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Alliance Geotechnical

Engineering | Environmental | Testing

Report Type:

Stage 2 Detailed Site Investigation

Project Address:

47 Warrane Road, Roseville Chase, NSW
Lots 33 and 34 in DP3285, Lot B in
DP403780 and Lot 3 in DP26343

Client Name:

Ku-ring-gai Council

09 July 2018
Report No: 6838-ER-1-2

We give you the right information to make the right decisions

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DOCUMENT CONTROL

Revision	Date	Author	Reviewer
Rev 0	9 July 2018	Sam Scully / Jacob Walker / Craig Cowper	Craig Cowper

EXECUTIVE SUMMARY

Alliance Geotechnical Pty Ltd (AG) was engaged by Ku-ring-gai Council, to undertake a stage 2 detailed site investigation (DSI) for 47 Warrane Road, Roseville Chase, NSW (refer **Figure 1** with the 'site' boundaries outlined in **Figure 2**).

AG has the following project appreciation:

- a stage 2 detailed site investigation (DSI) is required to address the findings of the stage 1 PSI undertaken by AG for the site.

The objectives of this investigation were to:

- Assess the potential nature and extent of identified contaminants of potential concern on the site, with reference to the areas of environmental concern reported in the stage 1 PSI;
- Provide advice on whether the site would be suitable (in the context of land contamination) for the proposed land use setting;
- Provide recommendations for further investigation, management and/or remediation (if warranted).

The scope of works undertaken to address the investigation objectives, included:

- A desktop review;
- Fieldwork including intrusive sampling;
- Laboratory analysis; and
- Data assessment and reporting.

Based on AG's assessment of the desktop review information, fieldwork data and laboratory analytical data, in the context of the proposed redevelopment scenario, AG makes the following conclusions:

- the detected concentrations of identified contaminants of potential concern in the soils assessed are considered unlikely to present an unacceptable direct contact human health exposure risk, with the exception of
- lead in soil at sampling point TP16 (AEC03) and benzo(a)pyrene TEQ at sampling point TP17 (AEC03);
- the detected concentrations of identified contaminants of potential concern in the soils assessed are considered unlikely to present an unacceptable inhalation / vapour intrusion human health exposure risk;
- the detected concentrations of identified contaminants of potential concern in the soils assessed are considered unlikely to present a petroleum hydrocarbon management limit risk;
- the asbestos detected in the soils assessed, are considered unlikely to present an unacceptable human health exposure risk, with the exception of soils in the northern portion of AEC04;
- the concentrations of contaminants of potential concern in the central and northern portions of AEC09 (footprint of former market garden underlying existing club house), have not been assessed, due to access constrained by the presence of the existing club house building; and
- the site could be made suitable for the proposed land use setting, subject to
    - assessment of soils in the central and northern portions of AEC09 (former market garden);

  - further assessment (and potential management/ remediation) of lead in soil in the vicinity of sampling point TP16 in AEC03
  - further assessment (and potential management/ remediation) of benzo(a)pyrene TEQ in soil in the vicinity of sampling point TP17 in AEC03; and
  - management/remediation of asbestos in soil in the northern portion of AEC04.

Based on these conclusions, AG makes the following recommendations:

- a supplementary contamination assessment should be undertaken to:
  - characterise the nature and extent of potential soil contamination in the central and northern portions of AEC09, following removal of the existing clubhouse building;
  - further characterise the nature and extent of lead in soil risks at sampling point TP16 and benzo(a)pyrene (TEQ) in soil risks at sampling point TP17 in AEC03; and
  - further characterise the nature and extent of asbestos in soil in the northern portion of AEC04;
- consideration should be given to preparation of a remedial action plan (RAP), which includes a strategy for implementing the supplementary contamination assessment works recommended, and which includes a preferred remedial strategy for addressing identified asbestos in soil risks. It is noted that an addendum to the RAP may be required in the event that unacceptable contamination risks are identified in AEC09 and EC03, which require management and/or remediation.

This report, including its conclusions and recommendations, must be read in conjunction with the limitations presented in **Section 12**.

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LIST OF ABBREVIATIONS

A list of the common abbreviations used throughout this report is provided below:

ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AG	Alliance Geotechnical Pty Ltd
AHD	Australian Height Datum
BTEX	Benzene, toluene, ethyl benzene and xylenes
COPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
DSI	Detailed Site Investigation
DP	Deposited Plan
EPA	Environment Protection Authority
m	metres
m^2	square metres
m bgs	metres below ground surface
mg/kg	milligrams per kilogram
OCP	Organochlorine pesticides
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyls
PSI	Preliminary Site Investigation
TRH	Total recoverable hydrocarbons

1. INTRODUCTION

1.1. Background

Alliance Geotechnical Pty Ltd (AG) was engaged by Ku-ring-gai Council, to undertake a stage 2 detailed site investigation (DSI) for 47 Warrane Road, Roseville Chase, NSW (refer **Figure 1** with the 'site' boundaries outlined in **Figure 2**).

AG has the following project appreciation:

- a stage 2 detailed site investigation (DSI) is required to address the findings of the stage 1 PSI undertaken by AG for the site.

1.2. Objectives

The objectives of this project were to:

- Assess the potential nature and extent of identified contaminants of potential concern on the site, with reference to the areas of environmental concern reported in the stage 1 PSI;
- Provide advice on whether the site would be suitable (in the context of land contamination) for the proposed land use setting;
- Provide recommendations for further investigation, management and/or remediation (if warranted).

1.3. Scope of Work

Alliance Geotechnical undertook the following scope of works to address the project objective:

- A desktop review;
- Fieldwork including intrusive sampling;
- Laboratory analysis; and
- Data assessment and reporting.

2. SITE IDENTIFICATION

The site is identified as Lots 33 and 34 in DP3285, Lot B in DP403780 and Lot 3 in DP26343.

The approximate geographic coordinates of the middle of the site, inferred from Google Earth were 33°46'36" S and 151°11'53" E.

The locality of the site is set out in **Figure 1**.

The general layout and boundary of the site is set out in **Figure 2**.

The site covers an area of approximately 1.0 hectare.

3. GEOLOGY, ACID SULPHATE SOILS, TOPOGRAPHY AND HYDROGEOLOGY

3.1. Geology

A review of the Sydney 1:100,000 Geological Series Sheet 9130 (Edition 1) 1983 indicated that the site is likely to be underlain by Middle Triassic, Wianamatta Group, Hawkesbury Sandstone, comprised of shale and laminite. The site is also in close proximity to a geological boundary to the immediate south, likely to be underlain with Middle Triassic, Wianamatta Group, Ashfield Shale, comprised of dark-grey to black claystone-siltstone and fine sandstone-siltstone laminite.

3.2. Acid Sulphate Soils

A review of the Department of Land and Water Conservation NSW Acid Sulfate Soil Risk Map for Prospect / Parramatta (1997) indicates that the site lies in an area mapped as 'No Known Occurrence' with respect to acid sulfate soils. This infers that land management activities are not likely to be affected by acid sulfate soil materials.

Further assessment of acid sulfate soils in the context of this investigation is considered by AG as not warranted.

3.3. Topography

The site topography is generally flat. AG understands that the sites are located at an elevation of approximately 80m Australian Height Datum.

3.4. Hydrogeology

Surface water courses proximal to the site included Middle Harbour, approximately 570m to the east, and Moores Creek, approximately 580m to the north-west.

Based on distances to the nearest surface water course and the site topography, groundwater flow in the vicinity of the site is considered likely to be towards the north-east.

4. PREVIOUS CONTAMINATION ASSESSMENTS

The following reports were considered during the undertaking of this project:

- AG 2018, 'Stage 1 Preliminary Site Investigation, 47 Warrane Road, Roseville Chase, NSW' dated 21st March 2018, ref: 6838-ER-1-1

A summary of this report is presented in Section 4.1.

4.1. Alliance Geotechnical (2018)

The objectives of the project were to:

- assess the potential for contamination to be present on the site as a result of past and current land use activities;
- provide advice on whether the site would be suitable (in the context of land contamination) for proposed child care centre land use;
- provide recommendations for further investigation, management and/or remediation (if warranted).

The scope of works undertaken to address the project objectives, included:

- a desktop review;
- a site walkover; and
- data assessment and reporting.

The site history data collected and site walkover observations made were assessed within the objectives of that project and in the context of the proposed development works. That assessment identified areas of environmental concern (AEC) and contaminants of potential concern (COPC) which may be present on site. The AEC identified are presented in attached **Figure 3** and associated COPC are presented in **Table 4.1**.

Table 4.1 Areas of Environmental Concern

ID	Area of Environmental Concern	Land Use Activity	Contaminants of Potential Concern
AEC01	Western bowling green	Uncontrolled filling, application of herbicides / pesticides, use of fibrous cement bowling green borders	Hydrocarbons, herbicides, pesticides, polychlorinated biphenyl, metals and asbestos
AEC02	Central bowling green	Uncontrolled filling, application of herbicides / pesticides, use of fibrous cement bowling green borders	Hydrocarbons, herbicides, pesticides, polychlorinated biphenyl, metals and asbestos
AEC03	Eastern bowling green	Uncontrolled filling, application of herbicides / pesticides, use of fibrous cement bowling green borders	Hydrocarbons, herbicides, pesticides, polychlorinated biphenyl, metals and asbestos

ID	Area of Environmental Concern	Land Use Activity	Contaminants of Potential Concern
AEC04	Grassed open space area, north eastern corner	Uncontrolled filling	Hydrocarbons, pesticides, polychlorinated biphenyl, metals and asbestos
AEC05	Greenkeepers shed / storage area	Historical chemical / fuel storage	Hydrocarbons, pesticides and metals
AEC06	Former residential dwelling	Uncontrolled demolition	Metals and asbestos
AEC07	Former shed	Uncontrolled demolition	Metals and asbestos
AEC08	Former market gardens	Application of pesticides	Pesticides
AEC09	Former market gardens	Application of pesticides	Pesticides

Based on AG's assessment of the desktop review information, fieldwork data and laboratory analytical data, in the context of the proposed low density residential land use setting, AG made the following conclusions:

- A number of areas of environmental concern (AEC) have been identified for the site;
- These AEC may present an unacceptable exposure risk (in the context of land contamination) for future land use settings; and
- The site could be made suitable (from a land contamination perspective) for future land use settings, subject to further assessment of the identified AEC, and management / remediation of potentially unacceptable contamination risks (if warranted).

Based on those conclusions, AG made the following recommendations:

- A stage 2 detailed site investigation (DSI) should be undertaken to address the identified areas of environmental concern.
- The stage 2 DSI should be undertaken by a suitably experienced environmental consultant.

5. CONCEPTUAL SITE MODEL

5.1. Land Use Setting

AG understands that the site is proposed for a low to medium density residential land use setting.

Based on the ongoing land use scenario and guidance provided in Section 2.2 of NEPC (1999a), AG considers it reasonable to adopt the 'HIL A – residential with garden accessible soil, including childcare centres, pre-schools and primary schools' land use setting, for the purpose of assessing land contamination exposure risks.

5.2. Direct Contact – Human Health

AG notes that the proposed development scenario has not yet been defined. However, based on the proposed land use setting, it is considered reasonable to assume that soils will be accessible to residential occupants, in the form of gardens and landscaped areas. In those areas, it is considered that a direct contact exposure pathway may be present between potential contamination and onsite receptors.

5.3. Inhalation / Vapour Intrusion – Human Health

In order for a potentially unacceptable inhalation / vapour intrusion human health exposure risk to exist, a primary vapour source (e.g. underground storage tank) or secondary vapour source (e.g. significantly contaminated soil or groundwater) is required.

The historical evidence reviewed did not indicate a potential for a primary source to be present on the site.

The same historical evidence indicated a potential land use activity to be uncontrolled filling. The excavation, transport, placement and spreading of imported (uncontrolled) fill material involves significant disturbance of soils which typically results in volatilisation of vapour producing contaminants.

A groundwater source of vapours was not identified for the site.

The potential for vapours to be present in soils on site at concentrations which might present an unacceptable exposure risk, is considered to be low to negligible, however, further assessment is considered warranted, given the sensitivity of the proposed land use setting.

5.4. Aesthetics – Human Health

Section 3.6.3 of NEPC (1999a) advises that there are no specific numeric aesthetic guidelines, however site assessment requires a balanced consideration of the quantity, type and distribution of foreign material or odours in relation to the specific land use and its sensitivity.

The historical evidence indicated potential land use activities being undertaken on the site which have the potential to result in unacceptable aesthetic impacts.

AG notes that the proposed development scenario has not yet been defined. However, based on the proposed land use setting, it is considered reasonable to assume that soils will be accessible to residential occupants, in the form of gardens and landscaped areas. In those areas, it is considered

that an aesthetics exposure pathway may be present between potential contamination and onsite receptors.

5.5. Terrestrial Ecosystems – Ecological Health

Section 3.4.2 of NEPC (1999a) advises a pragmatic risk-based approach should be taken when assessing ecological risks in residential and commercial / industrial land use settings. Section 3.4.2 also advises that when commercial / industrial sites have large buildings and extensive areas covered with concrete, other pavement or hardstand materials, environmental values requiring consideration while in operational use may be limited.

AG (2018) reported that there was no visual evidence observed to suggest significant or widespread phytotoxic impact (in the form of dieback or plant stress) in vegetation at the site and that similar observations were made of visible vegetation on land adjacent to the site.

Based on the field observations reported in AG (2019), advice in NEPC (1999) and the nature and extent of the proposed development concept, the need for further ecological assessment is considered not warranted.

5.6. Management Limits for Petroleum Hydrocarbon Compounds

NEPC (1999a) notes that there are a number of policy considerations which reflect the nature and properties of petroleum hydrocarbons:

- formation of observable light non-aqueous phase liquids (LNAPL);
- fire and explosive hazards; and
- effects on buried infrastructure (e.g. penetration of or damage to, in-ground services by hydrocarbons).

NEPC (1999a) includes ‘management limits’ to avoid or minimise these potential effects. Application of the management limits requires consideration of site-specific factors such as the depth of building basements and services and depth to groundwater, to determine the maximum depth to which the limits should apply. NEPC (1999a) also notes that management limits may have less relevance at operating industrial sites which have no or limited sensitive receptors in the area of potential impact, and when management limits are exceeded, further site-specific assessment and management may enable any identified risk to be addressed.

6. DATA QUALITY OBJECTIVES

Appendix B of NEPC (1999b) provides guidance on the development of data quality objectives (DQO) using a seven-step process.

The DQO for this project are set out in **Sections 6.1** to **6.7** of this report.

6.1. Step 1: State the problem

The first step involves summarising the contamination problem that requires new environmental data and identifying resources available to solve the problem.

The objectives of this project are to:

- assess the potential nature and extent of identified contaminants of potential concern on the site, with reference to the areas of environmental concern reported in the stage 1 PSI;
- provide advice on whether the site would be suitable (in the context of land contamination) for the proposed land use setting;
- provide recommendations for further investigation, management and/or remediation (if warranted).

The project is being undertaken because:

- The site is proposed for redevelopment, comprising a low to medium density residential land use setting; and
- a stage 2 detailed site investigation (DSI) to address the findings of the stage 1 PSI undertaken by AG for the site.

The project team identified for this project is comprised primarily of suitably experienced environmental consultants from Alliance Geotechnical Pty Ltd.

The regulatory authorities identified for this project include NSW EPA and the local Council.

6.2. Step 2: Identify the decision/goal of the study

The second step involves identifying decisions that need to be made about the contamination problem and the new environmental data required to make them.

The decisions that need to be made during this project include:

- Is the environmental data collected for the project, suitable for assessing relevant land contamination exposure risks?
- Do the concentrations of identified contaminants of potential concern (COPC) present an unacceptable exposure risk to identified receptors, for the proposed land use setting?
- Is the site suitable for the proposed land use setting, in the context of land contamination?

6.3. Step 3: Identify the information inputs

The third step involves identifying the information needed to support decisions and whether new environmental data will be needed.

The inputs required to make the decisions set out in Section 6.2 for this project, will include:

- data obtained during searches of the site's history;
- the nature and extent of sampling at the site, including both density and distribution;
- samples of relevant site media;
- the measured physical and/or chemical parameters of the site media samples (including field screening and laboratory analysis, where relevant); and
- assessment criteria adopted for each of the media sampled.

Taking into consideration the objectives of this project, and the conceptual site model and land use setting presented in **Section 5.1** of this project, the assessment criteria relevant to the proposed land use setting have been adopted for this project

- Human health direct contact – HILs in Table 1A (1) in NEPC (1999a) and HSLs in Table B4 of Friebel, E & Nadebaum, P (2011);
- Human health inhalation/vapour intrusion – HSLs in Table 1 (A) in NEPC (1999a);
- Human health (asbestos) – HSLs in Table 7 of NEPC (1999a);
- Petroleum hydrocarbon compounds (management limits) – Table 1 B(7) of NEPC (1999a); and
- Aesthetics – no highly malodorous site media (e.g. strong residual petroleum hydrocarbon odours, hydrogen sulphide in site media, organosulfur compounds), no hydrocarbon sheen on surface water, no discoloured chemical deposits or soil staining with chemical waste other than of a very minor nature, no large monolithic deposits of otherwise low risk material (e.g. gypsum as powder or plasterboard, cement kiln dust), no presence of putrescible refuse including material that may generate hazardous levels of methane such as a deep-fill profile of green waste or large quantities of timber waste, and no soils containing residue from animal burial (e.g. former abattoir sites).

6.4. Step 4: Define the boundaries of the study

The fourth step involves specifying the spatial and temporal aspects of the environmental media that the data must represent to support decisions.

The spatial extent of the project will be limited to the site as defined by its boundaries.

The temporal boundaries of the project include:

- the project timeframe presented in the AG proposal for this project,
- unacceptable weather conditions at the time of undertaking fieldwork, including rainfall, cold and/or heat;
- access availability of the site (to be defined by the site owner/representative); and
- availability of AG field staff (typically normal daylight working hours, Monday to Friday).

The lateral extent that contamination is expected to be distributed across, based on the conceptual site model, is defined by the inferred boundaries of the areas of environmental concern (AEC).

The vertical extent that contamination is expected to be distributed across, based on the conceptual site model and the project scope, is likely to be limited to shallow soils and fill material.

The scale of the decisions required will be based on the entire site.

Constraints which may affect the carrying out of this project may include access limitations, presence of above and below ground infrastructure, and hazards creating health and safety risks.

6.5. Step 5: Develop the analytical approach (or decision rule)

The fifth step involves defining the parameter of interest, specifying the action level, and integrating information from Steps 1 to 4 into a single statement that gives a logical basis for choosing between alternative actions.

6.5.1. Rinsate Blanks

One rinsate blank will be collected and scheduled for analysis, for each day of sampling undertaken, if non-disposable sampling equipment was used on that day. The rinsate blank will be analysed for at least one of the analytes the sample/s collected that day are being scheduled for analysis for (with the exception of asbestos).

6.5.2. Trip Spikes and Trip Blank Samples

One trip spike and trip blank sample will be used and scheduled for analysis, for each day of sampling undertaken, if site samples being collected that day are being analysed for volatile contaminants of concern (typically BTEX and/or TRH C_6-C_{10}).

6.5.3. Field Duplicates and Field Triplicates

Field duplicate and field triplicates will be collected at a rate of one per twenty (5%) site samples collected. The duplicates and triplicates collected will be analysed for at least one of the analytes that the parent sample of the duplicate/triplicate is being scheduled for analysis for (with the exception of asbestos).

The relative percent difference (RPD) of concentrations of relevant analytes, between the parent sample and the duplicate/triplicate will be calculated.

6.5.4. Laboratory Analysis Quality Assurance / Quality Control

The analytical laboratory QA/QC program will typically include laboratory method blank samples, matrix spike samples, surrogate spike samples, laboratory control samples, and laboratory duplicate samples.

6.5.5. If/Then Decision Rules

AG has adopted the following 'if/then' decision rules for this project:

- If the result of the assessment of field data and laboratory analytical data is considered acceptable, then that field data and laboratory analytical data is suitable for interpretation within the scope of this project; and
- If the field data and laboratory analytical data is within the constraints of the assessment criteria adopted for this project (refer **Section 6.3**), then the contamination exposure risks to identified receptors, are considered acceptable.

In the event the assessment of field data and/or laboratory analytical data results in the data being not suitable for interpretation, then AG will determine if additional data is required to allow interpretation to be undertaken.

In the event that field data and/or laboratory analytical data exceeds the assessment criteria adopted for this project (refer **Section 6.3**), AG will undertake an assessment of the exceedance in the context

of the project objectives to determine if additional data is required and whether management and/or remediation is required.

6.6. Step 6: Specify the performance or acceptance criteria

The sixth step involves specifying the decision maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data. When assessing contaminated land, there are generally two types of errors in decision making:

- Contamination exposure risks for a specific land use setting are acceptable, when they are not; and
- Contamination exposure risks for a specific land use setting are not acceptable, when they are.

AG will mitigate the risk of decision error by:

- Calculation of the 95% upper confidence limit (UCL) statistic to assess the mean concentration of relevant contaminants of potential concern;
- Assignment of fieldwork tasks to suitably experienced AG consulting staff, and suitably experienced contractors;
- Assignment of laboratory analytical tasks to reputable NATA accredited laboratories;
- Assignment of data interpretation tasks to suitably experienced AG consulting staff, and outsourcing to technical experts where required.

AG will also adopt a range of data quality indicators (DQI) to facilitate assessment of the completeness, comparability, representativeness, precision and accuracy (bias).

Completeness			
Field Considerations	**Assessment Criterion**	**Laboratory Considerations**	**Assessment Criterion**
Critical locations sampled	Refer **Section 6.7.1**	Critical samples analysed according to DQO	Refer **Section 6.7.7**
Critical samples collected	Refer **Section 6.7.1**	Analytes analysed according to DQO	Refer **Section 6.7.7**
SOPs appropriate and complied with	100%	Appropriate laboratory analytical methods and LORs	Refer **Section 6.7.7**
Field documentation complete	All sampling point logs, calibration logs and chain of custody forms	Sample documentation complete	All sample receipt advices, all certificates of analysis
		Sample extraction and holding times complied with	Refer **Section 6.7.8**
Comparability			

Field Considerations	**Assessment Criterion**	**Laboratory Considerations**	**Assessment Criterion**
Same SOPs used on each occasion	100%	Same analytical methods used by primary laboratory	Refer **Section 6.7.8**
Climatic conditions	Samples stored in insulated containers with ice, immediately after collection	Same LORs at primary laboratory	Refer **Section 6.7.8**
Same types of samples collected, and handled/preserved in same manner	All soil samples same size, all stored in insulated containers with ice	Same laboratory for primary sample analysis	All primary samples to SGS Environmental
		Same analytical measurement units	Refer **Section 6.7.8**
Representativeness			
Field Considerations	**Assessment Criterion**	**Laboratory Considerations**	**Assessment Criterion**
Appropriate media sampled according to DQO	Refer Section 6.4	Samples analysed according to SAQP	Refer **Section 6.7.7**
Media identified in DQO sampled	Refer Section 6.4		
Precision			
Field Considerations	**Assessment Criterion**	**Laboratory Considerations**	**Assessment Criterion**

Field duplicate / triplicate RPD	Minimum 5% duplicates and triplicates No limit for analytical results <10 times LOR 50% for analytical results 10-20 times LOR 30% for analytical results >20 times LOR	Laboratory duplicates	No exceedances of laboratory acceptance criteria
SOPs appropriate and complied with	100%		
Accuracy (bias)			
Field Considerations	**Assessment Criterion**	**Laboratory Considerations**	**Assessment Criterion**
Rinsate blanks	Less than laboratory limit of reporting	Laboratory method blank	No exceedances of laboratory acceptance criteria
Field trip spikes	Recoveries between 60% and 140%	Matrix spike recovery	No exceedances of laboratory acceptance criteria
Field trip blanks	Analyte concentration <LOR	Surrogate spike recovery	No exceedances of laboratory acceptance criteria

6.7. Step 7: Develop the plan for obtaining data

The seventh step involves identifying the most resource effective sampling and analysis design for generating the data that is required to satisfy the DQOs.

6.7.1. Sampling Point Density and Locations

Table A in NSW EPA (1995) provides guidance on minimum sampling point densities required for site characterisation, based on detecting circular hot spots by using a systematic sampling pattern. This guidance assumes the investigator has little knowledge about the probable locations of the contamination, the distribution of the contamination is expected to be random (e.g. land fill sites) or the distribution of the contamination is expected to be fairly homogenous (e.g. agricultural lands).

However, Section 3.1 of NSW EPA (1995) states that a judgemental sampling pattern can be used where there is enough information on the probable locations of contamination. Further to this, Section 6.2.1 of NEPC (1999b) states that the number and location or sampling points is based on knowledge of the site and professional judgement. Sampling should be localised to known or potentially contaminated areas identified from knowledge of the site either from site history or an earlier phase of site investigation. Judgemental sampling can be used to investigate sub-surface contamination issues in site assessment.

Table 1 in WA DOH (2009) indicates that where the 'likelihood of asbestos' is assessed as "possible" or "suspect", the investigation regimen should include a sampling density that is either judgemental or the same as that set out in Table A of NSW EPA (1995) for assessing asbestos.

As this project has included gathering data which provides a reasonable understanding of site history (in the context of potential areas of environmental concern on the site) and taking into consideration Table 1 in WA DOH (2009), it is considered reasonable to adopt a judgemental sampling pattern, with up to 8 sampling points.

The locations of the sampling points are set out in **Figure 4**. The location of actual sampling points will be recorded by hand on a site plan.

6.7.2. Sampling Methodology

The sampling point methodology presented in **Table 6.7.2** will be used for this project. The methodology is based on a range of factors considered relevant to this project, including:

- the identified contaminants of potential concern;
- the suspected laydown mechanisms for those contaminants of concern;
- the suspected likely depth of contamination; and
- site specific constraints which affect the type of sampling techniques suited to the site.

Table 6.7.2 Proposed Sampling Methodology

ID	AEC	Sampling Point ID	Method	Target Depth of Sampling Point (m bgs)
AEC01	Western bowling green	TP02 and TP04	Test pit	2.5m, practical refusal or 0.3m into natural material, whichever occurs first
		TP03 and TP05	Test pit	1.0m, practical refusal or 0.3m into natural material, whichever occurs first
		TP06	Test pit	1.5m, practical refusal or 0.3m into natural material, whichever occurs first
		FCS01	Grab Sample	Piece of bowling green edging
AEC02	Central bowling green	TP07 to TP08	Test pit	2.0m, practical refusal or 0.3m into natural material, whichever occurs first

ID	AEC	Sampling Point ID	Method	Target Depth of Sampling Point (m bgs)
		TP09 to TP10	Test Pit	2.0m, practical refusal or 0.3m into natural material, whichever occurs first
		FCS02	Grab Sample	Piece of bowling green edging
AEC03	Eastern bowling green	TP15 to TP17	Test pit	4.0m, practical refusal or 0.3m into natural material, whichever occurs first
		TP18 to TP19		1.0m, practical refusal or 0.3m into natural material, whichever occurs first
		TP20		2.0m, practical refusal or 0.3m into natural material, whichever occurs first
AEC04	Grassed open space area, north eastern corner	TP11 to TP14	Test pit	1.0m, practical refusal or 0.3m into natural material, whichever occurs first
AEC05	Greenkeepers shed / storage area	TP21	Test pit	1.0m, practical refusal or 0.3m into natural material, whichever occurs first
AEC06	Former residential dwelling	TP06 (as for AEC01)	Test pit	TP06 (as for AEC01)
AEC07	Former shed	TP06 (as for AEC03)	Test pit	TP06 (as for AEC03)
AEC08	Former market gardens	TP01	Test pit	2.5m, practical refusal or 0.3m into natural material, whichever occurs first
		TP02 (as for AEC01)	Test pit	TP02 (as for AEC01)
AEC09	Former market gardens	TP05 (as for AEC01)	Test pit	TP05 (as for AEC01)
		TP07 and TP08 (as for AEC02)	Test pit	TP07 and TP08 (as for AEC02)

Reference will also be made to Table 5 in WA DOH (2009) for the sampling and screening of fill soils for the presence of asbestos, where practical.

