



DalCo & Covo Positino
Detailed Environmental Site
Investigation Report

104 Fifteenth Avenue
West Hoxton, NSW

19 March 2021





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Executive Summary

Background

Land & Groundwater Consulting Pty Ltd (LG) has been engaged by DalCo (NSW) Pty Limited and Covo Positino Pty Limited to undertake a Detailed Environmental Site Investigation (DESI) at the site known as 104 Fifteenth Avenue, West Hoxton, NSW.

LG understands that DalCo (NSW) Pty Limited and Covo Positino Pty Limited wishes to develop the site and assess its environmental condition prior to development. It is understood that development of the site will comprise the demolition of the existing 2-storey brick residential building and storage/workshop/stable sheds and construction of a service station (including fuel bowser stations and underground storage tanks), McDonalds fast food store, childcare centre and parking spaces.

The sampling plan included the assessment of 28 locations across the site. Samples collected were analysed for a combination of total recoverable hydrocarbons (TRHs); benzene, toluene, ethylbenzene and xylene (BTEX); polycyclic aromatic hydrocarbons (PAHs); organochlorine pesticides (OCPs); organophosphate pesticides (OPPs); polychlorinated biphenyl (PCBs); metals (arsenic, cadmium, copper, chromium, lead, nickel, mercury and zinc) and asbestos identification.

Conclusions

Based on the findings of this DESI the following conclusions are provided:

- Prior to the current layout the site appeared to have comprised mainly vacant crown land between 1820's and 1910's. Residential structures are likely to have occupied the site since sometime between 1920's and 1940's. Therefore, it is estimated that the site has been in its current residential configurations for over 70 years. No significant changes were observed on the site during this period;
- Laboratory analytical results indicated that the fill materials and natural soils sampled from within the footprint of the proposed development area and analysed did not contain concentrations of TRHs, BTEX, PAHs, OCPs, OPPs, PCBs, heavy metals and asbestos that were greater than the HIL A and EIL A land use criteria (Residential A), at the time tested.
- Asbestos fibres were detected above the HIL A in the following samples:
 - Amosite fibrous mass (approximately 20 x 10 x 4 mm) in soil sample BH5/0.1-0.3, collected within the fill material at Borehole 5; and

- Chrysotile cement sheet fragments (approximately 10 x 6 x 2 mm) in soil sample BH6/0.1-0.3, collected within the fill material at Borehole 6.
- Bonded cement fragments collected from surfaces across the site for laboratory verification analysis confirmed the presence of amosite and chrysotile asbestos in fibrous cement samples PAC1 and PAC2. Therefore, these can be referred as ACMs.
- Based on the above findings the site subject to this DESI is likely to be suitable for the proposed land use, consistent with an R2 Low Density Residential zoning, provided the asbestos fragments and impacted soils identified are remediated in-situ or classified, removed and disposed offsite to a licensed facility, and the remaining excavation/voids are validated, accordingly.

Recommendations

Based on the conclusions above the following recommendations are provided:

- Remediation and validation works be undertaken, in order to safely remove asbestos hotspots (including bonded ACM fragments identified) and demonstrate that the remaining excavations and excavated soils meet NSW EPA requirements for the proposed land use.



1. Introduction

2.1 Background

Land & Groundwater Consulting Pty Ltd (LG) has been engaged by DalCo (NSW) Pty Limited and Covo Positino Pty Limited (DalCo & Covo Positino) to undertake a Detailed Environmental Site Investigation (DESI) at the property identified as Lot 2 in Deposited Plan (DP) 1074727, located at 104 Fifteenth Avenue, West Hoxton, NSW (the site). The site location plan is shown in **Figure 1** attached.

LG understands that a development application (DA) has been submitted to Liverpool City Council (Council) comprising demolition of the existing 2-storey brick residential building and storage/workshop/stable sheds and construction of a service station (including fuel bowser stations and underground storage tanks), McDonalds fast food store, childcare centre and parking spaces. This DESI provides a summary of the historical land uses and assesses the potential for soil contamination to be present.

The Section 149 Certificate for the site obtained from Council indicates that the site is zoned R2 Low Density Residential. A copy of the certificate is presented in **Appendix A**.

The DESI was undertaken with respect to the staged investigation approach outlined in *State Environmental Planning Policy No. 55 - Remediation of Land* (SEPP 55 - Ref 1) and the National Environment Protection Council (NEPC) *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended 2013) (NEPC, 2013 - Ref 2).

This report was prepared in general accordance the NSW Office of Environment and Heritage (OEH) "*Guidelines for Consultants Reporting on Contaminated Sites*" (2011).

2.2 Objectives

The specific objectives of the DESI were to:

- Provide an assessment of potential soil contamination resulting from onsite or offsite sources, during past or present activities;
- Assess the site suitability for Residential A land use; and
- Assess the need for further investigations and/or remedial action, if any.

2.3 Scope of Works

The following works were undertaken to meet the objective described above:

- Completed searches and review of historical information relating to the site from the following sources:
 - Current certificate of title;
 - Historical certificate of title;
 - Local Council records, including current planning and/or zoning certificates, previous land uses;
 - NSW OEH administered environment management and contaminated land registers;
 - Heritage Council of NSW online database of items of heritage significance;
 - Available historical aerial photographs;
 - Registered groundwater bore database for groundwater bores in the vicinity of the site; and
 - Available geological and hydrogeological information.
- Prepared a sampling and analytical plan outlining the sampling and assessment strategy for the DESI;
- Conducted dial before you dig search to assess for the presence of underground services and pipework;
- Undertook soil field investigations which included the following works:
 - Given that the site covers an area of approximately 18,230 m² (1.823 ha), a total of 28 soil sampling locations were investigated in accordance with the Minimum Sampling Points Required for Site Characterisation, published under the NSW EPA (1995) "*Sampling Design Guidelines*". These were placed in a triangular grid pattern across the site with allowance for structural obstacles (e.g. existing 2-storey brick residential building and storage/workshop/stable sheds);

- Sampling of 27 boreholes systematically located across the site, using drilling machine and 1 stockpile sample;
- Collection of representative samples of fill materials (i.e. 0.0 to 0.3 m bgs) and natural soils (i.e. 0.5 m bgs) at each borehole location and/or at changes in lithology or where visual and/or olfactory indicators of contamination were observed;
- Completion of detailed environmental logging of each borehole for evidence of contamination (e.g. by reference to staining, odour, presence of materials of anthropogenic materials), fill materials and soil properties;
- Submission of 13 samples (including 1 replicate) of fill materials to a National Association of Testing Authorities (NATA) accredited laboratory for variable analysis for the following suite of analytes:
 - o Total Recoverable Hydrocarbons (TRHs);
 - o Benzene, Toluene, Ethylbenzene and Xylene (BTEX);
 - o Polycyclic Aromatic Hydrocarbons (PAHs);
 - o Organochlorine Pesticides (OCPs);
 - o Organophosphate Pesticides (OPPs);
 - o Polychlorinated Biphenyls (PCBs);
 - o Heavy metals (arsenic, cadmium, copper, chromium, lead, nickel, mercury and zinc); and
 - o Asbestos identification.
- Submission of 9 samples (including 1 replicate) of fill materials to a NATA accredited laboratory for variable analysis for the following suite of analytes:
 - o TRHs;
 - o BTEX;
 - o PAHs;
 - o Heavy metals (arsenic, cadmium, copper, chromium, lead, nickel, mercury and zinc); and

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- Asbestos identification.
- Submission of 8 samples of fill materials to a NATA accredited laboratory for variable analysis for the following suite of analytes:
 - TRHs;
 - BTEX;
 - Heavy metals (arsenic, cadmium, copper, chromium, lead, nickel, mercury and zinc); and
 - Asbestos identification.
- Submission of 2 samples of fibrous cement fragments to a NATA accredited laboratory for analysis of asbestos identification.
- Prepared and submitted this DESI report including the following:
 - Desk study findings and findings of the subsurface investigation including, an outline of fieldwork undertaken, site conditions encountered, field observations, environmental and borehole logs.
 - A conceptual site model, data quality objectives, investigation methodologies and analytical laboratory results.
 - A general evaluation of the feasibility of the proposed development based on the potential environmental constraints identified.
 - Recommendations of the management options and/or remediation actions required to address the contamination impacts identified (if any).

2. Site Conditions and Local Environment

2.1 Site Identification

The site is located in West Hoxton, NSW, approximately 47 km southwest of the Sydney central business district (CBD). The site layout is presented in **Figure 2**. Details relating to the site are presented in **Table 1**.

Table 1 – Site Identification

Site Details	Description
Address	104 Fifteenth Avenue, West Hoxton, NSW, 2171
Lot/DP	Lot 2 in DP 1074727
Local Government Area	Liverpool City Council
Parish and County	Parish of Cabramatta, County of Cumberland
Site Area	Approximately 18,230 m ²
Registered Owner	Angela Carmel Froio
Zoning	R2 Low Density Residential
Current Land Use	Residential

2.2 Site Description

A site inspection was completed by LG on 28 January 2020 and the observations are detailed in **Table 2**. **Figure 2** shows an approximate layout of the site.

Table 2 – Site Description

Category	Observation
Weather Condition	Sunny and humid, approximately 35°C
Current Use	Lot 2 in DP 1074727 comprised of a semi-trapezoidal shape residential block covering a total area of approximately 18,230 m ² and was bound by Fifteenth Avenue to the north, Second Avenue to the east, a transmission line easement and rural residential lands beyond to the south and west.

Site Features	<p>At the time of inspection, the following site features were observed and noted:</p> <ul style="list-style-type: none"> ▪ The surface topography sloped down from southwest to northeast; ▪ The site comprised of a semi trapezoidal block of land with an existing 2-storey brick residential building and storage/workshop/stable sheds; ▪ An asphalt driveway was observed at the entrance to the property and main residence; ▪ Gravel surfaces were noted within the eastern portions of the site, adjacent to the primary residence and storage shed; ▪ Grassed garden areas were noted at the front and back of the property; ▪ No signs of oil spill or stains were noted on the floor surfaces across the site; ▪ No rubbish or domestic waste was observed across the site; ▪ There were no active pipelines; ▪ There were no above ground tanks (ASTs) or visible evidence of underground storage tanks (USTs) or systems which should cause air emissions such as laboratories, incinerators, surface impoundment and land treatment areas; and ▪ Asbestos containing materials (ACMs) in the form of bonded fibrous cement fragments were observed on the surfaces across the central portion of the site during the inspection.
Surface Covering	<p>The site surface can be summarised as follows:</p> <ul style="list-style-type: none"> ▪ Approx. 90% of the site was covered with grass and exposed soils. ▪ Approx. 5% was covered with surface gravel. ▪ Approx. 3% was covered with asphalt. ▪ Approx. 2% was covered with concrete and pavement.

2.3 Surrounding Land Use

The surrounding land use is summarised as follows:

- The northern side of the site is bound by Fifteenth Avenue;
- The site is bound to the east by Second Avenue;
- The site is bound to the south by a transmission line easement and a rural residential property beyond; and
- The western side of the site is bound a transmission line easement and a rural residential property beyond, occupied by the Australian Christian Fellowship church.

2.4 Topography

The ground surface at the site slopes from southwest to northeast. The ground surface varies in elevations from approximately 57.5 m (Australian Height Datum) AHD in the vicinity of the north eastern boundary of the site to approximately 64.0 m AHD in the vicinity of the south western boundary of the site, respectively.

2.5 Geology and Hydrogeology

Geological information obtained from the Penrith 1:100,000 Geological Series Sheet 9035 Edition 1, dated 1991, by the Geological Survey of New South Wales, Department of Mineral Resources, indicates the site is located within an area underlain by Triassic Age Bringelly Shale of the Wianamatta Group, denoted as Rwb. The Bringelly Shale is described as shale, carbonaceous claystone, claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff.

Bringelly Shale typically weathers to low permeability clays and it was anticipated that this clay would be present at the site.

Hydrogeological conditions at the site are likely to be defined mainly by a shallow aquifer system. This shallow system is likely to be a transient perched aquifer that develops after heavy rainfall and lies above the underlying shale bedrock. It is likely that the shallow aquifer is discontinuous and will be favourable in higher permeability areas, such as the areas of fill and easements (i.e. stormwater easement). The groundwater in this system is unlikely to pose an off-site migration risk due to its transient nature and the most likely contaminant source being from intermittent spills/leaks from near-surface infrastructure. Groundwater within the weathered shale lithology would be anticipated to be saline, low in permeability and not suitable for domestic, agricultural or irrigation uses.

2.6 Acid Sulfate Soils

A review of the acid sulfate soil (ASS) risk maps prepared by Department of Land and Water Conservation (1997)¹ for Prospect-Parramatta indicates the site is located in an area designated as "No Known Occurrence". Therefore, acid sulfate soils are not known or expected to occur in these areas. This map defines that land management activities are not likely to be affected by acid sulfate soil materials.

No indicators of acid sulfate soils were observed during the site inspection completed on 28 January 2020.

2.7 Registered Bore Search

A review of groundwater bore records available on the NSW Office of Water² (NOW) online database was undertaken on 28 January 2020. The search was limited to registered bores located within a radius of approximately 500 m of the site.

The search did not identify the presence registered bores within a radius of approximately 500 m of the site. A map showing bore search area is included in **Appendix B**.

2.8 Potentially Sensitive Receptors

Identified sensitive receptors of contamination potentially sourced from the site are as follows:

- Shallow groundwater present in the fill materials (if any) and sandy natural soils that may be present on the site and deeper groundwater present in the underlying sandstone bedrock;
- Surrounding industrial and/or commercial land uses and residential dwellings, which include access to soils for construction, gardening or potentially growing vegetables;

¹ Department of Land and Water Conservation, (1997), 1:25,000 Acid Sulfate Soil Risk Map (Series 9130N3, Edition 2).

² <http://allwaterdata.water.nsw.gov.au/water.stm>

- Parks, recreational open space including the parks and playing fields within the vicinity of the site;
- Fauna and flora reserves in the area within the vicinity of the site;
- Onsite workers: Persons who frequently work at or visit the site who may potentially be exposed to contaminated soils and water, particularly in unsealed areas of the site;
- Sub-surface maintenance workers: Persons, such as workers or visitors to the site or surrounding properties who have access to soils or groundwater; and
- Surface water bodies: The nearest surface water body is Hopkins Creek located approximately 352 m south of the site.

3. Review of Historical Records

3.1 Historical Information Sources

The sources from which historical site information has been obtained are summarised in **Table 3**.

Table 3 – Historical and Background Information Search

Source	Location of Source	Years / Date	Comments
Current and Historical Titles	NSW Land and Property Information Division	Titles searched 28 November 2018 and 13 February 2020	Current and Historical Title Documents are included in Appendix C .
Aerial Photographs	NSW Land and Property Information Division	Register searched 13 February 2020 Years 1965, 1978, 2001, 2007, 2015 and 2018	Aerial photographs extracts included in Appendix D .
Heritage Significance	http://www.environment.nsw.gov.au/heritage	Register searched 13 February 2020	All relevant notices detailed in Section 3.4 of this report.
Contaminated Land Register	http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx	Register searched 13 February 2020	All relevant notices detailed in Section 3.5 of this report.
Planning Certificate	Section 10.7 Certificate at Liverpool City Council	Register searched 9 February 2020	All relevant notices detailed in Section 3.6 of this report.

3.2 Certificate of Title

A historical land titles search was conducted through NSW Land and Property Information Division. Copies of relevant documents resulting from this search are presented in **Appendix C**. The site comprises the historical titles summarised in **Table 4**.

Table 4 – Summary of Owners for Lot 2 in DP 1074727

Date of Acquisition	Registered Proprietor	Reference to Title at Acquisition and Sale
14/01/1818	Thomas Sterrop Amos by Crown Grant	Vol 1101 Fol 115
14/05/1915	Edward Charles Hutton (Telephone Lineman)	Vol 2574 Fol 72
24/06/1921	William Henry Silk (Blacksmith)	Vol 2574 Fol 72
19/05/1937	Lucy Silk (Widow)	Vol 2574 Fol 72
14/07/1939	Walter Israel Taylor (Grader Driver)	Vol 2574 Fol 72
15/06/1962	Cosimo Gismondo (Railway Employee)	Vol 2574 Fol 72
06/01/1965	Electricity Commission of New South Wales	Vol 2574 Fol 72
02/12/2004	Land Release by Electricity Commission of NSW	Fols 443 to 445/2475
25/10/2018	Angela Carmel Froio	Fol 2/1074727 Ed 2

3.3 Historical Aerial Photographs

Aerial photographs of the site for the years 2001, 2007, 2015 and 2018 were sourced from NSW Land and Property Information Division. An interpretation of the photographs is provided in **Table 5** below. Aerial photograph extract images are presented in **Appendix D**.

Table 5 – Summary of Historical Aerial Photographs

Aerial Photograph	Description of Site and Surrounding Area
1965 Black and White	The 1965 photograph indicates that the site was already developed. A residential building and sheds were observed to occupy the site. Surrounding Land Use: Several main roads were observed around the local area, including what are now Fifteenth Avenue and Second Avenue. Residential properties were observed further north and east of the site.
1978 Black and White	The 1978 photograph indicates that a new brick residential building was constructed within the northern portion of the site, approximately between 1975 and 1978. The former residential building to the south was also demolished during this period. Surrounding Land Use: New residential properties were observed east of the site since the 1978 photograph.
2001 Colour	The 2001 photograph indicates that the site was already developed. A residential building was observed to occupy the site. Surrounding Land Use: New residential developments were observed east of the site.
2007 Colour	No significant changes were observed since the 2001 photograph. Surrounding Land Use: No significant changes were observed since the 2001 photograph.
2015 Colour	No significant changes were observed since the 2007 photograph. Surrounding Land Use: No significant changes were observed since the 2007 photograph, with the exception of clearing sub-division works observed further north of the site.
2018 Colour	No significant changes were observed since the 2015 photograph. Surrounding Land Use: No significant changes were observed since the 2015 photograph, with the exception of new residential dwellings constructed further north of the site.

3.4 Heritage Significance

Information relating to the site was accessed online at the Heritage Council of NSW webpage on 28 January 2020. The site is not listed as being of significance.

3.5 Contaminated Land Record

Search of the NSW EPA's public register under the Protection of the Environment Operations Act 1997 (POEO Act) was undertaken (**Appendix E**). The search for the site identified there were:

- No prevention, clean-up or prohibition notices; and
- No transfer, variation, suspension, surrender or revocation of an environmental protection licence.

A search was also conducted through the EPA's public contaminated land register (**Appendix E**). The search did not identify any current or previous records of notices by the EPA, or notification to the EPA under Section 60 of the Contaminated Land Management Act 1997 (CLM Act.), in relation to the site or immediately surrounding land.

3.6 Planning Certificate

A Section 10.7 Certificate for the site was obtained from Council on 9 February 2020. The certificate is presented in **Appendix A**. The Section 10.7 Certificate No. 3761, which is applicable to Lot 2 in DP 1074727, indicate that there are no matters arising under Section 59(2) of the *Contaminated Land Management Act 1997* (Act), as follows:

- The land **is NOT** significantly contaminated land (or part of the land) within the meaning of the Act at the date when the certificates were issued.
- The land **is NOT** the subject to a management order within the meaning of the Act at the date when the certificates were issued.
- The land **is NOT** the subject of an approval voluntary management proposal within the meaning of the Act at the date when the certificates were issued.
- The land **is NOT** the subject of an ongoing maintenance order within the meaning of the Act at the date when the certificates were issued.
- The land **is NOT** the subject of a site audit statement within the meaning of the Act at the date when the certificates were issued.

4. Sampling and Analysis Methodology

4.1 Sampling Plan

The rationale to the sampling plan adopted for the DESI was to:

- The site covers an area of approximately 18,230 m² (1.823hectares). Therefore, a total of 28 soil sampling locations were investigated in accordance with the Minimum Sampling Points Required for Site Characterisation, published under the NSW EPA (1995) "*Sampling Design Guidelines*". These were located in a triangular grid pattern across the site with allowance for structural obstacles (e.g. existing residential building and sheds/stables). Soil sampling location are shown in **Figure 3**;
- Provide adequate coverage of the potential soil contamination (including hydrocarbons, pesticides, heavy metals and asbestos) with respect to past and present potentially contaminating activities at the site;
- Ensure that an appropriate depth was achieved for effective characterisation of vertical extent of fill materials and natural soils; and
- Ensure that minimal disturbance of soil samples was achieved which may have caused loss of volatile compounds.

4.2 Soil Investigation Methodology

The soil investigation program, conducted on 28 January 2020, was undertaken by field personnel that are trained and experienced in collecting environmental samples. The soil sampling methods used in the assessment program followed the procedures set out below and were conducted with reference to the relevant guidelines endorsed by NSW EPA. The sampling methodology adopted for the soil investigations conducted is detailed in **Table 6**.

Table 6 – Soil Investigation Methodology

Protocol	Description
Service Location	A dial before you dig search was conducted to determine the presence of services at the site.
Drilling	A Dando Terrier rig with push tube and auguring capabilities, operated by BG Drilling Pty Ltd was used to drill through the fill materials and natural soils at 27 locations (BH1 to BH27), to a maximum depth of 1.0 m bgs, targeting a depth of at least 0.5 m below natural soils. A push tube was used to drill through the fill materials and natural soils

Protocol	Description
	to sample with minimal disturbance at the 27 locations. A grab sample was collected from a stockpile of building rubble material.
Field Logging	Logging of the boreholes was conducted in general accordance with the Unified Soil Classification System. The soil cores obtained from gouge auger methods were logged and the following information was recorded in the field: soil type, colour, grain size, grading, inclusions, moisture conditions, staining and observation of any anthropogenic material (i.e., odours, waste materials). Descriptions were recorded on LG's standard electronic field logs for uniformity in descriptions, presentation and to aid in any future interpretations.
Sampling Intervals	Samples were generally collected from each borehole from the surface between 0.0 – 0.3 m, at 0.5 m bgs, or at changes in stratigraphy, until a nominated depth of 1.0 m bgs was achieved.
Soil Sampling	Samples of the fill materials and natural soils, obtained in disposable polyethelene push tube liners, were collected from the centre of the push tube liner by hand protected by a nitrile glove. New nitrile gloves were used for the collection of each sample. Soil samples were collected in 125 mL jars supplied by the laboratory.
Sample Labelling, Storage and Transport	All samples were clearly labelled with unique sample identification numbers consisting of the date, sample location, depth of sample and sampler's initials. All samples were kept chilled in an ice-filled esky prior to dispatch and during transport to the NATA registered laboratory under chain-of-custody procedures. By prior arrangement with the laboratories, samples were analysed as soon as practicable after receipt.
Borehole Reinstatement	After the drilling and soil sampling activities, the remainder of the soil cuttings were backfilled into each respective borehole in reverse order (i.e. final materials removed were the first to be re-instated into borehole).
Decontamination	Single-use polyethylene push tubes were used when each borehole was advanced and a clean pair of disposable gloves was worn to collect each sample. During drilling, the push tube cutting shoe and the solid flight augers and the coring equipment were re-used. The cutting shoe was decontaminated by hand between each borehole location by scrubbing with an aqueous solution of Decon 90 followed by a rinse in potable water. The augers were sprayed with an aqueous solution of Decon 90 followed by a rinse in potable water.

4.3 Analytical Plan

The following sample analysis schedule was adopted for the DESI:

- Submission of 13 samples (including 1 replicate sample) of fill materials to a NATA accredited laboratory for variable analysis for the following suite of analytes:
 - TPHs;
 - BTEX;
 - PAHs;
 - OCPs;
 - OPPs;
 - PCBs;
 - Heavy metals (arsenic, cadmium, copper, chromium, lead, nickel, mercury and zinc); and
 - Asbestos identification.
- Submission of 9 samples (including 1 replicate sample) of fill materials to a NATA accredited laboratory for variable analysis for the following suite of analytes:
 - TRHs;
 - BTEX;
 - PAHs;
 - Heavy metals (arsenic, cadmium, copper, chromium, lead, nickel, mercury and zinc); and
 - Asbestos identification.
- Submission of 8 samples of natural soils to a NATA accredited laboratory for variable analysis for the following suite of analytes:
 - TRHs;
 - BTEX;

- Heavy metals (arsenic, cadmium, copper, chromium, lead, nickel, mercury and zinc); and
 - Asbestos identification.
- Submission of 2 samples of fibrous cement fragments to a NATA accredited laboratory for analysis of asbestos identification.

All samples were submitted to SGS Laboratory (SGS) located at Alexandria, Sydney. SGS is a NATA registered laboratory for the analysis required.

5. Site Assessment Criteria

5.1 Soil Assessment Guidelines

The current assessment criteria used in NSW to assess soil and groundwater quality are based on the following guidelines:

- NEPM (2013) Schedule B(1) *Guideline on Investigation Levels for Soil and Groundwater, National Environment Protection (Assessment of Site Contamination) Measure 1999 – Amendment 2013*, National Environment Protection Council (NEPC), May 2013;
- NSW DECC (2009) *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997*;
- NSW EPA (1995) *Sampling Design Guidelines*; and
- NSW EPA (2017) *Guidelines for the NSW Site Auditor Scheme (3rd Edition)*.

Application of these guidelines to this DESI report is briefly described below.

5.2 Soil Assessment Criteria

The guidelines to evaluate soil analytical results currently applied in NSW, as listed above, presents a range of Health-Based Soil Investigation Levels (HILs), Provisional Phytotoxicity-Based Investigation Levels (PILs), Ecological Investigation Levels (EILs), sensitive land use thresholds and expected background concentration ranges for urban redevelopment sites in NSW. Application of these guidelines are briefly described below.

HILs

The HILs described by NEPC (2013) guidelines are based on the *Australian exposure factor guidance* (enHealth 2012). HILs are scientifically based, generic assessment criteria designed to be used in the first stage (Tier 1 or 'screening') of an assessment of potential risks to human health from chronic exposure to contaminants. They are intentionally conservative and are based on a reasonable worst-case scenario for four generic land use settings:

- HIL A - residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also includes children's day care centres, preschools and primary schools);

- HIL B - residential with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats;
- HIL C - public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate; and
- HIL D - commercial/industrial such as shops, offices, factories and industrial sites.

