m-20.70m Granite Decomposed 20.70m-45.70m Granite Water Supply	1035m	North East
GW070358	0.00m-0.50m TOPSOIL 0.50m-20.00m DECOMPOSED GRANITE 20.00m-24.00m SAND 24.00m-49.00m GRANITE 49.00m-52.00m DECOMPOSED GRANITE & QUARTZ 52.00m-60.60m GRANITE	1078m	North West
GW053063	0.00m-0.30m Topsoil 0.30m-4.60m Clay 4.60m-35.10m Granite Decomposed Clay Bands 35.10m-39.60m Granite Decomposed Water Supply 39.60m-53.30m Granite	1087m	South East
GW704842	0.00m-0.50m Fill; orange & brown, silt, sand, gravels, moist 0.50m-1.80m Clay, Sandy; orange & brown, brown mottled, firm, ironstone, gravels <5mm, moist 1.80m-8.00m Clay/Gravel; orange & brown, gravel <5mm with clay inclusions (decomposed granite), moist 8.00m-9.00m Clay, Gravelly; driller indicated granite hardening around 8m 9.00m-11.00m Clay, Gravelly; hit hard granite @ 9m, anuger refusal @ 9.4m, switched to hammer 11.00m-20.40m (Unknown); no Page 2 of consultants log was provided	1104m	North West
GW702371	0.00m-1.00m Topsoil 1.00m-12.00m Clay 12.00m-30.00m Weathered Granite 30.00m-100.00m Granite, black & white	1126m	North

Groundwater No	Drillers Log	Distance	Direction
GW700532	0.00m-3.00m Light/Medium clay - orange/brown. 3.00m-9.00m Light/Medium Clay - pale light brown	1159m	West
GW700531	0.00m-0.50m Topsoil - dark brown, organic matter present 0.50m-3.00m Medium clay, brown, coarse sand present 10% 3.00m-4.00m Medium Sandy Clay, dark brown, angular very coarse sand present 50% 4.00m-8.00m Medium Clay - light brown, angular sand present, sorted with depth. Fine-sand 0.5mm present at 4.5 - 5.5m 8.00m-10.00m Sandy Clay - light brown, coarse angular sand 30%, some fine sand grains present	1172m	North West
GW025195	0.00m-0.30m Topsoil 0.30m-1.52m Clay Yellow 1.52m-7.92m Clay Sandy 7.92m-15.24m Granite Decomposed Water Supply 15.24m-60.96m Granite	1181m	East
GW025086	0.00m-2.13m Clay Yellow 2.13m-6.71m Clay Sandy 6.71m-11.28m Granite Decomposed 11.28m-13.72m Clay Coarse Gravel Water Supply 13.72m-14.94m Granite Decomposed Water Supply 14.94m-20.73m Granite Grey 20.73m-21.64m Granite Decomposed 21.64m-23.47m Granite Grey	1206m	North East
GW092305	0.00m-1.00m Dry sandy loam. Slightly cohesive when wet. 1.00m-2.00m Dry sandy loam. Slightly cohesive when wet. Iron nodules to 2 cm. 2.00m-5.00m Moist coarse sandy clay. Cohesive to 1.5 cm ribbon. sand grains to 5 mm. 5.00m-6.00m Very moist coarse sandy clay. cohesive to 1.5 cm ribbon. Sand grains to 4 mm.	1213m	South West
GW025180	0.00m-0.30m Topsoil 0.30m-3.66m Clay 3.66m-11.58m Clay Sandy 11.58m-18.90m Clay Granitic 18.90m-21.34m Granite Decomposed Water Supply 21.34m-24.38m Quartz Granitic Water Supply	1231m	North
GW704200	0.00m-1.00m topsoil 1.00m-3.00m clay, brown 3.00m-31.00m granite, decomposed	1262m	North West
GW025194	0.00m-0.61m Topsoil Red 0.61m-2.13m Clay Sandy 2.13m-3.05m Clay 3.05m-6.10m Clay Sandy 6.10m-15.24m Granite Decomposed 15.24m-18.90m Granite Wash 18.90m-33.22m Granite Decomposed Water Supply 33.22m-53.34m Granite	1283m	North
GW700167	0.00m-0.50m TOPSOIL 0.50m-1.50m RED CLAY 1.50m-17.00m DECOMPOSED GRANITE 17.00m-75.00m GREY GRANITE	1283m	East
GW703589	0.00m-0.50m Topsoil 0.50m-3.00m Clay 3.00m-19.00m Granite, decomposed 19.00m-90.90m Granite	1292m	South East
GW056234	0.00m-0.60m Topsoil 0.60m-4.20m Clay 4.20m-23.40m Granite Decomposed Water Supply	1312m	North West
GW047514	0.00m-0.30m Topsoil 0.30m-4.60m Clay 4.60m-10.70m Granite Decomposed 10.70m-61.00m Granite Water Supply	1318m	South West
GW048063	0.00m-0.30m Topsoil 0.30m-9.80m Clay 9.80m-18.90m Granite Decomposed Water Supply 18.90m-20.40m Granite	1322m	North West
GW703588	0.00m-0.50m Topsoil 0.50m-1.00m Granite, decomposed 1.00m-4.00m Clay 4.00m-15.00m Granite, decomposed 15.00m-60.00m Granite	1322m	South East
GW700534	0.00m-0.50m Topsoil - brown, organic matter present 0.50m-1.50m Light clay-light brown. Angular sand grains evident and visible, very coarse 1.50m-14.00m Sandy clay-orange/brown. Coarse angular sand 40%. Some moisture.	1324m	North West

Groundwater No	Drillers Log	Distance	Direction
GW092303	0.00m-1.00m Dry coarse sandy loam. Slightly cohesive when wet. Sand grains to 3 mm. Mica scattered through. 1.00m-2.00m Dry coarse sandy loam. Slightly cohesive when wet. Sand grains to 3 mm. Mica scattered through. 2.00m-3.00m Dry coarse sandy loam. Slightly cohesive when wet. Sand grains to 4 mm. Lots of mica. 3.00m-6.00m Dry coarse sandy loam, slightly cohesive when wet. Sand grains to 4 mm. Lots of mica. Slightly moist at bottom.	1360m	North West
GW092313	0.00m-1.00m Dry sandy loam. Slightly cohesive when wet. 1.00m-2.00m Dry sandy clay loam. Cohesive to 0.5 cm. 2.00m-5.00m Dry sandy clay. Cohesive to 1 cm. Scattered mica. 5.00m-6.00m Moist sandy clay. Cohesive to 1.5 cm. Sand grains to 2 mm. Scattered mica. 6.00m-7.00m Moist sandy clay. Cohesive to 1.5 cm. Sand grains to 2 mm. Scattered mica. 7.00m-9.00m Moist sandy clay. Cohesive to 1.5 cm. Sand grains to 2 mm. Scattered mica.	1363m	West
GW704897	0.00m-0.20m Fill; Concrete 0.20m-0.40m Fill; clayey Sand, brown 0.40m-0.60m Sandy Clay; yellow brown & mica 0.60m-1.20m Sandy Clay; grey 1.20m-3.30m Sandy Clay; grey brown 3.30m-6.00m Sandy Clay; brown	1379m	West
GW704899	0.00m-0.20m Fill; Concrete 0.20m-0.50m Fill; Clayey Sand, brown 0.50m-1.20m Sandy Clay 1.20m-2.00m Clay, Gravelly; brown & mica 2.00m-6.00m Gravel, Clayey; weathered granite	1382m	West
GW704898	0.00m-0.20m Fill; Concrete 0.20m-0.60m Fill; Clayey Sand, brown 0.60m-3.30m Sandy Clay; grey brown & mica 3.30m-6.00m Sandy Clay; brown 6.00m-7.50m Silty Clay; brown	1393m	West
GW700821	0.00m-0.50m Topsoil 0.50m-4.00m Clay 4.00m-12.00m Granite, decomposed 12.00m-15.00m Clay 15.00m-16.40m Granite, decomposed and quartz 16.40m-22.60m Granite, grey	1428m	West
GW700039	0.00m-0.50m TOPSOIL 0.50m-4.00m CLAY 4.00m-21.50m DECOMPOSED GRANITE	1447m	North West
GW054942	0.00m-9.14m Granite Decomposed Water Supply 9.14m-15.84m Granite Water Supply	1479m	East
GW701809	0.00m-0.60m Topsoil 0.60m-24.00m Sandy clay 24.00m-30.00m Weathered granite 30.00m-72.00m Granite	1484m	North East
GW700037	0.00m-0.50m TOPSOIL 0.50m-4.00m CLAY 4.00m-24.20m DECOMPOSED GRANITE	1485m	North West
GW092306	0.00m-1.00m Dry sand loam. Cohesive to 0.5 cm ribbon. 1.00m-2.00m Dry sandy clay loam. Cohesive to 1.0 cm ribbon. 2.00m-3.00m Dry coarse sandy loam. Cohesive to 0.5 cm ribbon. Sand grains through to 4 mm. 3.00m-4.00m Moist sandy clay. Cohesive to 1.5 cm ribbon. 4.00m-5.00m Moist coarse sandy clay. Cohesive to 1.5 cm ribbon. Sand grains to 4 mm. 5.00m-6.00m Very moist sandy clay. Cohesive to 2.0 cm ribbon. Sand grains to 2 mm.	1517m	West
GW049147	0.00m-0.30m Topsoil 0.30m-4.60m Clay 4.60m-15.20m Granite Decomposed Water Supply 15.20m-19.80m Granite	1519m	East
GW703190	0.00m-0.30m topsoil 0.30m-1.50m clay 1.50m-23.00m decomposedf granite 23.00m-30.00m granite	1540m	North West
GW056053	0.00m-3.50m Clay 3.50m-24.00m Granite Decomposed 24.00m-48.76m Granite	1541m	East
GW025192	0.00m-0.61m Topsoil 0.61m-2.74m Clay Yellow 2.74m-6.10m Clay Sandy 6.10m-9.14m Granite Decomposed 9.14m-76.20m Granite	1577m	North East