6.7.3. Identification, Storage and Handling of Samples

Sample identifiers will be used for each sample collected, based on the sampling point number and the depth/interval the sample was collected from, e.g. a sample collected from TP03 at a depth of 0.2m to 0.4m below ground level, would be identified as TP03/0.2-0.4.

Project samples will be stored in laboratory prepared glass jars (and zip lock bags if collected for asbestos or acid sulfate soil assessment).

Soil samples in glass jars (and acid sulfate soil samples) will be placed in insulated container/s with ice.

Samples will be transported to the relevant analytical laboratory, with chain of custody (COC) documentation that includes the following information:

AG project identification number
- Each sample identifier
- Date each sample was collected
- Sample type (e.g. soil or water)
- Container type/s for each sample collected
- Preservation method used for each sample (e.g. ice)
- Analytical requirements for each sample and turnaround times
- Date and time of dispatch and receipt of samples (including signatures)

6.7.4. Headspace Screening

Where the contaminants of potential concern include volatiles (e.g. TRH, BTEX), project soil samples will be subjected to field screening for ionisable volatile organic compounds (VOC), using a photo-ionisation detector (PID). The results of field screening will be recorded on sampling point log.

6.7.5. Decontamination

In the event that non-disposable sampling equipment is used, that equipment will be decontaminated before and in between sampling events, to mitigate potential for cross contamination between samples collected. The decontamination methodology to be adopted for this project will include:
- Washing relevant sampling equipment using potable water with a phosphate free detergent (i.e. Decon 90 or similar) mixed into the water;
- Rinsing the washed non-disposable sampling equipment with distilled or de-ionised water; and
- Air drying as required.

6.7.6. Laboratory Selection

The analytical laboratories used for this project will be NATA accredited for the analysis undertaken.

6.7.7. Laboratory Analytical Schedule

Project samples will be scheduled for NATA accredited laboratory analysis, using a combination of:
- Observations made in the field of the media sampled;
- Headspace screening results (where available);
- The contaminants of potential concern (COPC) identified for the area of environmental concern that the sample was collected from.

Based on site history, AG has adopted the laboratory analytical schedule (and associated upper limiting quantities) presented in **Table 6.7.7** for this project.

Table 6.7.7 Laboratory Analytical Schedule

ID	AEC	Sampling Point ID	TRH/BTEX	PAH	PCB	OCP	Phenoxy Acid Herbicides	8 Metals	Asbestos (0.001%)	Asbestos ID
AEC01	Western bowling green	TP02 and TP04	2	8	1	2	1	6	6	-
		TP03 and TP05	2	3	1	1	-	3	2	-
		TP06	-	1	-	-	-	2	2	-
		FCS01	-	-	-	-	-	-	-	1
AEC02	Central bowling green	TP07 to TP08	2	5	1	1	1	5	4	-
		TP09 to TP10	2	3	1	1	-	4	2	-
		FCS02	-	-	-	-	-	-	-	1
AEC03	Eastern bowling green	TP15 to TP17	3	13	1	1	1	13	12	-
		TP18 to TP19	2	3	1	1	-	3	2	-
		TP20	-	2	-	-	-	2	2	-
AEC04	Grassed open space area, north eastern corner	TP11 to TP14	2	6	1	1	-	6	4	-
AEC05	Greenkeepers shed / storage area	TP21	1	-	-	1	1	1	-	-
AEC06	Former residential dwelling	TP06 (as for AEC01)	-	-	-	-	-	-	-	-

ID	AEC	Sampling Point ID	TRH/BTEX	PAH	PCB	OCP	Phenoxy Acid Herbicides	8 Metals	Asbestos (0.001%)	Asbestos ID
AEC07	Former shed	TP20 (as for AEC03)	-	-	-	-	-	-	-	-
AEC08	Former market gardens	TP01	-	3	-	1	-	4	3	-
		TP02 (as for AEC01)	-	-	-	-	-	-	-	-
AEC09	Former market gardens	TP05 (as for AEC01)	-	-	-	-	-	-	-	-
		TP07 and TP08 (as for AEC02)	-	-	-	-	-	-	-	-
		TP07 and TP08 (as for AEC02)	-	-	-	-	-	-	-	-

6.7.8. Laboratory Holding Times, Analytical Methods and Limits of Reporting

The laboratory holding times, analytical methods and limits of reporting (LOR) being used for this project, are presented in **Table 6.7.8**.

Table 6.7.8 Laboratory Holding Times, Analytical Methods and Limits of Reporting

Analyte	Holding Time	Analytical Method	Limit of Reporting (mg/kg)
BTEX and TRH C_6-C_{10}	14 days	USEPA 5030, 8260B and 8020	0.2-0.5
TRH >C_{10}-C_{40}	14 days	USEPA 8015B & C	20-100
VOC	14 days	USEPA 8260	0.1-0.5
Phenoxy Acid Herbicides	14 days	MA84 (inhouse)	0.5
PAH	14 days	USEPA 8270	0.1-0.5
OCP	14 days	USEPA 8081	0.2
PCB	14 days	USEPA 8270	0.2
Metals	14 days	USEPA 8015B & C	0.05 – 2
Asbestos	No limit	AS4964:2004	Absence / presence
Asbestos	No limit	Inhouse Method	0.001% w/w

7. FIELDWORK

7.1. Soil Sampling

Soil sampling was undertaken by AG on 18 June 2018. An underground service locating contractor was engaged to survey each sampling point for the presence of underground services.

A total of 21 sampling points (TP01 to TP21) were established on site, were established on site, using a track mounted 3.5 tonne excavator.

Image 7.1.1 View of Sampling Point TP03

Samples were collected at each sampling point and placed in laboratory supplied acid-rinsed glass jars and sealed with Teflon lined lids.

A 10L bulk soil sample was collected for each metre of inferred fill material (or part thereof) encountered at each sampling point. Each bulk soil sample was screened for the presence of potential asbestos containing materials (ACM) greater than 7 mm in size. Potential ACM greater than 7mm was weighed and placed in separate laboratory supplied zip lock bags. Sub samples (500mL) of the bulk samples passing through 7 mm sieve were also collected and placed in separate laboratory supplied zip lock bags.

The jars and bags were labelled with the project number, sample identifier and date samples were collected on.

Each test pit was backfilled and track rolled with excavated soils at the completion of the sampling task at each sampling point. Each sampling point established was marked on a site plan. The locations of these sampling points are presented in Figure 4.

7.2. Site Geology

Observations were made of soils encountered during sampling work. These observations were recorded on borehole logs. A copy of these logs is presented in **Appendix A**.

Anthropogenic materials observed in some of the fill material encountered included coal waste, charcoal, wood, tile, brick, plastic, metal, concrete, asphalt and terracotta.

Inferred natural material was encountered at TP01 to TP15 and TP17 to TP20.

Image 7.2.1 Example of soil stratigraphy at sampling points TP20 and TP04

TP20

TP04

7.3. Headspace Screening

Samples collected were subjected to headspace screening. A sub sample from each sampling point was placed in a zip lock bag, sealed and shaken. Each bag was then pierced with the probe tip of a calibrated photo ionisation detector (PID) and the screening results recorded. These results are recorded on the borehole logs presented in **Appendix A**.

The results of the headspace screening indicated the potential for ionisable volatile organic compounds (VOC) to be present in the samples, was generally low.

A copy of the calibration record for the PID is presented in **Appendix B**.

7.4. Odours

Olfactory evidence of odours in the soil samples collected, was not detected. A suspected sewage odour was detected at sampling point TP18.

7.5. Staining

Visual evidence of staining in the soil samples collected, was not detected.

7.6. Potential Asbestos Containing Materials

Visual evidence of potential asbestos containing materials (ACM), was not detected within the fill profile at each sampling point. Four fragments of potential ACM, in the form of suspected fibrous cement were recovered from the surface of the site (FCS-01 to FCS-04). The locations of the recovered fragments were marked on a site plan and are presented in Figure 4.

8. LABORATORY

The samples collected were transported to the analytical laboratory, using chain of custody (COC) protocols. A selection of these samples was scheduled for analysis, with reference to the relevant COPC identified for the AEC that the samples were collected from.

A copy of the analytical laboratory certificates of analysis, is presented in **Appendix C**.

The sample analytical results were tabulated and presented in the attached **Table LAR1**.

9. DATA QUALITY INDICATOR ASSESSMENT

9.1. Completeness

An assessment of the completeness of data collected was undertaken, and the results presented in **Table 9.1**.

Table 9.1 Completeness DQI

Field Considerations	**Target**	**Actual**	**Comment**
Critical locations sampled	21	21	Performance against indicator considered acceptable.
Critical samples collected	68	82	Inferred natural material was not encountered at sampling points TP16 (bucket refusal), and TP21 (hand auger refusal). AG considers that critical samples from potential fill material beyond refusal depths at these locations, have not been collected. Further assessment would be required to address this data gap.
SOPs appropriate and complied with	100%	100%	Performance against indicator considered acceptable.
Field documentation complete	All sampling point logs, calibration logs and chain of custody forms	All sampling point logs, calibration logs and chain of custody forms	Performance against indicator considered acceptable.
Laboratory Considerations	**Target**	**Actual**	**Comment**
Critical samples analysed according to SAQP	Refer **Section 6.7.7**	Refer Section 6.7.7	Minor deviations from **Section 6.7.7**, to suit observations made in the field during sampling, and subsequent headspace screening. Performance against indicator considered acceptable.
Analytes analysed according to SAQP	Refer **Section 6.7.7**	100%	Performance against indicator considered acceptable.
Appropriate laboratory analytical methods and LORs	Refer **Section 6.7.8**	100%	Performance against indicator considered acceptable.

Sample documentation complete	All sample receipt advices, all certificates of analysis	100%	Performance against indicator considered acceptable.
Sample extraction and holding times complied with	Refer **Section 6.7.8**	Refer comments	Performance against indicator considered acceptable.

The data collected is considered to be adequately complete within the objectives and constraints of the project, with the exception of data required to characterise soils deeper fill material in AEC04, the north eastern portion of AEC01, and soils in general in AEC03.

9.2. Comparability

An assessment of the comparability of data collected was undertaken, and the results presented in **Table 9.2**.

Table 9.2 Comparability DQI

Field Considerations	**Target**	**Actual**	**Comment**
Same SOPs used on each occasion	100%	100%	Performance against indicator considered acceptable.
Climatic conditions	Samples stored in insulated containers with ice, immediately after collection	100%	Performance against indicator considered acceptable.
Same types of samples collected, and handled/preserved in same manner	All soil samples same size, all stored in insulated containers with ice	100%	Performance against indicator considered acceptable.
Laboratory Considerations	**Target**	**Actual**	**Comment**
Same analytical methods used by primary laboratory	Refer **Section 6.7.8**	100%	Performance against indicator considered acceptable.
Same LORs at primary laboratory	Refer **Section 6.7.8**	100%	Performance against indicator considered acceptable.
Same laboratory for primary sample analysis	All primary samples to SGS Environmental	100%	Performance against indicator considered acceptable.
Same analytical measurement units	Refer **Section 6.7.8**	100%	Performance against indicator considered acceptable.

The data collected is considered to be adequately comparable.

9.3. Representativeness

An assessment of the representativeness of data collected was undertaken, and the results presented in **Table 9.3**.

Table 9.3 Representativeness DQI

Field Considerations	**Target**	**Actual**	**Comment**
Appropriate media sampled according to DQO	Refer **Section 6.7.2**	100%	Performance against indicator considered acceptable.
Media identified in DQO sampled	Refer **Section 6.7.2**	100%	Performance against indicator considered acceptable.
Laboratory Considerations	**Target**	**Actual**	**Comment**
Samples analysed according to DQO	Refer **Section 6.7.7**	Refer comments	Minor deviations from **Section 6.7.7**, to suit observations made in the field during sampling, and subsequent headspace screening. Performance against indicator considered acceptable.

The data collected is considered to be adequately complete within the objectives and constraints of the project.

9.4. Precision

An assessment of the precision of data collected was undertaken, and the results presented in **Table 9.4**.

Table 9.4 Precision DQI

Field Considerations	**Target**	**Actual**	**Comment**

Field duplicate / triplicate RPD	Minimum 5% duplicates and triplicates	5.8 % duplicates and 5.8 % triplicates	Parent duplicate/triplicate relationships are as follows: DUP01/1A – TP13-0.0-0.2 DUP02/2A – TP11-0.0-0.2
	No limit for analytical results <10 times LOR	Nil	DUP02/2A – TP12-0.0-0.2 Exceedances included chromium, lead, zinc and mercury for DUP1A
	50% for analytical results 10-20 times LOR	Nil	AG considers these exceedances are likely to be attributable to heterogeneity in each of the discrete soils samples, as the parent sample could not be homogenised prior to splitting, due to the potential for volatile and semi volatile contaminants to be present. As a conservative measure, the sample reporting the higher concentration of the relevant analyte should be used when making decisions regarding contamination risks on the site.
	30% for analytical results >20 times LOR	4	Performance against indicator considered acceptable.
SOPs appropriate and complied with	100%	100%	Performance against indicator considered acceptable.
Laboratory Considerations	**Target**	**Actual**	**Comment**
Laboratory duplicates	No exceedances of laboratory acceptance criteria	Eight exceedances	Three laboratory exceedances were reported to have failed the laboratory recovery acceptance criteria due to sample heterogeneity. Five laboratory exceedances were reported to have failed he RPD acceptance criteria due to sample heterogeneity. Performance against indicator considered acceptable.

The data collected is considered to be adequately precise.

9.5. Accuracy

An assessment of the precision of data collected was undertaken, and the results presented in **Table 9.5**.

Table 9.5 Accuracy DQI

Field Considerations	**Target**	**Actual**	**Comment**
Rinsate blanks	Less than laboratory limit of reporting	No applicable	Disposable sampling equipment was used at each sampling point.
Field trip spikes	Recoveries between 60% and 140%	Not applicable	Due to an administrative error, a trip spike was not available for the fieldwork. AG notes that samples were stored and transported in insulated containers with ice, and that field observations did not indicate a significant potential for volatile contaminants to be present in the samples collected. Laboratory analytical results for volatile contaminants are consistent with field observations. Samples are considered to have been adequately preserved during storage and transport.
Field trip blanks	Analyte concentration <LOR	Not applicable	Due to an administrative error, a trip blank was not available for the fieldwork. AG notes that samples were stored and transported in insulated containers with ice, and that field observations did not indicate a significant potential for volatile contaminants to be present in the samples collected, nor were significant concentrations of volatile contaminants detected in the samples analysed. Laboratory analytical results for volatile contaminants are consistent with field observations. AG considers the potential for cross contamination of volatiles to have occurred between samples during storage and transport, to be negligible.
Laboratory Considerations	**Target**	**Actual**	**Comment**
Laboratory method blank	No exceedances of laboratory acceptance criteria	No exceedances of laboratory acceptance criteria	Performance against indicator considered acceptable.

Matrix spike recovery	No exceedances of laboratory acceptance criteria	Three exceedances	One laboratory exceedance was reported to have failed the matrix spike recovery acceptance criteria due to matrix interference. Performance against indicator considered acceptable.
Surrogate spike recovery	No exceedances of laboratory acceptance criteria	No exceedances of laboratory acceptance criteria	Performance against indicator considered acceptable.
Laboratory control sample recovery	No exceedances of laboratory acceptance criteria	No exceedances of laboratory acceptance criteria	Performance against indicator considered acceptable.

The data collected is considered to be adequately accurate.

10. DISCUSSION

A discussion on comparison of laboratory analytical results and field observations, in the context of the assessment criteria adopted for this project, is presented in **Sections** Error! Reference source not found. to Error! Reference source not found..

10.1. Human Health - Direct Contact

10.1.1. TRH

The concentrations of TRH C_6-C_{10}, >C_{10}-C_{16}, >C_{16}-C_{34} and >C_{34}-C_{40} detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria.

10.1.2. BTEX

The concentrations of benzene, toluene, ethyl benzene and xylenes detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria.

10.1.3. PAH

The concentrations of naphthalene detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria.

The concentrations of benzo(a)pyrene TEQ detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria, with the following exceptions:

- Benzo(a)pyrene TEQ (criterion of 3mg/kg) in sample TP17/0.0-0.2 (4.2mg/kg).

This exceedance of the adopted assessment criterion was detected in a sample collected from uncontrolled filling material.

The concentration of total PAH detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria.

10.1.4. OCP

The concentration of relevant OCP compounds detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria or less than laboratory limits of reporting.

10.1.5. Phenoxy Acid Herbicides

The concentration of phenoxy acid herbicide compounds detected in the soil samples analysed, were less than the laboratory limits of reporting.

10.1.6. PCB

The concentration of relevant PCB compounds detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria.

10.1.7. Metals

The concentrations of arsenic, cadmium, chromium, copper, lead, nickel, zinc and mercury detected in the soil samples analysed, were less than the applicable adopted direct contact human health exposure criteria, with the following exceptions:

- Lead (criterion of 300mg/kg) in samples TP16-0.7-0.9 (990mg/kg) and TP16-1.4-1.6 (330mg/kg).

These exceedances of the adopted assessment criterion were detected in samples collected from uncontrolled filling material.

10.2. Asbestos

10.2.1. Bonded Asbestos Containing Materials

Fragments of material suspected of containing asbestos, and greater than 7mm in size, were not encountered during screening of bulk soil samples collected.

10.2.2. Asbestos Fines and Friable Asbestos

The concentration of friable asbestos and asbestos fines (FA and AF) detected in the relevant soil samples analysed were less than the applicable adopted health screening level.

10.2.3. Asbestos (General)

Fragments of material suspected to contain asbestos, collected at sampling points FCS01 and FCS02 (bowling green edging material in AEC01 and AEC03) and FCS03 and FCS04 (fibrous cement sheeting observed on the surface of AEC04 were submitted for laboratory analysis for the presence of asbestos. Asbestos was not identified in FCS01 or FCS02. Asbestos was detected in FCS03 and FCS04. As these fragment samples were not detected during bulk screening of samples, it is not considered appropriate to apply the gravimetric approach set out in Section 4.10 of NEPC (1999a) to calculate bonded asbestos containing materials in soil concentrations.

The presence of asbestos containing materials on the surface of the site, may present an unacceptable human health exposure risk.

10.3. Human Health – Inhalation / Vapour Intrusion (Residential)

10.3.1. TRH

The concentrations of TRH C_6-C_{10} (minus BTEX) and >C_{10}-C_{16} (minus naphthalene) detected in the soil samples analysed, were less than the applicable adopted inhalation / vapour intrusion human health exposure criteria.

10.3.2. BTEX

The concentrations of benzene, toluene, ethyl benzene and xylenes detected in the soil samples analysed, were less than the applicable adopted inhalation / vapour intrusion human health exposure criteria.

10.3.3. PAH

The concentrations of naphthalene detected in the soil samples analysed, were less than the applicable adopted inhalation / vapour intrusion human health exposure criteria.

10.4. TPH Management Limits (Residential)

The concentrations of TRH C_6-C_{10}, >C_{10}-C_{16}, >C_{16}-C_{34} and >C_{34}-C_{40} detected in the soil samples analysed, were less than the applicable adopted TRH management limits or less than laboratory limits of reporting.

10.5. Aesthetics

There were no observations made of odours, significant chemical deposits/wastes, large monolithic deposits of low risk material, putrescible waste or hydrocarbon sheen in the samples collected.

A suspected sewage odour was detected at sampling point TP18, which appeared to be in an inferred downgradient location from a toilet block located in the immediate vicinity of AEC05. Based on AG's experience, the suspected sewage odour may be associated with a leaking sewer pipe in the vicinity of TP18.

11. CONCLUSIONS AND RECOMMENDATIONS

Based on AG's assessment of the desktop review information, fieldwork data and laboratory analytical data, in the context of the proposed redevelopment scenario, AG makes the following conclusions:

- the detected concentrations of identified contaminants of potential concern in the soils assessed are considered unlikely to present an unacceptable direct contact human health exposure risk, with the exception of
- lead in soil at sampling point TP16 (AEC03) and benzo(a)pyrene TEQ at sampling point TP17 (AEC03);
- the detected concentrations of identified contaminants of potential concern in the soils assessed are considered unlikely to present an unacceptable inhalation / vapour intrusion human health exposure risk;
- the detected concentrations of identified contaminants of potential concern in the soils assessed are considered unlikely to present a petroleum hydrocarbon management limit risk;
- the asbestos detected in the soils assessed, are considered unlikely to present an unacceptable human health exposure risk, with the exception of soils in the northern portion of AEC04;
- the concentrations of contaminants of potential concern in the central and northern portions of AEC09 (footprint of former market garden underlying existing club house), have not been assessed, due to access constrained by the presence of the existing club house building; and
- the site could be made suitable for the proposed land use setting, subject to
    - assessment of soils in the central and northern portions of AEC09 (former market garden);
    - further assessment (and potential management/ remediation) of lead in soil in the vicinity of sampling point TP16 in AEC03
    - further assessment (and potential management/ remediation) of benzo(a)pyrene TEQ in soil in the vicinity of sampling point TP17 in AEC03; and
    - management/remediation of asbestos in soil in the northern portion of AEC04.

Based on these conclusions, AG makes the following recommendations:

- a supplementary contamination assessment should be undertaken to:
    - characterise the nature and extent of potential soil contamination in the central and northern portions of AEC09, following removal of the existing clubhouse building;
    - further characterise the nature and extent of lead in soil risks at sampling point TP16 and benzo(a)pyrene (TEQ) in soil risks at sampling point TP17 in AEC03; and
    - further characterise the nature and extent of asbestos in soil in the northern portion of AEC04;
- consideration should be given to preparation of a remedial action plan (RAP), which includes a strategy for implementing the supplementary contamination assessment works recommended, and which includes a preferred remedial strategy for addressing identified asbestos in soil risks. It is noted that an addendum to the RAP may be required in the event that unacceptable contamination risks are identified in AEC09 and EC03, which require management and/or remediation.

This report, including its conclusions and recommendations, must be read in conjunction with the limitations presented in **Section 12**.

12. STATEMENT OF LIMITATIONS

The findings presented in this report are based on specific searches of relevant, government historical databases and anecdotal information that were made available during the course of this investigation. To the best of our knowledge, these observations represent a reasonable interpretation of the general condition of the site at the time of report completion.

This report has been prepared solely for the use of the client to whom it is addressed and no other party is entitled to rely on its findings.

No warranties are made as to the information provided in this report. All conclusions and recommendations made in this report are of the professional opinions of personnel involved with the project and while normal checking of the accuracy of data has been conducted, any circumstances outside the scope of this report or which are not made known to personnel and which may impact on those opinions is not the responsibility of Alliance Geotechnical Pty Ltd. Should information become available regarding conditions at the site including previously unknown sources of contamination, AG reserves the right to review the report in the context of the additional information.

This report must be reviewed in its entirety and in conjunction with the objectives, scope and terms applicable to AG's engagement. The report must not be used for any purpose other than the purpose specified at the time AG was engaged to prepare the report.

Logs, figures, and drawings are generated for this report based on individual AG consultant interpretations of nominated data, as well as observations made at the time site walkover/s were completed.

Data and/or information presented in this report must not be redrawn for its inclusion in other reports, plans or documents, nor should that data and/or information be separated from this report in any way.

Should additional information that may impact on the findings of this report be encountered or site conditions change, AG reserves the right to review and amend this report.

13. REFERENCES

AG 2018, 'Stage 1 Preliminary Site Investigation, 47 Warrane Road, Roseville Chase, NSW' dated 3 July 2018, ref: 6838-ER-1-1

National Environment Protection Council (NEPC) 1999a, 'Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013'.

National Environment Protection Council (NEPC) 1999b, 'Schedule B(2) Guideline on Site Characterisation, National Environment Protection (Assessment of Site Contamination) Measure (NEPM) as amended in May 2013'.

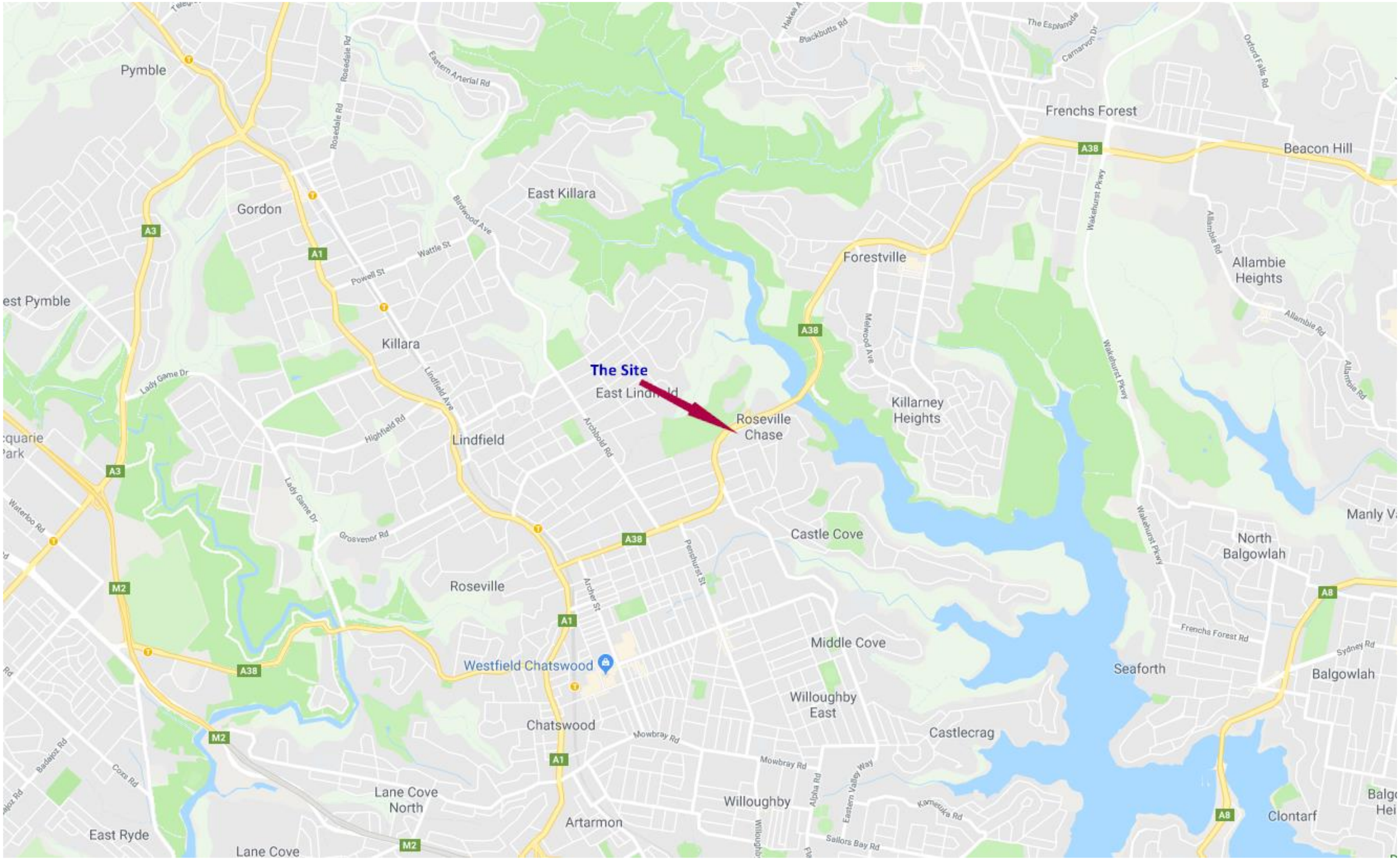
NSW EPA 2017, 'Contaminated Sites: Guidelines for the NSW Site Auditor Scheme (3rd edition)'.