SILs specifically for the lower volatility aliphatic and aromatic petroleum hydrocarbon components are also provided in NEPC (2013) for the various land use scenarios described above.

The NSW EPA endorsed contaminated site assessment process also stipulates that the impact of contaminants on ground and surface water, potential degradation of building structures and affects of chemical mixtures need to be considered.

PILs & EILs

The PILs (NSW DEC, 2006) and EILs (NEPC, 2013) have been devised for the protection of plant health, and are designed to be applied as single number criteria indicative of environmental effect. The PILs have been developed for application to sandy loam soils with a pH of 6 to 8. As such, their use has significant limitations since phytotoxicity depends on soil and species parameters in ways that are not fully understood and they are intended for use as a screening guide only. The NSW EPA decision process for assessing urban redevelopment sites stipulates that the PILs need to be considered on sites used for either residential purposes, or land uses including parks, recreational open space and secondary schools. PILs are not required to be adopted on land used for commercial/industrial purposes.

5.2.1 Adopted Soil Assessment Criteria

Given that the site is intended to be used for residential purposes, and in accordance with the decision process for assessment of urban redevelopment sites (EPA 2017), concentrations of contaminants in soils across the site were compared against the published investigation levels sourced from the following:

- NEPM (2013) Health-based Investigation Levels for Residential with direct access to soils (HIL-A);
- NEPM (2013) Health-based Screening Levels (HSLs) for soil vapour intrusion in sandy soils for Residential with direct access to soils land use (HSL-A); and
- NEPM (2013) Ecological Screening/Investigation Levels for Urban Residential/Public Open Space (ESL/EIL).

5.3 Aesthetic Criteria

Consistent with NSW EPA (2017), aesthetic issues were required to be considered for commercial land use scenarios. Also, the 2013 NEPM 'Schedule B(1) Guideline on the Investigation Levels for Soil and Groundwater' advises that:

'There are no numeric Aesthetic Guidelines but the fundamental principle is that the soils should not be discoloured, malodorous (including when dug over or wet) nor of abnormal consistency. The natural state of the soil should be considered.'

Discoloured soils are not considered by the NSW EPA as a quality of the environment that needs to be protected on a residential site. Given these NEPM and NSW EPA requirements, the aesthetic criteria of relevance to the site in its present condition are considered to be:

- No malodorous materials exposed at ground surface;
- No malodorous gases emanating from the ground; and
- No floating product to remain on groundwater at the site.



5.4 Structural Guidelines

The 2013 NEPM '*Schedule B(1) Guideline on the Investigation Levels for Soil and Groundwater*' advises that:

'For some substances such as phenol and sulphates, their impact on structures (effect on PVC piping and cement, respectively) may override the health and environmental considerations. Guidelines for protection of structures in the built environment should be set for a small number of contaminants where there is a concern. A structural guideline of 2000 mg/kg is set for sulphate in soil'

The available information indicates there should be a low risk of significant structural issues for the site as a result of possible contaminants in the ground.

6. Results

6.1 Sub-Surface Conditions

Description and classification of soils encountered during site investigation are summarised below:

- **Fill:** Fill consisting of silty CLAY, light to dark grey/brown, poorly graded, loose, dry, encountered at depths ranging from 0.2 m to 0.5 m; and
- **Clay:** Light to dark orange, non-plastic to moderate plasticity, stiff, moist, encountered at depths ranging from 0.5 m to 1.0 m.

6.2 Soil Analytical Results

On 28 January 2020, a total of 32 samples (BH1/0.1-0.3, BH2/0.1-0.3, BH3/0.1-0.3, BH4/0.1-0.3, BH5/0.1-0.3, BH6/0.1-0.3, BH7/0.1-0.3, BH8/0.1-0.3, BH9/0.1-0.3, BH10/0.1-0.3, BH11/0.1-0.3, BH12/0.1-0.3, BH13/0.1-0.3, BH14/0.1-0.3, BH15/0.1-0.3, BH16/0.1-0.3, BH17/0.1-0.3, BH18/0.1-0.3, BH19/0.1-0.3, BH20/0.1-0.3, BH21/0.1-0.3, BH22/0.1-0.3, BH23/0.1-0.3, BH24/0.1-0.3, BH25/0.1-0.3, BH26/0.1-0.3, BH27/0.1-0.3, SP1/0.1-0.3, PAC1, PAC2, QC1 and QC2) collected were collected from across the site and submitted for laboratory analysis. Borehole and soil sample locations are shown in **Figure 3**, and soil analytical results are summarised in **Table A** attached.

Chain of Custody (COC) documentation and certified laboratory reports are included in **Appendix F**.

The laboratory analytical results indicated that:

- Concentrations of petroleum hydrocarbons (TRH and BTEX) were either below the Estimated Quantitation Limit (EQL), HIL A and EIL A criteria in the soil samples analysed.
- Concentrations of heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc) were below the HIL A and EIL A criteria in all soil samples analysed.
- Concentrations of OCPs, OPPs and PCBs were either below the laboratory EQL, HIL A and EIL A criteria in all soil samples analysed.
- Asbestos fibres were detected above the HIL D in the following samples:

- Triplicate sample (QC1A) of sample TP13/0.0-0.1, collected within the fill material at Testpit 13;
- Triplicate sample (QC5A) of sample SP1/1, collected from Stockpile 1; and
-
- Asbestos containing materials were identified in the following bonded cement fragments:
 - Chrysotile asbestos was detected in samples PAC1 and PACM2; and
 - The above samples can be referred as ACMs.

7. Conclusions and Recommendations

7.1 Conclusions

Based on the findings of this DESI the following conclusions are provided:

- Prior to the current layout the site appeared to have comprised mainly vacant crown land between 1820's and 1910's. Residential structures are likely to have occupied the site since sometime between 1920's and 1940's. Therefore, it is estimated that the site has been in its current residential configurations for over 70 years. No significant changes were observed on the site during this period;
- Laboratory analytical results indicated that the fill materials and natural soils sampled from within the footprint of the proposed development area and analysed did not contain concentrations of TRHs, BTEX, PAHs, OCPs, OPPs, PCBs, heavy metals and asbestos that were greater than the HIL A and EIL A land use criteria (Residential A), at the time tested.
- Asbestos fibres were detected above the HIL A in the following samples:
 - Amosite fibrous mass (approximately 20 x 10 x 4 mm) in soil sample BH5/0.1-0.3, collected within the fill material at Borehole 5; and
 - Chrysotile cement sheet fragments (approximately 10 x 6 x 2 mm) in soil sample BH6/0.1-0.3, collected within the fill material at Borehole 6.
- Bonded cement fragments collected from surfaces across the site for laboratory verification analysis confirmed the presence of amosite and chrysotile asbestos in fibrous cement samples PAC1 and PAC2. Therefore, these can be referred as ACMs.
- Based on the above findings the site subject to this DESI is likely to be suitable for the proposed land use, consistent with an R2 Low Density Residential zoning, provided the asbestos fragments and impacted soils identified are remediated in-situ or classified, removed and disposed offsite to a licensed facility, and the remaining excavation/voids are validated, accordingly.

7.2 Recommendations

Based on the conclusions above the following recommendations are provided:

- Remediation and validation works be undertaken, in order to safely remove asbestos hotspots (including bonded ACM fragments identified) and demonstrate that the remaining excavations and excavated soils meet NSW EPA requirements for the proposed land use.

These conclusions and recommendations are made within the limitations of the work, which has been undertaken. A statement of these limitations is included in **Section 9** of this report.

8. References

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9. Limitation Statement

This DESI report has been prepared for the sole purpose of providing further assessment of the condition of soil at the site in accordance with generally accepted consulting practice. No other warranty or guarantee, expressed or implied is made as to the advice indicated in this report.

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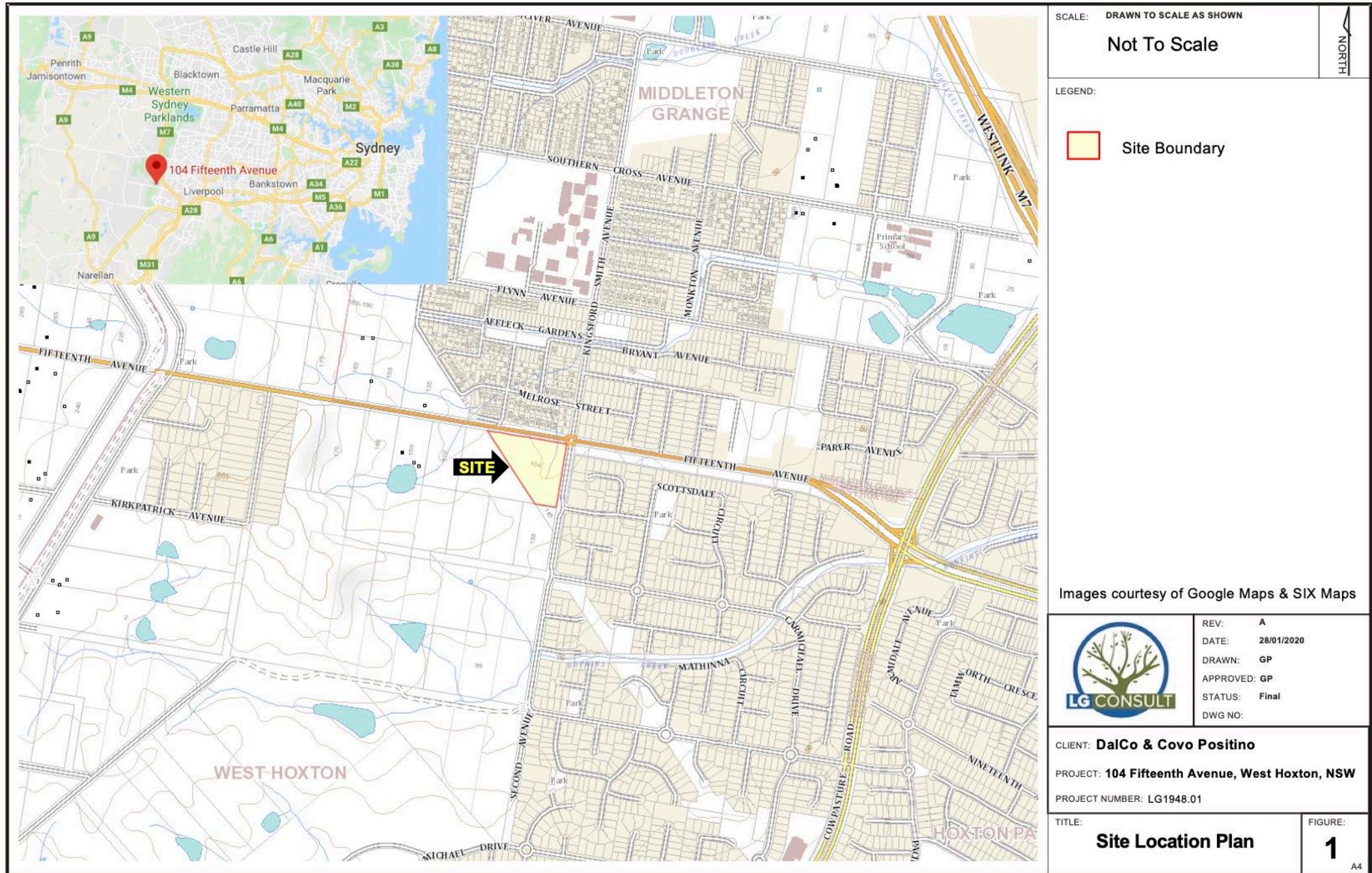
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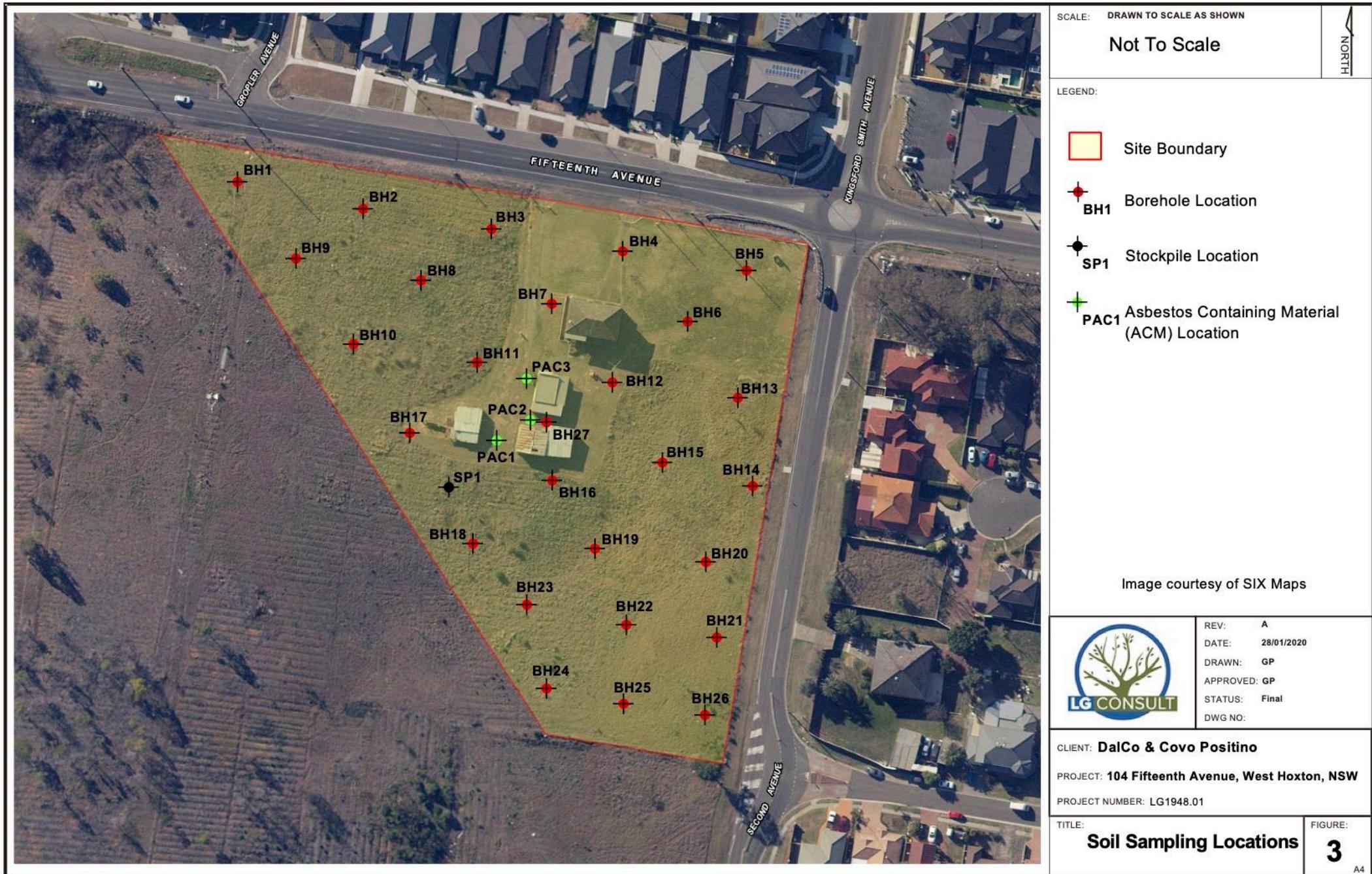
If further information becomes available, or additional assumptions need to be made, LG reserves its right to amend any statements or opinions made in this report.



Figures









Tables



Table A - Soil Analytical Results

Laboratory ID				SE202202.001	SE202202.002	SE202202.003	SE202202.004	SE202202.005	SE202202.006	SE202202.007
Sample ID				BH1/0.1-0.3	BH2/0.1-0.3	BH3/0.1-0.3	BH4/0.1-0.3	BH5/0.1-0.3	BH6/0.1-0.3	BH7/0.1-0.3
Depth (m)				0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3
Soil Type				Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay
Date Sampled				28/1/20	28/1/20	28/1/20	28/1/20	28/1/20	28/1/20	28/1/20
Compounds			Unit	EQL	NEPM 2013					
					Residential HIL A ¹	Urban Residential and Public Open Space EIL ³				
TRHs										
TRH C6-C9	mg/kg	20	-	-	<20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	-	-	<25	<25	<25	<25	<25	<25
TPH C6-C10 less BTEX (F1)	mg/kg	25	45 ²	180	<25	<25	<25	<25	<25	<25
TRH C10-C14	mg/kg	20	-	-	<20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	-	-	<45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	-	-	<45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	-	-	<100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	-	-	<25	<25	<25	<25	<25	<25
TRH >C10-C16 less Naphthalene (F2)	mg/kg	25	110 ²	-	<25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	-	120	<90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	-	300	<120	<120	<120	<120	<120	<120
TRH >C10-C36	mg/kg	110	-	2800	<110	<110	<110	<110	<110	<110
TRH >C10-C40	mg/kg	210	-	-	<210	<210	<210	<210	<210	<210
BTEX										
Benzene	mg/kg	0.1	0.5 ²	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	55 ²	70	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	160 ²	85	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	0.4
Xylene (o)	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Xylene Total	mg/kg	0.3	40 ²	105	<0.3	<0.3	<0.3	<0.3	<0.3	0.5
PAHs										
Naphthalene	mg/kg	0.1	3 ²	170	NA	NA	NA	NA	NA	NA
2-methylnaphthalene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
1-methylnaphthalene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Acenaphthylene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Acenaphthene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Fluorene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Phenanthrene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Anthracene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Fluoranthene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Pyrene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Benz(a)anthracene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Chrysene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Benz(b&i)fluoranthene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Benz(k)fluoranthene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Benz(a)pyrene	mg/kg	0.1	-	0.7	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Dibenz(a&h)anthracene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Benz(g)perylene	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Carcinoenic PAHs (as BaP TEQ)-assume results <LOR=0	TEQ	0.1	3	-	NA	NA	NA	NA	NA	NA
Carcinoenic PAHs (as BaP TEQ)-assume results <LOR=LOR	TEQ (mg/kg)	0.1	3	-	NA	NA	NA	NA	NA	NA
Carcinoenic PAHs (as BaP TEQ)-assume results <LOR=LOR/2	TEQ (mg/kg)	0.1	3	-	NA	NA	NA	NA	NA	NA
PAHs (Sum of total)	mg/kg	1	300	-	NA	NA	NA	NA	NA	NA
OCPs										
Hexachlorobenzene (HCB)	mg/kg	0.1	10	-	NA	NA	NA	NA	NA	NA
Alpha BHC	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Lindane	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Heptachlor	mg/kg	0.1	6	-	NA	NA	NA	NA	NA	NA
Aldrin	mg/kg	0.1	6	-	NA	NA	NA	NA	NA	NA
Dieldrin	mg/kg	0.2	-	-	NA	NA	NA	NA	NA	NA
Beta BHC	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Delta BHC	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Heptachlor epoxide	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Alpha Endosulfan	mg/kg	0.2	-	-	NA	NA	NA	NA	NA	NA
Gamma Chlordane	mg/kg	0.1	50	-	NA	NA	NA	NA	NA	NA
Alpha Chlordane	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
trans-Chlordane	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
trans-Nonachlor	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Endrin	mg/kg	0.2	10	-	NA	NA	NA	NA	NA	NA
o,p'-DDD	mg/kg	0.1	240	-	NA	NA	NA	NA	NA	NA
o,p'-DDT	mg/kg	0.1	-	180	NA	NA	NA	NA	NA	NA
o,p'-DDE	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Beta Endosulfan	mg/kg	0.2	-	-	NA	NA	NA	NA	NA	NA
p,p'-DDD	mg/kg	0.1	240	-	NA	NA	NA	NA	NA	NA
p,p'-DDT	mg/kg	0.1	-	180	NA	NA	NA	NA	NA	NA
p,p'-DDE	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Endosulfan sulphate	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Endrin Aldehyde	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Methoxychlor	mg/kg	0.1	300	-	NA	NA	NA	NA	NA	NA
Endrin Ketone	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Isodrin	mg/kg	0.1	-	-	NA	NA	NA	NA	NA	NA
Mirex	mg/kg	0.1	10	-	NA	NA	NA	NA	NA	NA
OPPs										



Table A - Soil Analytical Results

Laboratory ID				SE202202.008	SE202202.009	SE202202.010	SE202202.011	SE202202.012	SE202202.029	SE202202.013
Sample ID				BH8/0.1-0.3	BH9/0.1-0.3	BH10/0.1-0.3	BH11/0.1-0.3	BH12/0.1-0.3	QC1	BH13/0.1-0.3
Depth (m)				0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3		0.1-0.3
Soil Type				Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay		Silty Clay
Date Sampled				28/1/20	28/1/20	28/1/20	28/1/20	28/1/20	28/1/20	28/1/20
Compounds			Unit	EQL	NEPM 2013					
					Residential HIL A ¹	Urban Residential and Public Open Space EIL ³				
TRHs										
TRH C6-C9	mg/kg	20	-	-	<20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	-	-	<25	<25	<25	<25	<25	<25
TPH C6-C10 less BTEX (F1)	mg/kg	25	45 ²	180	<25	<25	<25	<25	<25	<25
TRH C10-C14	mg/kg	20	-	-	<20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	-	-	<45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	-	-	<45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	-	-	<100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	-	-	<25	<25	<25	<25	<25	<25
TRH >C10-C16 less Naphthalene (F2)	mg/kg	25	110 ²	-	<25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	-	120	<90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	-	300	<120	<120	<120	<120	<120	<120
TRH >C10-C36	mg/kg	110	-	2800	<110	<110	<110	<110	<110	<110
TRH >C10-C40	mg/kg	210	-	-	<210	<210	<210	<210	<210	<210
BTEX										
Benzene	mg/kg	0.1	0.5 ²	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	55 ²	70	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	160 ²	85	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3	40 ²	105	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
PAHs										
Naphthalene	mg/kg	0.1	3 ²	170	NA	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(b&i)fluoranthene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(k)fluoranthene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)pyrene	mg/kg	0.1	-	0.7	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a&h)anthracene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(g)perylene	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinoenic PAHs (as BaP TEQ)-assume results <LOR=0	TEQ	0.1	3	-	NA	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinoenic PAHs (as BaP TEQ)-assume results <LOR=LOR	TEQ (mg/kg)	0.1	3	-	NA	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinoenic PAHs (as BaP TEQ)-assume results <LOR=LOR/2	TEQ (mg/kg)	0.1	3	-	NA	<0.2	<0.2	<0.2	<0.2	<0.2
PAHs (Sum of total)	mg/kg	1	300	-	NA	<0.8	<0.8	<0.8	<0.8	<0.8
OCPs										
Hexachlorobenzene (HCB)	mg/kg	0.1	10	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	6	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	6	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	-	-	NA	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	50	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Chlordane	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	0.2	10	-	NA	<0.1	<0.1	<0.1	<0.1	0.4
o,p'-DDD	mg/kg	0.1	240	-	NA	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDT	mg/kg	0.1	-	180	NA	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDE	mg/kg	0.1	-	-	NA	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	-	-	NA	<0.1	<0.1	<0.1	<0.1	<



Table A - Soil Analytical Results

Laboratory ID				SE202202.014	SE202202.015	SE202202.016	SE202202.017	SE202202.018	SE202202.019	SE202202.020
Sample ID				BH14/0.1-0.3	BH15/0.1-0.3	BH16/0.1-0.3	BH17/0.1-0.3	BH18/0.1-0.3	BH19/0.1-0.3	BH20/0.1-0.3
Depth (m)				0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3
Soil Type				Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay
Date Sampled				28/1/20	28/1/20	28/1/20	28/1/20	28/1/20	28/1/20	28/1/20
Compounds			Unit	EQL	NEPM 2013					
					Residential HIL A ¹	Urban Residential and Public Open Space EIL ³				
TRHs										
TRH C6-C9	mg/kg	20	-	-	<20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	-	-	<25	<25	<25	<25	<25	<25
TPH C6-C10 less BTEX (F1)	mg/kg	25	45 ²	180	<25	<25	<25	<25	<25	<25
TRH C10-C14	mg/kg	20	-	-	<20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	-	-	<45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	-	-	<45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	-	-	<100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	-	-	<25	<25	<25	<25	<25	<25
TRH >C10-C16 less Naphthalene (F2)	mg/kg	25	110 ²	-	<25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	-	-	<90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	-	-	<120	<120	<120	<120	<120	<120
TRH >C10-C36	mg/kg	110	-	-	<110	<110	<110	<110	<110	<110
TRH >C10-C40	mg/kg	210	-	-	<210	<210	<210	<210	<210	<210
BTEX										
Benzene	mg/kg	0.1	0.5 ²	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	55 ²	70	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	160 ²	85	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3	40 ²	105	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
PAHs										
Naphthalene	mg/kg	0.1	3 ²	170	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	-	-	<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	<0.1
Acenaphthene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	-	-	<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	<0.1
Fluoranthene	mg/kg	0.1	-	-	<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	<0.1
Benz(a)anthracene	mg/kg	0.1	-	-	<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	<0.1
Benz(b&i)fluoranthene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(k)fluoranthene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)pyrene	mg/kg	0.1	-	0.7	<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	<0.1
Dibenz(a&h)anthracene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(g)perylene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs (as BaP TEQ)-assume results <LOR=0	TEQ	0.1	3	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs (as BaP TEQ)-assume results <LOR=LOR	TEQ (mg/kg)	0.1	3	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs (as BaP TEQ)-assume results <LOR=LOR/2	TEQ (mg/kg)	0.1	3	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
PAHs (Sum of total)	mg/kg	1	300	-	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
OCPs										
Hexachlorobenzene (HCB)	mg/kg	0.1	10	-	<0.1	NA	<0.1	<0.1	NA	NA
Alpha BHC	mg/kg	0.1	-	-	<0.1	NA	<0.1	<0.1	NA	NA
Lindane	mg/kg	0.1	-	-	<0.1	NA	<0.1	<0.1	NA	NA
Heptachlor	mg/kg	0.1	6	-	<0.1	NA	<0.1	<0.1	NA	NA
Aldrin	mg/kg	0.1	6	-	<0.1	NA	<0.1	<0.1	NA	NA
Dieldrin	mg/kg	0.2	-	-	<0.1	NA	<0.1	<0.1	NA	NA
Beta BHC	mg/kg	0.1	-	-	<0.1	NA	<0.1	<0.1	NA	NA
Delta BHC	mg/kg	0.1	-	-	<0.1	NA	<0.1	<0.1	NA	NA
Heptachlor epoxide	mg/kg	0.1	-	-	<0.1	NA	<0.1	<0.1	NA	NA
Alpha Endosulfan	mg/kg	0.2	-	-	<0.2	NA	<0.2	<0.2	NA	NA
Gamma Chlordane	mg/kg	0.1	50	-	<0.1	NA	<0.1	<0.1	NA	NA
Alpha Chlordane	mg/kg	0.1	-	-	<0.1	NA	<0.1	<0.1	NA	NA
trans-Chlordane	mg/kg	0.1	-	-	<0.1	NA	<0.1	<0.1	NA	NA
Endrin	mg/kg	0.2	10	-	<0.1	NA	<0.1	<0.1	NA	NA
o,p'-DDD	mg/kg	0.1	240	-	<0.2	NA	<0.2	<0.2	NA	NA
o,p'-DDT	mg/kg	0.1	-	-	<0.2	NA	<0.2	<0.2	NA	NA
o,p'-DDE	mg/kg	0.1	-	-	<0.1	NA	<0.1	<0.1	NA	NA
Beta Endosulfan	mg/kg	0.2	-	-	<0.1	NA	<0.1	<0.1	NA	NA
p,p'-DDD	mg/kg									