Groundwater No	Drillers Log	Distance	Direction
GW033388	0.00m-0.91m Topsoil 0.91m-14.02m Sand Claybound Water Supply 14.02m-31.09m Sand Coarse 31.09m-36.58m Granite	1589m	South West
GW027648	0.00m-1.22m Topsoil 1.22m-16.46m Clay Yellow 16.46m-18.29m Clay 18.29m-20.73m Water Supply 20.73m-27.43m Pug Red Clay Stiff 27.43m-39.62m Granite Sand 39.62m-48.77m Granite Yellow Decomposed Water Bearing	1619m	West
GW092307	0.00m-1.00m Dry coarse sandy loam. Slightly cohesive when wet. Sand grains to 4 mm. 1.00m-2.00m Dry sandy clay. Cohesive to 0.5 cm. 2.00m-3.00m Dry coarse sandy clay loam. Cohesive to 1.0 cm. Sand grains to 4 mm. 3.00m-4.00m Dry coarse sandy clay loam. Cohesive to 1.0 cm ribbon. Sand grains to 4 mm. 4.00m-5.00m Moist coarse sandy clay. Cohesive to 1.5 cm ribbon. Coarse sand grains through to 1.0 cm rocks. 5.00m-6.00m Moist coarse sandy clay. Cohesive to 1.5 cm ribbon. Coarse sand grains to 6 mm. 6.00m-6.50m Moist coarse sandy clay. Cohesive to 1.5 cm ribbon, coarse sand grains to 6 mm.	1644m	West
GW700533	0.00m-1.00m Topsoil - dark brown, organic matter present 1.00m-2.50m Medium clay - brown, angular sand present - 20% 2.50m-11.00m Sandy Clay - light brown, sand angular and coarse	1663m	West
GW025252	0.00m-0.30m Sand Red 0.30m-0.91m Loam White 0.91m-4.57m Clay Red Sandy 4.57m-10.06m Clay Yellow 10.06m-21.64m Clay Granite 21.64m-30.48m Granite Decomposed Water Supply 30.48m-85.34m Granite Water Supply	1667m	North West
GW700530	0.00m-0.50m Topsoil - dark brown, organic matter present. 0.50m-1.50m Sandy Clay - dark brown/red, fine angular sand 1.50m-5.50m Medium Sandy Clay - light brow/yellow, angular sand more coarse than above interval. 5.50m-15.50m Clayey Sand - khaki, angular coarse sand present >50%. Major inflow of water at 13.5-14.0m through to 15.0m 15.50m-16.00m Medium Sandy Clay - light brown/khaki. Coarse angular sand present	1678m	North West
GW700055	0.00m-0.50m TOPSOIL 0.50m-4.50m CLAY 4.50m-13.00m SHALE ROCK 13.00m-13.50m BROWN GRANITE & QUARTZ 13.50m-19.00m GRANITE 19.00m-20.00m BROWN GRANITE & QUARTZ 20.00m-20.50m GREY GRANITE 20.50m-21.60m BROWN GRANITE & QUARTZ 21.60m-24.70m GREY GRANITE	1689m	East
GW704753	0.00m-1.00m topsoil 1.00m-43.00m granite, decomposed 43.00m-120.00m granite, fresh, grey	1690m	South
GW092304	0.00m-1.00m Dry sandy loam. Slightly cohesive when wet. 1.00m-2.00m Slightly moist coarse sandy clay. Cohesive to 1.5 cm ribbon. Sand grains to 3 mm. 2.00m-4.00m Moist coarse sandy clay. Cohesive to 1.5 cm ribbon. Sand grains to 4 mm. 4.00m-5.00m Moist to very moist coarse sandy clay. Cohesive to 1.5 cm ribbon. Sand grains to 4 mm. 5.00m-6.00m Very moist coarse sandy clay. Cohesive to 2.0 cm ribbon. Sand grains to 3 mm (less larger than last). More plasticity	1694m	North West
GW702026	0.00m-12.00m Clay 12.00m-26.00m Decomposed Granite 26.00m-92.00m Granite	1716m	South West
GW035626	0.00m-0.30m Topsoil 0.30m-5.18m Clay 5.18m-5.49m Quartz 5.49m-25.30m Granite Weathered 25.30m-121.92m Granite Black Water Supply	1733m	South
GW701132	0.00m-0.30m Topsoil 0.30m-2.70m Sand 2.70m-8.20m Clay 8.20m-14.00m Decomposed Granite 14.00m-45.70m Granite 45.70m-72.00m Rock, 'Spotted Dog'	1793m	North East

Groundwater No	Drillers Log	Distance	Direction
GW057589	0.00m-0.50m Topsoil 0.50m-5.50m Granite Decomposed 5.50m-22.50m Sandstone 22.50m-23.80m Granite Broken Water Supply 23.80m-33.00m Granite Broken 33.00m-60.00m Granite Grey	1820m	North West
GW704045	0.00m-1.00m topsoil 1.00m-39.00m granite, decomposed 39.00m-42.00m granite, grey	1825m	North East
GW025193	0.00m-0.30m Topsoil 0.30m-14.33m Clay Sandy 14.33m-19.51m Gravel Medium-coarse Water Supply 19.51m-27.43m Granite Decomposed 27.43m-30.48m Granite	1828m	North East
GW700602	0.00m-0.40m Topsoil 0.40m-2.00m Clay, red 2.00m-8.00m Granite, decomposed 8.00m-36.00m Granite, grey 36.00m-36.50m Granite, broken brown 36.50m-63.00m Granite, grey black	1843m	North
GW702934	0.00m-1.50m Fill, silty clay, black moist, soft 1.50m-3.00m Clay, black, damp, stiff, slight hydrocarbon odour 3.00m-4.00m Clay, as above, grey 4.00m-5.00m Clay, as above, no hydrocarbon odour 5.00m-6.00m Clay, as above, red/brown	1850m	West
GW702935	0.00m-0.75m Fill, silt, black, loose, moist 0.75m-6.00m Clay, brown, moist, no hydrocarbon odour	1853m	West
GW702939	0.00m-1.00m Fill, black ash, silt & red bricks, moist 1.00m-2.00m Clay, red brown, dry, no hydrocarbon odour 2.00m-4.00m Clya, as above, light brown 4.00m-5.00m Clay, as above, moist 5.00m-8.00m Clay, as above, grey	1855m	West
GW702941	0.00m-1.00m Fill, grey, clay, wet, soft, no hydrocarbon odour 1.00m-2.00m Fill, sand, grey, coarse, loose, moist 2.00m-3.00m Clay, yellow, dry, firm, no hydrocarbon odour 3.00m-4.00m Clay, red, wet, firm, slight hydrocarbon odour 4.00m-5.00m Clay, as above, dry	1871m	West
GW702938	0.00m-1.00m Fill, silt, black, moist, loose, no hydrocarbon odour 1.00m-4.00m Clay, red, moist, soft, no hydrocarbon odour 4.00m-5.50m Clay, as above, grey 5.50m-6.00m Clay, as above, brown	1873m	West
GW092308	0.00m-1.00m Dry coarse sandy loam. Slightly cohesive when wet. Sand grains to 6 mm. 1.00m-3.00m Moist coarse sandy loam. Cohesive to 2.0 cm. Sand grains to 4 mm. 3.00m-4.00m Moist sandy clay. Cohesive to 2.0 cm. Sand grains to 2 mm. 4.00m-5.00m Moist sandy clay. Cohesive to 2.0 cm ribbon. Sand grains to 2 mm. 5.00m-6.00m Moist sandy clay. Cohesive to 2.0 cm ribbon. Sand grains to 3 mm.	1878m	West
GW701108	0.00m-2.50m Topsoil, and red clays 2.50m-20.00m Granite, weathered 20.00m-66.40m Granite, fresh	1887m	South West
GW051868	0.00m-0.30m Topsoil 0.30m-9.70m Clay 9.70m-27.40m Granite Decomposed 27.40m-34.20m Granite Soft 34.20m-76.20m Granite Water Supply	1888m	North
GW702940	0.00m-1.00m Fill, sandy clay, yellow, saturated, soft 1.00m-1.50m Fill, as above, dry 1.50m-3.70m Clay, brown, stiff 3.70m-5.00m Clay, grey, wet, soft, hydrocarbon odour 5.00m-5.50m Clay, as above, saturated, no hydrocarbon odour 5.50m-6.00m Clay, red, dry, very stiff, no hydrocarbon odour	1896m	West
GW702936	0.00m-1.50m Fill, silt, dry, brown, loose, no hydrocarbon odour 1.50m-4.00m Clay, red, dry, soft, no hydrocarbon odour 4.00m-6.00m Clay, as above, moist	1897m	West
GW702937	0.00m-1.00m Fill, silt, dry, grey, loose, no hydrocarbon odour 1.00m-2.00m Clay, red, moist, soft, no hydrocarbon odour 2.00m-3.00m Clay, red, dry, stiff, no hydrocarbon odour 3.00m-5.00m Clay, as above, moist 5.00m-6.00m Clay, as above, brown	1898m	West