NSW EPA 1995, 'Contaminated Sites: Sampling Design Guidelines'.

NSW OEH 2011, 'Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites'.

WA DOH 2009, 'Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia' dated May 2009.

FIGURES



Alliance Geotechnical ENGINEERING | ENVIRONMENTAL | TESTING Manage the earth, eliminate the risk	Site Locality				
	Client Name:	Ku-ring-gai Council	N	Figure Number:	1
	Project Name:	Stage 2 Detailed Site Investigation		Figure Date:	20 June 2018
	Project Location:	47 Warrane Road, Roseville Chase, NSW		Report Number:	6838-ER-1-2

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Site Layout

Client Name:	Ku-ring-gai Council	N	Figure Number:	2
Project Name:	Stage 2 Detailed Site Investigation		Figure Date:	20 June 2018
Project Location:	47 Warrane Road, Roseville Chase, NSW		Report Number:	6838-ER-1-2

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Areas of Environmental Concern

Client Name:	Ku-ring-gai Council	Figure Number:	3
Project Name:	Stage 2 Detailed Site Investigation	Figure Date:	20 June 2018
Project Location:	47 Warrane Road, Roseville Chase, NSW	Report Number:	6838-ER-1-2

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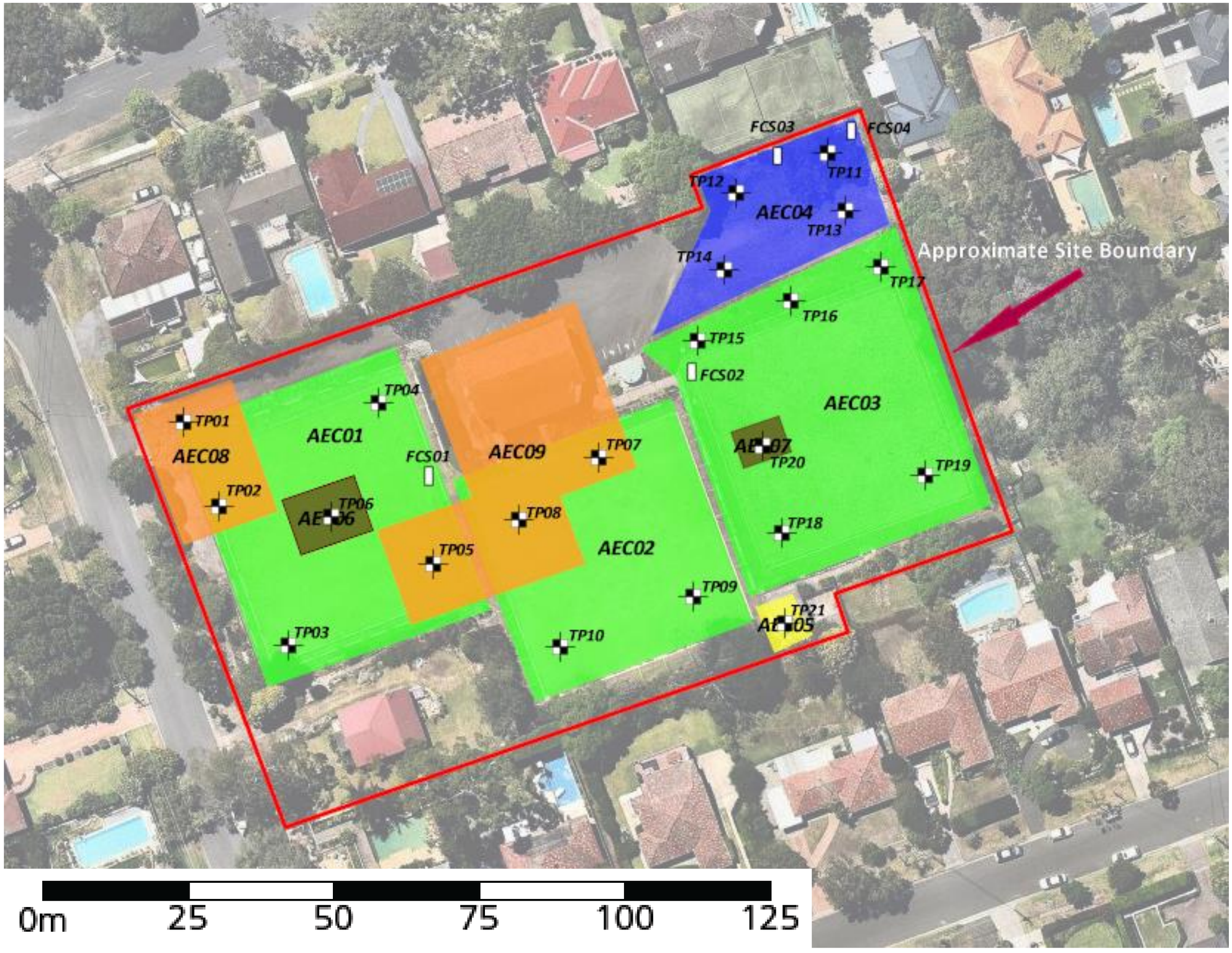

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Sampling Point Layout Plan

Client Name:	Ku-ring-gai Council	N	Figure Number:	4
Project Name:	Stage 2 Detailed Site Investigation		Figure Date:	20 June 2018
Project Location:	47 Warrane Road, Roseville Chase, NSW		Report Number:	6838-ER-1-2

TABLES

Table LAR1
47 Warrane Road, Roseville Chase NSW
Soil Results & Adopted Site Criteria
6838-ER-1-2

									Reference		SE180508.001	SE180509.001	SE180508.002	SE180508.003	SE180509.002	SE180508.004	SE180508.005	SE180508.006	SE180509.003	SE180508.007	SE180508.008	SE180508.009	SE180509.004	SE180508.010	SE180508.011	SE180508.012	SE180509.005	SE180508.013	SE180509.006	SE180508.014	SE180508.015	SE180509.007	SE180508.016	SE180509.008	SE180508.017	SE180508.018	SE180509.009	SE180508.019	SE180508.020	SE180509.010	SE180509.011	SE180508.021	SE180508.022
									Sample ID		TP01-0.0-0.2	TP01_0.0-0.4	TP01-0.4-0.6	TP02-0.0-0.2	TP02_0.0-0.6	TP02-0.45-0.6	TP02-0.6-0.8	TP03-0.0-0.2	TP03_0.0-0.7	TP03-0.45-0.6	TP03-0.7-0.8	TP04-0.0-0.2	TP04_0.0-0.7	TP04-0.5-0.7	TP04-0.7-0.9	TP05-0.0-0.2	TP05_0.0-0.8	TP05-0.5-0.7	TP06_0.0-0.5	TP06-0.4-0.5	TP06-0.5-0.7	TP07_0.0-1.0	TP07-0.7-0.9	TP07_1.0-2.0	TP07-1.3-1.5	TP07-1.8-2.0	TP07_2.0-2.1	TP07-2.1-2.3	TP08-0.0-0.2	TP08_0.0-1.0	TP08_1.0-1.2	TP08-1.2-1.4	TP09-0.0-0.2
									Date Sampled		18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018
									Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Group	Analyte	Units	PQL	Asbestos Health Screening Level (w/w) - NEPC 2013	Screening Levels for Direct Contact (mg/kg) - CRC Care 2011	Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (SAND)	Management Limits for TPH Fractions F1 - F4 in soil (mg/Kg) - NEPC 2013	Health Investigation Levels for Soil Contaminants - NEPC 2013																																			
				Residential A	HSL - A Residential (Low Density)	HSL A & HSL B - Low - High density Residential 0 m to <1 m	Residential, Parkland and Public Open Space Coarse Soil Texture	Residential A	Data Set Minimum	Data Set Maximum																																	
Metals	Arsenic, As	mg/kg	3	-	-	-	-	100	<1	51	11	-	<1	<1	-	<1	<1	-	-	1	<1	1	-	<1	<1	<1	-	-	-	<1	<1	-	<1	-	<1	-	-	<1	2	-	-	<1	<1
	Cadmium, Cd	mg/kg	0.3	-	-	-	-	20	<0.3	1.8	0.5	-	<0.3	0.6	-	<0.3	<0.3	-	-	0.6	<0.3	<0.3	-	0.5	<0.3	<0.3	-	-	-	<0.3	<0.3	-	<0.3	-	<0.3	-	-	<0.3	<0.3	-	-	<0.3	0.5
	Chromium, Cr	mg/kg	0.3	-	-	-	-	100	2	21	11	-	9.2	21	-	8.3	2.0	-	-	4.8	6.2	8.5	-	12.0	7.4	6.6	-	-	-	5.7	6.1	-	6.7	-	7.5	-	-	2.9	7.0	-	-	6.9	2.0
	Copper, Cu	mg/kg	0.5	-	-	-	-	6,000	<0.5	32	7.8	-	<0.5	6.3	-	20	<0.5	-	-	30	6.1	7.8	-	32	1	4.9	-	-	-	20	0.7	-	<0.5	-	0.6	-	-	<0.5	7.4	-	-	1.8	3.1
	Lead, Pb	mg/kg	1	-	-	-	-	300	1	990	17	-	3	11	-	5	2	-	-	9	5	11	-	17	4	10	-	-	-	28	1	-	3	-	5	-	-	2	8	-	-	3	4
	Nickel, Ni	mg/kg	0.5	-	-	-	-	400	<0.5	17	3.2	-	<0.5	3	-	6.2	<0.5	-	-	16	17	5.5	-	11	<0.5	3.5	-	-	-	13	<0.5	-	<0.5	-	<0.5	-	-	<0.5	4.2	-	-	<0.5	0.8
	Zinc, Zn	mg/kg	0.5	-	-	-	-	7,400	<2	160	20	-	2.4	15	-	15	<2	-	-	21	60	22	-	21	4.1	17	-	-	-	53	5	-	3.4	-	14	-	-	<2	19	-	-	2.4	8.1
	Mercury (inorganic)	mg/kg	0.05	-	-	-	-	40	<0.05	4.4	0.58	-	<0.05	3	-	1.3	<0.05	-	-	0.46	0.1	1.7	-	0.69	0.05	1.8	-	-	-	0.51	<0.05	-	<0.05	-	<0.05	-	-	<0.05	1.6	-	-	<0.05	1.1
PAHS	Naphthalene	mg/kg	0.1	-	-	3	-	-	<0.1	0	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	-	-	-	-	-	<0.1	0	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	-	-	-	-	-	<0.1	0	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Acenaphthylene	mg/kg	0.1	-	-	-	-	-	<0.1	0.3	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Acenaphthene	mg/kg	0.1	-	-	-	-	-	<0.1	0	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Fluorene	mg/kg	0.1	-	-	-	-	-	<0.1	0	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Phenanthrene	mg/kg	0.1	-	-	-	-	-	<0.1	4.6	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	0.2	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Anthracene	mg/kg	0.1	-	-	-	-	-	<0.1	1.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Fluoranthene	mg/kg	0.1	-	-	-	-	-	<0.1	7.2	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Pyrene	mg/kg	0.1	-	-	-	-	-	<0.1	6	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	-	-	-	-	-	<0.1	3	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Chrysene	mg/kg	0.1	-	-	-	-	-	<0.1	2.6	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Benzo(b&j)fluoranthene	mg/kg	0.1	-	-	-	-	-	<0.1	3.3	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Benzo(k)fluoranthene	mg/kg	0.1	-	-	-	-	-	<0.1	1.4	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	-	-	-	-	-	<0.1	3	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	-	-	-	<0.1	1.9	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Dibenzo(ah)anthracene	mg/kg	0.1	-	-	-	-	-	<0.1	0.2	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	-	-	<0.1	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	-	-	-	-	-	<0.1	1.5	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	-	-	-	<0.1	-	-	<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	4.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	-	-	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	-	-	-	<0.2	-	-	<0.2	-	<0.2	-	-	<0.2	<0.2	-	-	<0.2	<0.2
	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	-	-	-	-	3	<0.3	4.2	<0.3	-	<0.3	<0.3	-	<0.3	<0.3	-	-	<0.3	<0.3	<0.3	-	<0.3	<0.3	<0.3	-	-	-	<0.3	-	-	<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	4.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	-	-	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	-	-	-	<0.2	-	-	<0.2	-	<0.2	-	-	<0.2	<0.2	-	-	<0.2	<0.2
	Total PAH (18)	mg/kg	0.8	-	-	-	-	-	<0.8	36	<0.8	-	<0.8	<0.8	-	<0.8	<0.8	-	-	<0.8	<0.8	<0.8	-	<0.8	<0.8	<0.8	-	-	-	<0.8	-	-	<0.8	-	<0.8	-	-	<0.8	<0.8	-	-	<0.8	<0.8
	Total PAH (NEPM/WHO 16)	mg/kg	0.8	-	-	-	-	300	<0.8	36	<0.8	-	<0.8	<0.8	-	<0.8	<0.8	-	-	<0.8	<0.8	<0.8	-	<0.8	<0.8	<0.8	-	-	-	<0.8	-	-	<0.8	-	<0.8	-	-	<0.8	<0.8	-	-	<0.8	<0.8
TRH	TRH C6-C9	mg/kg	20	-	-	-	-	-	<20	<20	-	-	-	-	-	<20	-	<20	-	-	-	<20	-	-	-	-	-	<20	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	<20	<20
	Benzene (F0)	mg/kg	0.1	-	100	-	-	-	<0.1	<0.1	-	-	-	-	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	<0.1	<0.1
	TRH C6-C10	mg/kg	25	-	4,400	-	700	-	<25	<25	-	-	-	-	-	<25	-	<25	-	-	-	<25	-	-	-	-	-	<25	-	-	-	-	-	-	-	<25	-	-	-	-	-	-	<25	<25
	TRH C6-C10 minus BTEX (F1)	mg/kg	25	-	-	45	-	-	<25	<25	-	-	-	-	-	<25	-	<25	-	-	-	<25	-	-	-	-	-	<25	-	-	-	-	-	-	-	<25	-	-	-	-	-	-	<25	<25
	TRH C10-C14	mg/kg	20	-	-	-	-	-	<20	<20	-	-	-	-	-	<20	-	<20	-	-	-	<20	-	-	-	-	-	<20	-	-	-	-	-	-	-	<20	-	-	-	-	-	-	<20	<20
	TRH C15-C28	mg/kg	45	-	-	-	-	-	<45	79	-	-	-	-	-	<45	-	<45	-	-	-	<45	-	-	-	-	-	<45	-	-	-	-	-	-	-	<45	-	-	-	-	-	-	<45	<45
	TRH C29-C36	mg/kg	45	-	-	-	-	-	<45	<45	-	-	-	-	-	<45	-	<45	-	-	-	<45	-	-	-	-	-	<45	-	-	-	-	-	-	-	<45	-	-	-	-	-	-	<45	<45
	TRH C37-C40	mg/kg	100	-	-	-	-	-	<100	<100	-	-	-	-	-	<100	-	<100	-	-	-	<100	-	-	-	-	-	<100	-	-	-	-	-	-	-	<100	-	-	-	-	-	-	<100	<100
	TRH >C10-C16 (F2)	mg/kg	25	-	3,300	-	1,000	-	<25	<25	-	-	-	-	-	<25	-	<25	-	-	-	<25	-	-	-	-	-	<25	-	-	-	-	-	-	-	<25	-	-	-	-	-	-	<25	<25
	TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	-	-	110	-	-	<25	<25	-	-	-	-	-	<25	-	<25	-	-	-	<25	-	-	-	-	-	<25	-	-	-	-	-	-	-	<25	-	-	-	-	-	-	<25	<25
	TRH >C16-C34 (F3)	mg/kg	90	-	4,500	-	2,500	-	<90	110	-	-	-	-	-	<90	-	<90	-	-	-	<90	-	-	-	-	-	<90	-	-	-	-	-	-	-	<90	-	-	-	-	-	-	<90	<90
	TRH >C34-C40 (F4)	mg/kg	120	-	6,300	-	10,000	-	<120	<120	-	-	-	-	-	<120	-	<120	-	-	-	<120	-	-	-	-	-	<120	-	-	-	-	-	-	-	<120	-	-	-	-	-	-	<120	<120
	TRH C10-C36 Total	mg/kg	110	-	-	-	-	-	<110	<110	-	-	-	-	-	<110	-	<110	-	-	-	<110	-	-	-	-	-	<110	-	-	-	-	-	-	-	<110	-	-	-	-	-	-	<110	<110
	TRH C10-C40 Total (F bands)	mg/kg	210	-	-	-	-	-	<210	<210	-	-	-	-	-	<210	-	<210	-	-	-	<210	-	-	-	-	-	<210	-	-	-	-	-	-	-	<210	-	-	-	-	-	-	<210	<210
VOCs	Benzene	mg/kg	0.1	-	100	0.5	-	-	<0.1	<0.1	-	-	-	-	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	<0.1	<0.1
	Toluene	mg/kg	0.1	-	14,000	160	-	-	<0.1	<0.1	-	-	-	-	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	<0.1	<0.1
	Ethylbenzene	mg/kg	0.1	-	4,500	55	-	-	<0.1	<0.1	-	-	-	-	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	<0.1	<0.1
	m/p-xylene	mg/kg	0.2	-	-	-	-	-	<0.2	<0.2	-	-	-	-	-	<0.2	-	<0.2	-	-	-	<0.2	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	<0.2	<0.2
	o-xylene	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	<0.1	<0.1
	Total Xylenes	mg/kg	0.3	-	12,000	40	-	-	<0.3	<0.3	-	-	-	-	-	<0.3	-	<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	-	-	-	-	-	<0.6	-	-	-	-	-	-	-	<0.6	-	-	-	-	-	-	<0.6	<0.6
	Naphthalene	mg/kg	0.1	-	1,400	3	-	-	<0.1	<0.1	-	-	-	-	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	<0.1	<0.1
OCP	Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	10	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Alpha BHC	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Lindane	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Heptachlor	mg/kg	0.1	-	-	-	-	6	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Aldrin	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Beta BHC	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Delta BHC	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	o,p'-DDE	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-	<0.2	<0.2	<0.2	-	-	-	-	-	<0.2	-	-	-	-	<0.2	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2
	Gamma Chlordane	mg/kg	0.1	-	-	-	-	-	<0.1	0.5	<0.1	-	-	-	-	-	<0.1	-	-	-	-	0.3	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Alpha Chlordane	mg/kg	0.1	-	-	-	-	-	<0.1	0.9	<0.1	-	-	-	-	-	<0.1	-	-	-	-	0.5	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	0.1
	trans-Nonachlor	mg/kg	0.1	-	-	-	-	-	0.2	0.9	0.2	-	-	-	-	-	<0.1	-	-	-	-	0.5	-	-	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	0.2
	p,p'-DDE	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Dieldrin	mg/kg	0.2	-	-	-	-	-	<0.2	0.4	<0.2	-	-	-	-	-	<0.2	-	-	-	-	<0.2	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2
	Endrin	mg/kg	0.2	-	-	-	-	10	<0.2	<0.2	<0.2	-	-	-	-	-	<0.2	-	-	-	-	<0.2	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2
	o,p'-DDD	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	o,p'-DDT	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Beta Endosulfan	mg/kg	0.2	-	-	-	-	-	<0.2	<0.2	<0.2	-	-	-	-	-	<0.2	-	-	-	-	<0.2	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.2	<0.2
	p,p'-DDD	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	p,p'-DDT	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Methoxychlor	mg/kg	0.1	-	-	-	-	300	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Endrin Ketone	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Isodrin	mg/kg	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Mirex	mg/kg	0.1	-	-	-	-	10	<0.1	<0.1	<0.1	-	-	-	-	-	<0.1	-	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1
	Total CLP OC Pesticides	mg/kg	1	-	-	-	-	-	<1	2	<1	-	-	-	-	-	<1	-	-	-	-	<1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1
	DDT + DDE + DDD	mg/kg	0.1	-	-	-	-	240	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
	Alpha + Beta Endosulfan	mg/kg	0.1	-	-	-	-	270	0	0	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
	Aldrin + Dieldrin	mg/kg	0.1	-	-	-	-	6	0	0.4	0	-	-	-	-	-	0	-	-	-	-	0	-	-	-	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
	Alpha + Gamma Chlordane	mg/kg	0.1	-	-	-	-	50	0	1.4	0	-	-	-	-	-	0	-	-	-	-	0.8	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.1
PCBs	Arochlor 1016	mg/kg	0.2	-	-	-	-	-	0	0	<0.2	-	-	-	-	-	-	-	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-
	Arochlor 1221	mg/kg	0.2	-	-	-	-	-	0	0	<0.2	-	-	-	-	-	-	-	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-
	Arochlor 1232	mg/kg	0.2	-	-	-	-	-	0	0	<0.2	-	-	-	-	-	-	-	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-
	Arochlor 1242	mg/kg	0.2	-	-	-	-	-	0	0	<0.2	-	-	-	-	-	-	-	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-
	Arochlor 1248	mg/kg	0.2	-	-	-	-	-	0	0	<0.2	-	-	-	-	-	-	-	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-
	Arochlor 1254	mg/kg	0.2	-	-	-	-	-	0	0	<0.2	-	-	-	-	-	-	-	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-
	Arochlor 1260	mg/kg	0.2	-	-	-	-	-	0	0	<0.2	-	-	-	-	-	-	-	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-
	Arochlor 1262	mg/kg	0.2	-	-	-	-	-	0	0	<0.2	-	-	-	-	-	-	-	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-
	Arochlor 1268	mg/kg	0.2	-	-	-	-	-	0	0	<0.2	-	-	-	-	-	-	-	-	<0.2	-	<0.2	-	<0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-
	Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	1	0	0	<1	-	-	-	-	-	-	-	-	<1	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-
Phenoxy Acid Herbicides	Acifluorfen	mg/kg	0.5						0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	Bentazon	mg/kg	0.5						0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	Chloramben	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	24-D	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	24-DB	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	Dicamba	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	3,5-Dichlorobenzoic acid	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	Dichloroprop	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	Dinoseb	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	MCPA	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	MCPP	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	4-Nitrophenol	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	Pentachlorophenol	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	Picloram	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	245-T	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
	245-TP	mg/kg	0.5		-				0	0	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-
Asbestos	Total Sample Weight	g	1	-	-	-	-	-	673	1176	-	1105	-	-	1025	-	-	-	857	-	-	-	1114	-	-	-	1120	-	917	-	-	1086	-	719	-	-	794	-	-	1092	1003	-	-
	ACM in >7mm Sample	g	0.01	-	-	-	-	-	0	0	-	<0.01	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	<0.01	-	-	<0.01	-	<0.01	-	-	<0.01	-	-	<0.01	<0.01	-	-
	AF/FA in >2mm to <7mm Sample	g	0	-	-	-	-	-	0	0	-	<0.0001	-	-	<0.0001	-	-	-	<0.0001	-	-	-	<0.0001	-	-	-	<0.0001	-	<0.0001	-	-	<0.0001	-	<0.0001	-	-	<0.0001	-	-	<0.0001	<0.0001	-	-
	AF/FA in <2mm Sample	g	0.00	-	-	-	-	-	0	0	-	<0.0001	-	-	<0.0001	-	-	-	<0.0001	-	-	-	<0.0001	-	-	-	<0.0001	-	<0.0001	-	-	<0.0001	-	<0.0001	-	-	<0.0001	-	-	<0.0001	<0.0001	-	-
	Asbestos in soil (>7mm ACM)	%w/w	0.0100	0.01	-	-	-	-	0	0	-	<0.01	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	<0.01	-	-	<0.01	-	<0.01	-	-	<0.01	-	-	<0.01	<0.01	-	-
	Asbestos in soil (>2mm to <7mm AF/FA)	%w/w	0.0010	0.001	-	-	-	-	0	0	-	<0.001	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	<0.001	-	-	<0.001	-	<0.001	-	-	<0.001	-	-	<0.001	<0.001	-	-
	Asbestos in soil (<2mm AF/FA)	%w/w	0.00	0.001	-	-	-	-	0	0	-	<0.001	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	<0.001	-	-	<0.001	-	<0.001	-	-	<0.001	-	-	<0.001	<0.001	-	-
	Asbestos in soil (<7mm AF/FA)	%w/w	0.001	0.001	-	-	-	-	0	0	-	<0.001	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	-	-	<0.001	-	<0.001	-	-	<0.001	-	<0.001	-	-	<0.001	-	-	<0.001	<0.001	-	-
	Fibre Type	No unit	0.000	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Asbestos Detected	No unit	0.000	-	-	-	-	-	0	0	-	No	-	-	No	-	-	-	No	-	-	-	No	-	-	-	No	-	No	-	-	No	-	No	-	-	No	-	-	No	No	-	-
	Estimated Fibres	%w/w	0	-	-	-	-	-	0	0	-	<0.01	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	<0.01	-	-	<0.01	-	<0.01	-	-	<0.01	-	-	<0.01	<0.01	-	-

Table LAR1
47 Warrane Road, Roseville Chase NSW
Soil Results & Adopted Site Criteria
6838-ER-1-2