Table A - Soil Analytical Results

Laboratory ID				SE202202.021	SE202202.022	SE202202.023	SE202202.024	SE202202.025	SE202202.026	SE202202.027
Sample ID				BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3	BH24/0.1-0.3	BH25/0.1-0.3	BH26/0.1-0.3	BH27/0.1-0.3
Depth (m)				0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3	0.1-0.3
Soil Type				Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay	Silty Clay
Date Sampled				28/1/20	28/1/20	28/1/20	28/1/20	28/1/20	28/1/20	28/1/20
Compounds			Unit	EQL	NEPM 2013					
					Residential HIL A ¹	Urban Residential and Public Open Space EIL ³				
TRHs										
TRH C6-C9	mg/kg	20	-	-	<20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	-	-	<25	<25	<25	<25	<25	<25
TPH C6-C10 less BTEX (F1)	mg/kg	25	45 ²	180	<25	<25	<25	<25	<25	<25
TRH C10-C14	mg/kg	20	-	-	<20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	-	-	<45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	-	-	<45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	-	-	<100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	-	-	<25	<25	<25	<25	<25	<25
TRH >C10-C16 less Naphthalene (F2)	mg/kg	25	110 ²	-	<25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	-	120	<90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	-	300	<120	<120	<120	<120	<120	<120
TRH >C10-C36	mg/kg	110	-	2800	<110	<110	<110	<110	<110	<110
TRH >C10-C40	mg/kg	210	-	-	<210	<210	<210	<210	<210	<210
BTEX										
Benzene	mg/kg	0.1	0.5 ²	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	55 ²	70	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	160 ²	85	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3	40 ²	105	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
PAHs										
Naphthalene	mg/kg	0.1	3 ²	170	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	-	-	<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	<0.1
Acenaphthene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	-	-	<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	<0.1
Fluoranthene	mg/kg	0.1	-	-	<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	<0.1
Benz(a)anthracene	mg/kg	0.1	-	-	<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	<0.1
Benz(b&i)fluoranthene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(k)fluoranthene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)pyrene	mg/kg	0.1	-	0.7	<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	<0.1
Dibenzo(a&h)anthracene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(g)perylene	mg/kg	0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinoenic PAHs (as BaP TEQ)-assume results <LOR=0	TEQ	0.1	3	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinoenic PAHs (as BaP TEQ)-assume results <LOR=LOR	TEQ (mg/kg)	0.1	3	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinoenic PAHs (as BaP TEQ)-assume results <LOR=LOR/2	TEQ (mg/kg)	0.1	3	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
PAHs (Sum of total)	mg/kg	1	300	-	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
OCPs										
Hexachlorobenzene (HCB)	mg/kg	0.1	10	-	NA	<0.1	<0.1	NA	NA	NA
Alpha BHC	mg/kg	0.1	-	-	NA	<0.1	<0.1	NA	NA	NA
Lindane	mg/kg	0.1	-	-	NA	<0.1	<0.1	NA	NA	NA
Heptachlor	mg/kg	0.1	6	-	NA	<0.1	<0.1	NA	NA	NA
Aldrin	mg/kg	0.1	6	-	NA	<0.1	<0.1	NA	NA	NA
Dieldrin	mg/kg	0.2	-	-	NA	<0.1	<0.1	NA	NA	NA
Beta BHC	mg/kg	0.1	-	-	NA	<0.1	<0.1	NA	NA	NA
Delta BHC	mg/kg	0.1	-	-	NA	<0.1	<0.1	NA	NA	NA
Heptachlor epoxide	mg/kg	0.1	-	-	NA	<0.1	<0.1	NA	NA	NA
Alpha Endosulfan	mg/kg	0.2	-	-	NA	<0.2	<0.2	NA	NA	NA
Gamma Chlordane	mg/kg	0.1	50	-	NA	<0.1	<0.1	NA	NA	NA
Alpha Chlordane	mg/kg	0.1	-	-	NA	<0.1	<0.1	NA	NA	NA
trans-Chlordane	mg/kg	0.1	-	-	NA	<0.1	<0.1	NA	NA	NA
Endrin	mg/kg	0.2	10	-	NA	<0.1	<0.1	NA	NA	NA
o,p'-DDD	mg/kg	0.1	240	-	NA	<0.2	<0.2	NA	NA	NA
o,p'-DDT	mg/kg	0.1	-	180	NA	<0.2	<0.2	NA	NA	NA
o,p'-DDE	mg/kg	0.1	-	-	NA	<0.1	<0.1	NA	NA	NA
Beta Endosulfan	mg/kg	0.2	-	-	NA	<0.1	<0.1	NA	NA	NA
p,p'-DDD	mg/kg	0.1	240	-</						

Table A - Soil Analytical Results

Laboratory ID				SE202202.028	SE202202.030	SE202202.031	SE202202.032
Sample ID				SP1/0.1-0.3	QC2	PAC1	PAC2
Depth (m)				0.1-0.3	(Duplicate of SP1/0.1-0.3)	0.1-0.3	0.1-0.3
Soil Type				Sand and Rubble		Fibrous Cement	Fibrous Cement
Date Sampled				28/1/20	28/1/20	28/1/20	28/1/20
Compounds	Unit	EQL	NEPM 2013				
			Residential HIL A ¹	Urban Residential and Public Open Space EIL ³			
TRHs							
TRH C6-C9	mg/kg	20	-	-	<20	NA	NA
TRH C6-C10	mg/kg	25	-	-	<25	NA	NA
TPH C6-C10 less BTEX (F1)	mg/kg	25	45 ²	180	<25	NA	NA
TRH C10-C14	mg/kg	20	-	-	<20	NA	NA
TRH C15-C28	mg/kg	45	-	-	<45	NA	NA
TRH C29-C36	mg/kg	45	-	-	<45	NA	NA
TRH C37-C40	mg/kg	100	-	-	<100	NA	NA
TRH >C10-C16	mg/kg	25	-	-	<25	NA	NA
TRH >C10-C16 less Naphthalene (F2)	mg/kg	25	110 ²	-	<25	NA	NA
TRH >C16-C34 (F3)	mg/kg	90	-	120	<90	NA	NA
TRH >C34-C40 (F4)	mg/kg	120	-	300	<120	NA	NA
TRH >C10-C36	mg/kg	110	-	2800	<110	NA	NA
TRH >C10-C40	mg/kg	210	-	-	<210	NA	NA
BTEX							
Benzene	mg/kg	0.1	0.5 ²	50	<0.1	NA	NA
Ethylbenzene	mg/kg	0.1	55 ²	70	<0.1	NA	NA
Toluene	mg/kg	0.1	160 ²	85	<0.1	NA	NA
Xylene (m & p)	mg/kg	0.2	-	-	<0.2	NA	NA
Xylene (o)	mg/kg	0.1	-	-	<0.1	NA	NA
Xylene Total	mg/kg	0.3	40 ²	105	<0.3	NA	NA
PAHs							
Naphthalene	mg/kg	0.1	3 ²	170	<0.1	NA	NA
2-methylnaphthalene	mg/kg	0.1	-	-	<0.1	NA	NA
1-methylnaphthalene	mg/kg	0.1	-	-	<0.1	NA	NA
Acenaphthylene	mg/kg	0.1	-	-	<0.1	NA	NA
Acenaphthene	mg/kg	0.1	-	-	<0.1	NA	NA
Fluorene	mg/kg	0.1	-	-	<0.1	NA	NA
Phenanthrene	mg/kg	0.1	-	-	<0.1	NA	NA
Anthracene	mg/kg	0.1	-	-	<0.1	NA	NA
Fluoranthene	mg/kg	0.1	-	-	<0.1	NA	NA
Pyrene	mg/kg	0.1	-	-	<0.1	NA	NA
Benz(a)anthracene	mg/kg	0.1	-	-	<0.1	NA	NA
Chrysene	mg/kg	0.1	-	-	<0.1	NA	NA
Benz(b&)fluoranthene	mg/kg	0.1	-	-	<0.1	NA	NA
Benz(k)fluoranthene	mg/kg	0.1	-	-	<0.1	NA	NA
Benz(a)pyrene	mg/kg	0.1	-	0.7	<0.1	NA	NA
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	<0.1	NA	NA
Dibenzo(a&h)anthracene	mg/kg	0.1	-	-	<0.1	NA	NA
Benz(ghi)perylene	mg/kg	0.1	-	-	<0.1	NA	NA
Carcinogenic PAHs (as BaP TEQ)-assume results <LOR=0	TEQ	0.1	3	-	<0.2	NA	NA
Carcinogenic PAHs (as BaP TEQ)-assume results <LOR=LOR	TEQ (mg/kg)	0.1	3	-	<0.3	NA	NA
Carcinogenic PAHs (as BaP TEQ)-assume results <LOR=LOR/2	TEQ (mg/kg)	0.1	3	-	<0.2	NA	NA
PAHs (Sum of total)	mg/kg	1	300	-	<0.8	NA	NA
OCPs							
Hexachlorobenzene (HCB)	mg/kg	0.1	10	-	<0.1	NA	NA
Alpha BHC	mg/kg	0.1	-	-	<0.1	NA	NA
Lindane	mg/kg	0.1	-	-	<0.1	NA	NA
Heptachlor	mg/kg	0.1	6	-	<0.1	NA	NA
Aldrin	mg/kg	0.1	6	-	<0.1	NA	NA
Dieldrin	mg/kg	0.2	-	-	<0.1	NA	NA
Beta BHC	mg/kg	0.1	-	-	<0.1	NA	NA
Delta BHC	mg/kg	0.1	-	-	<0.1	NA	NA
Heptachlor epoxide	mg/kg	0.1	-	-	<0.1	NA	NA
Alpha Endosulfan	mg/kg	0.2	-	-	<0.2	NA	NA
Gamma Chlordane	mg/kg	0.1	50	-	<0.1	NA	NA
Alpha Chlordane	mg/kg	0.1	-	-	<0.1	NA	NA
trans-Nonachlor	mg/kg	0.1	-	-	<0.1	NA	NA
Endrin	mg/kg	0.2	10	-	<0.1	NA	NA
o,p'-DDD	mg/kg	0.1	240	-	<0.2	NA	NA
o,p'-DDT	mg/kg	0.1	-	180	<0.2	NA	NA
o,p'-DDE	mg/kg	0.1	-	-	<0.1	NA	NA
Beta Endosulfan	mg/kg	0.2	-	-	<0.1	NA	NA
p,p'-DDD	mg/kg	0.1	240	-	<0.2	NA	NA
p,p'-DDT	mg/kg	0.1	-	180	<0.1	NA	NA
p,p'-DDE	mg/kg	0.1	-	-	<0.1	NA	NA
Endosulfan sulphate	mg/kg	0.1	-	-	<0.1	NA	NA
Endrin Aldehyde	mg/kg	0.1	-	-	<0.1	NA	NA
Methoxychlor	mg/kg	0.1	300	-	<0.1	NA	NA
Endrin Ketone	mg/kg	0.1	-	-	<0.1	NA	NA
Isodrin	mg/kg	0.1	-	-	<0.1	NA	NA
Mirex	mg/kg	0.1	10	-	<0.1	NA	NA
OPPs							
Dichlorvos	mg/kg	0.5	-	-	<0.5	NA	NA
Dimethoate	mg/kg	0.5	-	-	<0.5	NA	NA
Diazinon (Dimpylate)	mg/kg	0.5	-	-	<0.5	NA	NA
Fenitrothion	mg/kg	0.2	-	-	<0.2	NA	NA
Malathion	mg/kg	0.2	-	-	<0.2	NA	NA
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	160	-	<0.2	NA	NA
Parathion-ethyl (Parathion)	mg/kg	0.2	-	-	<0.2	NA	NA
Bromophos Ethyl	mg/kg	0.2	-	-	<0.2	NA	NA
Methidathion	mg/kg	0.5	-	-	<0.5	NA	NA
Ethion	mg/kg	0.2	-	-	<0.2	NA	NA
Azinphos-methyl (Guthion)	mg/kg	0.2	-	-	<0.2	NA	NA
PCBs							
Arochlor 1016	mg/kg	0.2	-	-	<0.2	NA	NA
Arochlor 1221	mg/kg	0.2	-	-	<0.2	NA	NA
Arochlor 1232	mg/kg	0.2	-	-	<0.2	NA	NA
Arochlor 1242	mg/kg	0.2	-	-	<0.2	NA	NA
Arochlor 1248	mg/kg	0.2	-	-	<0.2	NA	NA
Arochlor 1254	mg/kg	0.2	-	-	<0.2	NA	NA
Arochlor 1260	mg/kg	0.2	-	-	<0.2	NA	NA
Arochlor 1262	mg/kg	0.2	-	-	<0.2	NA	NA
Arochlor 1268	mg/kg	0.2	-	-	<0.2	NA	NA
Total PCBs (Arochlors)	mg/kg	1	1	-	<1	NA	NA
Metals							
Arsenic	mg/kg	3	100	100	16	7	NA
Cadmium	mg/kg	0.3	20	-	<0.3	<0.3	NA
Chromium	mg/kg	0.3	100	190	11	10	NA
Copper	mg/kg	0.5	6,000	130	31	32	NA
Lead	mg/kg	1	300	1100	32	34	NA
Mercury	mg/kg	0.01	40	-	<0.05	<0.05	NA
Nickel	mg/kg	0.5	400	30	9.1	8.2	NA
Zinc	mg/kg	0.5	7,400	180	100	110	NA
Asbestos							
Asbestos Detected - Fibre Identification in soil	No unit	0.01	No Detected	-	No	NA	Yes



Appendix A – Section 10.7 Certificate



**PLANNING CERTIFICATE UNDER SECTION 10.7
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979**

Ref.: WEST HOXTON:88079

Cert. No.: 3761

Ppty: 166526

Applicant:

LAND & GROUNDWATER CONSULTING PTY LTD
13/80-84 ILLAWARRA RD
MARRICKVILLE NSW 2204

Receipt No.: 4483825

Receipt Amt.: 53.00

Date: 09-Feb-2020

The information in this certificate is provided pursuant to Section 10.7(2) of the Environmental Planning and Assessment Act (EP&A Act) 1979, as prescribed by Schedule 4 of the Environmental Planning and Assessment Regulation (EP&A Regulation) 2000. The information has been extracted from Council's records, as they existed at the date listed on the certificate. Please note that the accuracy of the information contained within the certificate may change after the date of this certificate due to changes in Legislation, planning controls or the environment of the land.

The information in this certificate is applicable to the land described below.

Legal Description: **LOT 2 DP 1074727**

Street Address: **LOT 2 FIFTEENTH AVENUE, WEST HOXTON NSW 2171**

Note: Items marked with an asterisk () may be reliant upon information transmitted to Council by a third party public authority. The accuracy of this information cannot be verified by Council and may be out-of-date. If such information is vital for the proposed land use or development, applicants should instead verify the information with the appropriate authority.*

Note: Commonly Used Abbreviations:

LEP: Local Environmental Plan

DCP: Development Control Plan

SEPP: State Environmental Planning Policy

EPI: Environmental Planning Instrument



Customer Service Centre Ground floor, 33 Moore Street, Liverpool NSW 2170
All correspondence to Locked Bag 7064 Liverpool BC NSW 1871
Call Centre 1300 36 2170 Email lcc@liverpool.nsw.gov.au
Web www.liverpool.nsw.gov.au NRS 13 36 77 ABN 84 181 182 471

1. Names of relevant planning instruments and DCPs

- (a) The name of each EPI that applies to the carrying out of development on the land is/are listed below:

LEPs:

Liverpool LEP 2008

SEPPs*:

SEPP No. 33 – Hazardous and Offensive Development
SEPP No. 50 – Canal Estate Development
SEPP No. 55 – Remediation of Land
SEPP No. 62 – Sustainable Aquaculture
SEPP No. 65 – Design Quality of Residential Flat Development
SEPP (Building Sustainability Index: BASIX) 2004
SEPP No. 70 – Affordable Housing (Revised Schemes)
SEPP (Infrastructure) 2007
SEPP (Mining, Petroleum Production and Extractive Industries) 2007
SEPP (Miscellaneous Consent Provisions) 2007
SEPP (State and Regional Development) 2011
SEPP (Education Establishments and Child Care Facilities) 2017
SEPP (Vegetation in Non-Rural Areas) 2017
SEPP No 19 – Bushland in Urban Areas
SEPP No 21 – Caravan Parks
SEPP No 30 – Intensive Agriculture
SEPP No 44 – Koala Habitat Protection
SEPP (Exempt and Complying Development Codes) 2008
SEPP No 64 – Advertising and Signage
SEPP (Affordable Rental Housing) 2009
SEPP (Sydney Region Growth Centres) 2006
SEPP (Housing for Seniors or People with a Disability) 2004

Deemed SEPPs*:

Greater Metropolitan Regional Environmental Plan No 2 – Georges River Catchment

- (b) The name of each draft EPI, or Planning Proposal (which has been subject to community consultation).

Draft LEPs:

N/A

Draft SEPPs*:

Draft SEPP (Competition) 2010

- (c) The name of each DCP that applies to the carrying out of development on the land.

Liverpool DCP 2008

2. Zoning and land use under relevant LEPs and /or SEPPs

This section contains information required under subclauses 2 and 2A of Schedule 4 of the EP&A Regulation 2000. Subclause 2 of the regulation requires Council to provide information with respect to zoning and land-use in areas zoned by, or proposed to be zoned by, a LEP. Subclause 2A of Schedule 4 of the regulation requires Council to provide information with respect to zoning and land-use in areas which are zoned by, or proposed to be zoned by, the SEPP (Sydney Region Growth Centres) 2006. The land use and zoning information under any EPI applying to the land is given below.

- (a) Name of zone, and the EPI from which the land zoning information is derived.

R2 Low Density Residential - Liverpool LEP 2008

- (b) The purposes for which development may be carried out within the zone without the need for development consent

Home-based child care; Home occupations

- (c) The purposes for which development may not be carried out within the zone except with development consent

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Child care centres; Community facilities; Dwelling houses; Educational establishments; Environmental facilities; Environmental protection works; Exhibition homes; Exhibition villages; Flood mitigation works; Group homes; Health consulting rooms; Home businesses; Home industries; Places of public worship; Recreation areas; Respite day care centres; Roads; Secondary dwellings; Semi-detached dwellings

- (d) The purposes for which the instrument provides that development is prohibited within the zone

Any development not specified in item (b) or (c)

- (a) Name of zone, and the EPI from which the land zoning information is derived.

SP2 Infrastructure (Classified Road) - Liverpool LEP 2008

- (b) The purposes for which development may be carried out within the zone without the need for development consent

Nil

- (c) The purposes for which development may not be carried out within the zone except with development consent

The purpose shown on the Land Zoning Map, including any development incidental or ancillary

to development for that purpose; **Environmental protection works; Roads**

(d) The purposes for which the instrument provides that development is prohibited within the zone

Any development not specified in item (b) or (c)

Additional Use - Use of certain land for service stations and take away food and drink Premises

(1) This clause applies to land shown coloured yellow on the Key Sites Map.

(2) Development for the following purposes is permitted with consent:

(a) service stations,

(b) take away food and drink premises if:

i. there will be no more than 1 take away food and drink premises at each of the areas shown coloured yellow on the Key Sites Map, and

ii. the gross floor area of the take away food and drink premises is not greater than 300m².

(e) If a dwelling house is a permitted use, are there any principal development standards applying to the land that fix minimum land dimensions for the erection of a dwelling house?

No

(f) Does the land include or comprise critical habitat?

No

(g) Is the land in a conservation area (however described):

No

(h) Is there an item of environmental heritage (however described) situated on the land

No

3. Complying development



The information below outlines whether complying development is permitted on the land as per the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18(1) (c3) and 1.19 SEPP of the (Exempt and Complying Development Codes) 2008.

The first column identifies the code(s). The second column describes the extent of the land in which exempt and complying development is permitted for the code(s) given to the immediate left. The third column indicates the reason as to why exempt and complying development is prohibited on some or all of the land, and will be blank if such development is permitted on all of the land.

Code	Extent of the land for which development is permitted:	The reason(s) as to why development is prohibited:
Housing Code, Rural Housing Code and Greenfield Housing Code	All	
Commercial and Industrial (New Buildings and Additions) Code	All	
General Development Code, Container Recycling Facilities Code, Fire Safety Code, Housing Alterations Code, Commercial and Industrial Alterations Code, Subdivisions Code, and Demolition Code	All	

Note: If council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement below will describe that a restriction applies to the land, but it may not apply to all of the land, and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Nil

4. Coastal protection*

Has the Department of Finance, Services and Innovation notified Council of the land being affected by 38 or 39 of the Coastal Protection Act, 1979?

No

4A. Certain information relating to beaches and coasts*



(a) Has an order has been made under Part 4D of the Coastal Protection Act 1979 on the land (or on public land adjacent to that land)?

No

(b) Has Council been notified under section 55X of the Coastal Protection Act 1979 that temporary coastal protection works have been placed on the land (or on public land adjacent to that land), and if works have been so placed, is council is satisfied that the works have been removed and the land restored in accordance with that Act?

Not applicable

4B. Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works*

Has the owner (or any previous owner) of the land consented, in writing, that the land is subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act)?

No

5. Mine subsidence*

Is the land a proclaimed to mine subsidence district within the meaning of section 15 of the Mine Subsidence Compensation Act 1961?

No

6. Road widening and road realignment

Is the land is affected by any road widening or road realignment under:

(a) Division 2 of Part 3 of the Roads Act 1993?*

No

(b) An EPI?

Yes

(c) A resolution of the council?

No

7. Council and other public authority policies on hazard risk restrictions



**PLANNING CERTIFICATE UNDER SECTION 10.7
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979**

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Page No.: 7 of 11**

The following table lists hazard/risk policies that have been adopted by Council (or prepared by another public authority and subsequently adopted by Council). The right-most column indicates whether the land is subject to those policies.

Hazard/Risk	Adopted Policy	Does this hazard/risk policy apply to the land?
Landslip hazard	Nil	No
Bushfire hazard	Liverpool DCP 2008	Yes
	Liverpool Growth Centre Precincts DCP*	No
	Edmondson Park South DCP 2012	No
	Planning for Bushfire Protection (Rural Fire Services, 2006)*	Yes
	Pleasure Point Bushfire Management Plan	No
Tidal inundation	Nil	No
Subsidence	Nil	No
Acid Sulphate Soils	Liverpool LEP 2008	No
	Liverpool DCP 2008	No
Potentially Contaminated Land	Liverpool DCP 2008	Yes, see section 10 of Part 1 of the Liverpool DCP 2008
	Liverpool Growth Centre Precincts DCP*	No
Potentially Saline Soils	Liverpool DCP 2008	Yes
	Liverpool Growth Centre Precincts DCP*	No

Note: Land for which a policy applies does not confirm that the land is affected by that hazard/risk. For example, all land for which the Liverpool DCP applies is subject to controls relating to contaminated land, as this policy contains triggers and procedures for identifying potential contamination. Applicants are encouraged to review the relevant policy, and other sections of this certificate, to determine what effect, if any, the policy may have on the land.

7A. Flood related development controls information

- (a) For the purpose of residential accommodation (excluding group homes or seniors housing), is the land, or part of the land, within the flood planning area and subject to flood planning controls?

No



For details of these controls, please refer to the flooding section of the relevant DCP(s) as specified in Section 1(c) of this certificate.

(b) Is development on that land, or part of the land, for any other purpose subject to flood related development controls?

No

For details of these controls, please refer to the flooding section of the relevant DCP(s) as specified in Section 1(c) of this certificate.

Note: Words and expressions in this clause have the same meanings as in the instrument set out in the Schedule to the Standard Instrument (Local Environmental Plans) Order 2006.

8. Land reserved for acquisition

Does a LEP, draft LEP, SEPP or draft SEPP identify the acquisition of the land, or part of the land, by a public authority, as referred to in section 3.15 of the Act?

No

9. Contribution Plans

Liverpool Contributions Plan 2009

9A. Biodiversity certified land*

Is the land, or part of the land, biodiversity certified land (within the meaning of Part 8 of the Biodiversity Conservation Act 2016)?

Yes, part/all of the land is bio-diversity certified land

10. Biobanking agreements*

Is the land subject to a bio-banking agreement under Part 6 of the Biodiversity Conservation Act 2016, as notified to Council by the Chief Executive of the Office of Environment and Heritage?