Groundwater No	Drillers Log	Distance	Direction
GW092298	0.00m-1.00m Dry coarse sandy loam. Slightly cohesive when wet. Sand grains to 3mm. 1.00m-2.00m Moist coarse sandy clay loam. Cohesive to 0.5 cm ribbon. Coarse sand grains right through to rocks to 3 cm. 2.00m-3.00m Very moist coarse sandy clay. Cohesive to 1 cm ribbon. Rocks to 3 cm. 3.00m-4.00m Wet coarse sandy clay. Cohesive to 0.5 cm. Sand grains to 3mm.	1929m	North West
GW702299	0.00m-1.00m Topsoil 1.00m-30.00m Weathered Granite 30.00m-126.00m Granite	1937m	East
GW034188	0.00m-0.30m Topsoil 0.30m-4.57m Clay 4.57m-25.30m Granite Decomposed 25.30m-99.06m Granite Porphyry Water Supply	1958m	South
GW700169	0.00m-17.00m DECOMPOSED GRANITE 17.00m-38.00m GRANITE	1965m	North West
GW051091	0.00m-0.30m Topsoil 0.30m-4.57m Clay Coloured 4.57m-10.36m Granite Decomposed 10.36m-18.90m Granite 18.90m-20.42m Granite Decomposed 20.42m-53.34m Granite Orange	1981m	East
GW025242	0.00m-0.91m Soil Red Sandy 0.91m-2.13m Clay Yellow 2.13m-6.10m Clay Grey 6.10m-9.75m Clay 9.75m-29.26m Granite Decomposed Water Supply 29.26m-60.96m Granite Water Supply	1991m	North

Geology 1:250,000

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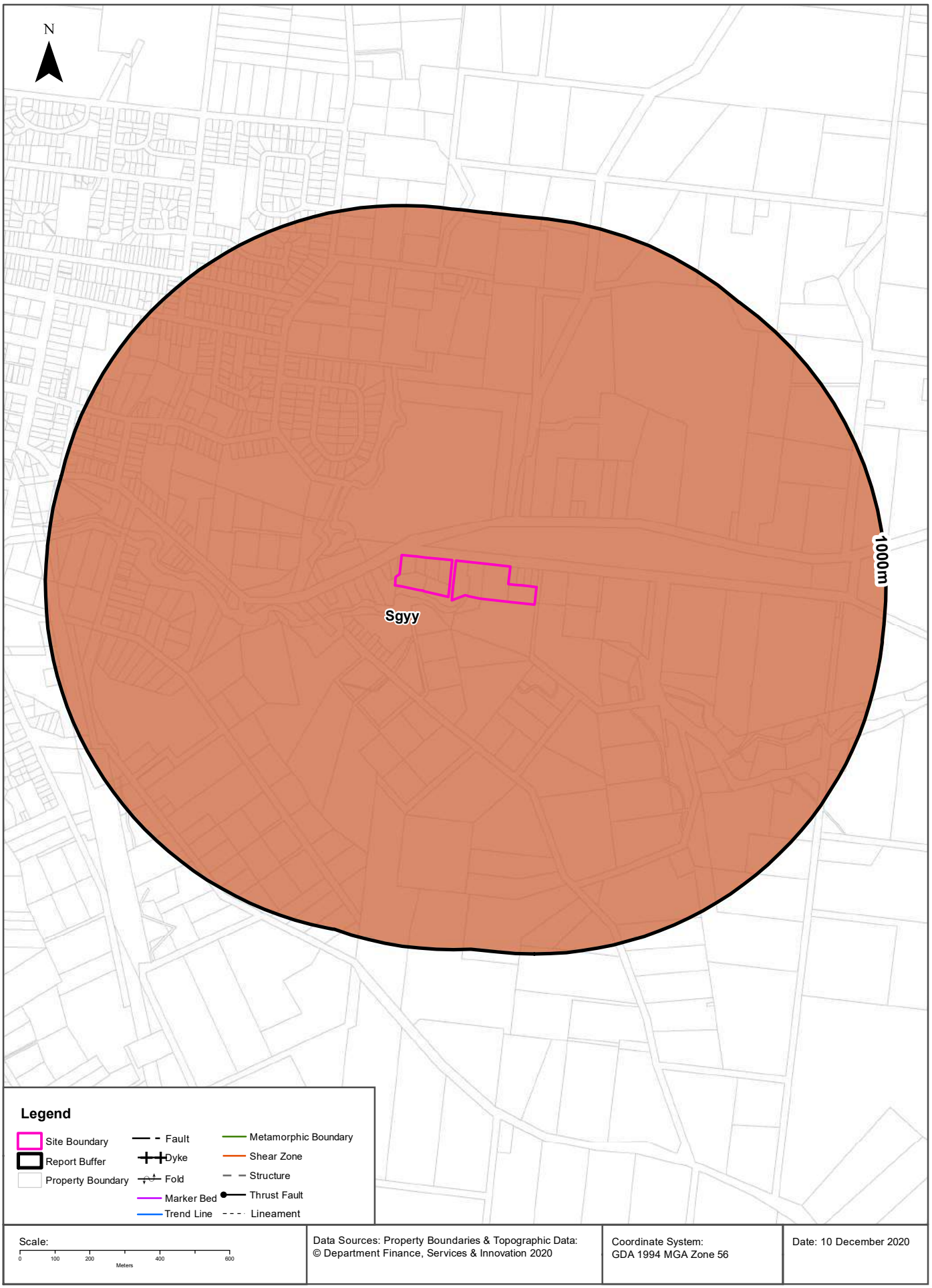

Geology

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Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Sgyy	Granodiorite, often porphyritic in quartz, plagioclase and more rarely in K-feldspar, biotite	Young Granodiorite	Young Suite		Palaeozoic			1:250,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Sgyy	Granodiorite, often porphyritic in quartz, plagioclase and more rarely in K-feldspar, biotite	Young Granodiorite	Young Suite		Palaeozoic			1:250,000

Geological Structures

What are the Geological Structures onsite?

Feature	Name	Description	Map Sheet	Dataset
No features				1:250,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Dataset
No features				1:250,000

Geological Data Source : NSW Department of Industry, Resources & Energy

Naturally Occurring Asbestos Potential

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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												