Group	Analyte	Units	PQL	Asbestos Health Screening Level (w/w) - NEPC 2013	Screening Levels for Direct Contact (mg/kg) - CRC Care 2011	Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (SAND)	Management Limits for TPH Fractions F1 - F4 in soil (mg/Kg) - NEPC 2013	Health Investigation Levels for Soil Contaminants - NEPC 2013	
				Residential A	HSL - A Residential (Low Density)	HSL A & HSL B - Low - High density Residential	Residential, Parkland and Public Open Space	Residential A	Data Set Minimum
						0 m to <1 m	Coarse Soil Texture		
Metals	Arsenic, As	mg/kg	3	-	-	-	-	100	<1
	Cadmium, Cd	mg/kg	0.3	-	-	-	-	20	<0.3
	Chromium, Cr	mg/kg	0.3	-	-	-	-	100	2
	Copper, Cu	mg/kg	0.5	-	-	-	-	6,000	<0.5
	Lead, Pb	mg/kg	1	-	-	-	-	300	1
	Nickel, Ni	mg/kg	0.5	-	-	-	-	400	<0.5
	Zinc, Zn	mg/kg	0.5	-	-	-	-	7,400	<2
	Mercury (inorganic)	mg/kg	0.05	-	-	-	-	40	<0.05
PAHS	Naphthalene	mg/kg	0.1	-	-	3	-	-	<0.1
	2-methylnaphthalene	mg/kg	0.1	-	-	-	-	-	<0.1
	1-methylnaphthalene	mg/kg	0.1	-	-	-	-	-	<0.1
	Acenaphthylene	mg/kg	0.1	-	-	-	-	-	<0.1
	Acenaphthene	mg/kg	0.1	-	-	-	-	-	<0.1
	Fluorene	mg/kg	0.1	-	-	-	-	-	<0.1
	Phenanthrene	mg/kg	0.1	-	-	-	-	-	<0.1
	Anthracene	mg/kg	0.1	-	-	-	-	-	<0.1
	Fluoranthene	mg/kg	0.1	-	-	-	-	-	<0.1
	Pyrene	mg/kg	0.1	-	-	-	-	-	<0.1
	Benzo(a)anthracene	mg/kg	0.1	-	-	-	-	-	<0.1
	Chrysene	mg/kg	0.1	-	-	-	-	-	<0.1
	Benzo(b&j)fluoranthene	mg/kg	0.1	-	-	-	-	-	<0.1
	Benzo(k)fluoranthene	mg/kg	0.1	-	-	-	-	-	<0.1
	Benzo(a)pyrene	mg/kg	0.1	-	-	-	-	-	<0.1
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	-	-	-	<0.1
	Dibenzo(ah)anthracene	mg/kg	0.1	-	-	-	-	-	<0.1
	Benzo(ghi)perylene	mg/kg	0.1	-	-	-	-	-	<0.1
	Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	-	-	-	-	-	<0.2
	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	-	-	-	-	3	<0.3
	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	-	-	-	-	-	<0.2
	Total PAH (18)	mg/kg	0.8	-	-	-	-	-	<0.8
	Total PAH (NEPM/WHO 16)	mg/kg	0.8	-	-	-	-	300	<0.8
TRH	TRH C6-C9	mg/kg	20	-	-	-	-	-	<20
	Benzene (F0)	mg/kg	0.1	-	100	-	-	-	<0.1
	TRH C6-C10	mg/kg	25	-	4,400	-	700	-	<25
	TRH C6-C10 minus BTEX (F1)	mg/kg	25	-	-	45	-	-	<25
	TRH C10-C14	mg/kg	20	-	-	-	-	-	<20
	TRH C15-C28	mg/kg	45	-	-	-	-	-	<45
	TRH C29-C36	mg/kg	45	-	-	-	-	-	<45
	TRH C37-C40	mg/kg	100	-	-	-	-	-	<100
	TRH >C10-C16 (F2)	mg/kg	25	-	3,300	-	1,000	-	<25
	TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	-	-	110	-	-	<25
	TRH >C16-C34 (F3)	mg/kg	90	-	4,500	-	2,500	-	<90
	TRH >C34-C40 (F4)	mg/kg	120	-	6,300	-	10,000	-	<120
	TRH C10-C36 Total	mg/kg	110	-	-	-	-	-	<110
	TRH C10-C40 Total (F bands)	mg/kg	210	-	-	-	-	-	<210
VOCs	Benzene	mg/kg	0.1	-	100	0.5	-	-	<0.1
	Toluene	mg/kg	0.1	-	14,000	160	-	-	<0.1
	Ethylbenzene	mg/kg	0.1	-	4,500	55	-	-	<0.1
	m/p-xylene	mg/kg	0.2	-	-	-	-	-	<0.2
	o-xylene	mg/kg	0.1	-	-	-	-	-	<0.1
	Total Xylenes	mg/kg	0.3	-	12,000	40	-	-	<0.3
	Total BTEX	mg/kg	0.6	-	-	-	-	-	<0.6
	Naphthalene	mg/kg	0.1	-	1,400	3	-	-	<0.1
OCP	Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	10	<0.1
	Alpha BHC	mg/kg	0.1	-	-	-	-	-	<0.1
	Lindane	mg/kg	0.1	-	-	-	-	-	<0.1
	Heptachlor	mg/kg	0.1	-	-	-	-	6	<0.1
	Aldrin	mg/kg	0.1	-	-	-	-	-	<0.1
	Beta BHC	mg/kg	0.1	-	-	-	-	-	<0.1
	Delta BHC	mg/kg	0.1	-	-	-	-	-	<0.1
	Heptachlor epoxide	mg/kg	0.1	-	-	-	-	-	<0.1
	o,p'-DDE	mg/kg	0.1	-	-	-	-	-	<0.1
	Alpha Endosulfan	mg/kg	0.2	-	-	-	-	-	<0.2
	Gamma Chlordane	mg/kg	0.1	-	-	-	-	-	<0.1
	Alpha Chlordane	mg/kg	0.1	-	-	-	-	-	<0.1
	trans-Nonachlor	mg/kg	0.1	-	-	-	-	-	0.2
	p,p'-DDE	mg/kg	0.1	-	-	-	-	-	<0.1
	Dieldrin	mg/kg	0.2	-	-	-	-	-	<0.2
	Endrin	mg/kg	0.2	-	-	-	-	10	<0.2
	o,p'-DDD	mg/kg	0.1	-	-	-	-	-	<0.1
	o,p'-DDT	mg/kg	0.1	-	-	-	-	-	<0.1
	Beta Endosulfan	mg/kg	0.2	-	-	-	-	-	<0.2
	p,p'-DDD	mg/kg	0.1	-	-	-	-	-	<0.1
	p,p'-DDT	mg/kg	0.1	-	-	-	-	-	<0.1
	Endosulfan sulphate	mg/kg	0.1	-	-	-	-	-	<0.1
	Endrin Aldehyde	mg/kg	0.1	-	-	-	-	-	<0.1
	Methoxychlor	mg/kg	0.1	-	-	-	-	300	<0.1
	Endrin Ketone	mg/kg	0.1	-	-	-	-	-	<0.1
	Isodrin	mg/kg	0.1	-	-	-	-	-	<0.1
	Mirex	mg/kg	0.1	-	-	-	-	10	<0.1
	Total CLP OC Pesticides	mg/kg	1	-	-	-	-	-	<1
	DDT + DDE + DDD	mg/kg	0.1	-	-	-	-	240	0
	Alpha + Beta Endosulfan	mg/kg	0.1	-	-	-	-	270	0
	Aldrin + Dieldrin	mg/kg	0.1	-	-	-	-	6	0
	Alpha + Gamma Chlordane	mg/kg	0.1	-	-	-	-	50	0
PCBs	Arochlor 1016	mg/kg	0.2	-	-	-	-	-	0
	Arochlor 1221	mg/kg	0.2	-	-	-	-	-	0
	Arochlor 1232	mg/kg	0.2	-	-	-	-	-	0
	Arochlor 1242	mg/kg	0.2	-	-	-	-	-	0
	Arochlor 1248	mg/kg	0.2	-	-	-	-	-	0
	Arochlor 1254	mg/kg	0.2	-	-	-	-	-	0
	Arochlor 1260	mg/kg	0.2	-	-	-	-	-	0
	Arochlor 1262	mg/kg	0.2	-	-	-	-	-	0
	Arochlor 1268	mg/kg	0.2	-	-	-	-	-	0
	Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	1	0
Phenoxy Acid Herbicides	Acifluorfen	mg/kg	0.5						0
	Bentazon	mg/kg	0.5						0
	Chloramben	mg/kg	0.5		-				0
	24-D	mg/kg	0.5		-				0
	24-DB	mg/kg	0.5		-				0
	Dicamba	mg/kg	0.5		-				0
	3,5-Dichlorobenzoic acid	mg/kg	0.5		-				0
	Dichloroprop	mg/kg	0.5		-				0
	Dinoseb	mg/kg	0.5		-				0
	MCPA	mg/kg	0.5		-				0
	MCPP	mg/kg	0.5		-				0
	4-Nitrophenol	mg/kg	0.5		-				0
	Pentachlorophenol	mg/kg	0.5		-				0
	Picloram	mg/kg	0.5		-				0
	245-T	mg/kg	0.5		-				0
	245-TP	mg/kg	0.5		-				0
Asbestos	Total Sample Weight	g	1	-	-	-	-	-	673
	ACM in >7mm Sample	g	0.01	-	-	-	-	-	0
	AF/FA in >2mm to <7mm Sample	g	0	-	-	-	-	-	0
	AF/FA in <2mm Sample	g	0.00	-	-	-	-	-	0
	Asbestos in soil (>7mm ACM)	%w/w	0.0100	0.01	-	-	-	-	0
	Asbestos in soil (>2mm to <7mm AF/FA)	%w/w	0.0010	0.001	-	-	-	-	0
	Asbestos in soil (<2mm AF/FA)	%w/w	0.00	0.001	-	-	-	-	0
	Asbestos in soil (<7mm AF/FA)	%w/w	0.001	0.001	-	-	-	-	0
	Fibre Type	No unit	0.000	-	-	-	-	-	0
	Asbestos Detected	No unit	0.000	-	-	-	-	-	0
	Estimated Fibres	%w/w	0	-	-	-	-	-	0

Reference	SE180509.012	SE180508.023	SE180509.013	SE180508.024	SE180508.025	SE180509.014	SE180508.026	SE180508.027	SE180509.015	SE180508.028	SE180508.029	SE180509.016	SE180508.030	SE180508.031	SE180509.017	SE180508.032	SE180508.033
Sample ID	TP09_0.0-0.7	TP10-0.0-0.2	TP10_0.0-0.6	TP10-0.6-0.8	TP11-0.0-0.2	TP11_0.0-0.5	TP11-0.5-0.6	TP12-0.0-0.2	TP12_0.0-0.6	TP12-0.6-0.8	TP13-0.0-0.2	TP13_0.0-0.6	TP13-0.6-0.8	TP14-0.0-0.2	TP14_0.0-0.3	TP14-0.3-0.4	TP15-0.0-0.2
Date Sampled	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018
Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Arsenic, As	-	<1	-	<1	8	-	-	9	-	16	9	-	2	8	-	-	33
Cadmium, Cd	-	0.3	-	<0.3	<0.3	-	-	1.8	-	0.4	<0.3	-	<0.3	0.3	-	-	0.9
Chromium, Cr	-	4.0	-	7.8	5.4	-	-	7.7	-	4.5	5.3	-	17.0	5.5	-	-	8.5
Copper, Cu	-	4.8	-	<0.5	5.3	-	-	17	-	3.8	5.4	-	<0.5	6	-	-	6.1
Lead, Pb	-	7	-	3	10	-	-	67	-	110	12	-	14	10	-	-	66
Nickel, Ni	-	1.9	-	<0.5	2.5	-	-	2.6	-	<0.5	2.9	-	<0.5	2.8	-	-	1.7
Zinc, Zn	-	13	-	<2	19	-	-	150	-	14	19	-	3.5	18	-	-	44
Mercury (inorganic)	-	1.6	-	<0.05	1.3	-	-	3.4	-	0.14	0.81	-	<0.05	0.67	-	-	0.19
Naphthalene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
2-methylnaphthalene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
1-methylnaphthalene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Acenaphthylene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Acenaphthene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Fluorene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Phenanthrene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Anthracene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Fluoranthene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	0.1	<0.1
Pyrene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	0.1	<0.1
Benzo(a)anthracene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Chrysene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Benzo(b&j)fluoranthene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Benzo(k)fluoranthene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Benzo(a)pyrene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Dibenzo(ah)anthracene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Benzo(ghi)perylene	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-	<0.1	-	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	-	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	-	-	<0.2	-	-	<0.2	-	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	-	<0.3	-	<0.3	<0.3	-	<0.3	<0.3	-	-	<0.3	-	-	<0.3	-	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	-	<0.2	-	<0.2	<0.2	-	<0.2	<0.2	-	-	<0.2	-	-	<0.2	-	<0.2	<0.2
Total PAH (18)	-	<0.8	-	<0.8	<0.8	-	<0.8	<0.8	-	-	<0.8	-	-	<0.8	-	<0.8	<0.8
Total PAH (NEPM/WHO 16)	-	<0.8	-	<0.8	<0.8	-	<0.8	<0.8	-	-	<0.8	-	-	<0.8	-	<0.8	<0.8
TRH C6-C9	-	<20	-	-	-	-	-	<20	-	-	<20	-	-	-	-	-	-
Benzene (F0)	-	<0.1	-	-	-	-	-	<0.1	-	-	<0.1	-	-	-	-	-	-
TRH C6-C10	-	<25	-	-	-	-	-	<25	-	-	<25	-	-	-	-	-	-
TRH C6-C10 minus BTEX (F1)	-	<25	-	-	-	-	-	<25	-	-	<25	-	-	-	-	-	-
TRH C10-C14	-	<20	-	-	-	-	-	<20	-	-	<20	-	-	-	-	-	-
TRH C15-C28	-	<45	-	-	-	-	-	<45	-	-	<45	-	-	-	-	-	-
TRH C29-C36	-	<45	-	-	-	-	-	<45	-	-	<45	-	-	-	-	-	-
TRH C37-C40	-	<100	-	-	-	-	-	<100	-	-	<100	-	-	-	-	-	-
TRH >C10-C16 (F2)	-	<25	-	-	-	-	-	<25	-	-	<25	-	-	-	-	-	-
TRH >C10-C16 (F2) - Naphthalene	-	<25	-	-	-	-	-	<25	-	-	<25	-	-	-	-	-	-
TRH >C16-C34 (F3)	-	<90	-	-	-	-	-	<90	-	-	<90	-	-	-	-	-	-
TRH >C34-C40 (F4)	-	<120	-	-	-	-	-	<120	-	-	<120	-	-	-	-	-	-
TRH C10-C36 Total	-	<110	-	-	-	-	-	<110	-	-	<110	-	-	-	-	-	-
TRH C10-C40 Total (F bands)	-	<210	-	-	-	-	-	<210	-	-	<210	-	-	-	-	-	-
Benzene	-	<0.1	-	-	-	-	-	<0.1	-	-	<0.1	-	-	-	-	-	-
Toluene	-	<0.1	-	-	-	-	-	<0.1	-	-	<0.1	-	-	-	-	-	-
Ethylbenzene	-	<0.1	-	-	-	-	-	<0.1	-	-	<0.1	-	-	-	-	-	-
m/p-xylene	-	<0.2	-	-	-	-	-	<0.2	-	-	<0.2	-	-	-	-	-	-
o-xylene	-	<0.1	-	-	-	-	-	<0.1	-	-	<0.1	-	-	-	-	-	-
Total Xylenes	-	<0.3	-	-	-	-	-	<0.3	-	-	<0.3	-	-	-	-	-	-
Total BTEX	-	<0.6	-	-	-	-	-	<0.6	-	-	<0.6	-	-	-	-	-	-
Naphthalene	-	<0.1	-	-	-	-	-	<0.1	-	-	<0.1	-	-	-	-	-	-
Hexachlorobenzene (HCB)	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Alpha BHC	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Lindane	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Aldrin	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Beta BHC	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Delta BHC	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDE	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Alpha Endosulfan	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-
Gamma Chlordane	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Alpha Chlordane	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-
trans-Nonachlor	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-
p,p'-DDE	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Dieldrin	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-
Endrin	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDD	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
o,p'-DDT	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Beta Endosulfan	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-
p,p'-DDD	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
p,p'-DDT	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan sulphate	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Endrin Aldehyde	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Methoxychlor	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Endrin Ketone	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Isodrin	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Mirex	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Total CLP OC Pesticides	-	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-	-
DDT + DDE + DDD	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
Alpha + Beta Endosulfan	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
Aldrin + Dieldrin	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-
Alpha + Gamma Chlordane	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1016	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-
Arochlor 1221	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-
Arochlor 1232	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-
Arochlor 1242	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-
Arochlor 1248	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-
Arochlor 1254	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-
Arochlor 1260	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-
Arochlor 1262	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-
Arochlor 1268	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	<0.2	-	-	-
Total PCBs (Arochlors)	-	<1	-	-	-	-	-	-	-	-	-	-	-	<1	-	-	-
Acifluorfen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bentazon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloramben	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dicamba	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,5-Dichlorobenzoic acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloroprop	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dinoseb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MCPA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MCPP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Picloram	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
245-T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
245-TP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Sample Weight	1088	-	1146	-	-	879	-	-	838	-	-	877	-	-	1103	-	-
ACM in >7mm Sample	<0.01	-	<0.01	-	-	<0.01	-	-	<0.01	-	-	<0.01	-	-	<0.01	-	-
AF/FA in >2mm to <7mm Sample	<0.0001	-	<0.0001	-	-	<0.0001	-	-	<0.0001	-	-	<0.0001	-	-	<0.0001	-	-
AF/FA in <2mm Sample	<0.0001	-	<0.0001	-	-	<0.0001	-	-	<0.0001	-	-	<0.0001	-	-	<0.0001	-	-
Asbestos in soil (>7mm ACM)	<0.01	-	<0.01	-	-	<0.01	-	-	<0.01	-	-	<0.01	-	-	<0.01	-	-
Asbestos in soil (>2mm to <7mm AF/FA)	<0.001	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-
Asbestos in soil (<2mm AF/FA)	<0.001	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-
Asbestos in soil (<7mm AF/FA)	<0.001	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-	<0.001	-	-
Fibre Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Detected	No	-	No	-	-	No	-	-	No	-	-	No	-	-	No	-	-
Estimated Fibres	<0.01	-	<0.01	-	-	<0.01	-	-	<0.01	-	-	<0.01	-	-	<0.01	-	-

Reference	SE180509.018	SE180508.034	SE180509.019	SE180508.035	SE180508.036	SE180508.037	SE180509.020	SE180508.038	SE180509.021	SE180508.039	SE180508.040	SE180509.022	SE180508.041	SE180509.023	SE180508.042	SE180508.043	SE180509.024
Sample ID	TP15_0.0-1.0	TP15-0.6-0.8	TP15_1.0-1.7	TP15-1.3-1.5	TP15-1.7-1.9	TP16-0.0-0.2	TP16_0.0-1.0	TP16-0.7-0.9	TP16_1.0-1.7	TP16-1.4-1.6	TP17-0.0-0.2	TP17_0.0-1.0	TP17-0.7-0.9	TP17_1.0-1.2	TP17-1.2-1.4	TP18-0.0-0.2	TP18_0.0-0.6
Date Sampled	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018
Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Arsenic, As	-	7	-	3	<1	51	-	6	-	8	24	-	40	-	1	7	-
Cadmium, Cd	-	<0.3	-	<0.3	<0.3	1.4	-	<0.3	-	<0.3	0.7	-	1.0	-	<0.3	0.4	-
Chromium, Cr	-	6.7	-	5.3	2.7	11.0	-	7.9	-	10.0	8.2	-	11.0	-	3.3	7.5	-
Copper, Cu	-	4.5	-	4.6	<0.5	7.9	-	17	-	10	11	-	6.1	-	2.9	8.2	-
Lead, Pb	-	79	-	37	2	89	-	990	-	360	96	-	66	-	8	12	-
Nickel, Ni	-	1.1	-	0.9	<0.5	1.5	-	3.7	-	1.7	1.4	-	1.4	-	<0.5	3.9	-
Zinc, Zn	-	32	-	29	<2	50	-	130	-	160	45	-	36	-	<2	20	-
Mercury (inorganic)	-	0.11	-	0.12	<0.05	0.34	-	0.81	-	0.27	0.34	-	0.17	-	<0.05	1.2	-
Naphthalene	-	<0.1	-	<0.1	-	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-
2-methylnaphthalene	-	<0.1	-	<0.1	-	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-
1-methylnaphthalene	-	<0.1	-	<0.1	-	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-
Acenaphthylene	-	<0.1	-	<0.1	-	<0.1	-	<0.1	-	<0.1	0.3	-	0.2	-	<0.1	<0.1	-
Acenaphthene	-	<0.1	-	<0.1	-	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-
Fluorene	-	<0.1	-	<0.1	-	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-
Phenanthrene	-	<0.1	-	0.2	-	0.2	-	<0.1	-	<0.1	4.6	-	1.1	-	<0.1	<0.1	-
Anthracene	-	<0.1	-	<0.1	-	<0.1	-	<0.1	-	<0.1	1.1	-	0.3	-	<0.1	<0.1	-
Fluoranthene	-	<0.1	-	0.4	-	0.4	-	0.1	-	<0.1	7.2	-	1.8	-	<0.1	<0.1	-
Pyrene	-	<0.1	-	0.4	-	0.4	-	<0.1	-	<0.1	6	-	1.6	-	<0.1	<0.1	-
Benzo(a)anthracene	-	<0.1	-	0.2	-	0.2	-	<0.1	-	<0.1	3	-	0.8	-	<0.1	<0.1	-
Chrysene	-	<0.1	-	0.2	-	0.2	-	<0.1	-	<0.1	2.6	-	0.8	-	<0.1	<0.1	-
Benzo(b&j)fluoranthene	-	<0.1	-	0.2	-	0.2	-	<0.1	-	<0.1	3.3	-	1	-	<0.1	<0.1	-
Benzo(k)fluoranthene	-	<0.1	-	<0.1	-	0.1	-	<0.1	-	<0.1	1.4	-	0.4	-	<0.1	<0.1	-
Benzo(a)pyrene	-	<0.1	-	0.2	-	0.2	-	<0.1	-	<0.1	3	-	0.9	-	<0.1	<0.1	-
Indeno(1,2,3-cd)pyrene	-	<0.1	-	0.1	-	0.1	-	<0.1	-	<0.1	1.9	-	0.6	-	<0.1	<0.1	-
Dibenzo(ah)anthracene	-	<0.1	-	<0.1	-	<0.1	-	<0.1	-	<0.1	0.2	-	<0.1	-	<0.1	<0.1	-
Benzo(ghi)perylene	-	<0.1	-	0.1	-	0.1	-	<0.1	-	<0.1	1.5	-	0.5	-	<0.1	<0.1	-
Carcinogenic PAHs, BaP TEQ <LOR=0	-	<0.2	-	0.2	-	0.2	-	<0.2	-	<0.2	4.2	-	1.2	-	<0.2	<0.2	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR	-	<0.3	-	0.3	-	0.3	-	<0.3	-	<0.3	4.2	-	1.3	-	<0.3	<0.3	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	-	<0.2	-	0.3	-	0.3	-	<0.2	-	<0.2	4.2	-	1.3	-	<0.2	<0.2	-
Total PAH (18)	-	<0.8	-	1.9	-	2.1	-	<0.8	-	<0.8	36	-	10	-	<0.8	<0.8	-
Total PAH (NEPM/WHO 16)	-	<0.8	-	1.9	-	2.1	-	<0.8	-	<0.8	36	-	10	-	<0.8	<0.8	-
TRH C6-C9	-	<20	-	-	-	-	-	-	-	<20	<20	-	-	-	-	-	-
Benzene (F0)	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-
TRH C6-C10	-	<25	-	-	-	-	-	-	-	<25	<25	-	-	-	-	-	-
TRH C6-C10 minus BTEX (F1)	-	<25	-	-	-	-	-	-	-	<25	<25	-	-	-	-	-	-
TRH C10-C14	-	<20	-	-	-	-	-	-	-	<20	<20	-	-	-	-	-	-
TRH C15-C28	-	<45	-	-	-	-	-	-	-	52	79	-	-	-	-	-	-
TRH C29-C36	-	<45	-	-	-	-	-	-	-	<45	<45	-	-	-	-	-	-
TRH C37-C40	-	<100	-	-	-	-	-	-	-	<100	<100	-	-	-	-	-	-
TRH >C10-C16 (F2)	-	<25	-	-	-	-	-	-	-	<25	<25	-	-	-	-	-	-
TRH >C10-C16 (F2) - Naphthalene	-	<25	-	-	-	-	-	-	-	<25	<25	-	-	-	-	-	-
TRH >C16-C34 (F3)	-	<90	-	-	-	-	-	-	-	<90	110	-	-	-	-	-	-
TRH >C34-C40 (F4)	-	<120	-	-	-	-	-	-	-	<120	<120	-	-	-	-	-	-
TRH C10-C36 Total	-	<110	-	-	-	-	-	-	-	<110	<110	-	-	-	-	-	-
TRH C10-C40 Total (F bands)	-	<210	-	-	-	-	-	-	-	<210	<210	-	-	-	-	-	-
Benzene	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-
Toluene	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-
Ethylbenzene	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-
m/p-xylene	-	<0.2	-	-	-	-	-	-	-	<0.2	<0.2	-	-	-	-	-	-
o-xylene	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-
Total Xylenes	-	<0.3	-	-	-	-	-	-	-	<0.3	<0.3	-	-	-	-	-	-
Total BTEX	-	<0.6	-	-	-	-	-	-	-	<0.6	<0.6	-	-	-	-	-	-
Naphthalene	-	<0.1	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-
Hexachlorobenzene (HCB)	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Alpha BHC	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Lindane	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Heptachlor	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Aldrin	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Beta BHC	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Delta BHC	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
o,p'-DDE	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Alpha Endosulfan	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-
Gamma Chlordane	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Alpha Chlordane	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
trans-Nonachlor	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
p,p'-DDE	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Dieldrin	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-
Endrin	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-
o,p'-DDD	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
o,p'-DDT	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Beta Endosulfan	-	-	-	-	-	-	-	<0.2	-	-	-	-	-	-	-	-	-
p,p'-DDD	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
p,p'-DDT	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Endosulfan sulphate	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Endrin Aldehyde	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Methoxychlor	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Endrin Ketone	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Isodrin	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Mirex	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-
Total CLP OC Pesticides	-	-	-	-	-	-	-	<1	-	-	-	-	-	-	-	-	-
DDT + DDE + DDD	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Alpha + Beta Endosulfan	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Aldrin + Dieldrin	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Alpha + Gamma Chlordane	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-
Arochlor 1016	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1221	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1232	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1242	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1248	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1254	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1260	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1262	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1268	-	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total PCBs (Arochlors)	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acifluorfen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bentazon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloramben	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24-DB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dicamba	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,5-Dichlorobenzoic acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloroprop	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dinoseb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MCPA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MCPP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Picloram	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
245-T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
245-TP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Sample Weight	1133	-	1111	-	-	-	911	-	1176	-	-	940	-	673	-	-	980
ACM in >7mm Sample	<0.01	-	<0.01	-	-	-	<0.01	-	<0.01	-	-	<0.01	-	<0.01	-	-	<0.01
AF/FA in >2mm to <7mm Sample	<0.0001	-	<0.0001	-	-	-	<0.0001	-	<0.0001	-	-	<0.0001	-	<0.0001	-	-	<0.0001
AF/FA in <2mm Sample	<0.0001	-	<0.0001	-	-	-	<0.0001	-	<0.0001	-	-	<0.0001	-	<0.0001	-	-	<0.0001
Asbestos in soil (>7mm ACM)	<0.01	-	<0.01	-	-	-	<0.01	-	<0.01	-	-	<0.01	-	<0.01	-	-	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)	<0.001	-	<0.001	-	-	-	<0.001	-	<0.001	-	-	<0.001	-	<0.001	-	-	<0.001
Asbestos in soil (<2mm AF/FA)	<0.001	-	<0.001	-	-	-	<0.001	-	<0.001	-	-	<0.001	-	<0.001	-	-	<0.001
Asbestos in soil (<7mm AF/FA)	<0.001	-	<0.001	-	-	-	<0.001	-	<0.001	-	-	<0.001	-	<0.001	-	-	<0.001
Fibre Type	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Detected	No	-	No	-	-	-	No	-	No	-	-	No	-	No	-	-	No
Estimated Fibres	<0.01	-	<0.01	-	-	-	<0.01	-	<0.01	-	-	<0.01	-	<0.01	-	-	<0.01