No

10A. Native vegetation clearing set asides

Does the land contain a set aside area under section 60ZC of the Local Land Services Act 2013?

No, Liverpool is excluded from section 60ZC of the Local Land Services Act 2013

11. Bushfire prone land



Is the land or part of the land, bushfire prone land as defined by the EP&A Act 1979?

Yes, part of the land is bushfire prone land

12. Property vegetation plans*

Is Council aware of the land being subject to a Property Vegetation Plan under the Native Vegetation Act 2003?

No, Liverpool is excluded from the operation of the Native Vegetation Act 2003

13. Orders under Trees (Disputes between Neighbours) Act 2006*

Does an order, made under the Trees (Disputes Between Neighbours) Act 2006 in relation to carrying out of work in relation to a tree on the land, apply?

No, Council has not been notified of an order

14. Directions under Part 3A*

Is there a direction (made by the Minister) that a provision of an EPI in relation to a development does not have effect?

No

15. Site compatibility certificates and conditions for seniors housing*

(a) Is there is a current site compatibility certificate (seniors housing), in respect of proposed development on the land?

No, Council has not been notified of an order.

16. Site compatibility certificates for infrastructure*

(a) Is there is a current site compatibility certificate (infrastructure), in respect of proposed development on the land?

No, Council has not been notified of an order

17. Site compatibility certificates and conditions for affordable rental housing*

Is there is a current site compatibility certificate (Affordable housing), in respect of proposed development on the land?

No, Council has not been notified of an order.

18. Paper subdivision information*

Does any development plan adopted by a relevant authority (or proposed plan subject to a consent ballot) apply to the land? If so the date of the subdivision order that applies to the land.

No

19. Site verification certificates*

Does a current site verification certificate, apply to the land?

No, Council is not aware of a site verification certificate

20. Loose-fill asbestos insulation *

Is a dwelling on the land listed on the register (maintained by the NSW Department of Fair Trading) as containing loose-fill asbestos insulation?

No

Note: despite any listing on the register, any buildings constructed before 1980 may contain loose-fill asbestos insulation or other asbestos products.

21. Affected building notices and building product rectification orders*

Is there any affected building notice (as in Part 4 of the Building Products (Safety) Act 2017) of which the council is aware that is in force in respect of the land?

No

Is there any building product rectification order (as in the Building Products (Safety) Act 2017) of which the council is aware that is in force in respect of the land and has not been fully complied with?

No

Is there any notice of intention to make a building product rectification order (as in the Building Products (Safety) Act 2017) of which the council is aware has been given in respect of the land and is outstanding?

No

22. Contaminated land

Is the land:



Customer Service Centre Ground floor, 33 Moore Street, Liverpool NSW 2170
All correspondence to Locked Bag 7064 Liverpool BC NSW 1871
Call Centre 1300 36 2170 Email lcc@liverpool.nsw.gov.au
Web www.liverpool.nsw.gov.au NRS 13 36 77 ABN 84 181 182 471

**PLANNING CERTIFICATE UNDER SECTION 10.7
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(a) Significantly contaminated land within the meaning of that Act?

No

(b) Subject to a management order within the meaning of that Act?

No

(c) Subject of an approved voluntary management proposal within the meaning of that Act?

No

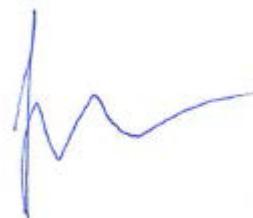
(d) Subject to an ongoing maintenance order within the meaning of that Act?

No

(e) Subject of a site audit statement within the meaning of that Act? *

No

Note: in this clause 'the Act' refers to the Contaminated Land Management Act 1997.



Kiersten Fishburn

Chief Executive Officer

Liverpool City Council

For further information, please contact

CALL CENTRE – 1300 36 2170



Appendix B – Registered Groundwater Bore Search

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State Overview

[State Overview](#)

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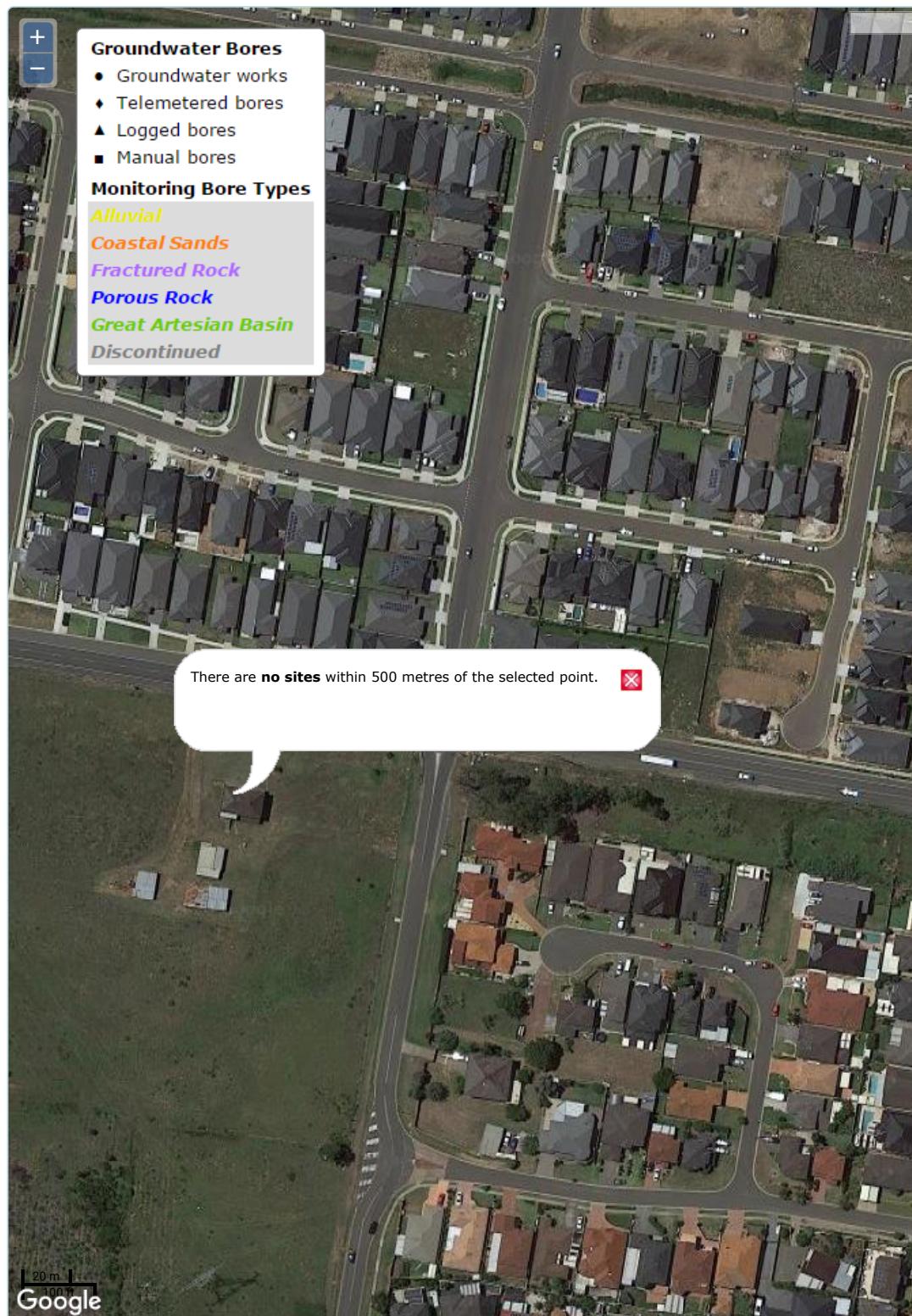
[All Groundwater Site Details](#) » [All Groundwater Map](#)

Greater Sydney Region

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All data times are Eastern Standard Time

Map





Appendix C – Certificates of Title



LAND
REGISTRY
SERVICES

Title Search

InfoTrack

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 2/1074727

SEARCH DATE	TIME	EDITION NO	DATE
28/11/2018	12:37 PM	2	25/10/2018

LAND

LOT 2 IN DEPOSITED PLAN 1074727
AT WEST HOXTON
LOCAL GOVERNMENT AREA LIVERPOOL
PARISH OF CABRAMATTA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1074727

FIRST SCHEDULE

ANGELA CARMEL FROIO (AE AN807455)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

FROIO

PRINTED ON 28/11/2018

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

PLAN FORM 2 (APPROVED FORM 3)

Plan Drawing only to appear in this space

SIGNATURE, AND SEALS ONLY.

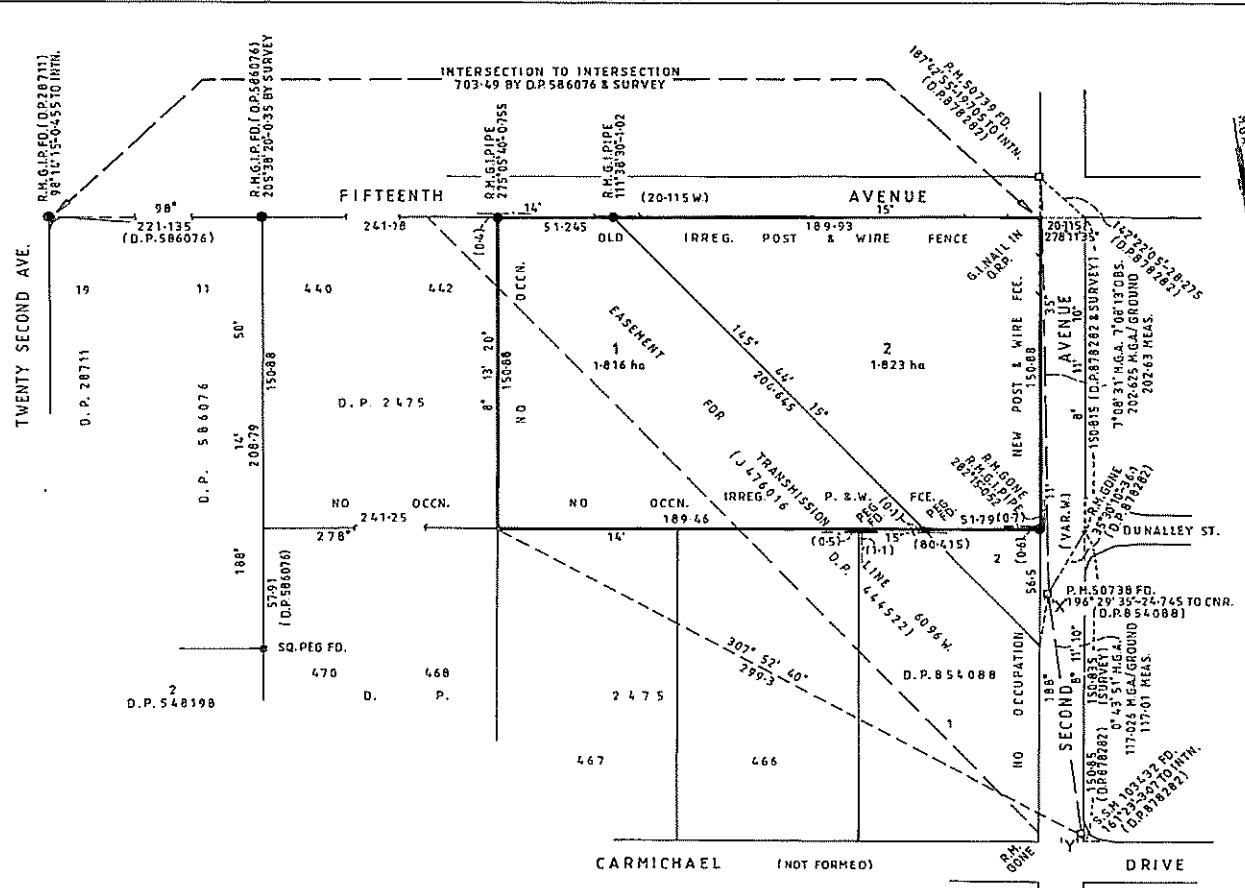
Phil Kenny
SIGNED by me PHILIP GERARD KENNY witness of the M.L.C. certifying the Environmental Planning and Assessment Act 1979, and I hereby certify that I have no notice of the revocation of such certificate.

Department of Land and Water Conservation Approval
In approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given.

Signature: _____
Date: _____
File Number: _____
Other: _____

Subdivision Certificate
I certify that the provisions of s.109A of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed
(street subdivision or new road) set out herein
Authorised Person/General Manager/Accredited Certifier
Consent Authority: _____
Date of Endorsement: _____
Accreditation No.: _____
Subdivision Certificate No.: _____
File No.: _____

Note:
When the plan is to be lodged electronically in Land and Property information, it should include a signature in an electronic or digital format approved by the Register-General.
(Details which are to be supplied)



CERTIFICATE OF TITLE.

(C.)

New South Wales.

[App^{n.} No. _____]
[Reference to Last Certificate
[Vol. 1101 Folio 115]



REGISTER BOOK

VOL. 2574 FOLIO 72

CANCELLED

ON ISSUE 5. 1977 FOLIO AUTO CONS. 2574-72

ON ISSUE OF FOLIO NO. 100

Edward Charles Hutton of Boston Park Telephone Linesman Transferred under
Instrument of Transfer N° A 172177 from The Assets Realisation Company Limited Mortgagee exercising
Power of Sale is now the proprietor of an Estate in Fee Simple,
subject nevertheless to the reservations and conditions, if any, contained in the Grant hereinafter referred to, and also subject to such encumbrances,
liens, and interest as are notified hereon, in
in the Shire of Nepean,
containing Nine acres,
That piece of land situated _____
, Parish of Cabramatta, and County of Cumberland, or thereabouts,
as shown on the Plan hereon, and therein edged red, being Lots 442, 443 and 467,
on a Plan deposited in the Land Titles Office, Sydney, No. 2475 and part of Eight hundred acres (Portion 40 of Parish),
delineated in the Public Map of the said Parish in the Department of Lands originally granted to Thomas Sterrop Amos by
Crown Grant dated the Thirteenth day of January One thousand eight hundred and eighteen.

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

Signed the 14 day of May, 1915.

in the presence of

Deputy Registrar General



FIFTEENTH AVENUE			
441	442	443	444
750 ft.	910 ft.	Wide	1000 ft.
400 ft.	400 ft.	400 ft.	1000 ft.
469	468	467	466
FOURTEENTH AVENUE		AVENUE	

— SCALE: 8 Chains to one inch —

No. A 708581 TRANSFER dated 4th June 1821
from the said Edward Charles Bouton to William
Hewry Sibley of Boston Park (Blacksmith)
of the land within described.
Produced and entered 24th June 1821
at 11 o'clock in the fore noon.

No A968975 Caveat dated 13rd July 1923.
Produced and entered 17th July 1923 at
53 mts pt 2 o'clock in the afternoon.

the afternoon.
Post Office
Registrar General

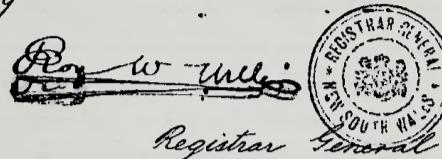
No. C 529227 APPLICATION BY TRANSMISSION
Lucy silk of Guildford, widow

is now the registered
Proprietor of the Land within described in pursuance of the above
Application produced 19th May 1939, and
entered 10th September 1939
at 12 o'clock in the noon.
Roy W. Willis
REGISTRAR GENERAL



The within mentioned caveat No. A968975 has lapsed.

Dated 28th August 1939
Vide Regd. C807703



Registrar General

No. C 807703 TRANSFER dated 24th June 1939
from the said Lucy silk to Waller Israel
Taylor of Weston Park Grocer, Draper
Producer 14th July 1939 and entered 28th August 1939
at 12 o'clock in the noon.
Roy W. Willis
REGISTRAR GENERAL



COSIMO GISMONDO

Cosimo Gismondo, of Austral, Railway Employee

now the registered proprietor of the land within described.
See TRANSFER No. J92155 dated 15th June 1962
Entered 1st November 1962.
Jawatson
REGISTRAR GENERAL



No. J476016 NOTICE OF RESUMPTION
ELECTRICITY COMMISSION OF NEW SOUTH WALES is
the proprietor of an easement for Transmission Line affecting that
part of the land within described, shown by black lines and notation
200 feet wide on the plan hereon, freed from all other interests.
Entered 6th January 1965

Jawatson
REGISTRAR GENERAL



COMPUTER FOLIO NO FURTHER
DEALINGS TO BE REGISTERED.

C807703
J92155 P1
Power of Easement for Transmision
T 476016 N/A



Appendix D – Historical Aerial Photographs



SCALE: DRAWN TO SCALE AS SHOWN

Not To Scale

NORTH

LEGEND:



Photograph courtesy of
NSW Land and Property Information



REV: A
DATE: 28/01/2020
DRAWN: GP
APPROVED: GP
STATUS: Final
DWG NO:

CLIENT: DalCo & Covo Positino

PROJECT: 104 Fifteenth Avenue, West Hoxton, NSW

PROJECT NUMBER: LG1948.01

TITLE: **Aerial Photograph
1965**

FIGURE:

A4



SCALE: DRAWN TO SCALE AS SHOWN

Not To Scale

NORTH

LEGEND:



Photograph courtesy of
NSW Land and Property Information



REV: A
DATE: 28/01/2020
DRAWN: GP
APPROVED: GP
STATUS: Final
DWG NO:

CLIENT: DalCo & Covo Positino

PROJECT: 104 Fifteenth Avenue, West Hoxton, NSW

PROJECT NUMBER: LG1948.01

TITLE: **Aerial Photograph
1978**

FIGURE:

A4



SCALE: DRAWN TO SCALE AS SHOWN

Not To Scale

NORTH

LEGEND:



Photograph courtesy of
NSW Land and Property Information



REV: A
DATE: 28/01/2020
DRAWN: GP
APPROVED: GP
STATUS: Final
DWG NO:

CLIENT: DalCo & Covo Positino

PROJECT: 104 Fifteenth Avenue, West Hoxton, NSW

PROJECT NUMBER: LG1948.01

TITLE: **Aerial Photograph
2001**

FIGURE:



SCALE: DRAWN TO SCALE AS SHOWN

Not To Scale

NORTH

LEGEND:

Site Boundary

Photograph courtesy of
NSW Land and Property Information



REV: A
DATE: 28/01/2020
DRAWN: GP
APPROVED: GP
STATUS: Final
DWG NO:

CLIENT: DalCo & Covo Positino

PROJECT: 104 Fifteenth Avenue, West Hoxton, NSW

PROJECT NUMBER: LG1948.01

TITLE: **Aerial Photograph
2007**

FIGURE:







Appendix E – NSW EPA Search Results

Search results

Your search for: **General Search** with the following criteria

Suburb - West Hoxton
returned 2 results

Export to excel		1 of 1 Pages			Search Again
Number	Name	Location	Type	Status	Issued date
20202	SYDNEY WATER CORPORATION	Lowry Ave, WEST HOXTON, NSW 2171	POEO licence	Surrendered	11 Jan 2013
1519590	SYDNEY WATER CORPORATION	Lowry Ave, WEST HOXTON, NSW 2171	s.80	Issued	20 Jan 2015 Surrender of a Licence

For business and industry

For local government

Contact us

- 131 555 (tel:131555)
- info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)
- EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

[Accessibility](#) (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index>)
[Disclaimer](#) (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer>)
[Privacy](#) (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy>)
[Copyright](#) (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright>)

[Find us on LinkedIn](#) (<https://au.linkedin.com/company/nsw-environment-protection-authority>)
 [Find us on YouTube](#) (<https://www.youtube.com/channel/UCWzJyfXmIjPQHgkOOGdVnA>)

Search results

Your search for: Suburb: WEST HOXTON

[Search Again](#) [Refine Search](#)

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the [planning process](#).

Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

[... more search tips](#)

More information about particular sites may be available from:

- The [POEO public register](#)
- The appropriate planning authority: for example, on a planning certificate issued by the local council under [section 149 of the Environmental Planning and Assessment Act](#).

See [What's in the record and What's not in the record](#).

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.

This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register.[POEO public register](#)

**For business
and industry**

**For local
government**

Contact us

- 131 555 (tel:131555)
- info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)
- EPA Office Locations (<https://www.epa.nsw.gov.au/about-us/contact-us/locations>)

[Accessibility](#) (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index>)
[Disclaimer](#) (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer>)
[Privacy](#) (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy>)
[Copyright](#) (<https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright>)

<https://au.linkedin.com/company/nsw-environment-protection-authority>
 Find us on <https://www.facebook.com/NSWEPA>
 <https://www.youtube.com/channel/UCFjwvJLcOOGXWzDyfCQHg>



Appendix F – Laboratory Reports



STATEMENT OF QA/QC PERFORMANCE

SE202202 R0

CLIENT DETAILS

Contact Gonzalo Parra
Client LAND AND GROUNDWATER CONSULTING PTY LTD
Address 131 B Riverview Road
NSW 2204

Telephone 61 2 95598424
Facsimile (Not specified)
Email gparra@lgconsult.com.au

Project 104 Fifteenth Avenue, West Hoxton, NSW
Order Number LG1948.01
Samples 32

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
Date Received 28 Jan 2020
Date Reported 04 Feb 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	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	1 item
	VOC's in Soil	1 item
	Volatile Petroleum Hydrocarbons in Soil	1 item
Duplicate	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Fibre ID in bulk materials
Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
PAC1	SE202202.031	LB192295	28 Jan 2020	28 Jan 2020	27 Jan 2021	04 Feb 2020	27 Jan 2021	04 Feb 2020
PAC2	SE202202.032	LB192295	28 Jan 2020	28 Jan 2020	27 Jan 2021	04 Feb 2020	27 Jan 2021	04 Feb 2020

Fibre Identification in soil
Method: ME-(AU)-[ENV]AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1/0.1-0.3	SE202202.001	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH2/0.1-0.3	SE202202.002	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH3/0.1-0.3	SE202202.003	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH4/0.1-0.3	SE202202.004	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH5/0.1-0.3	SE202202.005	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH6/0.1-0.3	SE202202.006	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH7/0.1-0.3	SE202202.007	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH8/0.1-0.3	SE202202.008	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH9/0.1-0.3	SE202202.009	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH10/0.1-0.3	SE202202.010	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH11/0.1-0.3	SE202202.011	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH12/0.1-0.3	SE202202.012	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH13/0.1-0.3	SE202202.013	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH14/0.1-0.3	SE202202.014	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH15/0.1-0.3	SE202202.015	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH16/0.1-0.3	SE202202.016	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH17/0.1-0.3	SE202202.017	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH18/0.1-0.3	SE202202.018	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH19/0.1-0.3	SE202202.019	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH20/0.1-0.3	SE202202.020	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH21/0.1-0.3	SE202202.021	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH22/0.1-0.3	SE202202.022	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH23/0.1-0.3	SE202202.023	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH24/0.1-0.3	SE202202.024	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH25/0.1-0.3	SE202202.025	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH26/0.1-0.3	SE202202.026	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
BH27/0.1-0.3	SE202202.027	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
SP1/0.1-0.3	SE202202.028	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020
QC1	SE202202.029	LB192203	28 Jan 2020	28 Jan 2020	27 Jan 2021	31 Jan 2020	27 Jan 2021	04 Feb 2020

Mercury in Soil
Method: ME-(AU)-[ENV]AN312

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1/0.1-0.3	SE202202.001	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH2/0.1-0.3	SE202202.002	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH3/0.1-0.3	SE202202.003	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH4/0.1-0.3	SE202202.004	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH5/0.1-0.3	SE202202.005	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH6/0.1-0.3	SE202202.006	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH7/0.1-0.3	SE202202.007	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH8/0.1-0.3	SE202202.008	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH9/0.1-0.3	SE202202.009	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH10/0.1-0.3	SE202202.010	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH11/0.1-0.3	SE202202.011	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH12/0.1-0.3	SE202202.012	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH13/0.1-0.3	SE202202.013	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH14/0.1-0.3	SE202202.014	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH15/0.1-0.3	SE202202.015	LB192094	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH16/0.1-0.3	SE202202.016	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH17/0.1-0.3	SE202202.017	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH18/0.1-0.3	SE202202.018	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH19/0.1-0.3	SE202202.019	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH20/0.1-0.3	SE202202.020	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH21/0.1-0.3	SE202202.021	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH22/0.1-0.3	SE202202.022	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH23/0.1-0.3	SE202202.023	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH24/0.1-0.3	SE202202.024	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 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 sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Mercury in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH25/0.1-0.3	SE202202.025	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH26/0.1-0.3	SE202202.026	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
BH27/0.1-0.3	SE202202.027	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
SP1/0.1-0.3	SE202202.028	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
QC1	SE202202.029	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020
QC2	SE202202.030	LB192095	28 Jan 2020	28 Jan 2020	25 Feb 2020	30 Jan 2020	25 Feb 2020	03 Feb 2020

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1/0.1-0.3	SE202202.001	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH2/0.1-0.3	SE202202.002	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH3/0.1-0.3	SE202202.003	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH4/0.1-0.3	SE202202.004	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH5/0.1-0.3	SE202202.005	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH6/0.1-0.3	SE202202.006	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH7/0.1-0.3	SE202202.007	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH8/0.1-0.3	SE202202.008	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH9/0.1-0.3	SE202202.009	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH10/0.1-0.3	SE202202.010	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH11/0.1-0.3	SE202202.011	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH12/0.1-0.3	SE202202.012	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH13/0.1-0.3	SE202202.013	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH14/0.1-0.3	SE202202.014	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH15/0.1-0.3	SE202202.015	LB192015	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH16/0.1-0.3	SE202202.016	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH17/0.1-0.3	SE202202.017	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH18/0.1-0.3	SE202202.018	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH19/0.1-0.3	SE202202.019	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH20/0.1-0.3	SE202202.020	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH21/0.1-0.3	SE202202.021	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH22/0.1-0.3	SE202202.022	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH23/0.1-0.3	SE202202.023	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH24/0.1-0.3	SE202202.024	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH25/0.1-0.3	SE202202.025	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH26/0.1-0.3	SE202202.026	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
BH27/0.1-0.3	SE202202.027	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
SP1/0.1-0.3	SE202202.028	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
QC1	SE202202.029	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020
QC2	SE202202.030	LB192016	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	03 Feb 2020	31 Jan 2020