Atlas of Australian Soils

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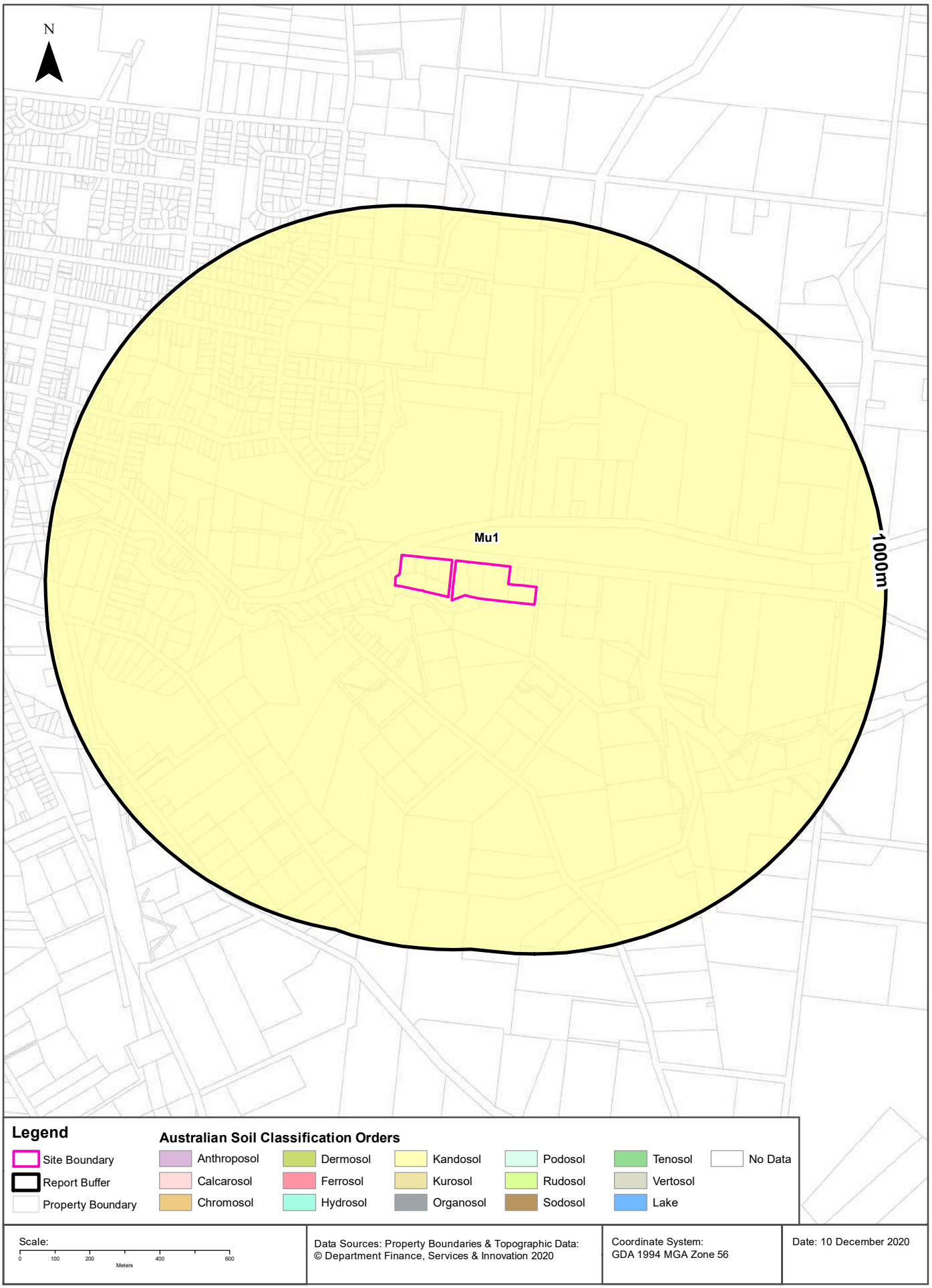

Soils

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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
Mu1	Kandosol	Undulating to rolling country with some rounded slopes, broken by ridges and knolls dotted with tors: chief soils are neutral leached red earths (Gn2.15) and hard neutral red soils (Dr2.22) and (Dr2.62), generally as follows: (i) undulating to rolling areas of (Gn2.15) and occasionally (Gn2.16), with (Gn2.25) and (Dy3.42) on mid and lower slopes and (Dy3.43) in valleys--ironstone gravels are present in some areas of the last three soils; (ii) rolling areas of (Dr2.22), (Dr2.42), (Dy3.22), and (Dy3.42); and (iii) ridges and knolls of (Dr2.22), (Dr2.62), and possibly other (D) soils with some areas of siliceous sands (Uc1.2) and tors. Soil dominance varies locally throughout the unit between (i), (ii), and (iii). Data are limited.	0m

Soil Landscapes of Central and Eastern NSW

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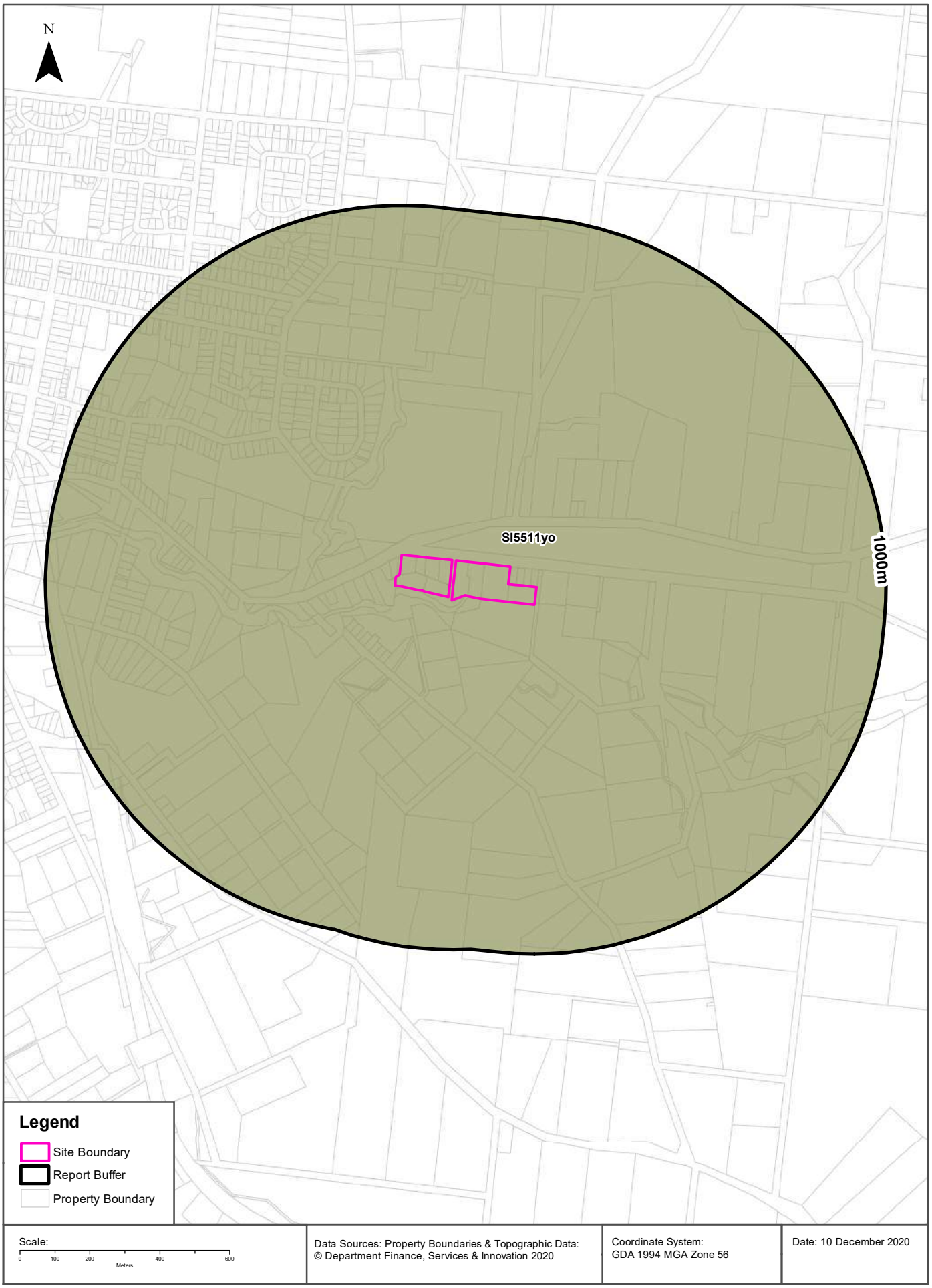

Soils

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Soil Landscapes of Central and Eastern NSW

What are the on-site Soil Landscapes?