Table LAR1
47 Warrane Road, Roseville Chase NSW
Soil Results & Adopted Site Criteria
6838-ER-1-2

Group	Analyte	Units	PQL	Asbestos Health Screening Level (w/w) - NEPC 2013	Screening Levels for Direct Contact (mg/kg) - CRC Care 2011	Inhalation / Vapour intrusion HSLs (mg/kg) - NEPC 2013 (SAND)	Management Limits for TPH Fractions F1 - F4 in soil (mg/kg) - NEPC 2013	Health Investigation Levels for Soil Contaminants - NEPC 2013	Reference	SE180508.044	SE180508.045	SE180509.025	SE180508.046	SE180508.047	SE180508.048	SE180509.026	SE180508.049	SE180508.050	SE180508.051	SE180508.052	SE180508.056	SE180508.057	SE180508.058	SE180508.059
									Sample ID	TP18-0.3-0.5	TP19-0.0-0.2	TP19_0.0-0.6	TP19-0.3-0.5	TP19-0.6-0.8	TP20-0.0-0.2	TP20_0.0-0.6	TP20-0.4-0.6	TP20-0.6-0.8	TP21-0.0-0.2	TP21-0.4-0.6	FCS-01	FCS-02	FCS-03	FCS-04
									Date Sampled	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018	18/6/2018
									Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Material	Material	Material	Material
				Residential A	HSL - A Residential (Low Density)	HSL A & HSL B - Low - High density Residential 0 m to <1 m	Residential, Parkland and Public Open Space Coarse Soil Texture	Residential A	Data Set Minimum																
Metals	Arsenic, As	mg/kg	3	-	-	-	-	100	<1	3	5	-	-	-	3	-	4	-	16	-	-	-	-	-
	Cadmium, Cd	mg/kg	0.3	-	-	-	-	20	<0.3	<0.3	0.7	-	-	-	1.0	-	<0.3	-	1.2	-	-	-	-	-
	Chromium, Cr	mg/kg	0.3	-	-	-	-	100	2	5.0	4.5	-	-	-	10.0	-	3.1	-	8.4	-	-	-	-	-
	Copper, Cu	mg/kg	0.5	-	-	-	-	6,000	<0.5	9.2	6.1	-	-	-	7.1	-	5.1	-	22	-	-	-	-	-
	Lead, Pb	mg/kg	1	-	-	-	-	300	1	7	5	-	-	-	8	-	4	-	47	-	-	-	-	-
	Nickel, Ni	mg/kg	0.5	-	-	-	-	400	<0.5	5.7	1.6	-	-	-	1.7	-	2.5	-	3.1	-	-	-	-	-
	Zinc, Zn	mg/kg	0.5	-	-	-	-	7,400	<2	14	7.6	-	-	-	8.5	-	6.6	-	68	-	-	-	-	-
	Mercury (inorganic)	mg/kg	0.05	-	-	-	-	40	<0.05	0.41	1.5	-	-	-	2.3	-	0.41	-	4.4	-	-	-	-	-
PAHS	Naphthalene	mg/kg	0.1	-	-	3	-	-	<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	-	-	-	-
	Benzo(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	-	-	-	-
	Benzo[bâ]fluoranthene	mg/kg	0.1	-	-	-	-	-	<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	-	<0.1	-	-	-	-
	Benzo(a)pyrene	mg/kg	0.1	-	-	-	-	-	<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(ah)anthracene	mg/kg	0.1	-	-	-	-	-	<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	-	<0.1	-	-	-	-
	Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	-	-	-	-	-	<0.2	<0.2	-	-	-	<0.2	-	-	<0.2	<0.2	-	<0.2	-	-	-	-
	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	-	-	-	-	3	<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	-	<0.2	-	-	-	-
	Total PAH (18)	mg/kg	0.8	-	-	-	-	-	<0.8	<0.8	-	-	-	<0.8	-	-	<0.8	<0.8	-	<0.8	-	-	-	-
	Total PAH (NEPM/WHO 16)	mg/kg	0.8	-	-	-	-	300	<0.8	<0.8	-	-	-	<0.8	-	-	<0.8	<0.8	-	<0.8	-	-	-	-
TRH	TRH C6-C9	mg/kg	20	-	-	-	-	-	<20	<20	<20	-	-	-	-	-	-	-	<20	-	-	-	-	-
	Benzene (F0)	mg/kg	0.1	-	100	-	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
	TRH C6-C10	mg/kg	25	-	4,400	-	700	-	<25	<25	<25	-	-	-	-	-	-	-	<25	-	-	-	-	-
	TRH C6-C10 minus BTEX (F1)	mg/kg	25	-	-	45	-	-	<25	<25	<25	-	-	-	-	-	-	-	<25	-	-	-	-	-
	TRH C10-C14	mg/kg	20	-	-	-	-	-	<20	<20	<20	-	-	-	-	-	-	-	<20	-	-	-	-	-
	TRH C15-C28	mg/kg	45	-	-	-	-	-	<45	<45	<45	-	-	-	-	-	-	-	<45	-	-	-	-	-
	TRH C29-C36	mg/kg	45	-	-	-	-	-	<45	<45	<45	-	-	-	-	-	-	-	<45	-	-	-	-	-
	TRH C37-C40	mg/kg	100	-	-	-	-	-	<100	<100	<100	-	-	-	-	-	-	-	<100	-	-	-	-	-
	TRH >C10-C16 (F2)	mg/kg	25	-	3,300	-	1,000	-	<25	<25	<25	-	-	-	-	-	-	-	<25	-	-	-	-	-
	TRH >C10-C16 (F2) - Naphthalene	mg/kg	25	-	-	110	-	-	<25	<25	<25	-	-	-	-	-	-	-	<25	-	-	-	-	-
	TRH >C16-C34 (F3)	mg/kg	90	-	4,500	-	2,500	-	<90	<90	<90	-	-	-	-	-	-	-	<90	-	-	-	-	-
	TRH >C34-C40 (F4)	mg/kg	120	-	6,300	-	10,000	-	<120	<120	<120	-	-	-	-	-	-	-	<120	-	-	-	-	-
	TRH C10-C36 Total	mg/kg	110	-	-	-	-	-	<110	<110	<110	-	-	-	-	-	-	-	<110	-	-	-	-	-
	TRH C10-C40 Total (F bands)	mg/kg	210	-	-	-	-	-	<210	<210	<210	-	-	-	-	-	-	-	<210	-	-	-	-	-
VOCs	Benzene	mg/kg	0.1	-	100	0.5	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
	Toluene	mg/kg	0.1	-	14,000	160	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
	Ethylbenzene	mg/kg	0.1	-	4,500	55	-	-	<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	-	-	-	-	-
	Total Xylenes	mg/kg	0.3	-	12,000	40	-	-	<0.3	<0.3	<0.3	-	-	-	-	-	-	-	<0.3	-	-	-	-	-
	Total BTEX	mg/kg	0.6	-	-	-	-	-	<0.6	<0.6	<0.6	-	-	-	-	-	-	-	<0.6	-	-	-	-	-
	Naphthalene	mg/kg	0.1	-	1,400	3	-	-	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
OCP	Hexachlorobenzene (HCB)	mg/kg	0.1	-	-	-	-	10	<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	-	-	-	-	6	<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	-	-	-	-	-	0.2	<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	-	-	-	-	10	<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	-	-	-	-	300	<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	-	-	-	-	10	<0.1	<0.1	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-
	Total CLP OC Pesticides	mg/kg	1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	<1	-	-	-	-	-
	DDT + DDE + DDD	mg/kg	0.1	-	-	-	-	240	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-
	Alpha + Beta Endosulfan	mg/kg	0.1	-	-	-	-	270	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-
	Aldrin + Dieldrin	mg/kg	0.1	-	-	-	-	6	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-
	Alpha + Gamma Chlordane	mg/kg	0.1	-	-	-	-	50	0	0	-	-	-	-	-	-	-	-	0	-	-	-	-	-
PCBs	Arochlor 1016	mg/kg	0.2	-	-	-	-	-	0	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
	Arochlor 1221	mg/kg	0.2	-	-	-	-	-	0	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
	Arochlor 1232	mg/kg	0.2	-	-	-	-	-	0	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
	Arochlor 1242	mg/kg	0.2	-	-	-	-	-	0	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
	Arochlor 1248	mg/kg	0.2	-	-	-	-	-	0	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
	Arochlor 1254	mg/kg	0.2	-	-	-	-	-	0	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
	Arochlor 1260	mg/kg	0.2	-	-	-	-	-	0	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
	Arochlor 1262	mg/kg	0.2	-	-	-	-	-	0	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
	Arochlor 1268	mg/kg	0.2	-	-	-	-	-	0	-	-	-	<0.2	-	-	-	-	-	-	-	-	-	-	-
	Total PCBs (Arochlors)	mg/kg	1	-	-	-	-	1	0	-	-	-	<1	-	-	-	-	-	-	-	-	-	-	-
Phenoxy Acid Herbicides	Acifluorfen	mg/kg	0.5						0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	Bentazon	mg/kg	0.5						0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	Chloramben	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	2,4-D	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	2,4-DB	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	Dicamba	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	3,5-Dichlorobenzoic acid	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	Dichloroprop	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	Dinoseb	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	MCPA	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	MCPP	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	4-Nitrophenol	mg/kg	0.5		-				0	-	-	-	-	-	0.5	-	-	-	<0.5	-	-	-	-	-
	Pentachlorophenol	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	Picloram	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	2,4,5-T	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
	2,4,5-TP	mg/kg	0.5		-				0	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-
Asbestos	Total Sample Weight	g	1	-	-	-	-	-	673	-	-	1054	-	-	-	972	-	-	-	-	-	-	-	-
	ACM in >7mm Sample	g	0.01	-	-	-	-	-	0	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	-	-	-
	AF/FA in >2mm to <7mm Sample	g	0	-	-	-	-	-	0	-	-	<0.0001	-	-	-	<0.0001	-	-	-	-	-	-	-	-
	AF/FA in <2mm Sample	g	0.00	-	-	-	-	-	0	-	-	<0.0001	-	-	-	<0.0001	-	-	-	-	-	-	-	-
	Asbestos in soil (>7mm ACM)	%w/w	0.0100	0.01	-	-	-	-	0	-	-	<0.01	-	-	-	<0.01	-	-	-	-	-	-	-	-
	Asbestos in soil (>2mm to <7mm AF/FA)	%w/w	0.0010	0.001	-	-	-	-	0	-	-	<0.001	-	-	-	<0.001	-	-	-	-	-	-	-	-
	Asbestos in soil (<2mm AF/FA)	%w/w	0.00	0.001	-	-	-	-	0	-	-	<0.001	-	-	-	<0.001	-	-	-	-	-	-	-	-
	Asbestos in soil (<7mm AF/FA)	%w/w	0.001	0.001	-	-	-	-	0	-	-	<0.001	-	-	-	<0.001	-	-	-	-	-	-	-	-
	Fibre Type	No unit	0.000	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	Chrysotile	Chrysotile
	Asbestos Detected	No unit	0.000	-	-	-	-	-	0	-	-	No	-	-	-	No	-	-	No	No	No	No	Yes	Yes
	Estimated Fibres	%w/w	0	-	-	-	-	-	0	-	-	<0.01	-	-	-	<0.01	-	-	<0.01	<0.01	-	-	-	-

Table LAR2 - RPD
47 Warrane Road, Roseville Chase NSW
Soil Results & Adopted Site Criteria
6838-ER-1-2

	Reference		SE180508.029	SE180508.053		S18-Jn22346		SE180508.025	SE180508.054		S18-Jn22347		SE180508.027	SE180508.055		S18-Jn22348	
	Sample ID		TP13-0.0-0.2	DUP-01		DUP-1A		TP11-0.0-0.2	DUP-02		DUP-2A		TP12-0.0-0.2	DUP-03		DUP-3A	
	Date Sampled		18/6/2018	18/6/2018		18/6/2018		18/6/2018	18/6/2018		18/6/2018		18/6/2018	18/6/2018		18/6/2018	
	Sample Matrix		Soil	Soil		Soil		Soil	Soil		Soil		Soil	Soil		Soil	
Group	**Analyte**	**Units**	**PQL**		RPD (%)		RPD (%)			RPD (%)		RPD (%)			RPD (%)		RPD (%)
Metals	Arsenic	mg/kg	<1	9	11	20	13	36	8	11	32	9.7	19	-	-	N/A	-	N/A
	Cadmium	mg/kg	<0.3	<0.3	0.3	N/A	<0.4	#VALUE!	<0.3	0.3	N/A	< 0.4	#VALUE!	-	-	N/A	-	N/A
	Chromium	mg/kg	<0.3	5	6	7	8.1	42	5	6	11	7.2	29	-	-	N/A	-	N/A
	Copper	mg/kg	<0.5	5	6	12	6.8	23	5	5	2	5.8	9	-	-	N/A	-	N/A
	Lead	mg/kg	<1	12	17	34	21	55	10	10	0	11	10	-	-	N/A	-	N/A
	Nickel	mg/kg	<0.5	2.9	3.0	3	<5	#VALUE!	2.5	2.9	15	< 5	#VALUE!	-	-	N/A	-	N/A
	Zinc	mg/kg	<0.5	19	24	23	32	51	19	20	5	24	23	-	-	N/A	-	N/A
	Mercury	mg/kg	<0.05	0.81	0.97	18	1.1	30	1.3	1.6	21	1.2	8	-	-	N/A	-	N/A
PAHs	Naphthalene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	<0.5	#VALUE!
	2-methylnaphthalene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	1-methylnaphthalene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Acenaphthylene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Acenaphthene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Fluorene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Phenanthrene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Anthracene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Fluoranthene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Pyrene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Benzo(a)anthracene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Chrysene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Benzo(b&j)fluoranthene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Benzo(k)fluoranthene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Benzo(a)pyrene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Dibenzo(ah)anthracene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Benzo(ghi)perylene	mg/kg	0.1	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.1	<0.1	#VALUE!	< 0.5	#VALUE!
	Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.2	<0.2	#VALUE!	< 0.5	#VALUE!
	Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.3	<0.3	#VALUE!	0.6	#VALUE!
	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.2	<0.2	#VALUE!	1.2	#VALUE!
	Total PAH (18)	mg/kg	0.8	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.8	<0.8	#VALUE!	< 0.5	#VALUE!
	Total PAH (NEPM/WHO 16)	mg/kg	0.8	-	-	N/A	-	N/A	-	-	N/A	-	N/A	<0.8	<0.8	#VALUE!	-	#VALUE!

N/A - When the sample concentration is less than the LOR or the primary sample concentration is less than ten times the LOR

RPD exceedences

APPENDIX A

LOGS

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Sample Point No: TP01
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW
Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavtor						FILL: Silty SAND, fine grain, brown, trace clay, medium dense, moist.	TP01-0.0-0.2	M		PID: 0.3 ppm. Asbestos Sample: 0.0-0.4 m. Grass on surface. No odours, staining or ACM observed.
			0.5		CL	CLAY, orange with red mottle, soft, moist.	TP01-0.4-0.6	M		PID: 0.2 ppm. No odours, staining or ACM observed.
			1.0			Borehole TP01 terminated at 0.9m				
			1.5							
			2.0							
			2.5							

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Sample Point No: TP02
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator						FILL: Clayey SAND, fine grain, dark brown, loose, moist.	TP02-0.0-0.2	M		PID: 0.3 ppm. Asbestos Sample: 0.0-0.6 m. Grass on surface. No odours, staining or ACM observed.
			0.5			FILL: mixture of Sandstone cobbles, light grey/orange + Coal Waste gravels, dark grey/black, loose, moist.	TP02-0.45-0.6	M		PID: 0.3 ppm. No odours, staining or ACM observed.
					CH	CLAY, grey with red mottle, trace sand, firm, moist.	TP02-0.6-0.8	M		PID: 0.3 ppm. No odours, staining or ACM observed.
			1.0			Borehole TP02 terminated at 1m				
			1.5							
			2.0							
			2.5							

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Sample Point No: TP03
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator						FILL: Clayey SAND, fine grain, dark brown, loose, moist.	TP03-0.0-0.2	M		PID: 0.4 ppm. Asbestos Sample: 0.0-0.7 m. Grass on surface. No odours, staining or ACM observed.
			0.5			FILL: mixture of Sandstone cobbles, light grey/orange + Coal Waste gravels, dark grey/black, loose, moist.	TP03-0.45-0.6	M		PID: 0.2 ppm. No odours, staining or ACM observed.
					SP	SANDSTONE, coarse grain, grey with red mottle, some clay, dense, moist.	TP03-0.7-0.8	M		PID: 0.2 ppm. No odours, staining or ACM observed.
						Borehole TP03 terminated at 0.8m				
			1.0							
			1.5							
			2.0							
			2.5							

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Sample Point No: TP04
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW
Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator
Hole Location: See Figure 4
Driller: Ken Coles
Logged: SS
RL Surface:
Contractor: AG
Bearing: ---
Checked: CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.5			FILL: Clayey SAND, fine grain, dark brown, loose, moist.	TP04-0.0-0.2	M		PID: 0.4 ppm. Asbestos Sample: 0.0-0.7 m. Grass on surface. No odours, staining or ACM observed.
			1.0			FILL: mixture of Sandstone cobbles, light grey/orange + Coal Waste gravels, dark grey/black, loose, moist.	TP04-0.5-0.7	M		PID: 0.2 ppm. No odours, staining or ACM observed.
					CL	Sandy CLAY, orange/red/grey, soft, moist.	TP04-0.7-0.9	M		PID: 0.3 ppm. No odours, staining or ACM observed.
			1.5			Borehole TP04 terminated at 1m				
			2.0							
			2.5							

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Sample Point No: TP05
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW
Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.5			FILL: Clayey SAND, fine grain, dark brown, loose, moist.	TP05-0.0-0.2	M		PID: 0.3 ppm. Asbestos Sample: 0.0-0.8 m. Grass on surface. No odours, staining or ACM observed.
			1.0			FILL: mixture of Sandstone cobbles, light grey/orange + Coal Waste gravels, dark grey/black, loose, moist.	TP05-0.5-0.7	M		PID: 0.2 ppm. No odours, staining or ACM observed.
					SC	Clayey SAND, medium to coarse grain, grey with red mottle, medium dense, moist.	TP05-0.8-1.0	M		PID: 0.9 ppm. No odours, staining or ACM observed.
			1.5			Borehole TP05 terminated at 1.2m				
			2.0							
			2.5							

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Sample Point No: TP06
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator						FILL: Clayey SAND, fine grain, dark brown, loose, moist.	TP06-0.0-0.2	M		PID: 0.3 ppm. Asbestos Sample: 0.0-0.5 m. Grass on surface. No odours, staining or ACM observed.
			0.5			FILL: Coal Waste gravels, dark grey/black, loose, moist.	TP06-0.4-0.5	M		PID: 0.3 ppm. No odours, staining or ACM observed.
						CLAY, orange with red mottle, soft, moist.	TP06-0.5-0.7	M		PID: 0.2 ppm. No odours, staining or ACM observed.
			1.0			Borehole TP06 terminated at 0.9m				
			1.5							
			2.0							
			2.5							

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Sample Point No: TP07
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW
Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator
Hole Location: See Figure 4
Driller: Ken Coles
Logged: SS
RL Surface:
Contractor: AG
Bearing: ---
Checked: CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.5			FILL: SAND, medium grain, dark brown, trace clay, loose, moist.	TP07-0.0-0.2	M		PID: 0.2 ppm. Asbestos Sample: 0.0-1 m. Grass on surface. No odours, staining or ACM observed.
						Material becomes grey.		M		
			1.0			FILL: Mixture of Clayey SAND + SANDSTONE cobbles, medium grain, orange/grey/red, medium dense, moist.	TP07-0.7-0.9	M		PID: 0.4 ppm. Asbestos Sample: 1.0-2.0 m. No odours, staining or ACM observed.
			1.5				TP07-1.3-1.5			
						Clayey SAND, medium grain, dark grey with orange mottle, medium dense, moist. Foreign materials included charcoaled wood, brick and tile fragments.		M		PID: 0.8 ppm & 1.3 ppm. Asbestos Sample: 2.0-2.1 m. No odours, staining or ACM observed.
			2.0				TP07-1.8-2.0			
					SC	Clayey SAND, medium to coarse grain, grey with red mottle, medium dense, moist.	TP07-2.1-2.3	M		PID: 0.6 ppm. No odours, staining or ACM observed.
			2.5			Borehole TP07 terminated at 2.5m				

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Sample Point No: TP08
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator
Hole Location: See Figure 4
Driller: Ken Coles
Logged: SS
RL Surface:
Contractor: AG
Bearing: ---
Checked: CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.5			FILL: SAND, medium grain, dark brown, trace clay, loose, moist.	TP08-0.0-0.2	M		PID: 0.3 ppm. Asbestos Sample: 0.0-1.0 m. Grass on surface. No odours, staining or ACM observed.
						Material becomes grey/brown.		M		
			1.0				TP08-0.7-0.9			PID: 0.7 ppm. Asbestos Sample: 1.0-1.2 m. Grass on surface. No odours, staining or ACM observed.
			1.5		SC	Clayey SAND, medium grain, grey, medium dense, moist.	TP08-1.2-1.4	M		PID: 0.7 ppm. No odours, staining or ACM observed.
			2.0			Borehole TP08 terminated at 1.6m				
			2.5							

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Sample Point No: TP09
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW
Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.5			FILL: SAND, medium grain, dark brown, trace clay, loose, moist.	TP09-0.0-0.2	M		PID: 0.3 ppm. Asbestos Sample: 0.0-0.7 m. Grass on surface. No odours, staining or ACM observed.
						Material becomes grey/brown.		M		
			1.0		SC	Clayey SAND, medium grain, grey with red/orange mottle, some sandstone cobbles and boulders, medium dense, moist.	TP09-0.7-0.9	M		PID: 0.3 ppm. No odours, staining or ACM observed.
						Borehole TP09 terminated at 1m				
			1.5							
			2.0							
			2.5							

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Sample Point No: TP10
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator						FILL: SAND, medium grain, dark brown, trace clay, loose, moist.	TP10-0.0-0.2 (DUP-04 & DUP-4A)	M		PID: 0.8 ppm. Asbestos Sample: 0.0-0.6 m. Grass on surface. No odours, staining or ACM observed.
						Material becomes grey/brown.		M		
			0.5		SC	Clayey SAND, medium grain, grey with red/orange mottle, some sandstone cobbles and boulders, medium dense, moist.	TP10-0.6-0.8	M		PID: 1.1 ppm. No odours, staining or ACM observed.
			1.0			Borehole TP10 terminated at 1m				
			1.5							
			2.0							
			2.5							

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Sample Point No: TP11
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.5			FILL: Silty SAND, fine grain, brown, trace clay, loose, moist. foreign materials included tree roots, tiles and sandstone gravels and cobbles.	TP11-0.0-0.2 (DUP-02 & DUP-2A)	M		PID: 0.1 ppm. Asbestos Sample: 0.0-0.5 m. Grass on surface. No odours, staining or ACM observed.
					CL	Sandy CLAY, grey, soft, moist.	TP11-0.5-0.6	M		PID: 0.1 ppm. No odours, staining or ACM observed.
			1.0			Borehole TP11 terminated at 0.6m				
			1.5							
			2.0							
			2.5							

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Sample Point No: TP12
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW
Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.5			FILL: Silty SAND, fine grain, brown, trace clay, loose, moist. foreign materials included tree roots, tiles, plastic cup and lining and sandstone gravels and cobbles.	TP12-0.0-0.2 (DUP-03 & DUP3A)	M		PID: 0.2 ppm. Asbestos Sample: 0.0-0.6 m. Grass on surface. No odours, staining or ACM observed.
			1.0		CL	Sandy CLAY, grey, soft and moist containing charcoal and sandstone gravels and cobbles.	TP12-0.6-0.8	M		PID: 0.3 ppm. No odours, staining or ACM observed.
			1.5			Borehole TP12 terminated at 1.2m				
			2.0							
			2.5							

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Sample Point No: TP13
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.5			FILL: Silty SAND, fine grain, brown, trace clay, medium dense, moist.	TP13-0.0-0.2 (DUP-01 & DUP1A)	M		PID: 0.2 ppm. Asbestos Sample: 0.0-0.6 m. Grass on surface. No odours, staining or ACM observed.
			1.0		CL	Sandy CLAY, grey with red/orange mottle, some sandstone gravels and cobbles, soft, moist.	TP13-0.6-0.8	M		PID: 0.3 ppm. No odours, staining or ACM observed.
			1.5			Borehole TP13 terminated at 1m				
			2.0							
			2.5							

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Sample Point No: TP14
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator						FILL: Silty SAND, fine grain, brown, trace clay, medium dense, moist.	TP14-0.0-0.2	M		PID: 0.1 ppm. Asbestos Sample: 0.0-0.3 m. Grass on surface. No odours, staining or ACM observed.
					SP	SANDSTONE, coarse grain, brown/orange, some clay, soft, moist.	TP14-0.3-0.4	M		PID: 0.2 ppm. No odours, staining or ACM observed.
			0.5			Borehole TP14 terminated at 0.4m				
			1.0							
			1.5							
			2.0							
			2.5							