OC Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1/0.1-0.3	SE202202.001	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH2/0.1-0.3	SE202202.002	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH3/0.1-0.3	SE202202.003	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH4/0.1-0.3	SE202202.004	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH5/0.1-0.3	SE202202.005	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH6/0.1-0.3	SE202202.006	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH7/0.1-0.3	SE202202.007	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH8/0.1-0.3	SE202202.008	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH9/0.1-0.3	SE202202.009	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH10/0.1-0.3	SE202202.010	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH11/0.1-0.3	SE202202.011	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH12/0.1-0.3	SE202202.012	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH13/0.1-0.3	SE202202.013	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH14/0.1-0.3	SE202202.014	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH15/0.1-0.3	SE202202.015	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH16/0.1-0.3	SE202202.016	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH17/0.1-0.3	SE202202.017	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH18/0.1-0.3	SE202202.018	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH19/0.1-0.3	SE202202.019	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 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 sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

OC Pesticides in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH20/0.1-0.3	SE202202.020	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH21/0.1-0.3	SE202202.021	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH22/0.1-0.3	SE202202.022	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH23/0.1-0.3	SE202202.023	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH24/0.1-0.3	SE202202.024	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH25/0.1-0.3	SE202202.025	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH26/0.1-0.3	SE202202.026	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH27/0.1-0.3	SE202202.027	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
SP1/0.1-0.3	SE202202.028	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
QC1	SE202202.029	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
QC2	SE202202.030	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020

OP Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1/0.1-0.3	SE202202.001	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH2/0.1-0.3	SE202202.002	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH3/0.1-0.3	SE202202.003	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH4/0.1-0.3	SE202202.004	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH5/0.1-0.3	SE202202.005	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH6/0.1-0.3	SE202202.006	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH7/0.1-0.3	SE202202.007	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH8/0.1-0.3	SE202202.008	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH9/0.1-0.3	SE202202.009	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH10/0.1-0.3	SE202202.010	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH11/0.1-0.3	SE202202.011	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH12/0.1-0.3	SE202202.012	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH13/0.1-0.3	SE202202.013	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH14/0.1-0.3	SE202202.014	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH15/0.1-0.3	SE202202.015	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH16/0.1-0.3	SE202202.016	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH17/0.1-0.3	SE202202.017	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH18/0.1-0.3	SE202202.018	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH19/0.1-0.3	SE202202.019	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH20/0.1-0.3	SE202202.020	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH21/0.1-0.3	SE202202.021	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH22/0.1-0.3	SE202202.022	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH23/0.1-0.3	SE202202.023	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH24/0.1-0.3	SE202202.024	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH25/0.1-0.3	SE202202.025	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH26/0.1-0.3	SE202202.026	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH27/0.1-0.3	SE202202.027	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
SP1/0.1-0.3	SE202202.028	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
QC1	SE202202.029	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
QC2	SE202202.030	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 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
BH1/0.1-0.3	SE202202.001	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH2/0.1-0.3	SE202202.002	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH3/0.1-0.3	SE202202.003	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH4/0.1-0.3	SE202202.004	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH5/0.1-0.3	SE202202.005	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH6/0.1-0.3	SE202202.006	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH7/0.1-0.3	SE202202.007	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH8/0.1-0.3	SE202202.008	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH9/0.1-0.3	SE202202.009	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH10/0.1-0.3	SE202202.010	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH11/0.1-0.3	SE202202.011	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH12/0.1-0.3	SE202202.012	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH13/0.1-0.3	SE202202.013	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH14/0.1-0.3	SE202202.014	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 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 sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

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
BH15/0.1-0.3	SE202202.015	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH16/0.1-0.3	SE202202.016	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH17/0.1-0.3	SE202202.017	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH18/0.1-0.3	SE202202.018	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH19/0.1-0.3	SE202202.019	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH20/0.1-0.3	SE202202.020	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH21/0.1-0.3	SE202202.021	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH22/0.1-0.3	SE202202.022	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH23/0.1-0.3	SE202202.023	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH24/0.1-0.3	SE202202.024	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH25/0.1-0.3	SE202202.025	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH26/0.1-0.3	SE202202.026	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH27/0.1-0.3	SE202202.027	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
SP1/0.1-0.3	SE202202.028	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
QC1	SE202202.029	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
QC2	SE202202.030	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020

PCBs in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1/0.1-0.3	SE202202.001	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH2/0.1-0.3	SE202202.002	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH3/0.1-0.3	SE202202.003	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH4/0.1-0.3	SE202202.004	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH5/0.1-0.3	SE202202.005	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH6/0.1-0.3	SE202202.006	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH7/0.1-0.3	SE202202.007	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH8/0.1-0.3	SE202202.008	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH9/0.1-0.3	SE202202.009	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH10/0.1-0.3	SE202202.010	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH11/0.1-0.3	SE202202.011	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH12/0.1-0.3	SE202202.012	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH13/0.1-0.3	SE202202.013	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH14/0.1-0.3	SE202202.014	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH15/0.1-0.3	SE202202.015	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH16/0.1-0.3	SE202202.016	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH17/0.1-0.3	SE202202.017	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH18/0.1-0.3	SE202202.018	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH19/0.1-0.3	SE202202.019	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH20/0.1-0.3	SE202202.020	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH21/0.1-0.3	SE202202.021	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH22/0.1-0.3	SE202202.022	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH23/0.1-0.3	SE202202.023	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH24/0.1-0.3	SE202202.024	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH25/0.1-0.3	SE202202.025	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH26/0.1-0.3	SE202202.026	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
BH27/0.1-0.3	SE202202.027	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
SP1/0.1-0.3	SE202202.028	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
QC1	SE202202.029	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020
QC2	SE202202.030	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	04 Feb 2020

Total Recoverable Elements in Soil/Waste Solids/Materials by ICP-OES

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1/0.1-0.3	SE202202.001	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH2/0.1-0.3	SE202202.002	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH3/0.1-0.3	SE202202.003	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH4/0.1-0.3	SE202202.004	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH5/0.1-0.3	SE202202.005	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH6/0.1-0.3	SE202202.006	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH7/0.1-0.3	SE202202.007	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH8/0.1-0.3	SE202202.008	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH9/0.1-0.3	SE202202.009	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 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 sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

Total Recoverable 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
BH10/0.1-0.3	SE202202.010	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH11/0.1-0.3	SE202202.011	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH12/0.1-0.3	SE202202.012	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH13/0.1-0.3	SE202202.013	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH14/0.1-0.3	SE202202.014	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH15/0.1-0.3	SE202202.015	LB192092	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH16/0.1-0.3	SE202202.016	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH17/0.1-0.3	SE202202.017	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH18/0.1-0.3	SE202202.018	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH19/0.1-0.3	SE202202.019	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH20/0.1-0.3	SE202202.020	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH21/0.1-0.3	SE202202.021	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH22/0.1-0.3	SE202202.022	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH23/0.1-0.3	SE202202.023	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH24/0.1-0.3	SE202202.024	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH25/0.1-0.3	SE202202.025	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH26/0.1-0.3	SE202202.026	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
BH27/0.1-0.3	SE202202.027	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
SP1/0.1-0.3	SE202202.028	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
QC1	SE202202.029	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 2020
QC2	SE202202.030	LB192093	28 Jan 2020	28 Jan 2020	26 Jul 2020	30 Jan 2020	26 Jul 2020	03 Feb 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
BH1/0.1-0.3	SE202202.001	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH2/0.1-0.3	SE202202.002	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH3/0.1-0.3	SE202202.003	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH4/0.1-0.3	SE202202.004	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH5/0.1-0.3	SE202202.005	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH6/0.1-0.3	SE202202.006	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH7/0.1-0.3	SE202202.007	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH8/0.1-0.3	SE202202.008	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH9/0.1-0.3	SE202202.009	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH10/0.1-0.3	SE202202.010	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH11/0.1-0.3	SE202202.011	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH12/0.1-0.3	SE202202.012	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH13/0.1-0.3	SE202202.013	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH14/0.1-0.3	SE202202.014	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH15/0.1-0.3	SE202202.015	LB192011	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	31 Jan 2020
BH16/0.1-0.3	SE202202.016	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH17/0.1-0.3	SE202202.017	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH18/0.1-0.3	SE202202.018	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH19/0.1-0.3	SE202202.019	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH20/0.1-0.3	SE202202.020	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH21/0.1-0.3	SE202202.021	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH22/0.1-0.3	SE202202.022	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH23/0.1-0.3	SE202202.023	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH24/0.1-0.3	SE202202.024	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH25/0.1-0.3	SE202202.025	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH26/0.1-0.3	SE202202.026	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH27/0.1-0.3	SE202202.027	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
SP1/0.1-0.3	SE202202.028	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
QC1	SE202202.029	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
QC2	SE202202.030	LB192012	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH1/0.1-0.3	SE202202.001	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH2/0.1-0.3	SE202202.002	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH3/0.1-0.3	SE202202.003	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH4/0.1-0.3	SE202202.004	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 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 sampled date is not supplied then compliance with criteria cannot be determined. If the received date is after one or both due dates then holding time will fail by default.

VOC's in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH5/0.1-0.3	SE202202.005	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH6/0.1-0.3	SE202202.006	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH7/0.1-0.3	SE202202.007	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH8/0.1-0.3	SE202202.008	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH9/0.1-0.3	SE202202.009	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH10/0.1-0.3	SE202202.010	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH11/0.1-0.3	SE202202.011	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH12/0.1-0.3	SE202202.012	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH13/0.1-0.3	SE202202.013	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH14/0.1-0.3	SE202202.014	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH15/0.1-0.3	SE202202.015	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH16/0.1-0.3	SE202202.016	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH17/0.1-0.3	SE202202.017	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH18/0.1-0.3	SE202202.018	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH19/0.1-0.3	SE202202.019	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH20/0.1-0.3	SE202202.020	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH21/0.1-0.3	SE202202.021	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH22/0.1-0.3	SE202202.022	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH23/0.1-0.3	SE202202.023	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH24/0.1-0.3	SE202202.024	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH25/0.1-0.3	SE202202.025	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH26/0.1-0.3	SE202202.026	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH27/0.1-0.3	SE202202.027	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
SP1/0.1-0.3	SE202202.028	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
QC1	SE202202.029	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
QC2	SE202202.030	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 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
BH1/0.1-0.3	SE202202.001	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH2/0.1-0.3	SE202202.002	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH3/0.1-0.3	SE202202.003	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH4/0.1-0.3	SE202202.004	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH5/0.1-0.3	SE202202.005	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH6/0.1-0.3	SE202202.006	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH7/0.1-0.3	SE202202.007	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH8/0.1-0.3	SE202202.008	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH9/0.1-0.3	SE202202.009	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH10/0.1-0.3	SE202202.010	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH11/0.1-0.3	SE202202.011	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH12/0.1-0.3	SE202202.012	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH13/0.1-0.3	SE202202.013	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH14/0.1-0.3	SE202202.014	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH15/0.1-0.3	SE202202.015	LB192008	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH16/0.1-0.3	SE202202.016	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH17/0.1-0.3	SE202202.017	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH18/0.1-0.3	SE202202.018	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH19/0.1-0.3	SE202202.019	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH20/0.1-0.3	SE202202.020	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH21/0.1-0.3	SE202202.021	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH22/0.1-0.3	SE202202.022	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH23/0.1-0.3	SE202202.023	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH24/0.1-0.3	SE202202.024	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH25/0.1-0.3	SE202202.025	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH26/0.1-0.3	SE202202.026	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
BH27/0.1-0.3	SE202202.027	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
SP1/0.1-0.3	SE202202.028	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
QC1	SE202202.029	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 2020
QC2	SE202202.030	LB192009	28 Jan 2020	28 Jan 2020	11 Feb 2020	29 Jan 2020	09 Mar 2020	03 Feb 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 identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH9/0.1-0.3	SE202202.009	%	60 - 130%	95
	BH10/0.1-0.3	SE202202.010	%	60 - 130%	89
	BH11/0.1-0.3	SE202202.011	%	60 - 130%	89
	BH12/0.1-0.3	SE202202.012	%	60 - 130%	91
	BH13/0.1-0.3	SE202202.013	%	60 - 130%	93
	BH14/0.1-0.3	SE202202.014	%	60 - 130%	91
	BH16/0.1-0.3	SE202202.016	%	60 - 130%	92
	BH17/0.1-0.3	SE202202.017	%	60 - 130%	92
	BH22/0.1-0.3	SE202202.022	%	60 - 130%	89
	BH23/0.1-0.3	SE202202.023	%	60 - 130%	87
	BH24/0.1-0.3	SE202202.024	%	60 - 130%	88
	SP1/0.1-0.3	SE202202.028	%	60 - 130%	86
	QC1	SE202202.029	%	60 - 130%	91

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH9/0.1-0.3	SE202202.009	%	60 - 130%	83
	BH10/0.1-0.3	SE202202.010	%	60 - 130%	86
	BH11/0.1-0.3	SE202202.011	%	60 - 130%	70
	BH12/0.1-0.3	SE202202.012	%	60 - 130%	90
	BH13/0.1-0.3	SE202202.013	%	60 - 130%	86
	BH14/0.1-0.3	SE202202.014	%	60 - 130%	87
	BH16/0.1-0.3	SE202202.016	%	60 - 130%	113
	BH17/0.1-0.3	SE202202.017	%	60 - 130%	89
	BH22/0.1-0.3	SE202202.022	%	60 - 130%	91
	BH23/0.1-0.3	SE202202.023	%	60 - 130%	80
	BH24/0.1-0.3	SE202202.024	%	60 - 130%	73
	SP1/0.1-0.3	SE202202.028	%	60 - 130%	84
	QC1	SE202202.029	%	60 - 130%	80
d14-p-terphenyl (Surrogate)	BH9/0.1-0.3	SE202202.009	%	60 - 130%	74
	BH10/0.1-0.3	SE202202.010	%	60 - 130%	78
	BH11/0.1-0.3	SE202202.011	%	60 - 130%	72
	BH12/0.1-0.3	SE202202.012	%	60 - 130%	83
	BH13/0.1-0.3	SE202202.013	%	60 - 130%	77
	BH14/0.1-0.3	SE202202.014	%	60 - 130%	76
	BH16/0.1-0.3	SE202202.016	%	60 - 130%	114
	BH17/0.1-0.3	SE202202.017	%	60 - 130%	83
	BH22/0.1-0.3	SE202202.022	%	60 - 130%	89
	BH23/0.1-0.3	SE202202.023	%	60 - 130%	84
	BH24/0.1-0.3	SE202202.024	%	60 - 130%	70
	SP1/0.1-0.3	SE202202.028	%	60 - 130%	86
	QC1	SE202202.029	%	60 - 130%	85

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH9/0.1-0.3	SE202202.009	%	70 - 130%	83
	BH10/0.1-0.3	SE202202.010	%	70 - 130%	86
	BH11/0.1-0.3	SE202202.011	%	70 - 130%	70
	BH12/0.1-0.3	SE202202.012	%	70 - 130%	90
	BH13/0.1-0.3	SE202202.013	%	70 - 130%	86
	BH14/0.1-0.3	SE202202.014	%	70 - 130%	87
	BH15/0.1-0.3	SE202202.015	%	70 - 130%	86
	BH16/0.1-0.3	SE202202.016	%	70 - 130%	113
	BH17/0.1-0.3	SE202202.017	%	70 - 130%	89
	BH18/0.1-0.3	SE202202.018	%	70 - 130%	85
	BH19/0.1-0.3	SE202202.019	%	70 - 130%	84
	BH20/0.1-0.3	SE202202.020	%	70 - 130%	89
	BH21/0.1-0.3	SE202202.021	%	70 - 130%	77
	BH22/0.1-0.3	SE202202.022	%	70 - 130%	91
	BH23/0.1-0.3	SE202202.023	%	70 - 130%	80
	BH24/0.1-0.3	SE202202.024	%	70 - 130%	73
	BH25/0.1-0.3	SE202202.025	%	70 - 130%	76

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)
Method: ME-(AU)-[ENV]AN420

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH26/0.1-0.3	SE202202.026	%	70 - 130%	76
	BH27/0.1-0.3	SE202202.027	%	70 - 130%	79
	SP1/0.1-0.3	SE202202.028	%	70 - 130%	84
	QC1	SE202202.029	%	70 - 130%	80
	QC2	SE202202.030	%	70 - 130%	88
d14-p-terphenyl (Surrogate)	BH9/0.1-0.3	SE202202.009	%	70 - 130%	74
	BH10/0.1-0.3	SE202202.010	%	70 - 130%	78
	BH11/0.1-0.3	SE202202.011	%	70 - 130%	72
	BH12/0.1-0.3	SE202202.012	%	70 - 130%	83
	BH13/0.1-0.3	SE202202.013	%	70 - 130%	77
	BH14/0.1-0.3	SE202202.014	%	70 - 130%	76
	BH15/0.1-0.3	SE202202.015	%	70 - 130%	76
	BH16/0.1-0.3	SE202202.016	%	70 - 130%	114
	BH17/0.1-0.3	SE202202.017	%	70 - 130%	83
	BH18/0.1-0.3	SE202202.018	%	70 - 130%	88
	BH19/0.1-0.3	SE202202.019	%	70 - 130%	89
	BH20/0.1-0.3	SE202202.020	%	70 - 130%	86
	BH21/0.1-0.3	SE202202.021	%	70 - 130%	80
	BH22/0.1-0.3	SE202202.022	%	70 - 130%	89
	BH23/0.1-0.3	SE202202.023	%	70 - 130%	84
	BH24/0.1-0.3	SE202202.024	%	70 - 130%	70
	BH25/0.1-0.3	SE202202.025	%	70 - 130%	80
	BH26/0.1-0.3	SE202202.026	%	70 - 130%	76
	BH27/0.1-0.3	SE202202.027	%	70 - 130%	78
d5-nitrobenzene (Surrogate)	SP1/0.1-0.3	SE202202.028	%	70 - 130%	86
	QC1	SE202202.029	%	70 - 130%	85
	QC2	SE202202.030	%	70 - 130%	84
	BH9/0.1-0.3	SE202202.009	%	70 - 130%	76
	BH10/0.1-0.3	SE202202.010	%	70 - 130%	78
PCBs in Soil	BH11/0.1-0.3	SE202202.011	%	70 - 130%	72
	BH12/0.1-0.3	SE202202.012	%	70 - 130%	83
	BH13/0.1-0.3	SE202202.013	%	70 - 130%	80
	BH14/0.1-0.3	SE202202.014	%	70 - 130%	80
	BH15/0.1-0.3	SE202202.015	%	70 - 130%	81
	BH16/0.1-0.3	SE202202.016	%	70 - 130%	107
	BH17/0.1-0.3	SE202202.017	%	70 - 130%	77
	BH18/0.1-0.3	SE202202.018	%	70 - 130%	80
	BH19/0.1-0.3	SE202202.019	%	70 - 130%	78
	BH20/0.1-0.3	SE202202.020	%	70 - 130%	82
	BH21/0.1-0.3	SE202202.021	%	70 - 130%	73
	BH22/0.1-0.3	SE202202.022	%	70 - 130%	85
	BH23/0.1-0.3	SE202202.023	%	70 - 130%	81
	BH24/0.1-0.3	SE202202.024	%	70 - 130%	67 ①
	BH25/0.1-0.3	SE202202.025	%	70 - 130%	75
	BH26/0.1-0.3	SE202202.026	%	70 - 130%	76
	BH27/0.1-0.3	SE202202.027	%	70 - 130%	77
PCBs in Soil	SP1/0.1-0.3	SE202202.028	%	70 - 130%	79
	QC1	SE202202.029	%	70 - 130%	83
	QC2	SE202202.030	%	70 - 130%	80
	BH9/0.1-0.3	SE202202.009	%	60 - 130%	95
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH10/0.1-0.3	SE202202.010	%	60 - 130%	89
	BH11/0.1-0.3	SE202202.011	%	60 - 130%	89
	BH12/0.1-0.3	SE202202.012	%	60 - 130%	91
	BH13/0.1-0.3	SE202202.013	%	60 - 130%	93
	BH14/0.1-0.3	SE202202.014	%	60 - 130%	91
	BH16/0.1-0.3	SE202202.016	%	60 - 130%	92
	BH17/0.1-0.3	SE202202.017	%	60 - 130%	92
	BH22/0.1-0.3	SE202202.022	%	60 - 130%	89

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

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

PCBs in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH23/0.1-0.3	SE202202.023	%	60 - 130%	87
	BH24/0.1-0.3	SE202202.024	%	60 - 130%	88
	SP1/0.1-0.3	SE202202.028	%	60 - 130%	86
	QC1	SE202202.029	%	60 - 130%	91

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1/0.1-0.3	SE202202.001	%	60 - 130%	99
	BH2/0.1-0.3	SE202202.002	%	60 - 130%	96
	BH3/0.1-0.3	SE202202.003	%	60 - 130%	99
	BH4/0.1-0.3	SE202202.004	%	60 - 130%	101
	BH5/0.1-0.3	SE202202.005	%	60 - 130%	101
	BH6/0.1-0.3	SE202202.006	%	60 - 130%	101
	BH7/0.1-0.3	SE202202.007	%	60 - 130%	101
	BH8/0.1-0.3	SE202202.008	%	60 - 130%	97
	BH9/0.1-0.3	SE202202.009	%	60 - 130%	100
	BH10/0.1-0.3	SE202202.010	%	60 - 130%	103
	BH11/0.1-0.3	SE202202.011	%	60 - 130%	100
	BH12/0.1-0.3	SE202202.012	%	60 - 130%	97
	BH13/0.1-0.3	SE202202.013	%	60 - 130%	98
	BH14/0.1-0.3	SE202202.014	%	60 - 130%	99
	BH15/0.1-0.3	SE202202.015	%	60 - 130%	96
	BH16/0.1-0.3	SE202202.016	%	60 - 130%	85
	BH17/0.1-0.3	SE202202.017	%	60 - 130%	82
	BH18/0.1-0.3	SE202202.018	%	60 - 130%	60
	BH19/0.1-0.3	SE202202.019	%	60 - 130%	56 (1)
	BH20/0.1-0.3	SE202202.020	%	60 - 130%	83
	BH21/0.1-0.3	SE202202.021	%	60 - 130%	78
	BH22/0.1-0.3	SE202202.022	%	60 - 130%	86
	BH23/0.1-0.3	SE202202.023	%	60 - 130%	62
	BH24/0.1-0.3	SE202202.024	%	60 - 130%	81
	BH25/0.1-0.3	SE202202.025	%	60 - 130%	76
	BH26/0.1-0.3	SE202202.026	%	60 - 130%	93
	BH27/0.1-0.3	SE202202.027	%	60 - 130%	87
	SP1/0.1-0.3	SE202202.028	%	60 - 130%	84
	QC1	SE202202.029	%	60 - 130%	88
	QC2	SE202202.030	%	60 - 130%	83
d4-1,2-dichloroethane (Surrogate)	BH1/0.1-0.3	SE202202.001	%	60 - 130%	107
	BH2/0.1-0.3	SE202202.002	%	60 - 130%	109
	BH3/0.1-0.3	SE202202.003	%	60 - 130%	108
	BH4/0.1-0.3	SE202202.004	%	60 - 130%	113
	BH5/0.1-0.3	SE202202.005	%	60 - 130%	115
	BH6/0.1-0.3	SE202202.006	%	60 - 130%	110
	BH7/0.1-0.3	SE202202.007	%	60 - 130%	110
	BH8/0.1-0.3	SE202202.008	%	60 - 130%	107
	BH9/0.1-0.3	SE202202.009	%	60 - 130%	112
	BH10/0.1-0.3	SE202202.010	%	60 - 130%	115
	BH11/0.1-0.3	SE202202.011	%	60 - 130%	112
	BH12/0.1-0.3	SE202202.012	%	60 - 130%	109
	BH13/0.1-0.3	SE202202.013	%	60 - 130%	113
	BH14/0.1-0.3	SE202202.014	%	60 - 130%	112
	BH15/0.1-0.3	SE202202.015	%	60 - 130%	109
	BH16/0.1-0.3	SE202202.016	%	60 - 130%	80
	BH17/0.1-0.3	SE202202.017	%	60 - 130%	81
	BH18/0.1-0.3	SE202202.018	%	60 - 130%	73
	BH19/0.1-0.3	SE202202.019	%	60 - 130%	73
	BH20/0.1-0.3	SE202202.020	%	60 - 130%	81
	BH21/0.1-0.3	SE202202.021	%	60 - 130%	76
	BH22/0.1-0.3	SE202202.022	%	60 - 130%	83
	BH23/0.1-0.3	SE202202.023	%	60 - 130%	72
	BH24/0.1-0.3	SE202202.024	%	60 - 130%	80