Soil Code	Name
SI5511yo	Young

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name
SI5511yo	Young

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				

Atlas of Australian Acid Sulfate Soils

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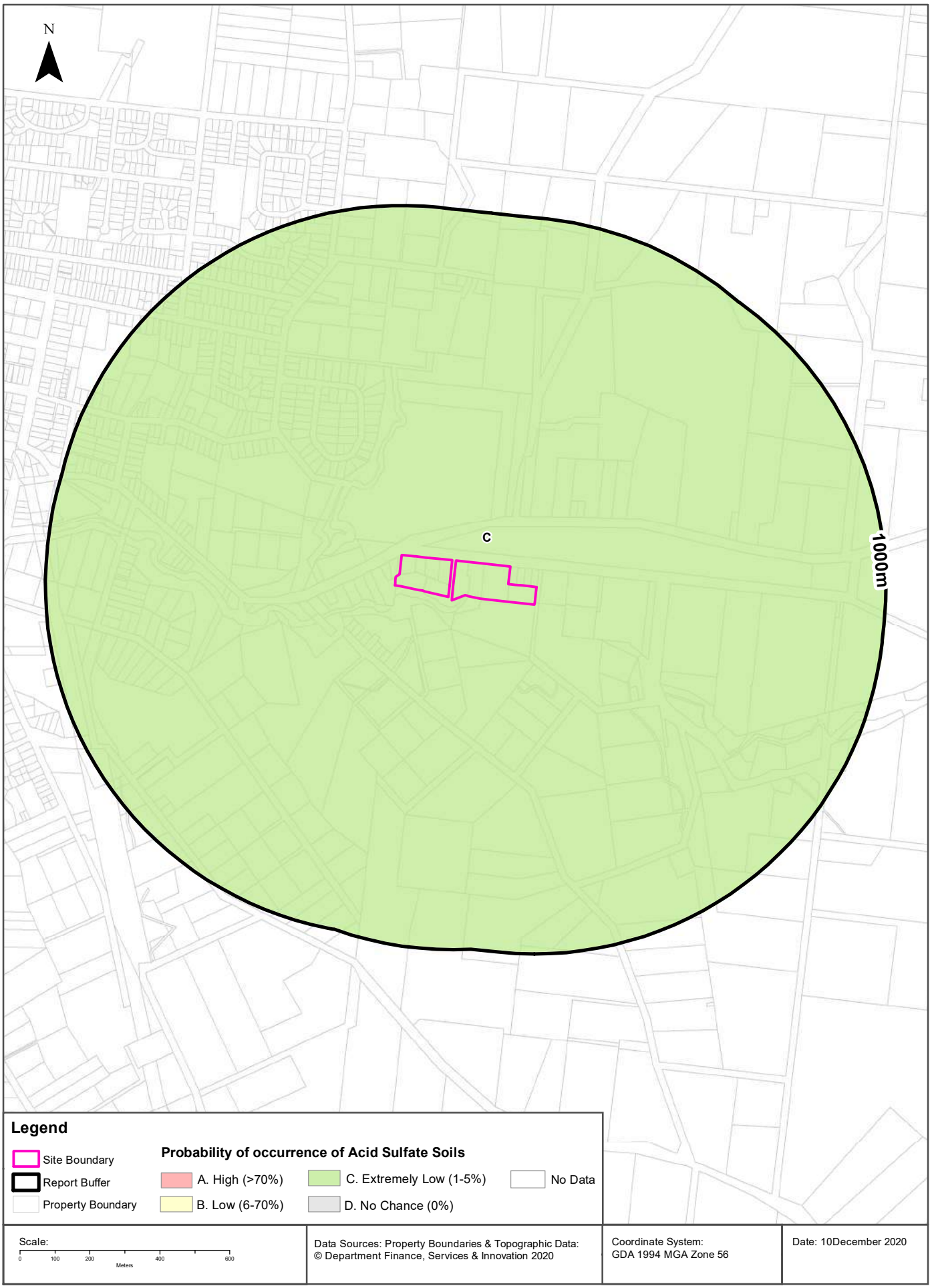

Acid Sulfate Soils

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Atlas of Australian Acid Sulfate Soils

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

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

Dryland Salinity

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Dryland Salinity

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Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

Yes

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

Yes

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
-	-	High hazard or risk	0m	Onsite
-	High hazard or risk	High hazard or risk	0m	Onsite

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

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
N/A	Outside Data Coverage			

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

Mining

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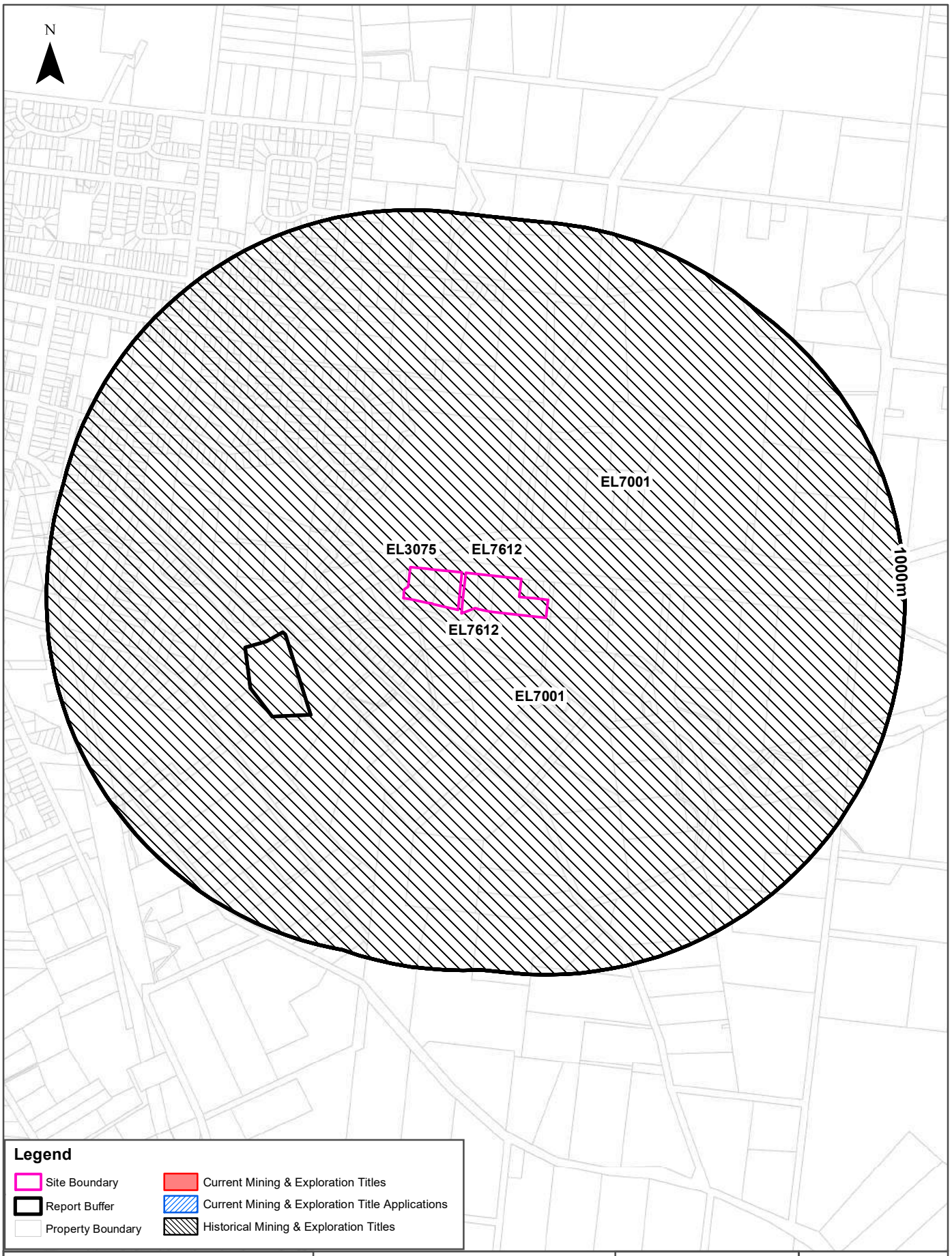
Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

Mining & Exploration Titles

2-20 Telegraph Road, Young, NSW 2594



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2020

Coordinate System: GDA 1994 MGA Zone 56

Date: 10 December 2020

Mining

2-20 Telegraph Road, Young, NSW 2594

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 (m)	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 (m)	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

2-20 Telegraph Road, Young, NSW 2594

Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist (m)	Dir'
EL3075	NORGOLD LIMITED	01 Feb 1988	01 Dec 1989	MINERALS	Au	0m	Onsite
EL7001	TARONGA MINES LIMITED			MINERALS		0m	Onsite
EL7001	TARONGA MINES LIMITED	07 Jan 2008	07 Jan 2010	MINERALS		0m	Onsite
EL7612	SLADE, John			MINERALS		0m	Onsite
EL7612	SLADE, John	31 Aug 2010	31 Aug 2014	MINERALS	Au	0m	Onsite