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Sample Point No: TP15
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW
Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator
Hole Location: See Figure 4
Driller: Ken Coles
Logged: SS
RL Surface:
Contractor: AG
Bearing: ---
Checked: CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.5			FILL: Clayey SAND, fine grain, brown, trace clay, loose, moist. Foreign materials included sandstone cobbles and tile fragments.	TP15-0.0-0.2	M		PID: 0.1 ppm. Asbestos Sample: 0.0-1 m. Grass on surface. No odours, staining or ACM observed.
			1.0			Material becomes grey/brown. Foreign materials include sandstone cobbles and boulders, bricks, concrete cobbles, wood, terracotta pipe fragments and bitument cobble.	TP15-0.6-0.8	M		PID: 0.2 ppm. Asbestos Sample: 1.0-1.7 m. No odours, staining or ACM observed.
			1.5				TP15-1.3-1.5			PID: 0.2 ppm. No odours, staining or ACM observed.
			2.0		SC	Clayey SAND, medium grain, grey with orange mottle, medium dense, moist.	TP15-1.7-1.9	M		PID: 0.1 ppm. No odours, staining or ACM observed.
			2.5			Borehole TP15 terminated at 2.2m				

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Sample Point No: TP16
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator
Hole Location: See Figure 4
Driller: Ken Coles
Logged: SS

RL Surface:
Contractor: AG
Bearing: ---
Checked: CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.0			FILL: Clayey SAND, fine grain, brown, trace clay, loose, moist. Foreign materials included sandstone cobbles, bricks, terracotta pipe fragments, glass, steel, concrete bounders and a large content of tile fragments.	TP16-0.0-0.2	M		PID: 0.1 ppm. Asbestos Sample: 0.0-1 m. Grass on surface. No odours, staining or ACM observed.
			0.5							
							TP16-0.7-0.9			PID: 0.1 ppm. No odours, staining or ACM observed.
			1.0							
			1.5				TP16-1.4-1.6			PID: 0.2 ppm. No odours, staining or ACM observed.
			2.0			Borehole TP16 terminated at 1.7m				
			2.5							

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Sample Point No: TP17
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator
Hole Location: See Figure 4
Driller: Ken Coles
Logged: SS
RL Surface:
Contractor: AG
Bearing: ---
Checked: CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator			0.5			FILL: Clayey SAND, fine grain, brown, trace clay, loose, moist. Foreign materials included sandstone cobbles and boulders, bricks, tiles, glass and terracotta pipe fragments.	TP17-0.0-0.2	M		PID: 0.4 ppm. Asbestos Sample: 0.0-1 m. Grass on surface. No odours, staining or ACM observed.
			1.0			FILL: Gravelly CLAY, grey with red mottling, some sand, firm, moist. Foreign materials included tile fragments and charcoal.	TP17-0.7-0.9	M		PID: 0.3 ppm. Asbestos Sample: 1.0-1.2 m. No odours, staining or ACM observed.
			1.5		CH	CLAY, red/grey, very stiff, moist.	TP17-1.2-1.4	M		PID: 0.3 ppm. No odours, staining or ACM observed.
			2.0			Borehole TP17 terminated at 1.6m				
			2.5							

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Sample Point No: TP18
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW
Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator						FILL: SAND, fine to medium grain, brown, trace clay, loose, moist.	TP18-0.0-0.2	M		PID: 0.6 ppm. Asbestos Sample: 0.0-0.6 m. Grass on surface. Sewage odour present. No staining or ACM observed.
			0.5			FILL: Igneous gravels and cobbles, dark grey, medium dense, moist	TP18-0.3-0.5	M		PID: 0.9 ppm. Sewage odour present. No staining or ACM observed.
			1.0		SC	Clayey SAND, medium grain, grey with orange mottle, medium dense, moist containing sandstone cobbles.	TP18-0.6-0.8	M		PID: 0.9 ppm. No odours, staining or ACM observed.
			1.5			Borehole TP18 terminated at 1m				
			2.0							
			2.5							

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Sample Point No: TP19
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW
Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator
Hole Location: See Figure 4
Driller: Ken Coles
Logged: SS
RL Surface:
Contractor: AG
Bearing: ---
Checked: CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Excavator						FILL: SAND, fine to medium grain, brown, trace clay, loose, moist.	TP19-0.0-0.2	M		PID: 0.9 ppm. Asbestos Sample: 0.0-0.6 m. Grass on surface. No odours, staining or ACM observed.
			0.5			FILL: Igneous gravels and cobbles, dark grey, medium dense, moist	TP19-0.3-0.5	M		PID: 1.1 ppm. No odours, staining or ACM observed.
			1.0		SC	Clayey SAND, medium grain, grey with orange mottle, medium dense, moist containing sandstone cobbles.	TP19-0.6-0.8	M		PID: 1.6 ppm. No odours, staining or ACM observed.
			1.5			Borehole TP19 terminated at 1m				
			2.0							
			2.5							

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Sample Point No: TP20
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW

Started: 18/6/18
Finished: 18/6/18
Borehole Size: 0.45m

Rig Type: 3.5 Tonne Excavator | **Hole Location:** See Figure 4 | **Driller:** Ken Coles | **Logged:** SS
RL Surface: | **Contractor:** AG | **Bearing:** --- | **Checked:** CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Hand Auger						FILL: SAND, fine to medium grain, brown, trace clay, loose, moist.	TP20-0.0-0.2	M		PID: 0.7 ppm. Asbestos Sample: 0.0-0.6 m. Grass on surface. No odours, staining or ACM observed.
			0.5			FILL: Igneous gravels and cobbles, dark grey, medium dense, moist	TP20-0.4-0.6	M		PID: 0.5 ppm. No odours, staining or ACM observed.
					SC	Clayey SAND, medium grain, grey with orange mottle, medium dense, moist containing sandstone cobbles.	TP20-0.6-0.8	M		PID: 0.9 ppm. No odours, staining or ACM observed.
			1.0			Borehole TP20 terminated at 1m				
			1.5							
			2.0							
			2.5							

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Sample Point No: TP21
Sheet: 1 of 1
Job No: 6838

Borehole Log

Client: Ku-ring-gai Council
Project: Stage 2 DSI
Location: 47 Warrane Road, Roseville Chase, NSW
Started: 18/6/18
Finished: 18/6/18
Borehole Size:

Rig Type: Hand Auger
Hole Location: See Figure 4
Driller:
Logged: SS
RL Surface:
Contractor: AG
Bearing: ---
Checked: CC

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
HAND AUGER						FILL: Silty SAND, fine grain, brown, loose, moist.	TP21-0.0-0.2	M		PID: 1.1 ppm. Grass on surface. No odours, staining or ACM observed.
			0.5			FILL: Clayey SAND, medium grain, brown/orange, some coalwaste and sandstone gravels, medium dense, moist.	TP21-0.4-0.6	M		PID: 1.3 ppm. No odours, staining or ACM observed.
			1.0			Borehole TP21 terminated at 0.6m				
			1.5							
			2.0							
			2.5							

BOREHOLE / TEST PIT 6838-ER-1-2-LOGS.GPJ GINT STD AUSTRALIA.GDT 9/7/18

APPENDIX B

CALIBRATION

6839

ThermoFisher SCIENTIFIC

The world leader in serving science

RENTALS

Equipment Report - MiniRAE 3000 PID

This Gas Meter has been performance checked and calibrated as follows:

Lamp	Compound	Concentration	Zero	Span	Traceability Lot #	Pass?
10.6 eV	Isobutylene	100 ppm	0 ppm	100 ppm	389261 Cyl: 9	☑

Alarm Limits

High	100 ppm
Low	50 ppm

Bump Test

Date	Target Gas	Reading	Pass?
08/06/2018	100 ppm	99.9 ppm	☑

☐ Battery Status 100 %
☑ 10 minutes test complete
☑ Spare battery status (Min 5.5 volts)
☑ Electrical Safety Tag attached (AS/NZS 3760)

☑ Performance check (pump, lamp, sensor)
☑ Data cleared
☑ Filters checked

Tag No: 000448

Valid to: 11/07/2018

Date: 08/06/2018

Signed: [signature]

Please check that the following items are received and that all items are cleaned and decontaminated before return. A minimum $30 cleaning / service / repair charge may be applied to any unclean or damaged items. Items not returned will be billed for at the full replacement cost.

Sent	Returned	Item
☑	☐	MiniRAE 2000 PID / Operational Check / Battery Status 100 %
☑	☐	Lamp _10.6 eV, Compound Set to: isobutylene_ C/factor: ____1_____
☑	☐	Protective yellow rubber boot
☑	☐	Inlet probe (attached to PID)
☑	☐	Spare water trap filter(s) Qty ____2____
☑	☐	Charger 240V to 12V1250mA
☑	☐	Cradle and Travel Charger
☑	☐	Instruction Manual behind foam on the lid of case "
☑	☐	Quick Guide Sheet behind foam on the lid of case "
☑	☐	Spare Alkaline Battery Compartment with batteries
☑	☐	Inline Moisture trap Filter Guide Laminated
☐	☐	Calibration regulator & tubing (optional)
☐	☐	Data cable and Software CD (optional)
☑	☐	Carry Case
☑	☐	Check to confirm electrical safety (tag must be valid)

Date: 08/06/2018

Signed: [signature]

TFS Reference	CS608972	Return Date:	/ /
Customer Reference		Return Time:	
Equipment ID	PID3000-17	Condition on return:	
Equipment Serial No.	592-914209		

APPENDIX C

LABORATORY

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Sam Scully	Manager	Huong Crawford
Client	ALLIANCE GEOTECHNICAL PTY LTD	Laboratory	SGS Alexandria Environmental
Address	10 Welder Road Seven Hills NSW 2147	Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	02 9675 1777 / 0400 545 805	Telephone	+61 2 8594 0400
Facsimile	02 9675 1888	Facsimile	+61 2 8594 0499
Email	sam@allgeo.com.au	Email	au.environmental.sydney@sgs.com
Project	**6838 - Roseville**	SGS Reference	**SE180508 R0**
Order Number	**P1392**	Date Received	19 Jun 2018
Samples	59	Date Reported	06 Jul 2018

COMMENTS

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

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

Sample # 56-57: No trace asbestos fibres detected using trace analysis technique.

Asbestos analysed by approved identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin .
Phenoxy Acid Herbicides subcontracted to SGS Melbourne , 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420

SIGNATORIES

Bennet Lo
Senior Organic Chemist/Metals Chemis

Dong Liang
Metals/Inorganics Team Leader

Ly Kim Ha
Organic Section Head

Ravee Sivasubramaniam
Hygiene Team Leader

Teresa Nguyen
Organic Chemist

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.001 Soil 18 Jun 2018 TP01-0.0-0.2	SE180508.002 Soil 18 Jun 2018 TP01-0.4-0.6	SE180508.003 Soil 18 Jun 2018 TP02-0.0-0.2	SE180508.004 Soil 18 Jun 2018 TP02-0.45-0.6
VOC's in Soil Method: AN433 Tested: 21/6/2018						
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
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	-	-	-	**83**
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	**94**
d8-toluene (Surrogate)	%	-	-	-	-	**84**
Bromofluorobenzene (Surrogate)	%	-	-	-	-	**77**
Totals						
Total Xylenes	mg/kg	0.3	-	-	-	<0.3
Total BTEX	mg/kg	0.6	-	-	-	<0.6
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018						
TRH C6-C10	mg/kg	25	-	-	-	<25
TRH C6-C9	mg/kg	20	-	-	-	<20
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	-	-	-	**83**
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	**94**
d8-toluene (Surrogate)	%	-	-	-	-	**84**
Bromofluorobenzene (Surrogate)	%	-	-	-	-	**77**
VPH F Bands						
Benzene (F0)	mg/kg	0.1	-	-	-	<0.1
TRH C6-C10 minus BTEX (F1)	mg/kg	25	-	-	-	<25

Parameter	Units	LOR	Sample Number: SE180508.001 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP01-0.0-0.2	SE180508.002 Soil 18 Jun 2018 TP01-0.4-0.6	SE180508.003 Soil 18 Jun 2018 TP02-0.0-0.2	SE180508.004 Soil 18 Jun 2018 TP02-0.45-0.6
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 21/6/2018						
TRH C10-C14	mg/kg	20	-	-	-	<20
TRH C15-C28	mg/kg	45	-	-	-	<45
TRH C29-C36	mg/kg	45	-	-	-	<45
TRH C37-C40	mg/kg	100	-	-	-	<100
TRH C10-C36 Total	mg/kg	110	-	-	-	<110
TRH C10-C40 Total (F bands)	mg/kg	210	-	-	-	<210
TRH F Bands						
TRH >C10-C16	mg/kg	25	-	-	-	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	-	-	-	<25
TRH >C16-C34 (F3)	mg/kg	90	-	-	-	<90
TRH >C34-C40 (F4)	mg/kg	120	-	-	-	<120
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 21/6/2018						
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8
Surrogates						
d5-nitrobenzene (Surrogate)	%	-	**116**	**106**	**94**	**94**
2-fluorobiphenyl (Surrogate)	%	-	**102**	**98**	**96**	**98**
d14-p-terphenyl (Surrogate)	%	-	**108**	**108**	**112**	**106**
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018						
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	-	-	-
o,p'-DDE	mg/kg	0.1	<0.1	-	-	-
Alpha Endosulfan	mg/kg	0.2	<0.2	-	-	-
Gamma Chlordane	mg/kg	0.1	<0.1	-	-	-
Alpha Chlordane	mg/kg	0.1	<0.1	-	-	-
trans-Nonachlor	mg/kg	0.1	**0.2**	-	-	-
p,p'-DDE	mg/kg	0.1	<0.1	-	-	-
Dieldrin	mg/kg	0.2	<0.2	-	-	-
Endrin	mg/kg	0.2	<0.2	-	-	-

Parameter	Units	LOR	Sample Number: SE180508.001 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP01-0.0-0.2	SE180508.002 Soil 18 Jun 2018 TP01-0.4-0.6	SE180508.003 Soil 18 Jun 2018 TP02-0.0-0.2	SE180508.004 Soil 18 Jun 2018 TP02-0.45-0.6
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018 (continued)						
o,p'-DDD	mg/kg	0.1	<0.1	-	-	-
o,p'-DDT	mg/kg	0.1	<0.1	-	-	-
Beta Endosulfan	mg/kg	0.2	<0.2	-	-	-
p,p'-DDD	mg/kg	0.1	<0.1	-	-	-
p,p'-DDT	mg/kg	0.1	<0.1	-	-	-
Endosulfan sulphate	mg/kg	0.1	<0.1	-	-	-
Endrin Aldehyde	mg/kg	0.1	<0.1	-	-	-
Methoxychlor	mg/kg	0.1	<0.1	-	-	-
Endrin Ketone	mg/kg	0.1	<0.1	-	-	-
Isodrin	mg/kg	0.1	<0.1	-	-	-
Mirex	mg/kg	0.1	<0.1	-	-	-
Total CLP OC Pesticides	mg/kg	1	<1	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**97**	-	-	-
PCBs in Soil Method: AN420 Tested: 21/6/2018						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 25/6/2018						
Arsenic, As	mg/kg	1	**11**	<1	<1	<1
Cadmium, Cd	mg/kg	0.3	**0.5**	<0.3	**0.6**	<0.3
Chromium, Cr	mg/kg	0.3	**11**	**9.2**	**21**	**8.3**
Copper, Cu	mg/kg	0.5	**7.8**	<0.5	**6.3**	**20**
Nickel, Ni	mg/kg	0.5	**3.2**	<0.5	**3.0**	**6.2**
Lead, Pb	mg/kg	1	**17**	**3**	**11**	**5**
Zinc, Zn	mg/kg	2	**20**	**2.4**	**15**	**15**
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	**0.58**	<0.05	**3.0**	**1.3**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.001 Soil 18 Jun 2018 TP01-0.0-0.2	SE180508.002 Soil 18 Jun 2018 TP01-0.4-0.6	SE180508.003 Soil 18 Jun 2018 TP02-0.0-0.2	SE180508.004 Soil 18 Jun 2018 TP02-0.45-0.6
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**12**	**13**	**11**	**16**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	Subcontracted	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.005 Soil 18 Jun 2018 TP02-0.6-0.8	SE180508.006 Soil 18 Jun 2018 TP03-0.0-0.2	SE180508.007 Soil 18 Jun 2018 TP03-0.45-0.6	SE180508.008 Soil 18 Jun 2018 TP03-0.7-0.8
VOC's in Soil Method: AN433 Tested: 21/6/2018							
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	-	-
Surrogates							
Dibromofluoromethane (Surrogate)	%	-		-	**98**	-	-
d4-1,2-dichloroethane (Surrogate)	%	-		-	**96**	-	-
d8-toluene (Surrogate)	%	-		-	**87**	-	-
Bromofluorobenzene (Surrogate)	%	-		-	**79**	-	-
Totals							
Total Xylenes	mg/kg	0.3		-	<0.3	-	-
Total BTEX	mg/kg	0.6		-	<0.6	-	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018							
TRH C6-C10	mg/kg	25		-	<25	-	-
TRH C6-C9	mg/kg	20		-	<20	-	-
Surrogates							
Dibromofluoromethane (Surrogate)	%	-		-	**98**	-	-
d4-1,2-dichloroethane (Surrogate)	%	-		-	**96**	-	-
d8-toluene (Surrogate)	%	-		-	**87**	-	-
Bromofluorobenzene (Surrogate)	%	-		-	**79**	-	-
VPH F Bands							
Benzene (F0)	mg/kg	0.1		-	<0.1	-	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25		-	<25	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.005 Soil 18 Jun 2018 TP02-0.6-0.8	SE180508.006 Soil 18 Jun 2018 TP03-0.0-0.2	SE180508.007 Soil 18 Jun 2018 TP03-0.45-0.6	SE180508.008 Soil 18 Jun 2018 TP03-0.7-0.8
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 21/6/2018						
TRH C10-C14	mg/kg	20	-	<20	-	-
TRH C15-C28	mg/kg	45	-	<45	-	-
TRH C29-C36	mg/kg	45	-	<45	-	-
TRH C37-C40	mg/kg	100	-	<100	-	-
TRH C10-C36 Total	mg/kg	110	-	<110	-	-
TRH C10-C40 Total (F bands)	mg/kg	210	-	<210	-	-
TRH F Bands						
TRH >C10-C16	mg/kg	25	-	<25	-	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	-	<25	-	-
TRH >C16-C34 (F3)	mg/kg	90	-	<90	-	-
TRH >C34-C40 (F4)	mg/kg	120	-	<120	-	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 21/6/2018						
Naphthalene	mg/kg	0.1	<0.1	-	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	-	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	-	**0.2**	<0.1
Anthracene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	-	**0.1**	<0.1
Pyrene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	-	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	-	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	-	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	-	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	-	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	-	<0.8	<0.8
Surrogates						
d5-nitrobenzene (Surrogate)	%	-	**90**	-	**98**	**110**
2-fluorobiphenyl (Surrogate)	%	-	**90**	-	**110**	**100**
d14-p-terphenyl (Surrogate)	%	-	**98**	-	**106**	**108**
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018						
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	-	-	-
o,p'-DDE	mg/kg	0.1	<0.1	-	-	-
Alpha Endosulfan	mg/kg	0.2	<0.2	-	-	-
Gamma Chlordane	mg/kg	0.1	<0.1	-	-	-
Alpha Chlordane	mg/kg	0.1	<0.1	-	-	-
trans-Nonachlor	mg/kg	0.1	<0.1	-	-	-
p,p'-DDE	mg/kg	0.1	<0.1	-	-	-
Dieldrin	mg/kg	0.2	<0.2	-	-	-
Endrin	mg/kg	0.2	<0.2	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.005 Soil 18 Jun 2018 TP02-0.6-0.8	SE180508.006 Soil 18 Jun 2018 TP03-0.0-0.2	SE180508.007 Soil 18 Jun 2018 TP03-0.45-0.6	SE180508.008 Soil 18 Jun 2018 TP03-0.7-0.8
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018 (continued)						
o,p'-DDD	mg/kg	0.1	<0.1	-	-	-
o,p'-DDT	mg/kg	0.1	<0.1	-	-	-
Beta Endosulfan	mg/kg	0.2	<0.2	-	-	-
p,p'-DDD	mg/kg	0.1	<0.1	-	-	-
p,p'-DDT	mg/kg	0.1	<0.1	-	-	-
Endosulfan sulphate	mg/kg	0.1	<0.1	-	-	-
Endrin Aldehyde	mg/kg	0.1	<0.1	-	-	-
Methoxychlor	mg/kg	0.1	<0.1	-	-	-
Endrin Ketone	mg/kg	0.1	<0.1	-	-	-
Isodrin	mg/kg	0.1	<0.1	-	-	-
Mirex	mg/kg	0.1	<0.1	-	-	-
Total CLP OC Pesticides	mg/kg	1	<1	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**102**	-	-	-
PCBs in Soil Method: AN420 Tested: 21/6/2018						
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)	%	-	-	-	**93**	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 25/6/2018						
Arsenic, As	mg/kg	1	<1	-	**1**	<1
Cadmium, Cd	mg/kg	0.3	<0.3	-	**0.6**	<0.3
Chromium, Cr	mg/kg	0.3	**2.0**	-	**4.8**	**6.2**
Copper, Cu	mg/kg	0.5	<0.5	-	**30**	**6.1**
Nickel, Ni	mg/kg	0.5	<0.5	-	**16**	**17**
Lead, Pb	mg/kg	1	**2**	-	**9**	**5**
Zinc, Zn	mg/kg	2	<2.0	-	**21**	**60**
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	<0.05	-	**0.46**	**0.10**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.005 Soil 18 Jun 2018 TP02-0.6-0.8	SE180508.006 Soil 18 Jun 2018 TP03-0.0-0.2	SE180508.007 Soil 18 Jun 2018 TP03-0.45-0.6	SE180508.008 Soil 18 Jun 2018 TP03-0.7-0.8
Moisture Content Method: AN002 Tested: 21/6/2018						
% Moisture	%w/w	0.5	**13**	**10**	**23**	**14**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018						
FibreID						
Asbestos Detected	No unit	-	-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018						
FibreID						
Asbestos Detected	No unit	-	-	-	-	-
SemiQuant						
Estimated Fibres*	%w/w	0.01	-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018						
Sample Subcontracted*	No unit	-	-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.009 Soil 18 Jun 2018 TP04-0.0-0.2	SE180508.010 Soil 18 Jun 2018 TP04-0.5-0.7	SE180508.011 Soil 18 Jun 2018 TP04-0.7-0.9	SE180508.012 Soil 18 Jun 2018 TP05-0.0-0.2
VOC's in Soil Method: AN433 Tested: 21/6/2018						
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	-	-	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	**96**	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	**92**	-	-	-
d8-toluene (Surrogate)	%	-	**83**	-	-	-
Bromofluorobenzene (Surrogate)	%	-	**75**	-	-	-
Totals						
Total Xylenes	mg/kg	0.3	<0.3	-	-	-
Total BTEX	mg/kg	0.6	<0.6	-	-	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018						
TRH C6-C10	mg/kg	25	<25	-	-	-
TRH C6-C9	mg/kg	20	<20	-	-	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	**96**	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	**92**	-	-	-
d8-toluene (Surrogate)	%	-	**83**	-	-	-
Bromofluorobenzene (Surrogate)	%	-	**75**	-	-	-
VPH F Bands						
Benzene (F0)	mg/kg	0.1	<0.1	-	-	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.009 Soil 18 Jun 2018 TP04-0.0-0.2	SE180508.010 Soil 18 Jun 2018 TP04-0.5-0.7	SE180508.011 Soil 18 Jun 2018 TP04-0.7-0.9	SE180508.012 Soil 18 Jun 2018 TP05-0.0-0.2
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 21/6/2018							
TRH C10-C14	mg/kg	20		<20	-	-	-
TRH C15-C28	mg/kg	45		<45	-	-	-
TRH C29-C36	mg/kg	45		<45	-	-	-
TRH C37-C40	mg/kg	100		<100	-	-	-
TRH C10-C36 Total	mg/kg	110		<110	-	-	-
TRH C10-C40 Total (F bands)	mg/kg	210		<210	-	-	-
TRH F Bands							
TRH >C10-C16	mg/kg	25		<25	-	-	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25		<25	-	-	-
TRH >C16-C34 (F3)	mg/kg	90		<90	-	-	-
TRH >C34-C40 (F4)	mg/kg	120		<120	-	-	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 21/6/2018							
Naphthalene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1		<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2		<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3		<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2		<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8		<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8		<0.8	<0.8	<0.8	<0.8
Surrogates							
d5-nitrobenzene (Surrogate)	%	-		**92**	**102**	**102**	**102**
2-fluorobiphenyl (Surrogate)	%	-		**98**	**102**	**98**	**104**
d14-p-terphenyl (Surrogate)	%	-		**108**	**110**	**108**	**112**
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018							
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		**0.3**	-	-	**0.5**
Alpha Chlordane	mg/kg	0.1		**0.5**	-	-	**0.9**
trans-Nonachlor	mg/kg	0.1		**0.5**	-	-	**0.9**
p,p'-DDE	mg/kg	0.1		<0.1	-	-	<0.1
Dieldrin	mg/kg	0.2		<0.2	-	-	**0.4**
Endrin	mg/kg	0.2		<0.2	-	-	<0.2