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

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

VOC's in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	BH25/0.1-0.3	SE202202.025	%	60 - 130%	76
	BH26/0.1-0.3	SE202202.026	%	60 - 130%	87
	BH27/0.1-0.3	SE202202.027	%	60 - 130%	83
	SP1/0.1-0.3	SE202202.028	%	60 - 130%	84
	QC1	SE202202.029	%	60 - 130%	86
	QC2	SE202202.030	%	60 - 130%	81
d8-toluene (Surrogate)	BH1/0.1-0.3	SE202202.001	%	60 - 130%	105
	BH2/0.1-0.3	SE202202.002	%	60 - 130%	106
	BH3/0.1-0.3	SE202202.003	%	60 - 130%	105
	BH4/0.1-0.3	SE202202.004	%	60 - 130%	110
	BH5/0.1-0.3	SE202202.005	%	60 - 130%	112
	BH6/0.1-0.3	SE202202.006	%	60 - 130%	108
	BH7/0.1-0.3	SE202202.007	%	60 - 130%	107
	BH8/0.1-0.3	SE202202.008	%	60 - 130%	104
	BH9/0.1-0.3	SE202202.009	%	60 - 130%	110
	BH10/0.1-0.3	SE202202.010	%	60 - 130%	113
	BH11/0.1-0.3	SE202202.011	%	60 - 130%	110
	BH12/0.1-0.3	SE202202.012	%	60 - 130%	106
	BH13/0.1-0.3	SE202202.013	%	60 - 130%	110
	BH14/0.1-0.3	SE202202.014	%	60 - 130%	108
	BH15/0.1-0.3	SE202202.015	%	60 - 130%	105
	BH16/0.1-0.3	SE202202.016	%	60 - 130%	83
	BH17/0.1-0.3	SE202202.017	%	60 - 130%	83
	BH18/0.1-0.3	SE202202.018	%	60 - 130%	73
	BH19/0.1-0.3	SE202202.019	%	60 - 130%	71
	BH20/0.1-0.3	SE202202.020	%	60 - 130%	85
	BH21/0.1-0.3	SE202202.021	%	60 - 130%	79
	BH22/0.1-0.3	SE202202.022	%	60 - 130%	86
	BH23/0.1-0.3	SE202202.023	%	60 - 130%	72
	BH24/0.1-0.3	SE202202.024	%	60 - 130%	82
	BH25/0.1-0.3	SE202202.025	%	60 - 130%	79
	BH26/0.1-0.3	SE202202.026	%	60 - 130%	88
	BH27/0.1-0.3	SE202202.027	%	60 - 130%	88
	SP1/0.1-0.3	SE202202.028	%	60 - 130%	88
	QC1	SE202202.029	%	60 - 130%	91
	QC2	SE202202.030	%	60 - 130%	86

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH1/0.1-0.3	SE202202.001	%	60 - 130%	99
	BH2/0.1-0.3	SE202202.002	%	60 - 130%	96
	BH3/0.1-0.3	SE202202.003	%	60 - 130%	99
	BH4/0.1-0.3	SE202202.004	%	60 - 130%	101
	BH5/0.1-0.3	SE202202.005	%	60 - 130%	101
	BH6/0.1-0.3	SE202202.006	%	60 - 130%	101
	BH7/0.1-0.3	SE202202.007	%	60 - 130%	101
	BH8/0.1-0.3	SE202202.008	%	60 - 130%	97
	BH9/0.1-0.3	SE202202.009	%	60 - 130%	100
	BH10/0.1-0.3	SE202202.010	%	60 - 130%	103
	BH11/0.1-0.3	SE202202.011	%	60 - 130%	100
	BH12/0.1-0.3	SE202202.012	%	60 - 130%	97
	BH13/0.1-0.3	SE202202.013	%	60 - 130%	98
	BH14/0.1-0.3	SE202202.014	%	60 - 130%	99
	BH15/0.1-0.3	SE202202.015	%	60 - 130%	96
	BH16/0.1-0.3	SE202202.016	%	60 - 130%	85
	BH17/0.1-0.3	SE202202.017	%	60 - 130%	82
	BH18/0.1-0.3	SE202202.018	%	60 - 130%	60
	BH19/0.1-0.3	SE202202.019	%	60 - 130%	56 ⓘ
	BH20/0.1-0.3	SE202202.020	%	60 - 130%	83
	BH21/0.1-0.3	SE202202.021	%	60 - 130%	78
	BH22/0.1-0.3	SE202202.022	%	60 - 130%	86

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

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

Volatile Petroleum Hydrocarbons in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH23/0.1-0.3	SE202202.023	%	60 - 130%	62
	BH24/0.1-0.3	SE202202.024	%	60 - 130%	81
	BH25/0.1-0.3	SE202202.025	%	60 - 130%	76
	BH26/0.1-0.3	SE202202.026	%	60 - 130%	93
	BH27/0.1-0.3	SE202202.027	%	60 - 130%	87
	SP1/0.1-0.3	SE202202.028	%	60 - 130%	84
	QC1	SE202202.029	%	60 - 130%	88
	QC2	SE202202.030	%	60 - 130%	83
d4-1,2-dichloroethane (Surrogate)	BH1/0.1-0.3	SE202202.001	%	60 - 130%	107
	BH2/0.1-0.3	SE202202.002	%	60 - 130%	109
	BH3/0.1-0.3	SE202202.003	%	60 - 130%	108
	BH4/0.1-0.3	SE202202.004	%	60 - 130%	113
	BH5/0.1-0.3	SE202202.005	%	60 - 130%	115
	BH6/0.1-0.3	SE202202.006	%	60 - 130%	110
	BH7/0.1-0.3	SE202202.007	%	60 - 130%	110
	BH8/0.1-0.3	SE202202.008	%	60 - 130%	107
	BH9/0.1-0.3	SE202202.009	%	60 - 130%	112
	BH10/0.1-0.3	SE202202.010	%	60 - 130%	115
	BH11/0.1-0.3	SE202202.011	%	60 - 130%	112
	BH12/0.1-0.3	SE202202.012	%	60 - 130%	109
	BH13/0.1-0.3	SE202202.013	%	60 - 130%	113
	BH14/0.1-0.3	SE202202.014	%	60 - 130%	112
	BH15/0.1-0.3	SE202202.015	%	60 - 130%	109
	BH16/0.1-0.3	SE202202.016	%	60 - 130%	80
	BH17/0.1-0.3	SE202202.017	%	60 - 130%	81
	BH18/0.1-0.3	SE202202.018	%	60 - 130%	73
	BH19/0.1-0.3	SE202202.019	%	60 - 130%	73
	BH20/0.1-0.3	SE202202.020	%	60 - 130%	81
	BH21/0.1-0.3	SE202202.021	%	60 - 130%	76
	BH22/0.1-0.3	SE202202.022	%	60 - 130%	83
	BH23/0.1-0.3	SE202202.023	%	60 - 130%	72
	BH24/0.1-0.3	SE202202.024	%	60 - 130%	80
	BH25/0.1-0.3	SE202202.025	%	60 - 130%	76
	BH26/0.1-0.3	SE202202.026	%	60 - 130%	87
	BH27/0.1-0.3	SE202202.027	%	60 - 130%	83
	SP1/0.1-0.3	SE202202.028	%	60 - 130%	84
	QC1	SE202202.029	%	60 - 130%	86
	QC2	SE202202.030	%	60 - 130%	81
d8-toluene (Surrogate)	BH1/0.1-0.3	SE202202.001	%	60 - 130%	105
	BH2/0.1-0.3	SE202202.002	%	60 - 130%	106
	BH3/0.1-0.3	SE202202.003	%	60 - 130%	105
	BH4/0.1-0.3	SE202202.004	%	60 - 130%	110
	BH5/0.1-0.3	SE202202.005	%	60 - 130%	112
	BH6/0.1-0.3	SE202202.006	%	60 - 130%	108
	BH7/0.1-0.3	SE202202.007	%	60 - 130%	107
	BH8/0.1-0.3	SE202202.008	%	60 - 130%	104
	BH9/0.1-0.3	SE202202.009	%	60 - 130%	110
	BH10/0.1-0.3	SE202202.010	%	60 - 130%	113
	BH11/0.1-0.3	SE202202.011	%	60 - 130%	110
	BH12/0.1-0.3	SE202202.012	%	60 - 130%	106
	BH13/0.1-0.3	SE202202.013	%	60 - 130%	110
	BH14/0.1-0.3	SE202202.014	%	60 - 130%	108
	BH15/0.1-0.3	SE202202.015	%	60 - 130%	105
	BH16/0.1-0.3	SE202202.016	%	60 - 130%	83
	BH17/0.1-0.3	SE202202.017	%	60 - 130%	83
	BH18/0.1-0.3	SE202202.018	%	60 - 130%	73
	BH19/0.1-0.3	SE202202.019	%	60 - 130%	71
	BH20/0.1-0.3	SE202202.020	%	60 - 130%	85
	BH21/0.1-0.3	SE202202.021	%	60 - 130%	79
	BH22/0.1-0.3	SE202202.022	%	60 - 130%	86
	BH23/0.1-0.3	SE202202.023	%	60 - 130%	72

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

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

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	BH24/0.1-0.3	SE202202.024	%	60 - 130%	82
	BH25/0.1-0.3	SE202202.025	%	60 - 130%	79
	BH26/0.1-0.3	SE202202.026	%	60 - 130%	88
	BH27/0.1-0.3	SE202202.027	%	60 - 130%	88
	SP1/0.1-0.3	SE202202.028	%	60 - 130%	88
	QC1	SE202202.029	%	60 - 130%	91
	QC2	SE202202.030	%	60 - 130%	86

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

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

Mercury in Soil

Sample Number	Parameter	Units	LOR	Result
LB192094.001	Mercury	mg/kg	0.05	<0.05
LB192095.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

Sample Number	Parameter	Units	LOR	Result
LB192011.001	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
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	84
LB192012.001	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
	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	83

OP Pesticides in Soil

Sample Number	Parameter	Units	LOR	Result
LB192011.001	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

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 (continued)

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

Sample Number	Parameter	Units	LOR	Result
LB192011.001	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)	%	-
		d14-p-terphenyl (Surrogate)	%	-
				84
				78
LB192012.001	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)	%	-
		d14-p-terphenyl (Surrogate)	%	-
				88
				89

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB192011.001	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)	%	-	80
	2-fluorobiphenyl (Surrogate)	%	-	84
	d14-p-terphenyl (Surrogate)	%	-	78
LB192012.001	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

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
LB192012.001	Surrogates	d5-nitrobenzene (Surrogate)	%	-
		2-fluorobiphenyl (Surrogate)	%	-
		d14-p-terphenyl (Surrogate)	%	-

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB192011.001	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)	%	-
LB192012.001	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)	%	-
				83

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

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

Sample Number	Parameter	Units	LOR	Result
LB192092.001	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
LB192093.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB192011.001	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
LB192012.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

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

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

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

VOC's in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB192008.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
		d4-1,2-dichloroethane (Surrogate)	%	-	105
		d8-toluene (Surrogate)	%	-	102
	Surrogates	Bromofluorobenzene (Surrogate)	%	-	94
		Totals	Total BTEX	mg/kg	0.6
LB192009.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
		d4-1,2-dichloroethane (Surrogate)	%	-	85
		d8-toluene (Surrogate)	%	-	89
	Surrogates	Bromofluorobenzene (Surrogate)	%	-	89
		Totals	Total BTEX	mg/kg	0.6

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB192008.001	Surrogates	TRH C6-C9	mg/kg	20	<20
		d4-1,2-dichloroethane (Surrogate)	%	-	105
LB192009.001	Surrogates	TRH C6-C9	mg/kg	20	<20
		d4-1,2-dichloroethane (Surrogate)	%	-	85

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE202202.010	LB192094.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE202202.015	LB192094.020	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE202202.025	LB192095.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE202202.030	LB192095.020	Mercury	mg/kg	0.05	<0.05	<0.05	142	0

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE202202.010	LB192015.011	% Moisture	%w/w	1	13.7	13.6	37	1
SE202202.015	LB192015.017	% Moisture	%w/w	1	14.1	13.7	37	3
SE202202.025	LB192016.011	% Moisture	%w/w	1	15.3	13.9	37	10
SE202202.030	LB192016.017	% Moisture	%w/w	1	3.1	3.3	61	4

OC Pesticides in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE202202.014	LB192011.021	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	0	200	0
		Alpha BHC	mg/kg	0.1	<0.1	0	200	0
		Lindane	mg/kg	0.1	<0.1	0	200	0
		Heptachlor	mg/kg	0.1	<0.1	0	200	0
		Aldrin	mg/kg	0.1	<0.1	0	200	0
		Beta BHC	mg/kg	0.1	<0.1	0	200	0
		Delta BHC	mg/kg	0.1	<0.1	0	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	0	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	0	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	0	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	0	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	0	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	0	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	0	200	0
		Dieldrin	mg/kg	0.2	<0.2	0	200	0
		Endrin	mg/kg	0.2	<0.2	0	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	0	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	0	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	0	200	0
		p,p'-DDD	mg/kg	0.1	<0.1	0	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	0	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	0	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	0	200	0
		Methoxychlor	mg/kg	0.1	<0.1	0	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	0	200	0
		Isodrin	mg/kg	0.1	<0.1	0	200	0
		Mirex	mg/kg	0.1	<0.1	0	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	0	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.133	30	3
SE202202.029	LB192012.021	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	0	200	0
		Alpha BHC	mg/kg	0.1	<0.1	0	200	0
		Lindane	mg/kg	0.1	<0.1	0	200	0
		Heptachlor	mg/kg	0.1	<0.1	0	200	0
		Aldrin	mg/kg	0.1	<0.1	0	200	0
		Beta BHC	mg/kg	0.1	<0.1	0	200	0
		Delta BHC	mg/kg	0.1	<0.1	0	200	0
		Heptachlor epoxide	mg/kg	0.1	<0.1	0	200	0
		o,p'-DDE	mg/kg	0.1	<0.1	0	200	0
		Alpha Endosulfan	mg/kg	0.2	<0.2	0	200	0
		Gamma Chlordane	mg/kg	0.1	<0.1	0	200	0
		Alpha Chlordane	mg/kg	0.1	<0.1	0	200	0
		trans-Nonachlor	mg/kg	0.1	<0.1	0	200	0
		p,p'-DDE	mg/kg	0.1	<0.1	0	200	0
		Dieldrin	mg/kg	0.2	<0.2	0	200	0
		Endrin	mg/kg	0.2	<0.2	0	200	0
		o,p'-DDD	mg/kg	0.1	<0.1	0	200	0
		o,p'-DDT	mg/kg	0.1	<0.1	0	200	0
		Beta Endosulfan	mg/kg	0.2	<0.2	0	200	0

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

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: $MAD = 100 \times SDL / Mean + LR$

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the 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 %
SE202202.029	LB192012.021	p,p'-DDD	mg/kg	0.1	<0.1	0	200	0
		p,p'-DDT	mg/kg	0.1	<0.1	0	200	0
		Endosulfan sulphate	mg/kg	0.1	<0.1	0	200	0
		Endrin Aldehyde	mg/kg	0.1	<0.1	0	200	0
		Methoxychlor	mg/kg	0.1	<0.1	0	200	0
		Endrin Ketone	mg/kg	0.1	<0.1	0	200	0
		Isodrin	mg/kg	0.1	<0.1	0	200	0
		Mirex	mg/kg	0.1	<0.1	0	200	0
		Total CLP OC Pesticides	mg/kg	1	<1	0	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.133	30
Method: ME-(AU)-[ENV]AN420								

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE202202.015	LB192011.020	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
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30
								2
SE202202.025	LB192012.014	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
								2

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the 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 %
SE202202.025	LB192012.014	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30 13
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30 2
SE202202.030	LB192012.020	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	169	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	153	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	154	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	170	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	169	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	180	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	148	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenz(a,h)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	0.5	30	14
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	8
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	17

PCBs in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE202202.014	LB192011.021	Arochlor 1016	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	0	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	0	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0.133	30	3
SE202202.029	LB192012.021	Arochlor 1016	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	0	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	0	200	0
		Total PCBs (Arochlors)	mg/kg	1	<1	0	200	0
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0.133	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 %
SE202202.010	LB192092.014	Arsenic, As	mg/kg	1	8	8	43	1
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	12	13	34	3
		Copper, Cu	mg/kg	0.5	23	25	32	7
		Nickel, Ni	mg/kg	0.5	7.2	7.5	37	4
		Lead, Pb	mg/kg	1	13	13	38	4
		Zinc, Zn	mg/kg	2	44	45	35	3

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES (continued)
Method: ME-(AU)-[ENV]AN040/AN320

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE202202.015	LB192092.020	Arsenic, As	mg/kg	1	5	5	50	8
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	9.1	9.5	35	4
		Copper, Cu	mg/kg	0.5	16	16	33	2
		Nickel, Ni	mg/kg	0.5	2.2	2.3	52	5
		Lead, Pb	mg/kg	1	15	16	37	8
		Zinc, Zn	mg/kg	2	16	18	42	7
SE202202.025	LB192093.014	Arsenic, As	mg/kg	1	2	2	79	9
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	7.0	6.8	37	3
		Copper, Cu	mg/kg	0.5	17	18	33	3
		Nickel, Ni	mg/kg	0.5	2.1	1.9	55	12
		Lead, Pb	mg/kg	1	13	13	38	1
		Zinc, Zn	mg/kg	2	15	14	44	1
SE202202.030	LB192093.020	Arsenic, As	mg/kg	1	7	6	44	16
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	164	0
		Chromium, Cr	mg/kg	0.5	10	19	33	63 ②
		Copper, Cu	mg/kg	0.5	32	32	32	1
		Nickel, Ni	mg/kg	0.5	8.2	7.7	36	7
		Lead, Pb	mg/kg	1	34	37	33	6
		Zinc, Zn	mg/kg	2	110	120	32	5

TRH (Total Recoverable Hydrocarbons) in Soil
Method: ME-(AU)-[ENV]AN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE202202.010	LB192011.014	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	25	<25	<25	200	0	
			TRH >C10-C16 - Naphthalene (F2)	25	<25	<25	200	0	
			TRH >C16-C34 (F3)	90	<90	<90	200	0	
			TRH >C34-C40 (F4)	120	<120	<120	200	0	
		SE202202.015	TRH C10-C14	20	<20	<20	200	0	
			TRH C15-C28	45	<45	<45	200	0	
			TRH C29-C36	45	<45	<45	200	0	
			TRH C37-C40	100	<100	<100	200	0	
			TRH C10-C36 Total	110	<110	<110	200	0	
			TRH >C10-C40 Total (F bands)	210	<210	<210	200	0	
			TRH F Bands	TRH >C10-C16	25	<25	<25	200	0
				TRH >C10-C16 - Naphthalene (F2)	25	<25	<25	200	0
				TRH >C16-C34 (F3)	90	<90	<90	200	0
				TRH >C34-C40 (F4)	120	<120	<120	200	0
		SE202202.025	TRH C10-C14	20	<20	<20	200	0	
			TRH C15-C28	45	<45	<45	200	0	
			TRH C29-C36	45	<45	<45	200	0	
			TRH C37-C40	100	<100	<100	200	0	
			TRH C10-C36 Total	110	<110	<110	200	0	
			TRH >C10-C40 Total (F bands)	210	<210	<210	200	0	
			TRH F Bands	TRH >C10-C16	25	<25	<25	200	0
				TRH >C10-C16 - Naphthalene (F2)	25	<25	<25	200	0
				TRH >C16-C34 (F3)	90	<90	<90	200	0
				TRH >C34-C40 (F4)	120	<120	<120	200	0
		SE202202.030	TRH C10-C14	20	<20	<20	200	0	
			TRH C15-C28	45	<45	<45	200	0	
			TRH C29-C36	45	<45	<45	200	0	
			TRH C37-C40	100	<100	<100	200	0	
			TRH C10-C36 Total	110	<110	<110	200	0	
			TRH >C10-C40 Total (F bands)	210	<210	<210	200	0	
			TRH F Bands	TRH >C10-C16	25	<25	<25	200	0

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE202202.030	LB192012.020	TRH F Bands	mg/kg	25	<25	<25	200	0
		TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
		TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE202202.010	LB192008.014	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	-	11.5	11.6	50	1
			d8-toluene (Surrogate)	mg/kg	-	11.3	11.3	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.3	10.3	50	0
		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
SE202202.015	LB192008.020	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	-	10.9	10.7	50	1
			d8-toluene (Surrogate)	mg/kg	-	10.5	10.4	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	9.4	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
SE202202.025	LB192009.014	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	-	7.6	7.7	50	1
			d8-toluene (Surrogate)	mg/kg	-	7.9	8.0	50	0
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.6	7.4	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
SE202202.030	LB192009.020	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	-	8.1	8.8	50	8
			d8-toluene (Surrogate)	mg/kg	-	8.6	9.3	50	8
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	8.8	50	6
		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

Volatile Petroleum Hydrocarbons in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE202202.010	LB192008.014	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	-	11.5	11.6	30	1
			d8-toluene (Surrogate)	mg/kg	-	11.3	11.3	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.3	10.3	30	0
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE202202.015	LB192008.020	TRH C6-C10	mg/kg	25	<25	<25	200	0	
		TRH C6-C9	mg/kg	20	<20	<20	200	0	

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the 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 %
SE202202.015	LB192008.020	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.9	10.7	30 1
			d8-toluene (Surrogate)	mg/kg	-	10.5	10.4	30 1
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.6	9.4	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
			TRH C6-C10	mg/kg	25	<25	<25	200 0
SE202202.025	LB192009.014		TRH C6-C9	mg/kg	20	<20	<20	200 0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.6	7.7	30 1
			d8-toluene (Surrogate)	mg/kg	-	7.9	8.0	30 0
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.6	7.4	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	
		TRH C6-C10	mg/kg	25	<25	<25	200 0	
SE202202.030	LB192009.020		TRH C6-C9	mg/kg	20	<20	<20	200 0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.1	8.8	30 8
			d8-toluene (Surrogate)	mg/kg	-	8.6	9.3	30 8
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.3	8.8	30 6
	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	
		TRH C6-C10	mg/kg	25	<25	<25	200 0	



LABORATORY CONTROL SAMPLES

SE202202 R0

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB192094.002	Mercury	mg/kg	0.05	0.23	0.2	70 - 130	113
LB192095.002	Mercury	mg/kg	0.05	0.22	0.2	70 - 130	109

OC Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB192011.002	Heptachlor	mg/kg	0.1	0.3	0.2	60 - 140	126
	Aldrin	mg/kg	0.1	0.3	0.2	60 - 140	125
	Delta BHC	mg/kg	0.1	0.3	0.2	60 - 140	127
	Dieldrin	mg/kg	0.2	0.3	0.2	60 - 140	128
	Endrin	mg/kg	0.2	0.3	0.2	60 - 140	131
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	91
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130
LB192012.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	122
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	124
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	119
	Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	125
	Endrin	mg/kg	0.2	0.2	0.2	60 - 140	121
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	97
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130

OP Pesticides in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB192011.002	Dichlorvos	mg/kg	0.5	1.7	2	60 - 140	85	
	Diazinon (Dimpylate)	mg/kg	0.5	1.7	2	60 - 140	87	
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.7	2	60 - 140	86	
	Ethion	mg/kg	0.2	1.4	2	60 - 140	72	
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	75	
	Surrogates	Dichlorvos	mg/kg	0.5	1.8	2	60 - 140	91
LB192012.002	Diazinon (Dimpylate)	mg/kg	0.5	1.5	2	60 - 140	73	
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.6	2	60 - 140	79	
	Ethion	mg/kg	0.2	1.3	2	60 - 140	67	
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	88
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	80	

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB192011.002	Naphthalene	mg/kg	0.1	3.6	4	60 - 140	91	
	Acenaphthylene	mg/kg	0.1	3.7	4	60 - 140	92	
	Acenaphthene	mg/kg	0.1	3.8	4	60 - 140	94	
	Phenanthrene	mg/kg	0.1	3.7	4	60 - 140	94	
	Anthracene	mg/kg	0.1	3.5	4	60 - 140	88	
	Fluoranthene	mg/kg	0.1	3.4	4	60 - 140	86	
	Pyrene	mg/kg	0.1	3.6	4	60 - 140	91	
	Benzo(a)pyrene	mg/kg	0.1	3.6	4	60 - 140	89	
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	77
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	82	
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	75	
	Surrogates	Naphthalene	mg/kg	0.1	4.2	4	60 - 140	105
	Acenaphthylene	mg/kg	0.1	4.1	4	60 - 140	103	
	Acenaphthene	mg/kg	0.1	4.4	4	60 - 140	110	
LB192012.002	Phenanthrene	mg/kg	0.1	4.4	4	60 - 140	110	
	Anthracene	mg/kg	0.1	4.3	4	60 - 140	107	
	Fluoranthene	mg/kg	0.1	4.0	4	60 - 140	100	
	Pyrene	mg/kg	0.1	4.4	4	60 - 140	109	
	Benzo(a)pyrene	mg/kg	0.1	4.6	4	60 - 140	114	
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	79
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	88	
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	80	

PCBs in Soil

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

Sample Number	Parameter	Units	LOR
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LABORATORY CONTROL SAMPLES

SE202202 R0

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

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

PCBs in Soil (continued)

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB192011.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	88
LB192012.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	89

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB192092.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	107
	Cadmium, Cd	mg/kg	0.3	5.2	5.41	80 - 120	97
	Chromium, Cr	mg/kg	0.5	37	38.31	80 - 120	96
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	108
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	98	89.9	80 - 120	109
LB192093.002	Zinc, Zn	mg/kg	2	290	273	80 - 120	105
	Arsenic, As	mg/kg	1	340	318.22	80 - 120	108
	Cadmium, Cd	mg/kg	0.3	5.3	5.41	80 - 120	98
	Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	99
	Copper, Cu	mg/kg	0.5	320	290	80 - 120	109
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	102
	Lead, Pb	mg/kg	1	99	89.9	80 - 120	110
	Zinc, Zn	mg/kg	2	290	273	80 - 120	107

TRH (Total Recoverable Hydrocarbons) in Soil

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB192011.002	TRH C10-C14	mg/kg	20	43	40	60 - 140	108
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	108
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	75
	TRH F Bands						
	TRH >C10-C16	mg/kg	25	40	40	60 - 140	100
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	103
LB192012.002	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	80
	TRH C10-C14	mg/kg	20	40	40	60 - 140	100
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	90
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	75
	TRH F Bands						
	TRH >C10-C16	mg/kg	25	38	40	60 - 140	95
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	85
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	80

VOC's in Soil

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB192008.002	Monocyclic	Benzene	mg/kg	0.1	3.9	5	60 - 140
	Aromatic	Toluene	mg/kg	0.1	4.1	5	60 - 140
		Ethylbenzene	mg/kg	0.1	4.0	5	60 - 140
		m/p-xylene	mg/kg	0.2	8.1	10	60 - 140
		o-xylene	mg/kg	0.1	4.0	5	60 - 140
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.7	10	70 - 130
		d8-toluene (Surrogate)	mg/kg	-	11.6	10	70 - 130
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.8	10	70 - 130
	Monocyclic	Benzene	mg/kg	0.1	4.3	5	60 - 140
	Aromatic	Toluene	mg/kg	0.1	4.3	5	60 - 140
LB192009.002		Ethylbenzene	mg/kg	0.1	4.2	5	60 - 140
		m/p-xylene	mg/kg	0.2	8.4	10	60 - 140
		o-xylene	mg/kg	0.1	4.2	5	60 - 140
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.0	10	70 - 130
		d8-toluene (Surrogate)	mg/kg	-	9.4	10	70 - 130
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130
	Monocyclic	Benzene	mg/kg	0.1	4.3	5	60 - 140
	Aromatic	Toluene	mg/kg	0.1	4.3	5	60 - 140
		Ethylbenzene	mg/kg	0.1	4.2	5	60 - 140
		m/p-xylene	mg/kg	0.2	8.4	10	60 - 140

Volatile Petroleum Hydrocarbons in Soil

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB192008.002	TRH C6-C10	mg/kg	25	86	92.5	60 - 140	93
	TRH C6-C9	mg/kg	20	75	80	60 - 140	93
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.7	10	70 - 130
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.8	10	70 - 130
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	62	62.5	60 - 140
		TRH C6-C10	mg/kg	25	67	92.5	60 - 140
LB192009.002							72

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.