State Environmental Planning Policy

2-20 Telegraph Road, Young, NSW 2594

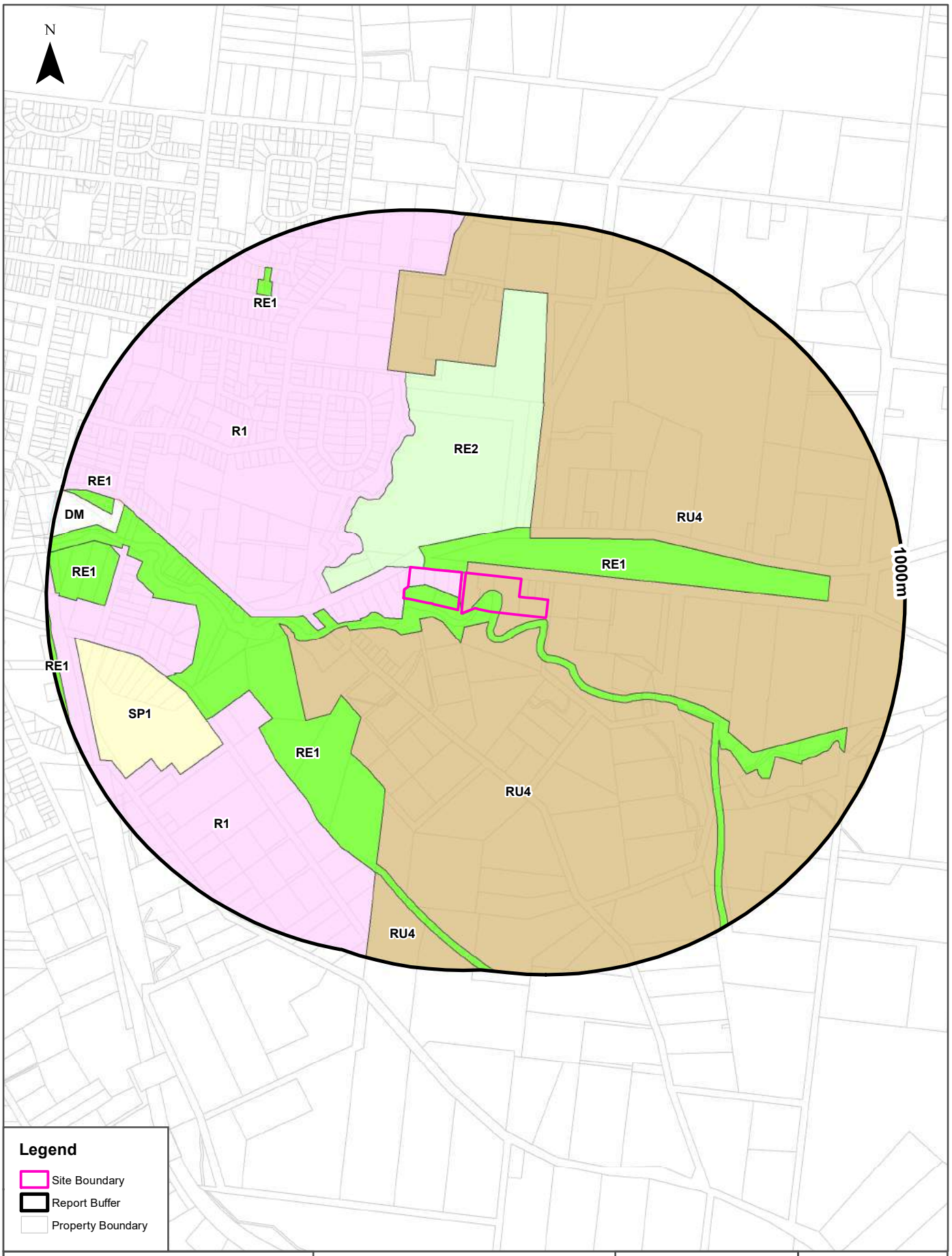
State Significant Precincts

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							

EPI Planning Zones

2-20 Telegraph Road, Young, NSW 2594



Environmental Planning Instrument

2-20 Telegraph Road, Young, NSW 2594

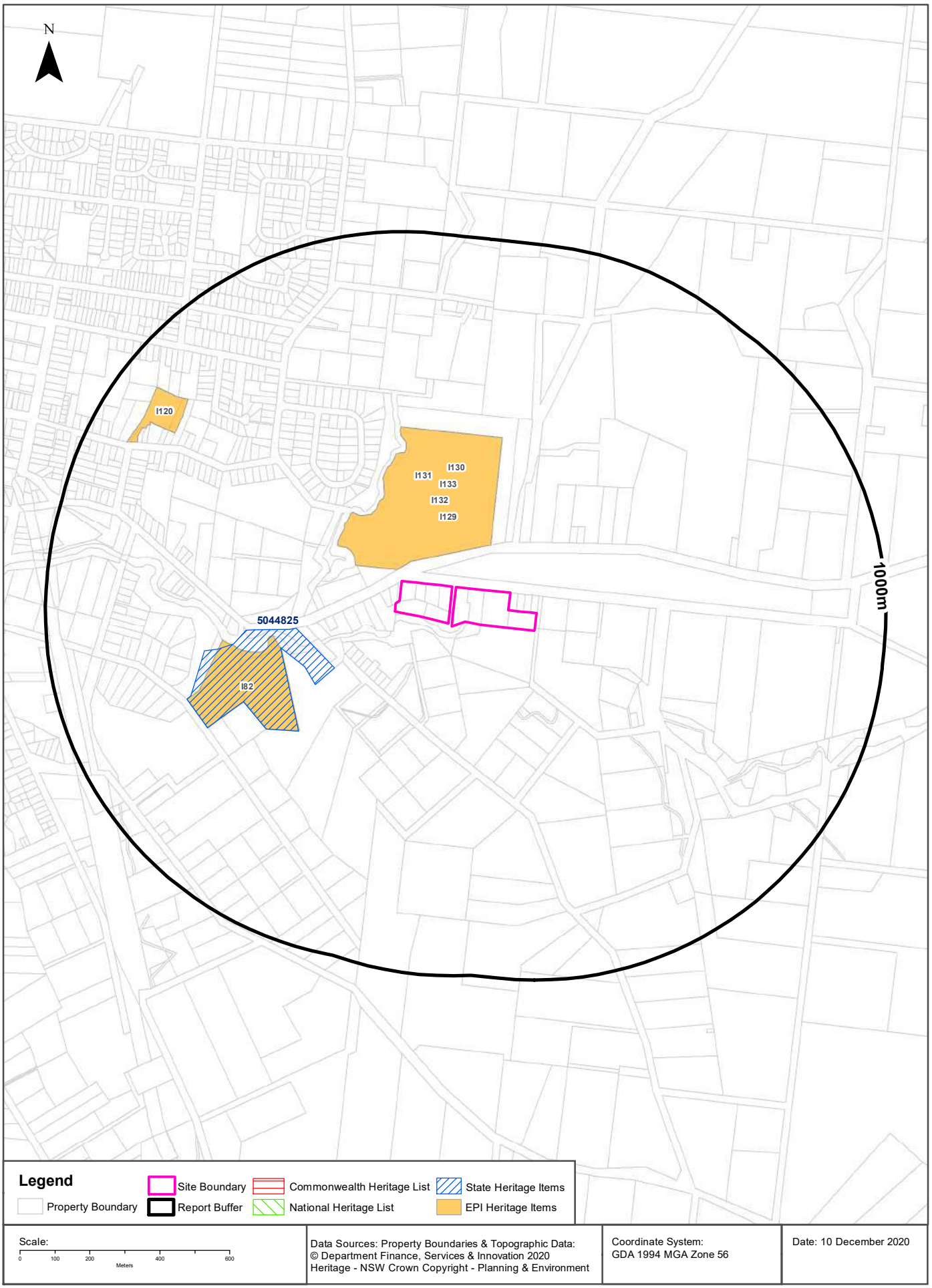
Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RU4	Primary Production Small Lots		Young Local Environmental Plan 2010	12/07/2013	12/07/2013	27/03/2015	Amendment No 6	0m	Onsite
RE1	Public Recreation		Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015		0m	Onsite
R1	General Residential		Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015		0m	Onsite
RE2	Private Recreation		Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015		0m	North
R1	General Residential		Young Local Environmental Plan 2010	30/11/2012	08/03/2013	08/03/2013	Amendment No 5	499m	South West
SP1	Special Activities	Waste and Resource Management Facility	Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015		650m	West
RE1	Public Recreation		Young Local Environmental Plan 2010	27/03/2015	27/03/2015	27/03/2015	Amendment No 7	804m	West
DM	Deferred Matter		Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015		820m	West
RE1	Public Recreation		Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015		847m	West
RE1	Public Recreation		Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015		854m	North West

Heritage Items

2-20 Telegraph Road, Young, NSW 2594



Heritage

2-20 Telegraph Road, Young, NSW 2594

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
5044825	Blackguard Gully	Whiteman Avenue, Young	Young	13/03/2009	01775	2182	237m	West

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

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

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I129	Young Showground Art Hall	Item - General	Local	Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015	36m	North
I130	Young Showground Grandstand	Item - General	Local	Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015	36m	North
I131	Young Showground Main Pavillion	Item - General	Local	Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015	36m	North

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I132	Young Showground Sheep Pavillion & Cattle Shed	Item - General	Local	Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015	36m	North
I133	Young Showground Stan Lowe Pavillion	Item - General	Local	Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015	36m	North
I82	Blackguard Gully gold diggings	Item - General	State	Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015	343m	West
I120	Verity Prunes	Item - General	Local	Young Local Environmental Plan 2010	02/08/2010	02/08/2010	27/03/2015	775m	North West

Natural Hazards - Bush Fire Prone Land

2-20 Telegraph Road, Young, NSW 2594

Data Sources: Bush Fire Prone Land: © NSW Rural Fire Service 2020. Property Boundaries: © Department Finance, Services & Innovation 2020