Parameter	Units	LOR	Sample Number: SE180508.009 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP04-0.0-0.2	SE180508.010 Soil 18 Jun 2018 TP04-0.5-0.7	SE180508.011 Soil 18 Jun 2018 TP04-0.7-0.9	SE180508.012 Soil 18 Jun 2018 TP05-0.0-0.2
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018 (continued)						
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	-	-	**2**
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**99**	-	-	**103**
PCBs in Soil Method: AN420 Tested: 21/6/2018						
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	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**99**	**113**	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 25/6/2018						
Arsenic, As	mg/kg	1	**1**	<1	<1	<1
Cadmium, Cd	mg/kg	0.3	<0.3	**0.5**	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	**8.5**	**12**	**7.4**	**6.6**
Copper, Cu	mg/kg	0.5	**7.8**	**32**	**1.0**	**4.9**
Nickel, Ni	mg/kg	0.5	**5.5**	**11**	<0.5	**3.5**
Lead, Pb	mg/kg	1	**11**	**17**	**4**	**10**
Zinc, Zn	mg/kg	2	**22**	**21**	**4.1**	**17**
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	**1.7**	**0.69**	**0.05**	**1.8**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.009 Soil 18 Jun 2018 TP04-0.0-0.2	SE180508.010 Soil 18 Jun 2018 TP04-0.5-0.7	SE180508.011 Soil 18 Jun 2018 TP04-0.7-0.9	SE180508.012 Soil 18 Jun 2018 TP05-0.0-0.2
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**12**	**21**	**8.7**	**13**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number: SE180508.013 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP05-0.5-0.7	SE180508.014 Soil 18 Jun 2018 TP06-0.4-0.5	SE180508.015 Soil 18 Jun 2018 TP06-0.5-0.7	SE180508.016 Soil 18 Jun 2018 TP07-0.7-0.9
VOC's in Soil Method: AN433 Tested: 21/6/2018						
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	-	-	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	**87**	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	**91**	-	-	-
d8-toluene (Surrogate)	%	-	**81**	-	-	-
Bromofluorobenzene (Surrogate)	%	-	**70**	-	-	-
Totals						
Total Xylenes	mg/kg	0.3	<0.3	-	-	-
Total BTEX	mg/kg	0.6	<0.6	-	-	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018						
TRH C6-C10	mg/kg	25	<25	-	-	-
TRH C6-C9	mg/kg	20	<20	-	-	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	**87**	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	**91**	-	-	-
d8-toluene (Surrogate)	%	-	**81**	-	-	-
Bromofluorobenzene (Surrogate)	%	-	**70**	-	-	-
VPH F Bands						
Benzene (F0)	mg/kg	0.1	<0.1	-	-	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.013 Soil 18 Jun 2018 TP05-0.5-0.7	SE180508.014 Soil 18 Jun 2018 TP06-0.4-0.5	SE180508.015 Soil 18 Jun 2018 TP06-0.5-0.7	SE180508.016 Soil 18 Jun 2018 TP07-0.7-0.9
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 21/6/2018							
TRH C10-C14	mg/kg	20		<20	-	-	-
TRH C15-C28	mg/kg	45		<45	-	-	-
TRH C29-C36	mg/kg	45		<45	-	-	-
TRH C37-C40	mg/kg	100		<100	-	-	-
TRH C10-C36 Total	mg/kg	110		<110	-	-	-
TRH C10-C40 Total (F bands)	mg/kg	210		<210	-	-	-
TRH F Bands							
TRH >C10-C16	mg/kg	25		<25	-	-	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25		<25	-	-	-
TRH >C16-C34 (F3)	mg/kg	90		<90	-	-	-
TRH >C34-C40 (F4)	mg/kg	120		<120	-	-	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 21/6/2018							
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&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		-	<0.1	-	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1		-	<0.1	-	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1		-	<0.1	-	<0.1
Benzo(ghi)perylene	mg/kg	0.1		-	<0.1	-	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2		-	<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
Surrogates							
d5-nitrobenzene (Surrogate)	%	-		-	**98**	-	**104**
2-fluorobiphenyl (Surrogate)	%	-		-	**100**	-	**98**
d14-p-terphenyl (Surrogate)	%	-		-	**108**	-	**108**
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018							
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		-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.013 Soil 18 Jun 2018 TP05-0.5-0.7	SE180508.014 Soil 18 Jun 2018 TP06-0.4-0.5	SE180508.015 Soil 18 Jun 2018 TP06-0.5-0.7	SE180508.016 Soil 18 Jun 2018 TP07-0.7-0.9
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018 (continued)							
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		-	-	-	-
Surrogates							
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-		-	-	-	-
PCBs in Soil Method: AN420 Tested: 21/6/2018							
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		-	-	-	-
Surrogates							
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-		-	-	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 22/6/2018							
Arsenic, As	mg/kg	1		-	<1	<1	<1
Cadmium, Cd	mg/kg	0.3		-	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3		-	**5.7**	**6.1**	**6.7**
Copper, Cu	mg/kg	0.5		-	**20**	**0.7**	<0.5
Nickel, Ni	mg/kg	0.5		-	**13**	<0.5	<0.5
Lead, Pb	mg/kg	1		-	**28**	**1**	**3**
Zinc, Zn	mg/kg	2		-	**53**	**5.0**	**3.4**
Mercury in Soil Method: AN312 Tested: 25/6/2018							
Mercury	mg/kg	0.05		-	**0.51**	<0.05	<0.05

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.013 Soil 18 Jun 2018 TP05-0.5-0.7	SE180508.014 Soil 18 Jun 2018 TP06-0.4-0.5	SE180508.015 Soil 18 Jun 2018 TP06-0.5-0.7	SE180508.016 Soil 18 Jun 2018 TP07-0.7-0.9
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**23**	**23**	**10**	**11**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.017 Soil 18 Jun 2018 TP07-1.3-1.5	SE180508.018 Soil 18 Jun 2018 TP07-1.8-2.0	SE180508.019 Soil 18 Jun 2018 TP07-2.1-2.3	SE180508.020 Soil 18 Jun 2018 TP08-0.0-0.2
VOC's in Soil Method: AN433 Tested: 21/6/2018							
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	-	-
Surrogates							
Dibromofluoromethane (Surrogate)	%	-		-	**89**	-	-
d4-1,2-dichloroethane (Surrogate)	%	-		-	**92**	-	-
d8-toluene (Surrogate)	%	-		-	**83**	-	-
Bromofluorobenzene (Surrogate)	%	-		-	**75**	-	-
Totals							
Total Xylenes	mg/kg	0.3		-	<0.3	-	-
Total BTEX	mg/kg	0.6		-	<0.6	-	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018							
TRH C6-C10	mg/kg	25		-	<25	-	-
TRH C6-C9	mg/kg	20		-	<20	-	-
Surrogates							
Dibromofluoromethane (Surrogate)	%	-		-	**89**	-	-
d4-1,2-dichloroethane (Surrogate)	%	-		-	**92**	-	-
d8-toluene (Surrogate)	%	-		-	**83**	-	-
Bromofluorobenzene (Surrogate)	%	-		-	**75**	-	-
VPH F Bands							
Benzene (F0)	mg/kg	0.1		-	<0.1	-	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25		-	<25	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.017 Soil 18 Jun 2018 TP07-1.3-1.5	SE180508.018 Soil 18 Jun 2018 TP07-1.8-2.0	SE180508.019 Soil 18 Jun 2018 TP07-2.1-2.3	SE180508.020 Soil 18 Jun 2018 TP08-0.0-0.2
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 21/6/2018							
TRH C10-C14	mg/kg	20		-	<20	-	-
TRH C15-C28	mg/kg	45		-	<45	-	-
TRH C29-C36	mg/kg	45		-	<45	-	-
TRH C37-C40	mg/kg	100		-	<100	-	-
TRH C10-C36 Total	mg/kg	110		-	<110	-	-
TRH C10-C40 Total (F bands)	mg/kg	210		-	<210	-	-
TRH F Bands							
TRH >C10-C16	mg/kg	25		-	<25	-	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25		-	<25	-	-
TRH >C16-C34 (F3)	mg/kg	90		-	<90	-	-
TRH >C34-C40 (F4)	mg/kg	120		-	<120	-	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 21/6/2018							
Naphthalene	mg/kg	0.1		<0.1	-	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1		<0.1	-	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Acenaphthylene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Acenaphthene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Fluorene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Phenanthrene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Anthracene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Fluoranthene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Pyrene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Chrysene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2		<0.2	-	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3		<0.3	-	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2		<0.2	-	<0.2	<0.2
Total PAH (18)	mg/kg	0.8		<0.8	-	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8		<0.8	-	<0.8	<0.8
Surrogates							
d5-nitrobenzene (Surrogate)	%	-		**98**	-	**106**	**98**
2-fluorobiphenyl (Surrogate)	%	-		**106**	-	**92**	**98**
d14-p-terphenyl (Surrogate)	%	-		**116**	-	**106**	**108**
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018							
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		-	-	-	-

Parameter	Units	LOR	Sample Number: SE180508.017 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP07-1.3-1.5	SE180508.018 Soil 18 Jun 2018 TP07-1.8-2.0	SE180508.019 Soil 18 Jun 2018 TP07-2.1-2.3	SE180508.020 Soil 18 Jun 2018 TP08-0.0-0.2
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018 (continued)						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
PCBs in Soil Method: AN420 Tested: 21/6/2018						
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)	%	-	**103**	-	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 25/6/2018						
Arsenic, As	mg/kg	1	<1	-	<1	**2**
Cadmium, Cd	mg/kg	0.3	<0.3	-	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	**7.5**	-	**2.9**	**7.0**
Copper, Cu	mg/kg	0.5	**0.6**	-	<0.5	**7.4**
Nickel, Ni	mg/kg	0.5	<0.5	-	<0.5	**4.2**
Lead, Pb	mg/kg	1	**5**	-	**2**	**8**
Zinc, Zn	mg/kg	2	**14**	-	<2.0	**19**
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	<0.05	-	<0.05	**1.6**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.017 Soil 18 Jun 2018 TP07-1.3-1.5	SE180508.018 Soil 18 Jun 2018 TP07-1.8-2.0	SE180508.019 Soil 18 Jun 2018 TP07-2.1-2.3	SE180508.020 Soil 18 Jun 2018 TP08-0.0-0.2
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**12**	**12**	**14**	**10**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	-	Subcontracted

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.021 Soil 18 Jun 2018 TP08-1.2-1.4	SE180508.022 Soil 18 Jun 2018 TP09-0.0-0.2	SE180508.023 Soil 18 Jun 2018 TP10-0.0-0.2	SE180508.024 Soil 18 Jun 2018 TP10-0.6-0.8
VOC's in Soil Method: AN433 Tested: 21/6/2018						
Monocyclic Aromatic Hydrocarbons						
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	-
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	-
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Polycyclic VOCs						
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	**105**	**101**	**106**	-
d4-1,2-dichloroethane (Surrogate)	%	-	**95**	**97**	**98**	-
d8-toluene (Surrogate)	%	-	**85**	**84**	**88**	-
Bromofluorobenzene (Surrogate)	%	-	**76**	**77**	**82**	-
Totals						
Total Xylenes	mg/kg	0.3	<0.3	<0.3	<0.3	-
Total BTEX	mg/kg	0.6	<0.6	<0.6	<0.6	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018						
TRH C6-C10	mg/kg	25	<25	<25	<25	-
TRH C6-C9	mg/kg	20	<20	<20	<20	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	**105**	**101**	**106**	-
d4-1,2-dichloroethane (Surrogate)	%	-	**95**	**97**	**98**	-
d8-toluene (Surrogate)	%	-	**85**	**84**	**88**	-
Bromofluorobenzene (Surrogate)	%	-	**76**	**77**	**82**	-
VPH F Bands						
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	-

Parameter	Units	LOR	Sample Number: SE180508.021 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP08-1.2-1.4	SE180508.022 Soil 18 Jun 2018 TP09-0.0-0.2	SE180508.023 Soil 18 Jun 2018 TP10-0.0-0.2	SE180508.024 Soil 18 Jun 2018 TP10-0.6-0.8
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 21/6/2018						
TRH C10-C14	mg/kg	20	<20	<20	<20	-
TRH C15-C28	mg/kg	45	<45	<45	<45	-
TRH C29-C36	mg/kg	45	<45	<45	<45	-
TRH C37-C40	mg/kg	100	<100	<100	<100	-
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	-
TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	-
TRH F Bands						
TRH >C10-C16	mg/kg	25	<25	<25	<25	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	-
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	-
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 21/6/2018						
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8
Surrogates						
d5-nitrobenzene (Surrogate)	%	-	**88**	**88**	**90**	**80**
2-fluorobiphenyl (Surrogate)	%	-	**86**	**92**	**96**	**88**
d14-p-terphenyl (Surrogate)	%	-	**90**	**106**	**102**	**96**
OC Pesticides in Soil Method: AN420 Tested: 21/6/2018						
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	**0.2**	-	-
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	-	-

Parameter	Units	LOR	Sample Number: SE180508.021 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP08-1.2-1.4	SE180508.022 Soil 18 Jun 2018 TP09-0.0-0.2	SE180508.023 Soil 18 Jun 2018 TP10-0.0-0.2	SE180508.024 Soil 18 Jun 2018 TP10-0.6-0.8
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018 (continued)						
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	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**95**	**109**	-	-
PCBs in Soil Method: AN420 Tested: 21/6/2018						
Arochlor 1016	mg/kg	0.2	-	-	<0.2	-
Arochlor 1221	mg/kg	0.2	-	-	<0.2	-
Arochlor 1232	mg/kg	0.2	-	-	<0.2	-
Arochlor 1242	mg/kg	0.2	-	-	<0.2	-
Arochlor 1248	mg/kg	0.2	-	-	<0.2	-
Arochlor 1254	mg/kg	0.2	-	-	<0.2	-
Arochlor 1260	mg/kg	0.2	-	-	<0.2	-
Arochlor 1262	mg/kg	0.2	-	-	<0.2	-
Arochlor 1268	mg/kg	0.2	-	-	<0.2	-
Total PCBs (Arochlors)	mg/kg	1	-	-	<1	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	**100**	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 25/6/2018						
Arsenic, As	mg/kg	1	<1	<1	<1	<1
Cadmium, Cd	mg/kg	0.3	<0.3	**0.5**	**0.3**	<0.3
Chromium, Cr	mg/kg	0.3	**6.9**	**2.0**	**4.0**	**7.8**
Copper, Cu	mg/kg	0.5	**1.8**	**3.1**	**4.8**	<0.5
Nickel, Ni	mg/kg	0.5	<0.5	**0.8**	**1.9**	<0.5
Lead, Pb	mg/kg	1	**3**	**4**	**7**	**3**
Zinc, Zn	mg/kg	2	**2.4**	**8.1**	**13**	<2.0
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	<0.05	**1.1**	**1.6**	<0.05

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.021 Soil 18 Jun 2018 TP08-1.2-1.4	SE180508.022 Soil 18 Jun 2018 TP09-0.0-0.2	SE180508.023 Soil 18 Jun 2018 TP10-0.0-0.2	SE180508.024 Soil 18 Jun 2018 TP10-0.6-0.8
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**12**	**5.7**	**8.0**	**14**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.025 Soil 18 Jun 2018 TP11-0.0-0.2	SE180508.026 Soil 18 Jun 2018 TP11-0.5-0.6	SE180508.027 Soil 18 Jun 2018 TP12-0.0-0.2	SE180508.028 Soil 18 Jun 2018 TP12-0.6-0.8
VOC's in Soil Method: AN433 Tested: 21/6/2018							
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	-
Surrogates							
Dibromofluoromethane (Surrogate)	%	-		-	-	**103**	-
d4-1,2-dichloroethane (Surrogate)	%	-		-	-	**94**	-
d8-toluene (Surrogate)	%	-		-	-	**85**	-
Bromofluorobenzene (Surrogate)	%	-		-	-	**75**	-
Totals							
Total Xylenes	mg/kg	0.3		-	-	<0.3	-
Total BTEX	mg/kg	0.6		-	-	<0.6	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018							
TRH C6-C10	mg/kg	25		-	-	<25	-
TRH C6-C9	mg/kg	20		-	-	<20	-
Surrogates							
Dibromofluoromethane (Surrogate)	%	-		-	-	**103**	-
d4-1,2-dichloroethane (Surrogate)	%	-		-	-	**94**	-
d8-toluene (Surrogate)	%	-		-	-	**85**	-
Bromofluorobenzene (Surrogate)	%	-		-	-	**75**	-
VPH F Bands							
Benzene (F0)	mg/kg	0.1		-	-	<0.1	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25		-	-	<25	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.025 Soil 18 Jun 2018 TP11-0.0-0.2	SE180508.026 Soil 18 Jun 2018 TP11-0.5-0.6	SE180508.027 Soil 18 Jun 2018 TP12-0.0-0.2	SE180508.028 Soil 18 Jun 2018 TP12-0.6-0.8
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 22/6/2018						
TRH C10-C14	mg/kg	20	-	-	<20	-
TRH C15-C28	mg/kg	45	-	-	<45	-
TRH C29-C36	mg/kg	45	-	-	<45	-
TRH C37-C40	mg/kg	100	-	-	<100	-
TRH C10-C36 Total	mg/kg	110	-	-	<110	-
TRH C10-C40 Total (F bands)	mg/kg	210	-	-	<210	-
TRH F Bands						
TRH >C10-C16	mg/kg	25	-	-	<25	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	-	-	<25	-
TRH >C16-C34 (F3)	mg/kg	90	-	-	<90	-
TRH >C34-C40 (F4)	mg/kg	120	-	-	<120	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 22/6/2018						
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	-
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	-
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	-
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	-
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	-
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	-
Surrogates						
d5-nitrobenzene (Surrogate)	%	-	**86**	**78**	**90**	-
2-fluorobiphenyl (Surrogate)	%	-	**94**	**90**	**96**	-
d14-p-terphenyl (Surrogate)	%	-	**100**	**104**	**102**	-
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018						
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	-	-	-
o,p'-DDE	mg/kg	0.1	<0.1	-	-	-
Alpha Endosulfan	mg/kg	0.2	<0.2	-	-	-
Gamma Chlordane	mg/kg	0.1	<0.1	-	-	-
Alpha Chlordane	mg/kg	0.1	**0.1**	-	-	-
trans-Nonachlor	mg/kg	0.1	**0.2**	-	-	-
p,p'-DDE	mg/kg	0.1	<0.1	-	-	-
Dieldrin	mg/kg	0.2	<0.2	-	-	-
Endrin	mg/kg	0.2	<0.2	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.025 Soil 18 Jun 2018 TP11-0.0-0.2	SE180508.026 Soil 18 Jun 2018 TP11-0.5-0.6	SE180508.027 Soil 18 Jun 2018 TP12-0.0-0.2	SE180508.028 Soil 18 Jun 2018 TP12-0.6-0.8
OC Pesticides in Soil Method: AN420 Tested: 26/6/2018 (continued)						
o,p'-DDD	mg/kg	0.1	<0.1	-	-	-
o,p'-DDT	mg/kg	0.1	<0.1	-	-	-
Beta Endosulfan	mg/kg	0.2	<0.2	-	-	-
p,p'-DDD	mg/kg	0.1	<0.1	-	-	-
p,p'-DDT	mg/kg	0.1	<0.1	-	-	-
Endosulfan sulphate	mg/kg	0.1	<0.1	-	-	-
Endrin Aldehyde	mg/kg	0.1	<0.1	-	-	-
Methoxychlor	mg/kg	0.1	<0.1	-	-	-
Endrin Ketone	mg/kg	0.1	<0.1	-	-	-
Isodrin	mg/kg	0.1	<0.1	-	-	-
Mirex	mg/kg	0.1	<0.1	-	-	-
Total CLP OC Pesticides	mg/kg	1	<1	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	**101**	-	-	-
PCBs in Soil Method: AN420 Tested: 22/6/2018						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 25/6/2018						
Arsenic, As	mg/kg	1	**8**	-	**9**	**16**
Cadmium, Cd	mg/kg	0.3	<0.3	-	**1.8**	**0.4**
Chromium, Cr	mg/kg	0.3	**5.4**	-	**7.7**	**4.5**
Copper, Cu	mg/kg	0.5	**5.3**	-	**17**	**3.8**
Nickel, Ni	mg/kg	0.5	**2.5**	-	**2.6**	<0.5
Lead, Pb	mg/kg	1	**10**	-	**67**	**110**
Zinc, Zn	mg/kg	2	**19**	-	**150**	**14**
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	**1.3**	-	**3.4**	**0.14**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.025 Soil 18 Jun 2018 TP11-0.0-0.2	SE180508.026 Soil 18 Jun 2018 TP11-0.5-0.6	SE180508.027 Soil 18 Jun 2018 TP12-0.0-0.2	SE180508.028 Soil 18 Jun 2018 TP12-0.6-0.8
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**11**	**9.8**	**12**	**9.8**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number: SE180508.029 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP13-0.0-0.2	SE180508.030 Soil 18 Jun 2018 TP13-0.6-0.8	SE180508.031 Soil 18 Jun 2018 TP14-0.0-0.2	SE180508.032 Soil 18 Jun 2018 TP14-0.3-0.4
VOC's in Soil Method: AN433 Tested: 21/6/2018						
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	-	-	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	**86**	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	**89**	-	-	-
d8-toluene (Surrogate)	%	-	**80**	-	-	-
Bromofluorobenzene (Surrogate)	%	-	**72**	-	-	-
Totals						
Total Xylenes	mg/kg	0.3	<0.3	-	-	-
Total BTEX	mg/kg	0.6	<0.6	-	-	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018						
TRH C6-C10	mg/kg	25	<25	-	-	-
TRH C6-C9	mg/kg	20	<20	-	-	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	**86**	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	**89**	-	-	-
d8-toluene (Surrogate)	%	-	**80**	-	-	-
Bromofluorobenzene (Surrogate)	%	-	**72**	-	-	-
VPH F Bands						
Benzene (F0)	mg/kg	0.1	<0.1	-	-	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.029 Soil 18 Jun 2018 TP13-0.0-0.2	SE180508.030 Soil 18 Jun 2018 TP13-0.6-0.8	SE180508.031 Soil 18 Jun 2018 TP14-0.0-0.2	SE180508.032 Soil 18 Jun 2018 TP14-0.3-0.4
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 22/6/2018							
TRH C10-C14	mg/kg	20		<20	-	-	-
TRH C15-C28	mg/kg	45		<45	-	-	-
TRH C29-C36	mg/kg	45		<45	-	-	-
TRH C37-C40	mg/kg	100		<100	-	-	-
TRH C10-C36 Total	mg/kg	110		<110	-	-	-
TRH C10-C40 Total (F bands)	mg/kg	210		<210	-	-	-
TRH F Bands							
TRH >C10-C16	mg/kg	25		<25	-	-	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25		<25	-	-	-
TRH >C16-C34 (F3)	mg/kg	90		<90	-	-	-
TRH >C34-C40 (F4)	mg/kg	120		<120	-	-	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 22/6/2018							
Naphthalene	mg/kg	0.1		<0.1	-	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1		<0.1	-	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Acenaphthylene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Acenaphthene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Fluorene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Phenanthrene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Anthracene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Fluoranthene	mg/kg	0.1		<0.1	-	<0.1	**0.1**
Pyrene	mg/kg	0.1		<0.1	-	<0.1	**0.1**
Benzo(a)anthracene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Chrysene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1		<0.1	-	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2		<0.2	-	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3		<0.3	-	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2		<0.2	-	<0.2	<0.2
Total PAH (18)	mg/kg	0.8		<0.8	-	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8		<0.8	-	<0.8	<0.8
Surrogates							
d5-nitrobenzene (Surrogate)	%	-		**90**	-	**84**	**84**
2-fluorobiphenyl (Surrogate)	%	-		**96**	-	**90**	**92**
d14-p-terphenyl (Surrogate)	%	-		**100**	-	**96**	**98**
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018							
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		-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.029 Soil 18 Jun 2018 TP13-0.0-0.2	SE180508.030 Soil 18 Jun 2018 TP13-0.6-0.8	SE180508.031 Soil 18 Jun 2018 TP14-0.0-0.2	SE180508.032 Soil 18 Jun 2018 TP14-0.3-0.4
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018 (continued)						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
PCBs in Soil Method: AN420 Tested: 22/6/2018						
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)	%	-	-	-	**104**	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 25/6/2018						
Arsenic, As	mg/kg	1	**9**	**2**	**8**	-
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	**0.3**	-
Chromium, Cr	mg/kg	0.3	**5.3**	**17**	**5.5**	-
Copper, Cu	mg/kg	0.5	**5.4**	<0.5	**6.0**	-
Nickel, Ni	mg/kg	0.5	**2.9**	<0.5	**2.8**	-
Lead, Pb	mg/kg	1	**12**	**14**	**10**	-
Zinc, Zn	mg/kg	2	**19**	**3.5**	**18**	-
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	**0.81**	<0.05	**0.67**	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.029 Soil 18 Jun 2018 TP13-0.0-0.2	SE180508.030 Soil 18 Jun 2018 TP13-0.6-0.8	SE180508.031 Soil 18 Jun 2018 TP14-0.0-0.2	SE180508.032 Soil 18 Jun 2018 TP14-0.3-0.4
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**11**	**5.4**	**12**	**18**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.033 Soil 18 Jun 2018 TP15-0.0-0.2	SE180508.034 Soil 18 Jun 2018 TP15-0.6-0.8	SE180508.035 Soil 18 Jun 2018 TP15-1.3-1.5	SE180508.036 Soil 18 Jun 2018 TP15-1.7-1.9
VOC's in Soil Method: AN433 Tested: 21/6/2018							
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	-	-
Surrogates							
Dibromofluoromethane (Surrogate)	%	-		-	**114**	-	-
d4-1,2-dichloroethane (Surrogate)	%	-		-	**103**	-	-
d8-toluene (Surrogate)	%	-		-	**92**	-	-
Bromofluorobenzene (Surrogate)	%	-		-	**80**	-	-
Totals							
Total Xylenes	mg/kg	0.3		-	<0.3	-	-
Total BTEX	mg/kg	0.6		-	<0.6	-	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018							
TRH C6-C10	mg/kg	25		-	<25	-	-
TRH C6-C9	mg/kg	20		-	<20	-	-
Surrogates							
Dibromofluoromethane (Surrogate)	%	-		-	**114**	-	-
d4-1,2-dichloroethane (Surrogate)	%	-		-	**103**	-	-
d8-toluene (Surrogate)	%	-		-	**92**	-	-
Bromofluorobenzene (Surrogate)	%	-		-	**80**	-	-
VPH F Bands							
Benzene (F0)	mg/kg	0.1		-	<0.1	-	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25		-	<25	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.033 Soil 18 Jun 2018 TP15-0.0-0.2	SE180508.034 Soil 18 Jun 2018 TP15-0.6-0.8	SE180508.035 Soil 18 Jun 2018 TP15-1.3-1.5	SE180508.036 Soil 18 Jun 2018 TP15-1.7-1.9
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 22/6/2018							
TRH C10-C14	mg/kg	20		-	<20	-	-
TRH C15-C28	mg/kg	45		-	<45	-	-
TRH C29-C36	mg/kg	45		-	<45	-	-
TRH C37-C40	mg/kg	100		-	<100	-	-
TRH C10-C36 Total	mg/kg	110		-	<110	-	-
TRH C10-C40 Total (F bands)	mg/kg	210		-	<210	-	-
TRH F Bands							
TRH >C10-C16	mg/kg	25		-	<25	-	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25		-	<25	-	-
TRH >C16-C34 (F3)	mg/kg	90		-	<90	-	-
TRH >C34-C40 (F4)	mg/kg	120		-	<120	-	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 22/6/2018							
Naphthalene	mg/kg	0.1		<0.1	<0.1	<0.1	-
2-methylnaphthalene	mg/kg	0.1		<0.1	<0.1	<0.1	-
1-methylnaphthalene	mg/kg	0.1		<0.1	<0.1	<0.1	-
Acenaphthylene	mg/kg	0.1		<0.1	<0.1	<0.1	-
Acenaphthene	mg/kg	0.1		<0.1	<0.1	<0.1	-
Fluorene	mg/kg	0.1		<0.1	<0.1	<0.1	-
Phenanthrene	mg/kg	0.1		<0.1	<0.1	**0.2**	-
Anthracene	mg/kg	0.1		<0.1	<0.1	<0.1	-
Fluoranthene	mg/kg	0.1		<0.1	<0.1	**0.4**	-
Pyrene	mg/kg	0.1		<0.1	<0.1	**0.4**	-
Benzo(a)anthracene	mg/kg	0.1		<0.1	<0.1	**0.2**	-
Chrysene	mg/kg	0.1		<0.1	<0.1	**0.2**	-
Benzo(b&j)fluoranthene	mg/kg	0.1		<0.1	<0.1	**0.2**	-
Benzo(k)fluoranthene	mg/kg	0.1		<0.1	<0.1	<0.1	-
Benzo(a)pyrene	mg/kg	0.1		<0.1	<0.1	**0.2**	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1		<0.1	<0.1	**0.1**	-
Dibenzo(ah)anthracene	mg/kg	0.1		<0.1	<0.1	<0.1	-
Benzo(ghi)perylene	mg/kg	0.1		<0.1	<0.1	**0.1**	-
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2		<0.2	<0.2	**0.2**	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3		<0.3	<0.3	**0.3**	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2		<0.2	<0.2	**0.3**	-
Total PAH (18)	mg/kg	0.8		<0.8	<0.8	**1.9**	-
Total PAH (NEPM/WHO 16)	mg/kg	0.8		<0.8	<0.8	**1.9**	-
Surrogates							
d5-nitrobenzene (Surrogate)	%	-		**78**	**76**	**82**	-
2-fluorobiphenyl (Surrogate)	%	-		**86**	**88**	**90**	-
d14-p-terphenyl (Surrogate)	%	-		**96**	**100**	**94**	-
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018							
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		-	-	-	-