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB192009.002	TRH C6-C9	mg/kg	20	58	80	60 - 140	72
Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.0	10	70 - 130	90
	Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	41	62.5	60 - 140	66

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

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

Mercury in Soil

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE202202.001	LB192094.004	Mercury	mg/kg	0.05	0.20	<0.05	0.2	97
SE202202.016	LB192095.004	Mercury	mg/kg	0.05	0.18	<0.05	0.2	87

OP Pesticides in Soil

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE202202.016	LB192012.004	Dichlorvos	mg/kg	0.5	1.5	<0.5	2	74
		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	1.8	<0.2	2	88
		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	1.9	<0.2	2	95
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
		Total OP Pesticides*	mg/kg	1.7	7.4	<1.7	-	-
		Surrogates	mg/kg	-	0.5	0.6	-	90
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.6	-	88
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.6	-	88

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE202202.016	LB192012.004	Naphthalene	mg/kg	0.1	4.4	<0.1	4	110
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	4.9	<0.1	4	123
		Acenaphthene	mg/kg	0.1	4.6	<0.1	4	114
		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	4.6	<0.1	4	116
		Anthracene	mg/kg	0.1	4.4	<0.1	4	110
		Fluoranthene	mg/kg	0.1	4.7	<0.1	4	117
		Pyrene	mg/kg	0.1	4.9	<0.1	4	123
		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	5.0	<0.1	4	125
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
		Dibenz(a,h)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	5.0	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	5.1	<0.3	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	5.1	<0.2	-	-
		Total PAH (18)	mg/kg	0.8	38	<0.8	-	-
		Surrogates	mg/kg	-	0.4	0.5	-	86
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.6	-	90
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.6	-	88

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE202202.001	LB192092.004	Arsenic, As	mg/kg	1	47	2	50	91
		Cadmium, Cd	mg/kg	0.3	44	<0.3	50	88
		Chromium, Cr	mg/kg	0.5	51	6.8	50	89
		Copper, Cu	mg/kg	0.5	62	17	50	89
		Nickel, Ni	mg/kg	0.5	49	3.7	50	90
		Lead, Pb	mg/kg	1	52	10	50	85
		Zinc, Zn	mg/kg	2	67	22	50	89
SE202202.016	LB192093.004	Arsenic, As	mg/kg	1	46	3	50	86
		Cadmium, Cd	mg/kg	0.3	42	<0.3	50	83
		Chromium, Cr	mg/kg	0.5	53	10	50	84
		Copper, Cu	mg/kg	0.5	76	37	50	78

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

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

Total Recoverable 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%
SE202202.016	LB192093.004	Nickel, Ni	mg/kg	0.5	50	8.3	50	84
		Lead, Pb	mg/kg	1	60	23	50	75
		Zinc, Zn	mg/kg	2	92	55	50	74

TRH (Total Recoverable Hydrocarbons) in Soil
Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE202202.001	LB192011.004	TRH C10-C14	mg/kg	20	54	<20	40	135	
		TRH C15-C28	mg/kg	45	<45	<45	40	105	
		TRH C29-C36	mg/kg	45	<45	<45	40	83	
		TRH C37-C40	mg/kg	100	<100	<100	-	-	
		TRH C10-C36 Total	mg/kg	110	<110	<110	-	-	
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-	
		TRH F Bands	TRH >C10-C16	mg/kg	25	50	<25	40	125
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	50	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	98
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-
SE202202.016	LB192012.004	TRH C10-C14	mg/kg	20	44	<20	40	110	
		TRH C15-C28	mg/kg	45	<45	<45	40	88	
		TRH C29-C36	mg/kg	45	<45	<45	40	70	
		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	40	<25	40	100
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	26	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	80
			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%	
SE202202.001	LB192008.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	3.4	<0.1	5	68
			Toluene	mg/kg	0.1	3.6	<0.1	5	72
			Ethylbenzene	mg/kg	0.1	3.7	<0.1	5	74
			m/p-xylene	mg/kg	0.2	7.5	<0.2	10	74
			o-xylene	mg/kg	0.1	4.0	<0.1	5	79
		Polycyclic Surrogates	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.4	10.7	10	114
			d8-toluene (Surrogate)	mg/kg	-	11.4	10.5	10	114
		Totals	Bromofluorobenzene (Surrogate)	mg/kg	-	12.3	9.9	10	123
			Total Xylenes	mg/kg	0.3	11	<0.3	-	-
SE202202.016	LB192009.004	Monocyclic Aromatic	Total BTEX	mg/kg	0.6	22	<0.6	-	-
			Benzene	mg/kg	0.1	4.2	<0.1	5	83
			Toluene	mg/kg	0.1	4.2	<0.1	5	84
			Ethylbenzene	mg/kg	0.1	4.1	<0.1	5	82
			m/p-xylene	mg/kg	0.2	8.4	<0.2	10	83
		Polycyclic Surrogates	o-xylene	mg/kg	0.1	4.1	<0.1	5	82
			Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	8.0	10	86
		Totals	d8-toluene (Surrogate)	mg/kg	-	9.0	8.3	10	90
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	8.5	10	88

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%	
SE202202.001	LB192008.004	Surrogates	TRH C6-C10	mg/kg	25	71	<25	92.5	76
			TRH C6-C9	mg/kg	20	62	<20	80	77
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	11.4	10.7	10	114
			d8-toluene (Surrogate)	mg/kg	-	11.4	10.5	10	114
			Bromofluorobenzene (Surrogate)	mg/kg	-	12.3	9.9	-	123
		VPH F Bands	Benzene (F0)	mg/kg	0.1	3.4	<0.1	-	-
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	48	<25	62.5	77
			TRH C6-C10	mg/kg	25	63	<25	92.5	68
SE202202.016	LB192009.004								

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

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

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE202202.016	LB192009.004	TRH C6-C9	mg/kg	20	54	<20	80	68
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	8.0	10	86
		d8-toluene (Surrogate)	mg/kg	-	9.0	8.3	10	90
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	8.5	-	88
	VPH F Bands	Benzene (F0)	mg/kg	0.1	4.2	<0.1	-	-
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	38	<25	62.5	61

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

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

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

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

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

No matrix spike duplicates were required for this job.

S

id samples expressed on a dry weight basis.

Criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found at [https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf](https://www.sgs.com.au/~media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf)

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.

- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
- ④ Recovery failed acceptance criteria due to matrix interference.
- ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- ⑥ LOR was raised due to sample matrix interference.
- ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
- ⑩ LOR was raised due to high conductivity of the sample (required dilution).
- † Refer to relevant report comments for further information.

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SE202202

Chain of Custody Record

Project No: LG1948.01				Lab: SGS								ANALYSIS REQUIRED										
Project/Site: 104 Fifteenth Avenue, West Hoxton, NSW				Lab Quote No: LGC141106060																		
Sampled By: Gonzalo Parra				Lab Batch No:																		
Phone: 0415 726 951				Date Results Required: Standard TAT																		
Page 1 of 2				Sample Disposal After:																		
Number of Eskies: 2				CONTAINER TYPE & PRESERVATIVE																		
LAB ID	SAMPLE ID	DATE	MATRIX	Soil			Water									CL 17: TRH C6-C40/BTEXN/PAH/OC/OP/PCB/8 Metals	CL 10: TRH C6-C40/BTEXN/PAH/8	CL 7: TRH C6-C40/BTEXN/8 Metals	Asbestos	HOLD		
				0.1-0.2 L Glass jar, unpreserved	- Plastic bag	0.1-0.2 L Plastic, Filtered, HNO3	0.5-1.0 L Amber glass, unpreserve d	40-50ml unpreserve d	0.25-1 L Plastic, unpreserve d	0.2-1.0L Plastic, sterile												
1	BH1/0.1-0.3	28/1/20	Soil	1	1										X	X						
	BH1/0.5	28/1/20	Soil	1															X			
2	BH2/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH2/0.5	28/1/20	Soil	1															X			
3	BH3/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH3/0.5	28/1/20	Soil	1															X			
4	BH4/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH4/0.5	28/1/20	Soil	1															X			
5	BH5/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH5/0.5	28/1/20	Soil	1															X			
6	BH6/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH6/0.5	28/1/20	Soil	1															X			
7	BH7/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH7/0.5	28/1/20	Soil	1															X			
8	BH8/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH8/0.5	28/1/20	Soil	1															X			
9	BH9/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH9/0.5	28/1/20	Soil	1															X			
10	BH10/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH10/0.5	28/1/20	Soil	1															X			
11	BH11/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH11/0.5	28/1/20	Soil	1															X			
12	BH12/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH12/0.5	28/1/20	Soil	1															X			
13	BH13/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH13/0.5	28/1/20	Soil	1															X			
14	BH14/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH14/0.5	28/1/20	Soil	1															X			
15	BH15/0.1-0.3	28/1/20	Soil	1	1											X	X					
	BH15/0.5	28/1/20	Soil	1															X			
				TOTALS	30	15																
Relinquished By: Gonzalo Parra NAME				Received By: NAME Alex J SIGNATURE				Custody Seals Intact 16.45 Samples Received Chilled DATE 28/6 Method of Shipment								Y <input checked="" type="checkbox"/> N <input type="checkbox"/>						
NOTES: _____																						



Chain of Custody Record

Project No: LG1948.01				Lab: SGS								ANALYSIS REQUIRED						HOLD							
Project/Site: 104 Fifteenth Avenue, West Hoxton, NSW				Lab Quote No: LGC141106060																					
Sampled By: Gonzalo Parra				Lab Batch No:																					
Phone: 0415 726 951				Date Results Required: Standard TAT																					
Page 2 of 2				Sample Disposal After:																					
Number of Eskies: 2				CONTAINER TYPE & PRESERVATIVE																					
LAB ID	SAMPLE ID	DATE	MATRIX	Soil			Water					CL 17: TRH C6-C40/BTEXN/PAH/OC/OP/PCB/8 Metals	CL 10: TRH C6-C40/BTEXN/PAH/8	CL 7: TRH C6-C40/BTEXN/8 Metals	Asbestos IP										
				0.1-0.2 L	-	0.1-0.2 L	0.5-1.0 L	40-50ml	0.25-1 L	0.2-1.0L															
16	BH16/0.1-0.3	28/1/20	Soil	1	1	Glass jar, unpreserved	Plastic bag	Amber glass, unpreserved	Plastic, unpreserved	Plastic, sterile				X											
	BH16/0.5	28/1/20	Soil	1																					
17	BH17/0.1-0.3	28/1/20	Soil	1	1									X	X										
	BH17/0.5	28/1/20	Soil	1																					
18	BH18/0.1-0.3	28/1/20	Soil	1	1									X	X										
	BH18/0.5	28/1/20	Soil	1																					
19	BH19/0.1-0.3	28/1/20	Soil	1	1									X	X										
	BH19/0.5	28/1/20	Soil	1																					
20	BH20/0.1-0.3	28/1/20	Soil	1	1									X	X										
	BH20/0.5	28/1/20	Soil	1																					
21	BH21/0.1-0.3	28/1/20	Soil	1	1									X	X										
	BH21/0.5	28/1/20	Soil	1																					
22	BH22/0.1-0.3	28/1/20	Soil	1	1									X	X										
	BH22/0.5	28/1/20	Soil	1																					
23	BH23/0.1-0.3	28/1/20	Soil	1	1									X	X										
	BH23/0.5	28/1/20	Soil	1																					
24	BH24/0.1-0.3	28/1/20	Soil	1	1									X	X										
	BH24/0.5	28/1/20	Soil	1																					
25	BH25/0.1-0.3	28/1/20	Soil	1	1									■ X	X										
	BH25/0.5	28/1/20	Soil	1																					
26	BH26/0.1-0.3	28/1/20	Soil	1	1									X	X										
	BH26/0.5	28/1/20	Soil	1																					
27	BH27/0.1-0.3	28/1/20	Soil	1	1									X	X										
	BH27/0.5	28/1/20	Soil	1																					
28	SPI /0.1-0.3	28/1/20	Soil	1	1									■ ■	X										
	██████████	██████████	Soil	■																					
29	QC1	28/1/20	Soil	1	1									X	X										
30	QC2	28/1/20	Soil	1										X											
31	PAC1	28/1/20	Cement	1												X									
32	PAC2	28/1/20	Cement	1											X										
				TOTALS	28	14																			
Relinquished By: Gonzalo Parra NAME				Received By: 28/1/20 SIGNATURE				Custody Seals Intact Samples Received Chilled								Y N									
																Y N									

NOTES:



SAMPLE RECEIPT ADVICE

SE202202

CLIENT DETAILS

Contact Gonzalo Parra
Client LAND AND GROUNDWATER CONSULTING PTY LTD
Address 131 B Riverview Road
NSW 2204

Telephone 61 2 95598424
Facsimile (Not specified)
Email gparra@lgconsult.com.au

Project 104 Fifteenth Avenue, West Hoxton, NSW
Order Number LG1948.01
Samples 32

LABORATORY DETAILS

Manager Huong Crawford
Laboratory SGS Alexandria Environmental
Address Unit 16, 33 Maddox St
Alexandria NSW 2015

Telephone +61 2 8594 0400
Facsimile +61 2 8594 0499
Email au.environmental.sydney@sgs.com

Samples Received Tue 28/1/2020
Report Due Tue 4/2/2020
SGS Reference SE202202

SUBMISSION DETAILS

This is to confirm that 32 samples were received on Tuesday 28/1/2020. Results are expected to be ready by COB Tuesday 4/2/2020. Please quote SGS reference SE202202 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	30 Soil, 2 Material
Date documentation received	28/1/2020	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	20°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

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

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

CLIENT DETAILS

 Client **LAND AND GROUNDWATER CONSULTING PTY LTD**

 Project **104 Fifteenth Avenue, West Hoxton, 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	BH1/0.1-0.3	-	-	-	-	7	10	11	7
002	BH2/0.1-0.3	-	-	-	-	7	10	11	7
003	BH3/0.1-0.3	-	-	-	-	7	10	11	7
004	BH4/0.1-0.3	-	-	-	-	7	10	11	7
005	BH5/0.1-0.3	-	-	-	-	7	10	11	7
006	BH6/0.1-0.3	-	-	-	-	7	10	11	7
007	BH7/0.1-0.3	-	-	-	-	7	10	11	7
008	BH8/0.1-0.3	-	-	-	-	7	10	11	7
009	BH9/0.1-0.3	29	14	26	11	7	10	11	7
010	BH10/0.1-0.3	29	14	26	11	7	10	11	7
011	BH11/0.1-0.3	29	14	26	11	7	10	11	7
012	BH12/0.1-0.3	29	14	26	11	7	10	11	7
013	BH13/0.1-0.3	29	14	26	11	7	10	11	7
014	BH14/0.1-0.3	29	14	26	11	7	10	11	7
015	BH15/0.1-0.3	-	-	26	-	7	10	11	7
016	BH16/0.1-0.3	29	14	26	11	7	10	11	7
017	BH17/0.1-0.3	29	14	26	11	7	10	11	7
018	BH18/0.1-0.3	-	-	26	-	7	10	11	7
019	BH19/0.1-0.3	-	-	26	-	7	10	11	7
020	BH20/0.1-0.3	-	-	26	-	7	10	11	7
021	BH21/0.1-0.3	-	-	26	-	7	10	11	7
022	BH22/0.1-0.3	29	14	26	11	7	10	11	7
023	BH23/0.1-0.3	29	14	26	11	7	10	11	7
024	BH24/0.1-0.3	29	14	26	11	7	10	11	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



SAMPLE RECEIPT ADVICE

SE202202

CLIENT DETAILS

Client LAND AND GROUNDWATER CONSULTING PTY LTD

Project 104 Fifteenth Avenue, West Hoxton, 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	BH25/0.1-0.3	-	-	26	-	7	10	11	7
026	BH26/0.1-0.3	-	-	26	-	7	10	11	7
027	BH27/0.1-0.3	-	-	26	-	7	10	11	7
028	SP1/0.1-0.3	29	14	26	11	7	10	11	7
029	QC1	29	14	26	11	7	10	11	7
030	QC2	-	-	26	-	7	10	11	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

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Testing as per this table shall commence immediately unless the client intervenes with a correction .

CLIENT DETAILS

Client LAND AND GROUNDWATER CONSULTING PTY LTD

Project 104 Fifteenth Avenue, West Hoxton, NSW

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Mercury in Soil	Moisture Content
001	BH1/0.1-0.3	2	1	1
002	BH2/0.1-0.3	2	1	1
003	BH3/0.1-0.3	2	1	1
004	BH4/0.1-0.3	2	1	1
005	BH5/0.1-0.3	2	1	1
006	BH6/0.1-0.3	2	1	1
007	BH7/0.1-0.3	2	1	1
008	BH8/0.1-0.3	2	1	1
009	BH9/0.1-0.3	2	1	1
010	BH10/0.1-0.3	2	1	1
011	BH11/0.1-0.3	2	1	1
012	BH12/0.1-0.3	2	1	1
013	BH13/0.1-0.3	2	1	1
014	BH14/0.1-0.3	2	1	1
015	BH15/0.1-0.3	2	1	1
016	BH16/0.1-0.3	2	1	1
017	BH17/0.1-0.3	2	1	1
018	BH18/0.1-0.3	2	1	1
019	BH19/0.1-0.3	2	1	1
020	BH20/0.1-0.3	2	1	1
021	BH21/0.1-0.3	2	1	1
022	BH22/0.1-0.3	2	1	1
023	BH23/0.1-0.3	2	1	1
024	BH24/0.1-0.3	2	1	1

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



SAMPLE RECEIPT ADVICE

SE202202

CLIENT DETAILS

Client LAND AND GROUNDWATER CONSULTING PTY LTD

Project 104 Fifteenth Avenue, West Hoxton, NSW

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre ID in bulk materials	Fibre Identification in soil	Mercury in Soil	Moisture Content
025	BH25/0.1-0.3	-	2	1	1
026	BH26/0.1-0.3	-	2	1	1
027	BH27/0.1-0.3	-	2	1	1
028	SP1/0.1-0.3	-	2	1	1
029	QC1	-	2	1	1
030	QC2	-	-	1	1
031	PAC1	1	-	-	-
032	PAC2	1	-	-	-

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details .

Testing as per this table shall commence immediately unless the client intervenes with a correction .



ANALYTICAL REPORT



Accreditation No. 2562

CLIENT DETAILS

LABORATORY DETAILS

Contact	Gonzalo Parra	Manager	Huong Crawford
Client	LAND AND GROUNDWATER CONSULTING PTY LTD	Laboratory	SGS Alexandria Environmental
Address	131 B Riverview Road NSW 2204	Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	61 2 95598424	Telephone	+61 2 8594 0400
Facsimile	(Not specified)	Facsimile	+61 2 8594 0499
Email	gparra@lgconsult.com.au	Email	au.environmental.sydney@sgs.com
Project	104 Fifteenth Avenue, West Hoxton, NSW	SGS Reference	SE202202 R0
Order Number	LG1948.01	Date Received	28 Jan 2020
Samples	31	Date Reported	04 Feb 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.

A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Environmental Services recommends supplying approximately 50-100g of sample in a separate container.

Sample # 5: Asbestos found as approx 20x10x4mm fibrous mass.

Sample # 6 : Asbestos found in approx 10x6x2mm cement sheet fragments.

Asbestos analysed by Approved Identifiers Yusuf Kuthpuдин and Ravee Sivasubramaniam.

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Dong LIANG
Metals/Inorganics Team Leader

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*
SE202202.001	BH1/0.1-0.3	Soil	190g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.002	BH2/0.1-0.3	Soil	159g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.003	BH3/0.1-0.3	Soil	149g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.004	BH4/0.1-0.3	Soil	164g Clay, Soil, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.005	BH5/0.1-0.3	Soil	178g Clay, Soil, Rocks	28 Jan 2020	Amosite Asbestos Found	>0.01
SE202202.006	BH6/0.1-0.3	Soil	150g Clay, Sand, Soil, Rocks	28 Jan 2020	Chrysotile Asbestos Found Organic Fibres Detected	>0.01
SE202202.007	BH7/0.1-0.3	Soil	169g Clay, Soil, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.008	BH8/0.1-0.3	Soil	155g Clay, Soil, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.009	BH9/0.1-0.3	Soil	180g Clay, Soil, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.010	BH10/0.1-0.3	Soil	181g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.011	BH11/0.1-0.3	Soil	144g Clay, Soil, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.012	BH12/0.1-0.3	Soil	201g Clay, Soil, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.013	BH13/0.1-0.3	Soil	195g Clay, Sand, Soil, Rocks	28 Jan 2020	No Asbestos Found Organic Fibres Detected	<0.01
SE202202.014	BH14/0.1-0.3	Soil	168g Clay, Sand, Soil, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.015	BH15/0.1-0.3	Soil	227g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.016	BH16/0.1-0.3	Soil	177g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.017	BH17/0.1-0.3	Soil	127g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.018	BH18/0.1-0.3	Soil	144g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.019	BH19/0.1-0.3	Soil	160g Clay, Sand, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.020	BH20/0.1-0.3	Soil	181g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.021	BH21/0.1-0.3	Soil	196g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.022	BH22/0.1-0.3	Soil	181g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.023	BH23/0.1-0.3	Soil	181g Clay, Sand, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.024	BH24/0.1-0.3	Soil	173g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.025	BH25/0.1-0.3	Soil	169g Clay, Soil, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.026	BH26/0.1-0.3	Soil	220g Clay, Soil, Rocks	28 Jan 2020	No Asbestos Found	<0.01



ANALYTICAL REPORT

SE202202 R0

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est. %w/w*
SE202202.027	BH27/0.1-0.3	Soil	203g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01
SE202202.028	SP1/0.1-0.3	Soil	153g Sand, Soil, Rocks	28 Jan 2020	No Asbestos Found Organic Fibres Detected	<0.01
SE202202.029	QC1	Soil	201g Clay, Rocks	28 Jan 2020	No Asbestos Found	<0.01



ANALYTICAL REPORT

SE202202 R0

RESULTS

Fibre ID in bulk materials

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est. %w/w*
SE202202.031	PAC1	Other	20x15x4mm Cement sheet fragment	28 Jan 2020	Amosite & Chrysotile Asbestos Detected	
SE202202.032	PAC2	Other	20x15x4mm Cement sheet fragment	28 Jan 2020	Amosite & Chrysotile Asbestos Detected	

METHOD

METHODOLOGY SUMMARY

AN602

Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.

AN602

Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) 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.

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

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

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

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

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

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ANALYTICAL REPORT



Accreditation No. 2562

CLIENT DETAILS

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Project **104 Fifteenth Avenue, West Hoxton, NSW**
Order Number **LG1948.01**
Samples **32**

LABORATORY DETAILS

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SGS Reference **SE202202 R0**
Date Received **28/1/2020**
Date Reported **4/2/2020**

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.

A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Environmental Services recommends supplying approximately 50-100g of sample in a separate container.

Sample # 5: Asbestos found as approx 20x10x4mm fibrous mass.

Sample # 6 : Asbestos found in approx 10x6x2mm cement sheet fragments.

Asbestos analysed by Approved Identifiers Yusuf Kuthpuddin and Ravee Sivasubramaniam .