Coordinate System: GDA 1994 MGA Zone 56

Date: 10 December 2020

Natural Hazards

2-20 Telegraph Road, Young, NSW 2594

Bush Fire Prone Land

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

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	998m	South

Ecological Constraints

2-20 Telegraph Road, Young, NSW 2594

Ramsar Wetlands

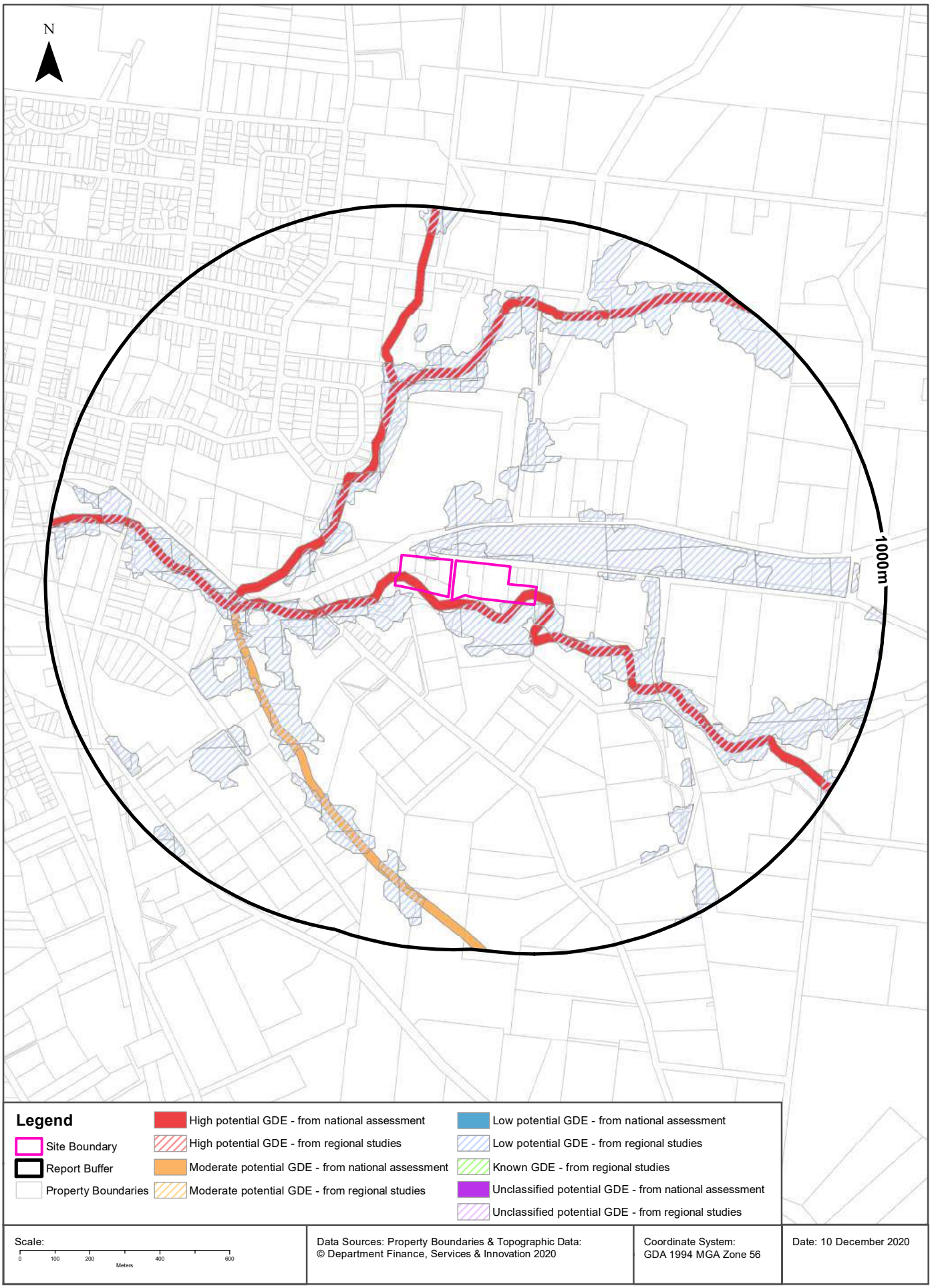
What Ramsar Wetland areas exist within the dataset buffer?

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 Environment

Ecological Constraints - Groundwater Dependent Ecosystems Atlas

2-20 Telegraph Road, Young, NSW 2594



Ecological Constraints

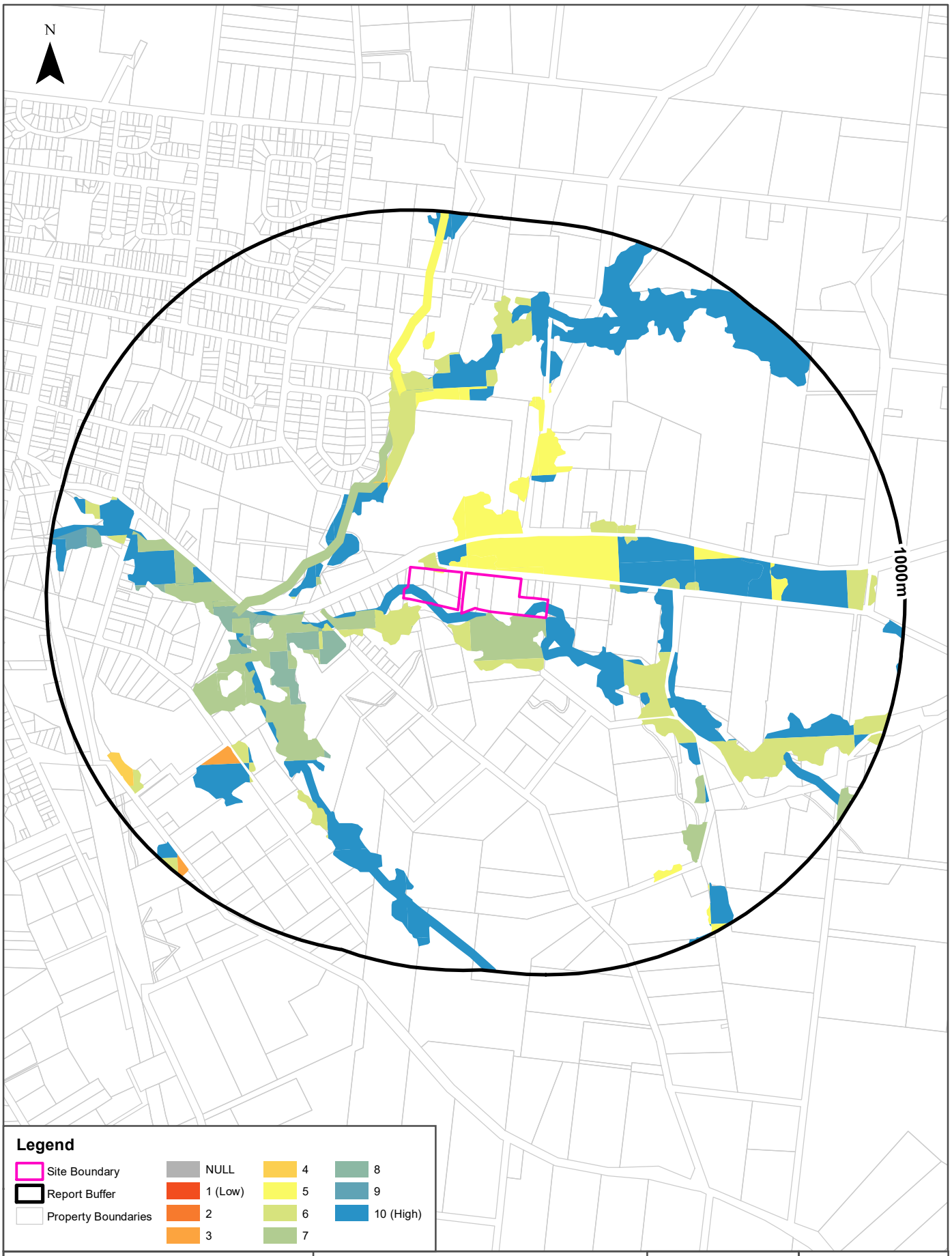
2-20 Telegraph Road, Young, NSW 2594

Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Aquatic	High potential GDE - from national assessment	Tablelands stepping down to west and breaking into detached hills.	River		0m
Terrestrial	Low potential GDE - from regional studies	Tablelands stepping down to west and breaking into detached hills.	Vegetation		0m
Aquatic	Moderate potential GDE - from national assessment	Tablelands stepping down to west and breaking into detached hills.	River		454m

Ecological Constraints - Inflow Dependent Ecosystems Likelihood

2-20 Telegraph Road, Young, NSW 2594



Ecological Constraints

2-20 Telegraph Road, Young, NSW 2594

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Aquatic	10	Tablelands stepping down to west and breaking into detached hills.	River		0m
Terrestrial	5	Tablelands stepping down to west and breaking into detached hills.	Vegetation		0m
Terrestrial	6	Tablelands stepping down to west and breaking into detached hills.	Vegetation		0m
Terrestrial	7	Tablelands stepping down to west and breaking into detached hills.	Vegetation		0m
Terrestrial	10	Tablelands stepping down to west and breaking into detached hills.	Vegetation		0m
Aquatic	7	Tablelands stepping down to west and breaking into detached hills.	River		199m
Terrestrial	8	Tablelands stepping down to west and breaking into detached hills.	Vegetation		205m
Terrestrial	4	Tablelands stepping down to west and breaking into detached hills.	Vegetation		227m
Aquatic	5	Tablelands stepping down to west and breaking into detached hills.	River		473m
Terrestrial	3	Tablelands stepping down to west and breaking into detached hills.	Vegetation		640m
Terrestrial	9	Tablelands stepping down to west and breaking into detached hills.	Vegetation		895m

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

Ecological Constraints

2-20 Telegraph Road, Young, NSW 2594

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	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Oxyura australis	Blue-billed Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.

Location Confidences

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

LC Code	Location Confidence
Premise match	Georeferenced to the site location / premise or part of site
General area or suburb match	Georeferenced with the confidence of the general/approximate area
Road match	Georeferenced to the road or rail
Road intersection	Georeferenced to the road intersection
Feature is a buffered point	Feature is a buffered point
Land adjacent to geocoded site	Land adjacent to Georeferenced Site
Network of features	Georeferenced to a network of features

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Appendix K – Proposed Development Plan

SCALE 1:500
0.0m 10.0M 20.0m 30.0M 40.0m 50.0m

EXISTING U/G POWER LINES
Depth and location to be verified on site by potholing and locator
If depth insufficient, to be relocated

www.dialbeforeyoudig.com.au
DIAL 1100
DIAL BEFORE YOU DIG

MGA

TELEGRAPH ROAD
30.175 WIDE

DP 736225

2 DP 736225

3 DP 845187

4 DP 845187

11 DP 1138027

12 DP 1138027

7335 DP 1165940

1171 DP 754611

1154 DP 754611

1199 DP 754611

3 DP 374948

7335 DP 1165940

2299 DP 754611

1 DP 374948

2 DP 374948

1 DP 374004

1 DP 373540

1 DP 247633

ROAD 10.06 WIDE

VICTORIA GULLY

DATUM AHD SSM 39765: RL 447.048
COORDINATES MGA ZONE 55 SSM 39765: E 620693.766, N 6201834.952

.	.	.
D	RAISE BUILDING PAD FFL 454.3, MODIFY EASTERN PAD AREA	20th Sept, 2017
C	RAISE BULDING PAD 0.31, EXTEND OUTER PAD	28th Aug, 2017
B	VOLUME AND BUILDING PAD	20th July, 2017
A	DETAIL AND CONTOUR SURVEY	12th July, 2016
ISSUE	AMENDMENT	DATE

I HEREBY CERTIFY THAT ENGINEERING WORKS SHOWN ON THIS PLAN ARE WORK-AS-EXECUTED AND HAVE BEEN CONSTRUCTED GENERALLY IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY THE DIRECTOR. IN ACCORDANCE WITH THE GENERAL REQUIREMENTS
NAME: .....
SIGNATURE: .....
CAPACITY: .....
DATE: .....

DATE	CHECKED
20th Sept 2017	WJC
DRAWN	APPROVED
WJC	WJC
DESIGNED	SCALE
WJC	PLAN 1:500 LS HS 1:500 LS VS 1:100

SHEET A1

C.P.C.
LAND DEVELOPMENT CONSULTANTS P\L
ACN 003 773 975

YOUNG OFFICE
121 NASMYTH STREET
YOUNG NSW, 2954
TEL (02) 6382 1501
FAX (02) 6382 4729

COWRA OFFICE
5/103 KENDAL ST.
COWRA NSW, 2794
TEL (02) 6342 4577
FAX (02) 6382 4729

GOULBURN OFFICE
299 SLOANE ST.
GOULBURN NSW.
TEL (02) 4823 5100
FAX (02) 4823 5200

SHEET SUBJECT
PLAN VIEW
DETAIL AND CONTOURS

PROJECT APOLLO FABRICATION GROUP PTY LTD
TELEGRAPH ROAD, YOUNG

CLIENT
Apollo Fabrication Group Pty Ltd

ISSUE	PROJECT NO.	SHEET NO.	SHEET
D	18424	1 of 2	A1

SCALE 1:500
0.0m
10.0m
20.0m
30.0m
40.0m
50.0m
EXISTING U/G POWER LINES
Depth and location to be verified on site by potholing and locator
If depth insufficient, to be relocated
www.dialbeforeyoudig.com.au
DIAL 1100
DIAL BEFORE YOU DIG
MGA
TELEGRAPH ROAD
30.175 WIDE
2 DP 736225
3 DP 845187
4 DP 845187
FFL 453.66
11 DP 1138027
12 DP 1138027
7335 DP 1165940
1171 DP 754611
1154 DP 754611
1199 DP 754611
DESIGN PAD RL 454.1
DESIGN FFL 454.3
PAD AREA 9470sqm
BATTER SLOPE 4:1
VOL CUL: 3730cum
VOL FILL: 3940cum
PAD AREA 4590sqm
BATTER SLOPE 3:1
VOL CUT: 4050cum
VOL FILL: 2370cum
DESIGN PAD RL 452.5
1 DP 374948
2 DP 374948
1 DP 374004
1 DP 373540
1 DP 247633
3 DP 374948
2299 DP 754611
VICTORIA GULLY
ROAD 10.06 WIDE
Colorbond Shed Fabrication
Brick Office
Gal Iron Workshop
C'Bond Shed Amenities
Toilets
C'bond Shed 'Paint Shed'
Colorbond Shed 'Sand Blast'

DATUM AHD SSM 39765: RL 447.048
COORDINATES MGA ZONE 55 SSM 39765: E 620693.766, N 6201834.952

ISSUE	AMENDMENT	DATE
.	.	.
D	RAISE BUILDING PAD FFL 454.3, MODIFY EASTERN PAD AREA	20th Sept, 2017
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NAME: ....
SIGNATURE: ....
CAPACITY: ....
DATE: ....

DATE	CHECKED
20th Sept 2017	WJC
DRAWN	APPROVED
WJC	WJC
DESIGNED	SCALE / SHEET
WJC	PLAN 1:500, LS HS 1:500, LS VS 1:100 / A1

C.P.C.
LAND DEVELOPMENT CONSULTANTS P\L
ACN 003 773 975

YOUNG OFFICE
121 NASMYTH STREET
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FAX (02) 6382 4729

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299 SLOANE ST.
GOULBURN NSW.
TEL (02) 4823 5100
FAX (02) 4823 5200

SHEET SUBJECT
DESIGN PAD CUT/FILL
DESIGN DETAIL AND CONTOURS

PROJECT APOLLO FABRICATION GROUP PTY LTD
TELEGRAPH ROAD, YOUNG

CLIENT
Apollo Fabrication Group Pty Ltd

ISSUE	PROJECT NO.	SHEET NO.	SHEET
D	18424	2 of 2	A1

SCALE 1:500

0.0m 10.0M 20.0m 30.0M 40.0m 50.0m

EXISTING U/G POWER LINES
Depth and location to be verified on site by potholing and locator If depth insufficient, to be relocated

TELEGRAPH ROAD
30.175 WIDE

edge bitumin

Proposed spoon drain

NEW OFFICE BLOCK

60

NEW WORKSHOP

1 DP 736225

2 DP 736225

47

Lot 3 DP845187

2231.1sq.m

EXISTING Colorbond Shed Fabrication EXISTING

EXISTING Colorbond Shed Fabrication EXISTING

OFFICE BLOCK

C'bond Shed 'Paint Shed' EXISTING

Colorbond Shed 'Sand Blast'

NEW ADDITION

3 DP 845187

4 DP 845187

(12.5)

(17.8)

(34.2)

99°33'50" 40.45

90°33'50" 37.0

8°10'20" 50.62 (48.88)

291°54'10" 8.33

295°42'20" 32.35

295°42'20" 38.52

7°41'00" 47.37

285°43'20" 7.68

33.135

11 DP 1138027

12 DP 1138027

7335 DP 1165940

Future acces

Road 10.06 Width

25.5m

5

6

33m

OFFICE BLOCK
561m²
5148m³

17m

94.8m

2157,3 m²
29274.56 m³

84.6m

NEW WORKSHOP 2
2417,4 m²
32160.9m³

50.5m

5.0

NEW WORKSHOP 1
4737.5m²
64287.87m³

25m

189.5m

25m

1492,5 m²
20253.22m³

59.7m

59.7m

69.7m

25

16.6

1 DP 374948

2 DP 374948

1 DP 374004

1 DP 373540

1 DP 247633

ROAD 10.06 WIDE

7335 DP 1165940

2299 DP 754611

VICTORIA GULLY

DATUM AHD SSM 39765: RL 447.048
COORDINATES MGA ZONE 55 SSM 39765: E 620693.766, N 6201834.952

ISSUE	DATE	REASON FOR REVISION
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UNIQUE CAD EXPERIENCE

Client: APOLLO FABRICATION GROUP Pty Ltd

Project: Apollo fabrication grop Pty Ltd
Telegraph road, Young

Drawing: PROPOSED SITE PLAN

Job Number:

No. in Set: Sheet No.: A 0.1

Scale: 1:500 Revision No.:

Date: 28.9.2020 Revision Date:

Drawn: M.C.

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A1