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Dong LIANG
Metals/Inorganics Team Leader

Ly Kim HA
Organic Section Head

Ravee SIVASUBRAMANIAM
Hygiene Team Leader



ANALYTICAL RESULTS

SE202202 R0

VOC's in Soil [AN433] Tested: 29/1/2020

PARAMETER	UOM	LOR	BH1/0.1-0.3	BH2/0.1-0.3	BH3/0.1-0.3	BH4/0.1-0.3	BH5/0.1-0.3
			SOIL - 28/1/2020 SE202202.001	SOIL - 28/1/2020 SE202202.002	SOIL - 28/1/2020 SE202202.003	SOIL - 28/1/2020 SE202202.004	SOIL - 28/1/2020 SE202202.005
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	BH6/0.1-0.3	BH7/0.1-0.3	BH8/0.1-0.3	BH9/0.1-0.3	BH10/0.1-0.3
			SOIL - 28/1/2020 SE202202.006	SOIL - 28/1/2020 SE202202.007	SOIL - 28/1/2020 SE202202.008	SOIL - 28/1/2020 SE202202.009	SOIL - 28/1/2020 SE202202.010
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	0.4	<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	0.5	<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	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3	BH14/0.1-0.3	BH15/0.1-0.3
			SOIL - 28/1/2020 SE202202.011	SOIL - 28/1/2020 SE202202.012	SOIL - 28/1/2020 SE202202.013	SOIL - 28/1/2020 SE202202.014	SOIL - 28/1/2020 SE202202.015
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	BH16/0.1-0.3	BH17/0.1-0.3	BH18/0.1-0.3	BH19/0.1-0.3	BH20/0.1-0.3
			SOIL - 28/1/2020 SE202202.016	SOIL - 28/1/2020 SE202202.017	SOIL - 28/1/2020 SE202202.018	SOIL - 28/1/2020 SE202202.019	SOIL - 28/1/2020 SE202202.020
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: 29/1/2020 (continued)

PARAMETER	UOM	LOR	BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3	BH24/0.1-0.3	BH25/0.1-0.3
			SOIL 28/1/2020 SE202202.021	SOIL 28/1/2020 SE202202.022	SOIL 28/1/2020 SE202202.023	SOIL 28/1/2020 SE202202.024	SOIL 28/1/2020 SE202202.025
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	BH26/0.1-0.3	BH27/0.1-0.3	SP1/0.1-0.3	QC1	QC2
			SOIL 28/1/2020 SE202202.026	SOIL 28/1/2020 SE202202.027	SOIL 28/1/2020 SE202202.028	SOIL 28/1/2020 SE202202.029	SOIL 28/1/2020 SE202202.030
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



ANALYTICAL RESULTS

SE202202 R0

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 29/1/2020

PARAMETER	UOM	LOR	BH1/0.1-0.3	BH2/0.1-0.3	BH3/0.1-0.3	BH4/0.1-0.3	BH5/0.1-0.3
			SOIL - 28/1/2020 SE202202.001	SOIL - 28/1/2020 SE202202.002	SOIL - 28/1/2020 SE202202.003	SOIL - 28/1/2020 SE202202.004	SOIL - 28/1/2020 SE202202.005
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	BH6/0.1-0.3	BH7/0.1-0.3	BH8/0.1-0.3	BH9/0.1-0.3	BH10/0.1-0.3
			SOIL - 28/1/2020 SE202202.006	SOIL - 28/1/2020 SE202202.007	SOIL - 28/1/2020 SE202202.008	SOIL - 28/1/2020 SE202202.009	SOIL - 28/1/2020 SE202202.010
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	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3	BH14/0.1-0.3	BH15/0.1-0.3
			SOIL - 28/1/2020 SE202202.011	SOIL - 28/1/2020 SE202202.012	SOIL - 28/1/2020 SE202202.013	SOIL - 28/1/2020 SE202202.014	SOIL - 28/1/2020 SE202202.015
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	BH16/0.1-0.3	BH17/0.1-0.3	BH18/0.1-0.3	BH19/0.1-0.3	BH20/0.1-0.3
			SOIL - 28/1/2020 SE202202.016	SOIL - 28/1/2020 SE202202.017	SOIL - 28/1/2020 SE202202.018	SOIL - 28/1/2020 SE202202.019	SOIL - 28/1/2020 SE202202.020
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	BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3	BH24/0.1-0.3	BH25/0.1-0.3
			SOIL - 28/1/2020 SE202202.021	SOIL - 28/1/2020 SE202202.022	SOIL - 28/1/2020 SE202202.023	SOIL - 28/1/2020 SE202202.024	SOIL - 28/1/2020 SE202202.025
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	BH26/0.1-0.3	BH27/0.1-0.3	SP1/0.1-0.3	QC1	QC2
			SOIL - 28/1/2020 SE202202.026	SOIL - 28/1/2020 SE202202.027	SOIL - 28/1/2020 SE202202.028	SOIL - 28/1/2020 SE202202.029	SOIL - 28/1/2020 SE202202.030
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

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 29/1/2020

PARAMETER	UOM	LOR	BH1/0.1-0.3	BH2/0.1-0.3	BH3/0.1-0.3	BH4/0.1-0.3	BH5/0.1-0.3
			SOIL 28/1/2020 SE202202.001	SOIL 28/1/2020 SE202202.002	SOIL 28/1/2020 SE202202.003	SOIL 28/1/2020 SE202202.004	SOIL 28/1/2020 SE202202.005
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	BH6/0.1-0.3	BH7/0.1-0.3	BH8/0.1-0.3	BH9/0.1-0.3	BH10/0.1-0.3
			SOIL 28/1/2020 SE202202.006	SOIL 28/1/2020 SE202202.007	SOIL 28/1/2020 SE202202.008	SOIL 28/1/2020 SE202202.009	SOIL 28/1/2020 SE202202.010
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	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3	BH14/0.1-0.3	BH15/0.1-0.3
			SOIL 28/1/2020 SE202202.011	SOIL 28/1/2020 SE202202.012	SOIL 28/1/2020 SE202202.013	SOIL 28/1/2020 SE202202.014	SOIL 28/1/2020 SE202202.015
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



ANALYTICAL RESULTS

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TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 29/1/2020 (continued)

PARAMETER	UOM	LOR	BH16/0.1-0.3	BH17/0.1-0.3	BH18/0.1-0.3	BH19/0.1-0.3	BH20/0.1-0.3
			SOIL 28/1/2020 SE202202.016	SOIL 28/1/2020 SE202202.017	SOIL 28/1/2020 SE202202.018	SOIL 28/1/2020 SE202202.019	SOIL 28/1/2020 SE202202.020
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	BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3	BH24/0.1-0.3	BH25/0.1-0.3
			SOIL 28/1/2020 SE202202.021	SOIL 28/1/2020 SE202202.022	SOIL 28/1/2020 SE202202.023	SOIL 28/1/2020 SE202202.024	SOIL 28/1/2020 SE202202.025
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	<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	BH26/0.1-0.3	BH27/0.1-0.3	SP1/0.1-0.3	QC1	QC2
			SOIL 28/1/2020 SE202202.026	SOIL 28/1/2020 SE202202.027	SOIL 28/1/2020 SE202202.028	SOIL 28/1/2020 SE202202.029	SOIL 28/1/2020 SE202202.030
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 29/1/2020

PARAMETER	UOM	LOR	BH9/0.1-0.3	BH10/0.1-0.3	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3
			SOIL 28/1/2020 SE202202.009	SOIL 28/1/2020 SE202202.010	SOIL 28/1/2020 SE202202.011	SOIL 28/1/2020 SE202202.012	SOIL 28/1/2020 SE202202.013
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	BH14/0.1-0.3	BH15/0.1-0.3	BH16/0.1-0.3	BH17/0.1-0.3	BH18/0.1-0.3
			SOIL 28/1/2020 SE202202.014	SOIL 28/1/2020 SE202202.015	SOIL 28/1/2020 SE202202.016	SOIL 28/1/2020 SE202202.017	SOIL 28/1/2020 SE202202.018
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 29/1/2020 (continued)

PARAMETER	UOM	LOR	BH19/0.1-0.3	BH20/0.1-0.3	BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3
			SOIL 28/1/2020 SE202202.019	SOIL 28/1/2020 SE202202.020	SOIL 28/1/2020 SE202202.021	SOIL 28/1/2020 SE202202.022	SOIL 28/1/2020 SE202202.023
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<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	BH24/0.1-0.3	BH25/0.1-0.3	BH26/0.1-0.3	BH27/0.1-0.3	SP1/0.1-0.3
			SOIL 28/1/2020 SE202202.024	SOIL 28/1/2020 SE202202.025	SOIL 28/1/2020 SE202202.026	SOIL 28/1/2020 SE202202.027	SOIL 28/1/2020 SE202202.028
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: 29/1/2020 (continued)

PARAMETER	UOM	LOR	QC1	QC2
			SOIL 28/1/2020 SE202202.029	SOIL 28/1/2020 SE202202.030
Naphthalene	mg/kg	0.1	<0.1	<0.1
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	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1
Benzo(b&i)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	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenz(a,h)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	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8



ANALYTICAL RESULTS

SE202202 R0

OC Pesticides in Soil [AN420] Tested: 29/1/2020

PARAMETER	UOM	LOR	BH1/0.1-0.3	SOIL	BH2/0.1-0.3	SOIL	BH3/0.1-0.3	SOIL	BH4/0.1-0.3	SOIL	BH5/0.1-0.3
			28/1/2020 SE202202.001	-	28/1/2020 SE202202.002	-	28/1/2020 SE202202.003	-	28/1/2020 SE202202.004	-	28/1/2020 SE202202.005
Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Lindane	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Heptachlor	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Aldrin	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Beta BHC	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Delta BHC	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-	-	-	-	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-	-	-	-	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-	-	-	-	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Dieldrin	mg/kg	0.2	-	-	-	-	-	-	-	-	-
Endrin	mg/kg	0.2	-	-	-	-	-	-	-	-	-
o,p'-DDD	mg/kg	0.1	-	-	-	-	-	-	-	-	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-	-	-	-	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-	-	-	-	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Isodrin	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Mirex	mg/kg	0.1	-	-	-	-	-	-	-	-	-
Total CLP OC Pesticides	mg/kg	1	-	-	-	-	-	-	-	-	-

OC Pesticides in Soil [AN420] Tested: 29/1/2020 (continued)

PARAMETER	UOM	LOR	BH6/0.1-0.3	SOIL	BH7/0.1-0.3	SOIL	BH8/0.1-0.3	SOIL	BH9/0.1-0.3	SOIL	BH10/0.1-0.3
			28/1/2020 SE202202.006	-	28/1/2020 SE202202.007	-	28/1/2020 SE202202.008	-	28/1/2020 SE202202.009	-	28/1/2020 SE202202.010
Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Alpha BHC	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Lindane	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Heptachlor	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Aldrin	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Beta BHC	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Delta BHC	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
o,p'-DDE	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-	<0.2	-	<0.2	-
Gamma Chlordane	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Alpha Chlordane	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
p,p'-DDE	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Dieldrin	mg/kg	0.2	-	-	-	-	-	<0.2	-	<0.2	-
Endrin	mg/kg	0.2	-	-	-	-	-	<0.2	-	<0.2	-
o,p'-DDD	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
o,p'-DDT	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Beta Endosulfan	mg/kg	0.2	-	-	-	-	-	<0.2	-	<0.2	-
p,p'-DDD	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
p,p'-DDT	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Methoxychlor	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Endrin Ketone	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Isodrin	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Mirex	mg/kg	0.1	-	-	-	-	-	<0.1	-	<0.1	-
Total CLP OC Pesticides	mg/kg	1	-	-	-	-	-	<1	-	<1	-

OC Pesticides in Soil [AN420] Tested: 29/1/2020 (continued)

PARAMETER	UOM	LOR	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3	BH14/0.1-0.3	BH15/0.1-0.3
			SOIL 28/1/2020 SE202202.011	SOIL 28/1/2020 SE202202.012	SOIL 28/1/2020 SE202202.013	SOIL 28/1/2020 SE202202.014	SOIL 28/1/2020 SE202202.015
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Lindane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
o,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	0.4	<0.1	-
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
o,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
o,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Endrin Ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	-
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	-

OC Pesticides in Soil [AN420] Tested: 29/1/2020 (continued)

PARAMETER	UOM	LOR	BH16/0.1-0.3	SOIL	BH17/0.1-0.3	SOIL	BH18/0.1-0.3	SOIL	BH19/0.1-0.3	SOIL	BH20/0.1-0.3
			28/1/2020 SE202202.016	-	28/1/2020 SE202202.017	-	28/1/2020 SE202202.018	-	28/1/2020 SE202202.019	-	28/1/2020 SE202202.020
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	-	-	-	-	-	-

OC Pesticides in Soil [AN420] Tested: 29/1/2020 (continued)

PARAMETER	UOM	LOR	BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3	BH24/0.1-0.3	BH25/0.1-0.3
			SOIL 28/1/2020 SE202202.021	SOIL 28/1/2020 SE202202.022	SOIL 28/1/2020 SE202202.023	SOIL 28/1/2020 SE202202.024	SOIL 28/1/2020 SE202202.025
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	-

OC Pesticides in Soil [AN420] Tested: 29/1/2020 (continued)

PARAMETER	UOM	LOR	BH26/0.1-0.3	SOIL	BH27/0.1-0.3	SOIL	SP1/0.1-0.3	QC1	QC2
			28/1/2020 SE202202.026	-	28/1/2020 SE202202.027	-	28/1/2020 SE202202.028	-	28/1/2020 SE202202.030
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: 29/1/2020

PARAMETER	UOM	LOR	BH9/0.1-0.3	BH10/0.1-0.3	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3
			SOIL - 28/1/2020 SE202202.009	SOIL - 28/1/2020 SE202202.010	SOIL - 28/1/2020 SE202202.011	SOIL - 28/1/2020 SE202202.012	SOIL - 28/1/2020 SE202202.013
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	BH14/0.1-0.3	BH16/0.1-0.3	BH17/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3
			SOIL - 28/1/2020 SE202202.014	SOIL - 28/1/2020 SE202202.016	SOIL - 28/1/2020 SE202202.017	SOIL - 28/1/2020 SE202202.022	SOIL - 28/1/2020 SE202202.023
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	BH24/0.1-0.3	SP1/0.1-0.3	QC1
			SOIL - 28/1/2020 SE202202.024	SOIL - 28/1/2020 SE202202.028	SOIL - 28/1/2020 SE202202.029
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



ANALYTICAL RESULTS

SE202202 R0

PCBs in Soil [AN420] Tested: 29/1/2020

PARAMETER	UOM	LOR	BH1/0.1-0.3	BH2/0.1-0.3	BH3/0.1-0.3	BH4/0.1-0.3	BH5/0.1-0.3
			SOIL 28/1/2020 SE202202.001	SOIL 28/1/2020 SE202202.002	SOIL 28/1/2020 SE202202.003	SOIL 28/1/2020 SE202202.004	SOIL 28/1/2020 SE202202.005
Arochlor 1016	mg/kg	0.2	-	-	-	-	-
Arochlor 1221	mg/kg	0.2	-	-	-	-	-
Arochlor 1232	mg/kg	0.2	-	-	-	-	-
Arochlor 1242	mg/kg	0.2	-	-	-	-	-
Arochlor 1248	mg/kg	0.2	-	-	-	-	-
Arochlor 1254	mg/kg	0.2	-	-	-	-	-
Arochlor 1260	mg/kg	0.2	-	-	-	-	-
Arochlor 1262	mg/kg	0.2	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-
Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	-

PARAMETER	UOM	LOR	BH6/0.1-0.3	BH7/0.1-0.3	BH8/0.1-0.3	BH9/0.1-0.3	BH10/0.1-0.3
			SOIL 28/1/2020 SE202202.006	SOIL 28/1/2020 SE202202.007	SOIL 28/1/2020 SE202202.008	SOIL 28/1/2020 SE202202.009	SOIL 28/1/2020 SE202202.010
Arochlor 1016	mg/kg	0.2	-	-	-	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	-	-	-	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	-	-	-	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	-	-	-	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	-	-	-	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	-	-	-	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	-	-	-	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	-	-	-	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	-	-	-	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	-	-	-	<1	<1

PARAMETER	UOM	LOR	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3	BH14/0.1-0.3	BH15/0.1-0.3
			SOIL 28/1/2020 SE202202.011	SOIL 28/1/2020 SE202202.012	SOIL 28/1/2020 SE202202.013	SOIL 28/1/2020 SE202202.014	SOIL 28/1/2020 SE202202.015
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	-
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	-



ANALYTICAL RESULTS

SE202202 R0

PCBs in Soil [AN420] Tested: 29/1/2020 (continued)

PARAMETER	UOM	LOR	BH16/0.1-0.3	BH17/0.1-0.3	BH18/0.1-0.3	BH19/0.1-0.3	BH20/0.1-0.3
			SOIL 28/1/2020 SE202202.016	SOIL 28/1/2020 SE202202.017	SOIL 28/1/2020 SE202202.018	SOIL 28/1/2020 SE202202.019	SOIL 28/1/2020 SE202202.020
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-	-
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-	-
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-	-
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-	-
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-	-
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-	-
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	-	-	-
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-	-
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-	-
Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-	-

PARAMETER	UOM	LOR	BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3	BH24/0.1-0.3	BH25/0.1-0.3
			SOIL 28/1/2020 SE202202.021	SOIL 28/1/2020 SE202202.022	SOIL 28/1/2020 SE202202.023	SOIL 28/1/2020 SE202202.024	SOIL 28/1/2020 SE202202.025
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	-

PARAMETER	UOM	LOR	BH26/0.1-0.3	BH27/0.1-0.3	SP1/0.1-0.3	QC1	QC2
			SOIL 28/1/2020 SE202202.026	SOIL 28/1/2020 SE202202.027	SOIL 28/1/2020 SE202202.028	SOIL 28/1/2020 SE202202.029	SOIL 28/1/2020 SE202202.030
Arochlor 1016	mg/kg	0.2	-	-	<0.2	<0.2	-
Arochlor 1221	mg/kg	0.2	-	-	<0.2	<0.2	-
Arochlor 1232	mg/kg	0.2	-	-	<0.2	<0.2	-
Arochlor 1242	mg/kg	0.2	-	-	<0.2	<0.2	-
Arochlor 1248	mg/kg	0.2	-	-	<0.2	<0.2	-
Arochlor 1254	mg/kg	0.2	-	-	<0.2	<0.2	-
Arochlor 1260	mg/kg	0.2	-	-	<0.2	<0.2	-
Arochlor 1262	mg/kg	0.2	-	-	<0.2	<0.2	-
Arochlor 1268	mg/kg	0.2	-	-	<0.2	<0.2	-
Total PCBs (Arochlors)	mg/kg	1	-	-	<1	<1	-



ANALYTICAL RESULTS

SE202202 R0

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/1/2020

PARAMETER	UOM	LOR	BH1/0.1-0.3	BH2/0.1-0.3	BH3/0.1-0.3	BH4/0.1-0.3	BH5/0.1-0.3
			SOIL - 28/1/2020 SE202202.001	SOIL - 28/1/2020 SE202202.002	SOIL - 28/1/2020 SE202202.003	SOIL - 28/1/2020 SE202202.004	SOIL - 28/1/2020 SE202202.005
Arsenic, As	mg/kg	1	2	6	7	13	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	6.8	14	15	13	8.3
Copper, Cu	mg/kg	0.5	17	44	18	19	8.0
Lead, Pb	mg/kg	1	10	29	15	18	18
Nickel, Ni	mg/kg	0.5	3.7	18	5.3	4.1	4.3
Zinc, Zn	mg/kg	2	22	48	41	26	22

PARAMETER	UOM	LOR	BH6/0.1-0.3	BH7/0.1-0.3	BH8/0.1-0.3	BH9/0.1-0.3	BH10/0.1-0.3
			SOIL - 28/1/2020 SE202202.006	SOIL - 28/1/2020 SE202202.007	SOIL - 28/1/2020 SE202202.008	SOIL - 28/1/2020 SE202202.009	SOIL - 28/1/2020 SE202202.010
Arsenic, As	mg/kg	1	6	4	7	5	8
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	27	15	12	12
Copper, Cu	mg/kg	0.5	37	27	15	24	23
Lead, Pb	mg/kg	1	42	17	18	20	13
Nickel, Ni	mg/kg	0.5	6.5	44	2.9	3.4	7.2
Zinc, Zn	mg/kg	2	57	44	19	26	44

PARAMETER	UOM	LOR	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3	BH14/0.1-0.3	BH15/0.1-0.3
			SOIL - 28/1/2020 SE202202.011	SOIL - 28/1/2020 SE202202.012	SOIL - 28/1/2020 SE202202.013	SOIL - 28/1/2020 SE202202.014	SOIL - 28/1/2020 SE202202.015
Arsenic, As	mg/kg	1	14	7	6	7	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	15	15	16	20	9.1
Copper, Cu	mg/kg	0.5	20	22	24	22	16
Lead, Pb	mg/kg	1	35	21	25	29	15
Nickel, Ni	mg/kg	0.5	3.9	7.8	6.1	9.4	2.2
Zinc, Zn	mg/kg	2	25	30	37	41	16

PARAMETER	UOM	LOR	BH16/0.1-0.3	BH17/0.1-0.3	BH18/0.1-0.3	BH19/0.1-0.3	BH20/0.1-0.3
			SOIL - 28/1/2020 SE202202.016	SOIL - 28/1/2020 SE202202.017	SOIL - 28/1/2020 SE202202.018	SOIL - 28/1/2020 SE202202.019	SOIL - 28/1/2020 SE202202.020
Arsenic, As	mg/kg	1	3	4	4	8	6
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	8.2	9.2	19	16
Copper, Cu	mg/kg	0.5	37	18	19	24	24
Lead, Pb	mg/kg	1	23	15	17	30	25
Nickel, Ni	mg/kg	0.5	8.3	4.2	2.4	10	5.6
Zinc, Zn	mg/kg	2	55	29	15	50	31

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/1/2020

PARAMETER	UOM	LOR	BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3	BH24/0.1-0.3	BH25/0.1-0.3
			SOIL - 28/1/2020 SE202202.021	SOIL - 28/1/2020 SE202202.022	SOIL - 28/1/2020 SE202202.023	SOIL - 28/1/2020 SE202202.024	SOIL - 28/1/2020 SE202202.025
Arsenic, As	mg/kg	1	6	3	6	2	2
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	17	5.4	14	11	7.0
Copper, Cu	mg/kg	0.5	15	17	25	37	17
Lead, Pb	mg/kg	1	20	11	22	15	13
Nickel, Ni	mg/kg	0.5	5.3	1.6	5.9	7.2	2.1
Zinc, Zn	mg/kg	2	21	12	38	52	15

PARAMETER	UOM	LOR	BH26/0.1-0.3	BH27/0.1-0.3	SP1/0.1-0.3	QC1	QC2
			SOIL - 28/1/2020 SE202202.026	SOIL - 28/1/2020 SE202202.027	SOIL - 28/1/2020 SE202202.028	SOIL - 28/1/2020 SE202202.029	SOIL - 28/1/2020 SE202202.030
Arsenic, As	mg/kg	1	8	7	16	8	7
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	16	12	11	15	10
Copper, Cu	mg/kg	0.5	19	19	31	25	32
Lead, Pb	mg/kg	1	21	19	32	23	34
Nickel, Ni	mg/kg	0.5	4.2	2.4	9.1	3.0	8.2
Zinc, Zn	mg/kg	2	26	26	100	27	110



ANALYTICAL RESULTS

SE202202 R0

Mercury in Soil [AN312] Tested: 30/1/2020

PARAMETER	UOM	LOR	BH1/0.1-0.3	BH2/0.1-0.3	BH3/0.1-0.3	BH4/0.1-0.3	BH5/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH6/0.1-0.3	BH7/0.1-0.3	BH8/0.1-0.3	BH9/0.1-0.3	BH10/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
Mercury	mg/kg	0.05	0.07	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3	BH14/0.1-0.3	BH15/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH16/0.1-0.3	BH17/0.1-0.3	BH18/0.1-0.3	BH19/0.1-0.3	BH20/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3	BH24/0.1-0.3	BH25/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH26/0.1-0.3	BH27/0.1-0.3	SP1/0.1-0.3	QC1	QC2
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05



ANALYTICAL RESULTS

SE202202 R0

Moisture Content [AN002] Tested: 29/1/2020

PARAMETER	UOM	LOR	BH1/0.1-0.3	BH2/0.1-0.3	BH3/0.1-0.3	BH4/0.1-0.3	BH5/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
% Moisture	%w/w	1	13.9	16.7	12.6	11.3	6.7

PARAMETER	UOM	LOR	BH6/0.1-0.3	BH7/0.1-0.3	BH8/0.1-0.3	BH9/0.1-0.3	BH10/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
% Moisture	%w/w	1	8.6	9.9	13.9	14.4	13.7

PARAMETER	UOM	LOR	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3	BH14/0.1-0.3	BH15/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
% Moisture	%w/w	1	14.7	18.1	10.6	11.2	14.1

PARAMETER	UOM	LOR	BH16/0.1-0.3	BH17/0.1-0.3	BH18/0.1-0.3	BH19/0.1-0.3	BH20/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
% Moisture	%w/w	1	12.2	11.6	14.4	11.9	13.9

PARAMETER	UOM	LOR	BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3	BH24/0.1-0.3	BH25/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
% Moisture	%w/w	1	14.1	14.7	14.8	14.5	15.3

PARAMETER	UOM	LOR	BH26/0.1-0.3	BH27/0.1-0.3	SP1/0.1-0.3	QC1	QC2
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
% Moisture	%w/w	1	14.6	16.3	2.2	12.9	3.1



ANALYTICAL RESULTS

SE202202 R0

Fibre Identification in soil [AN602] Tested: 31/1/2020

PARAMETER	UOM	LOR	BH1/0.1-0.3	BH2/0.1-0.3	BH3/0.1-0.3	BH4/0.1-0.3	BH5/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
Asbestos Detected	No unit	-	No	No	No	No	Yes
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	>0.01

PARAMETER	UOM	LOR	BH6/0.1-0.3	BH7/0.1-0.3	BH8/0.1-0.3	BH9/0.1-0.3	BH10/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
Asbestos Detected	No unit	-	Yes	No	No	No	No
Estimated Fibres*	%w/w	0.01	>0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH11/0.1-0.3	BH12/0.1-0.3	BH13/0.1-0.3	BH14/0.1-0.3	BH15/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
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	BH16/0.1-0.3	BH17/0.1-0.3	BH18/0.1-0.3	BH19/0.1-0.3	BH20/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
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	BH21/0.1-0.3	BH22/0.1-0.3	BH23/0.1-0.3	BH24/0.1-0.3	BH25/0.1-0.3
			SOIL -	SOIL -	SOIL -	SOIL -	SOIL -
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	BH26/0.1-0.3	BH27/0.1-0.3	SP1/0.1-0.3	QC1
			SOIL -	SOIL -	SOIL -	SOIL -
Asbestos Detected	No unit	-	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01



ANALYTICAL RESULTS

SE202202 R0

Fibre ID in bulk materials [AN602] Tested: 4/2/2020

PARAMETER	UOM	LOR	PAC1	PAC2
			MATERIAL	MATERIAL
Asbestos Detected	No unit	-	28/1/2020 SE202202.031	28/1/2020 SE202202.032

AN002

The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.

AN040/AN320

A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.

AN040

A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.

AN312

Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500

AN403

Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.

AN403

Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .

AN403

The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.

AN420

(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).

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 IS LNR	Not validated. Insufficient sample for analysis. Sample listed, but not received.	LOR ↑↓	Limit of Reporting. Raised/lowered Limit of Reporting.

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

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

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

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

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

Note that in terms of units of radioactivity:

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

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

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

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