Parameter	Units	LOR	Sample Number: SE180508.033 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP15-0.0-0.2	SE180508.034 Soil 18 Jun 2018 TP15-0.6-0.8	SE180508.035 Soil 18 Jun 2018 TP15-1.3-1.5	SE180508.036 Soil 18 Jun 2018 TP15-1.7-1.9
OC Pesticides in Soil Method: AN420 Tested: 26/6/2018 (continued)						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
PCBs in Soil Method: AN420 Tested: 22/6/2018						
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)	%	-	-	**108**	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 22/6/2018						
Arsenic, As	mg/kg	1	**33**	**7**	**3**	<1
Cadmium, Cd	mg/kg	0.3	**0.9**	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.3	**8.5**	**6.7**	**5.3**	**2.7**
Copper, Cu	mg/kg	0.5	**6.1**	**4.5**	**4.6**	<0.5
Nickel, Ni	mg/kg	0.5	**1.7**	**1.1**	**0.9**	<0.5
Lead, Pb	mg/kg	1	**66**	**79**	**37**	**2**
Zinc, Zn	mg/kg	2	**44**	**32**	**29**	<2.0
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	**0.19**	**0.11**	**0.12**	<0.05

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.033 Soil 18 Jun 2018 TP15-0.0-0.2	SE180508.034 Soil 18 Jun 2018 TP15-0.6-0.8	SE180508.035 Soil 18 Jun 2018 TP15-1.3-1.5	SE180508.036 Soil 18 Jun 2018 TP15-1.7-1.9
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**16**	**8.6**	**7.9**	**9.3**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.037 Soil 18 Jun 2018 TP16-0.0-0.2	SE180508.038 Soil 18 Jun 2018 TP16-0.7-0.9	SE180508.039 Soil 18 Jun 2018 TP16-1.4-1.6	SE180508.040 Soil 18 Jun 2018 TP17-0.0-0.2
VOC's in Soil Method: AN433 Tested: 21/6/2018							
Monocyclic Aromatic Hydrocarbons							
Benzene	mg/kg	0.1		-	-	<0.1	<0.1
Toluene	mg/kg	0.1		-	-	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		-	-	<0.1	<0.1
m/p-xylene	mg/kg	0.2		-	-	<0.2	<0.2
o-xylene	mg/kg	0.1		-	-	<0.1	<0.1
Polycyclic VOCs							
Naphthalene	mg/kg	0.1		-	-	<0.1	<0.1
Surrogates							
Dibromofluoromethane (Surrogate)	%	-		-	-	**97**	**110**
d4-1,2-dichloroethane (Surrogate)	%	-		-	-	**99**	**101**
d8-toluene (Surrogate)	%	-		-	-	**87**	**86**
Bromofluorobenzene (Surrogate)	%	-		-	-	**75**	**79**
Totals							
Total Xylenes	mg/kg	0.3		-	-	<0.3	<0.3
Total BTEX	mg/kg	0.6		-	-	<0.6	<0.6
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018							
TRH C6-C10	mg/kg	25		-	-	<25	<25
TRH C6-C9	mg/kg	20		-	-	<20	<20
Surrogates							
Dibromofluoromethane (Surrogate)	%	-		-	-	**97**	**110**
d4-1,2-dichloroethane (Surrogate)	%	-		-	-	**99**	**101**
d8-toluene (Surrogate)	%	-		-	-	**87**	**86**
Bromofluorobenzene (Surrogate)	%	-		-	-	**75**	**79**
VPH F Bands							
Benzene (F0)	mg/kg	0.1		-	-	<0.1	<0.1
TRH C6-C10 minus BTEX (F1)	mg/kg	25		-	-	<25	<25

Parameter	Units	LOR	Sample Number: SE180508.037 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP16-0.0-0.2	SE180508.038 Soil 18 Jun 2018 TP16-0.7-0.9	SE180508.039 Soil 18 Jun 2018 TP16-1.4-1.6	SE180508.040 Soil 18 Jun 2018 TP17-0.0-0.2
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 22/6/2018						
TRH C10-C14	mg/kg	20	-	-	<20	<20
TRH C15-C28	mg/kg	45	-	-	**52**	**79**
TRH C29-C36	mg/kg	45	-	-	<45	<45
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	-	-	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	-	-	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	-	-	<90	**110**
TRH >C34-C40 (F4)	mg/kg	120	-	-	<120	<120
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 22/6/2018						
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.3**
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	**0.2**	<0.1	<0.1	**4.6**
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	**1.1**
Fluoranthene	mg/kg	0.1	**0.4**	**0.1**	<0.1	**7.2**
Pyrene	mg/kg	0.1	**0.4**	<0.1	<0.1	**6.0**
Benzo(a)anthracene	mg/kg	0.1	**0.2**	<0.1	<0.1	**3.0**
Chrysene	mg/kg	0.1	**0.2**	<0.1	<0.1	**2.6**
Benzo(b&j)fluoranthene	mg/kg	0.1	**0.2**	<0.1	<0.1	**3.3**
Benzo(k)fluoranthene	mg/kg	0.1	**0.1**	<0.1	<0.1	**1.4**
Benzo(a)pyrene	mg/kg	0.1	**0.2**	<0.1	<0.1	**3.0**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	**0.1**	<0.1	<0.1	**1.9**
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.2**
Benzo(ghi)perylene	mg/kg	0.1	**0.1**	<0.1	<0.1	**1.5**
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	**0.2**	<0.2	<0.2	**4.2**
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	**0.3**	<0.3	<0.3	**4.2**
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	**0.3**	<0.2	<0.2	**4.2**
Total PAH (18)	mg/kg	0.8	**2.1**	<0.8	<0.8	**36**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	**2.1**	<0.8	<0.8	**36**
Surrogates						
d5-nitrobenzene (Surrogate)	%	-	**90**	**86**	**82**	**86**
2-fluorobiphenyl (Surrogate)	%	-	**98**	**94**	**92**	**98**
d14-p-terphenyl (Surrogate)	%	-	**100**	**98**	**90**	**100**
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018						
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	-	-
o,p'-DDE	mg/kg	0.1	-	<0.1	-	-
Alpha Endosulfan	mg/kg	0.2	-	<0.2	-	-
Gamma Chlordane	mg/kg	0.1	-	<0.1	-	-
Alpha Chlordane	mg/kg	0.1	-	<0.1	-	-
trans-Nonachlor	mg/kg	0.1	-	<0.1	-	-
p,p'-DDE	mg/kg	0.1	-	<0.1	-	-
Dieldrin	mg/kg	0.2	-	<0.2	-	-
Endrin	mg/kg	0.2	-	<0.2	-	-

Parameter	Units	LOR	Sample Number: SE180508.037 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP16-0.0-0.2	SE180508.038 Soil 18 Jun 2018 TP16-0.7-0.9	SE180508.039 Soil 18 Jun 2018 TP16-1.4-1.6	SE180508.040 Soil 18 Jun 2018 TP17-0.0-0.2
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018 (continued)						
o,p'-DDD	mg/kg	0.1	-	<0.1	-	-
o,p'-DDT	mg/kg	0.1	-	<0.1	-	-
Beta Endosulfan	mg/kg	0.2	-	<0.2	-	-
p,p'-DDD	mg/kg	0.1	-	<0.1	-	-
p,p'-DDT	mg/kg	0.1	-	<0.1	-	-
Endosulfan sulphate	mg/kg	0.1	-	<0.1	-	-
Endrin Aldehyde	mg/kg	0.1	-	<0.1	-	-
Methoxychlor	mg/kg	0.1	-	<0.1	-	-
Endrin Ketone	mg/kg	0.1	-	<0.1	-	-
Isodrin	mg/kg	0.1	-	<0.1	-	-
Mirex	mg/kg	0.1	-	<0.1	-	-
Total CLP OC Pesticides	mg/kg	1	-	<1	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	**100**	-	-
PCBs in Soil Method: AN420 Tested: 22/6/2018						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 22/6/2018						
Arsenic, As	mg/kg	1	**51**	**6**	**8**	**24**
Cadmium, Cd	mg/kg	0.3	**1.4**	<0.3	<0.3	**0.7**
Chromium, Cr	mg/kg	0.3	**11**	**7.9**	**10**	**8.2**
Copper, Cu	mg/kg	0.5	**7.9**	**17**	**10**	**11**
Nickel, Ni	mg/kg	0.5	**1.5**	**3.7**	**1.7**	**1.4**
Lead, Pb	mg/kg	1	**89**	**990**	**360**	**96**
Zinc, Zn	mg/kg	2	**50**	**130**	**160**	**45**
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	**0.34**	**0.81**	**0.27**	**0.34**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.037 Soil 18 Jun 2018 TP16-0.0-0.2	SE180508.038 Soil 18 Jun 2018 TP16-0.7-0.9	SE180508.039 Soil 18 Jun 2018 TP16-1.4-1.6	SE180508.040 Soil 18 Jun 2018 TP17-0.0-0.2
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**18**	**9.7**	**9.8**	**12**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.041 Soil 18 Jun 2018 TP17-0.7-0.9	SE180508.042 Soil 18 Jun 2018 TP17-1.2-1.4	SE180508.043 Soil 18 Jun 2018 TP18-0.0-0.2	SE180508.044 Soil 18 Jun 2018 TP18-0.3-0.5
VOC's in Soil Method: AN433 Tested: 21/6/2018						
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
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	-	-	-	**92**
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	**95**
d8-toluene (Surrogate)	%	-	-	-	-	**86**
Bromofluorobenzene (Surrogate)	%	-	-	-	-	**76**
Totals						
Total Xylenes	mg/kg	0.3	-	-	-	<0.3
Total BTEX	mg/kg	0.6	-	-	-	<0.6
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018						
TRH C6-C10	mg/kg	25	-	-	-	<25
TRH C6-C9	mg/kg	20	-	-	-	<20
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	-	-	-	**92**
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	**95**
d8-toluene (Surrogate)	%	-	-	-	-	**86**
Bromofluorobenzene (Surrogate)	%	-	-	-	-	**76**
VPH F Bands						
Benzene (F0)	mg/kg	0.1	-	-	-	<0.1
TRH C6-C10 minus BTEX (F1)	mg/kg	25	-	-	-	<25

Parameter	Units	LOR	Sample Number: SE180508.041 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP17-0.7-0.9	SE180508.042 Soil 18 Jun 2018 TP17-1.2-1.4	SE180508.043 Soil 18 Jun 2018 TP18-0.0-0.2	SE180508.044 Soil 18 Jun 2018 TP18-0.3-0.5
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 22/6/2018						
TRH C10-C14	mg/kg	20	-	-	-	<20
TRH C15-C28	mg/kg	45	-	-	-	<45
TRH C29-C36	mg/kg	45	-	-	-	<45
TRH C37-C40	mg/kg	100	-	-	-	<100
TRH C10-C36 Total	mg/kg	110	-	-	-	<110
TRH C10-C40 Total (F bands)	mg/kg	210	-	-	-	<210
TRH F Bands						
TRH >C10-C16	mg/kg	25	-	-	-	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	-	-	-	<25
TRH >C16-C34 (F3)	mg/kg	90	-	-	-	<90
TRH >C34-C40 (F4)	mg/kg	120	-	-	-	<120
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 22/6/2018						
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	**0.2**	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	**1.1**	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	**0.3**	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**1.8**	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	**1.6**	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	**0.8**	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	**0.8**	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	**1.0**	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	**0.4**	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	**0.9**	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	**0.6**	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	**0.5**	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	**1.2**	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	**1.3**	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	**1.3**	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	**10**	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	**10**	<0.8	<0.8	<0.8
Surrogates						
d5-nitrobenzene (Surrogate)	%	-	**78**	**82**	**90**	**86**
2-fluorobiphenyl (Surrogate)	%	-	**90**	**82**	**98**	**94**
d14-p-terphenyl (Surrogate)	%	-	**98**	**110**	**108**	**106**
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018						
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
o,p'-DDE	mg/kg	0.1	-	-	-	<0.1
Alpha Endosulfan	mg/kg	0.2	-	-	-	<0.2
Gamma Chlordane	mg/kg	0.1	-	-	-	<0.1
Alpha Chlordane	mg/kg	0.1	-	-	-	<0.1
trans-Nonachlor	mg/kg	0.1	-	-	-	<0.1
p,p'-DDE	mg/kg	0.1	-	-	-	<0.1
Dieldrin	mg/kg	0.2	-	-	-	<0.2
Endrin	mg/kg	0.2	-	-	-	<0.2

Parameter	Units	LOR	Sample Number: SE180508.041 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP17-0.7-0.9	SE180508.042 Soil 18 Jun 2018 TP17-1.2-1.4	SE180508.043 Soil 18 Jun 2018 TP18-0.0-0.2	SE180508.044 Soil 18 Jun 2018 TP18-0.3-0.5
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018 (continued)						
o,p'-DDD	mg/kg	0.1	-	-	-	<0.1
o,p'-DDT	mg/kg	0.1	-	-	-	<0.1
Beta Endosulfan	mg/kg	0.2	-	-	-	<0.2
p,p'-DDD	mg/kg	0.1	-	-	-	<0.1
p,p'-DDT	mg/kg	0.1	-	-	-	<0.1
Endosulfan sulphate	mg/kg	0.1	-	-	-	<0.1
Endrin Aldehyde	mg/kg	0.1	-	-	-	<0.1
Methoxychlor	mg/kg	0.1	-	-	-	<0.1
Endrin Ketone	mg/kg	0.1	-	-	-	<0.1
Isodrin	mg/kg	0.1	-	-	-	<0.1
Mirex	mg/kg	0.1	-	-	-	<0.1
Total CLP OC Pesticides	mg/kg	1	-	-	-	<1
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	**107**
PCBs in Soil Method: AN420 Tested: 22/6/2018						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 22/6/2018						
Arsenic, As	mg/kg	1	**40**	**1**	**7**	**3**
Cadmium, Cd	mg/kg	0.3	**1.0**	<0.3	**0.4**	<0.3
Chromium, Cr	mg/kg	0.3	**11**	**3.3**	**7.5**	**5.0**
Copper, Cu	mg/kg	0.5	**6.1**	**2.9**	**8.2**	**9.2**
Nickel, Ni	mg/kg	0.5	**1.4**	<0.5	**3.9**	**5.7**
Lead, Pb	mg/kg	1	**66**	**8**	**12**	**7**
Zinc, Zn	mg/kg	2	**36**	<2.0	**20**	**14**
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	**0.17**	<0.05	**1.2**	**0.41**

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.041 Soil 18 Jun 2018 TP17-0.7-0.9	SE180508.042 Soil 18 Jun 2018 TP17-1.2-1.4	SE180508.043 Soil 18 Jun 2018 TP18-0.0-0.2	SE180508.044 Soil 18 Jun 2018 TP18-0.3-0.5
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**13**	**14**	**13**	**4.7**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number: SE180508.045 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP19-0.0-0.2	SE180508.046 Soil 18 Jun 2018 TP19-0.3-0.5	SE180508.047 Soil 18 Jun 2018 TP19-0.6-0.8	SE180508.048 Soil 18 Jun 2018 TP20-0.0-0.2
VOC's in Soil Method: AN433 Tested: 21/6/2018						
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	-	-	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	**96**	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	**94**	-	-	-
d8-toluene (Surrogate)	%	-	**83**	-	-	-
Bromofluorobenzene (Surrogate)	%	-	**74**	-	-	-
Totals						
Total Xylenes	mg/kg	0.3	<0.3	-	-	-
Total BTEX	mg/kg	0.6	<0.6	-	-	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018						
TRH C6-C10	mg/kg	25	<25	-	-	-
TRH C6-C9	mg/kg	20	<20	-	-	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	**96**	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	**94**	-	-	-
d8-toluene (Surrogate)	%	-	**83**	-	-	-
Bromofluorobenzene (Surrogate)	%	-	**74**	-	-	-
VPH F Bands						
Benzene (F0)	mg/kg	0.1	<0.1	-	-	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.045 Soil 18 Jun 2018 TP19-0.0-0.2	SE180508.046 Soil 18 Jun 2018 TP19-0.3-0.5	SE180508.047 Soil 18 Jun 2018 TP19-0.6-0.8	SE180508.048 Soil 18 Jun 2018 TP20-0.0-0.2
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 22/6/2018						
TRH C10-C14	mg/kg	20	<20	-	-	-
TRH C15-C28	mg/kg	45	<45	-	-	-
TRH C29-C36	mg/kg	45	<45	-	-	-
TRH C37-C40	mg/kg	100	<100	-	-	-
TRH C10-C36 Total	mg/kg	110	<110	-	-	-
TRH C10-C40 Total (F bands)	mg/kg	210	<210	-	-	-
TRH F Bands						
TRH >C10-C16	mg/kg	25	<25	-	-	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	-	-	-
TRH >C16-C34 (F3)	mg/kg	90	<90	-	-	-
TRH >C34-C40 (F4)	mg/kg	120	<120	-	-	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 22/6/2018						
Naphthalene	mg/kg	0.1	-	-	<0.1	-
2-methylnaphthalene	mg/kg	0.1	-	-	<0.1	-
1-methylnaphthalene	mg/kg	0.1	-	-	<0.1	-
Acenaphthylene	mg/kg	0.1	-	-	<0.1	-
Acenaphthene	mg/kg	0.1	-	-	<0.1	-
Fluorene	mg/kg	0.1	-	-	<0.1	-
Phenanthrene	mg/kg	0.1	-	-	<0.1	-
Anthracene	mg/kg	0.1	-	-	<0.1	-
Fluoranthene	mg/kg	0.1	-	-	<0.1	-
Pyrene	mg/kg	0.1	-	-	<0.1	-
Benzo(a)anthracene	mg/kg	0.1	-	-	<0.1	-
Chrysene	mg/kg	0.1	-	-	<0.1	-
Benzo(b&j)fluoranthene	mg/kg	0.1	-	-	<0.1	-
Benzo(k)fluoranthene	mg/kg	0.1	-	-	<0.1	-
Benzo(a)pyrene	mg/kg	0.1	-	-	<0.1	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	<0.1	-
Dibenzo(ah)anthracene	mg/kg	0.1	-	-	<0.1	-
Benzo(ghi)perylene	mg/kg	0.1	-	-	<0.1	-
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	-	-	<0.2	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	-	-	<0.3	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	-	-	<0.2	-
Total PAH (18)	mg/kg	0.8	-	-	<0.8	-
Total PAH (NEPM/WHO 16)	mg/kg	0.8	-	-	<0.8	-
Surrogates						
d5-nitrobenzene (Surrogate)	%	-	-	-	**84**	-
2-fluorobiphenyl (Surrogate)	%	-	-	-	**108**	-
d14-p-terphenyl (Surrogate)	%	-	-	-	**98**	-
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018						
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	-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.045 Soil 18 Jun 2018 TP19-0.0-0.2	SE180508.046 Soil 18 Jun 2018 TP19-0.3-0.5	SE180508.047 Soil 18 Jun 2018 TP19-0.6-0.8	SE180508.048 Soil 18 Jun 2018 TP20-0.0-0.2
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018 (continued)						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
PCBs in Soil Method: AN420 Tested: 22/6/2018						
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)	%	-	-	**113**	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 22/6/2018						
Arsenic, As	mg/kg	1	**5**	-	-	**3**
Cadmium, Cd	mg/kg	0.3	**0.7**	-	-	**1.0**
Chromium, Cr	mg/kg	0.3	**4.5**	-	-	**10**
Copper, Cu	mg/kg	0.5	**6.1**	-	-	**7.1**
Nickel, Ni	mg/kg	0.5	**1.6**	-	-	**1.7**
Lead, Pb	mg/kg	1	**5**	-	-	**8**
Zinc, Zn	mg/kg	2	**7.6**	-	-	**8.5**
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	**1.5**	-	-	**2.3**

Parameter	Units	LOR	Sample Number: SE180508.045 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP19-0.0-0.2	SE180508.046 Soil 18 Jun 2018 TP19-0.3-0.5	SE180508.047 Soil 18 Jun 2018 TP19-0.6-0.8	SE180508.048 Soil 18 Jun 2018 TP20-0.0-0.2
Moisture Content Method: AN002 Tested: 21/6/2018						
% Moisture	%w/w	0.5	**11**	**9.3**	**16**	**10**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018						
FibreID						
Asbestos Detected	No unit	-	-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018						
FibreID						
Asbestos Detected	No unit	-	-	-	-	-
SemiQuant						
Estimated Fibres*	%w/w	0.01	-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018						
Sample Subcontracted*	No unit	-	-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.049 Soil 18 Jun 2018 TP20-0.4-0.6	SE180508.050 Soil 18 Jun 2018 TP20-0.6-0.8	SE180508.051 Soil 18 Jun 2018 TP21-0.0-0.2	SE180508.052 Soil 18 Jun 2018 TP21-0.4-0.6
VOC's in Soil Method: AN433 Tested: 21/6/2018						
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	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	-	-	**94**	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	**96**	-
d8-toluene (Surrogate)	%	-	-	-	**83**	-
Bromofluorobenzene (Surrogate)	%	-	-	-	**76**	-
Totals						
Total Xylenes	mg/kg	0.3	-	-	<0.3	-
Total BTEX	mg/kg	0.6	-	-	<0.6	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018						
TRH C6-C10	mg/kg	25	-	-	<25	-
TRH C6-C9	mg/kg	20	-	-	<20	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	-	-	**94**	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	**96**	-
d8-toluene (Surrogate)	%	-	-	-	**83**	-
Bromofluorobenzene (Surrogate)	%	-	-	-	**76**	-
VPH F Bands						
Benzene (F0)	mg/kg	0.1	-	-	<0.1	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25	-	-	<25	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.049 Soil 18 Jun 2018 TP20-0.4-0.6	SE180508.050 Soil 18 Jun 2018 TP20-0.6-0.8	SE180508.051 Soil 18 Jun 2018 TP21-0.0-0.2	SE180508.052 Soil 18 Jun 2018 TP21-0.4-0.6
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 22/6/2018						
TRH C10-C14	mg/kg	20	-	-	<20	-
TRH C15-C28	mg/kg	45	-	-	<45	-
TRH C29-C36	mg/kg	45	-	-	<45	-
TRH C37-C40	mg/kg	100	-	-	<100	-
TRH C10-C36 Total	mg/kg	110	-	-	<110	-
TRH C10-C40 Total (F bands)	mg/kg	210	-	-	<210	-
TRH F Bands						
TRH >C10-C16	mg/kg	25	-	-	<25	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	-	-	<25	-
TRH >C16-C34 (F3)	mg/kg	90	-	-	<90	-
TRH >C34-C40 (F4)	mg/kg	120	-	-	<120	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 22/6/2018						
Naphthalene	mg/kg	0.1	<0.1	<0.1	-	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	<0.2	-	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	<0.3	-	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	<0.2	-	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	-	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	-	<0.8
Surrogates						
d5-nitrobenzene (Surrogate)	%	-	**80**	**86**	-	**92**
2-fluorobiphenyl (Surrogate)	%	-	**104**	**100**	-	**112**
d14-p-terphenyl (Surrogate)	%	-	**98**	**98**	-	**102**
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018						
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	-
o,p'-DDE	mg/kg	0.1	-	-	<0.1	-
Alpha Endosulfan	mg/kg	0.2	-	-	<0.2	-
Gamma Chlordane	mg/kg	0.1	-	-	<0.1	-
Alpha Chlordane	mg/kg	0.1	-	-	<0.1	-
trans-Nonachlor	mg/kg	0.1	-	-	**0.1**	-
p,p'-DDE	mg/kg	0.1	-	-	<0.1	-
Dieldrin	mg/kg	0.2	-	-	<0.2	-
Endrin	mg/kg	0.2	-	-	<0.2	-

Parameter	Units	LOR	Sample Number: SE180508.049 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP20-0.4-0.6	SE180508.050 Soil 18 Jun 2018 TP20-0.6-0.8	SE180508.051 Soil 18 Jun 2018 TP21-0.0-0.2	SE180508.052 Soil 18 Jun 2018 TP21-0.4-0.6
OC Pesticides in Soil Method: AN420 Tested: 22/6/2018 (continued)						
o,p'-DDD	mg/kg	0.1	-	-	<0.1	-
o,p'-DDT	mg/kg	0.1	-	-	<0.1	-
Beta Endosulfan	mg/kg	0.2	-	-	<0.2	-
p,p'-DDD	mg/kg	0.1	-	-	<0.1	-
p,p'-DDT	mg/kg	0.1	-	-	<0.1	-
Endosulfan sulphate	mg/kg	0.1	-	-	<0.1	-
Endrin Aldehyde	mg/kg	0.1	-	-	<0.1	-
Methoxychlor	mg/kg	0.1	-	-	<0.1	-
Endrin Ketone	mg/kg	0.1	-	-	<0.1	-
Isodrin	mg/kg	0.1	-	-	<0.1	-
Mirex	mg/kg	0.1	-	-	<0.1	-
Total CLP OC Pesticides	mg/kg	1	-	-	<1	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	**95**	-
PCBs in Soil Method: AN420 Tested: 22/6/2018						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 22/6/2018						
Arsenic, As	mg/kg	1	**4**	-	**16**	-
Cadmium, Cd	mg/kg	0.3	<0.3	-	**1.2**	-
Chromium, Cr	mg/kg	0.3	**3.1**	-	**8.4**	-
Copper, Cu	mg/kg	0.5	**5.1**	-	**22**	-
Nickel, Ni	mg/kg	0.5	**2.5**	-	**3.1**	-
Lead, Pb	mg/kg	1	**4**	-	**47**	-
Zinc, Zn	mg/kg	2	**6.6**	-	**68**	-
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	**0.41**	-	**4.4**	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180508.049 Soil 18 Jun 2018 TP20-0.4-0.6	SE180508.050 Soil 18 Jun 2018 TP20-0.6-0.8	SE180508.051 Soil 18 Jun 2018 TP21-0.0-0.2	SE180508.052 Soil 18 Jun 2018 TP21-0.4-0.6
Moisture Content Method: AN002 Tested: 21/6/2018							
% Moisture	%w/w	0.5		**8.4**	**8.7**	**8.8**	**10**
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	-	-
Fibre Identification in soil Method: AN602 Tested: 25/6/2018							
FibreID							
Asbestos Detected	No unit	-		-	-	No	No
SemiQuant							
Estimated Fibres*	%w/w	0.01		-	-	<0.01	<0.01
Sample Subcontracted Method: Tested: 6/7/2018							
Sample Subcontracted*	No unit	-		-	-	Subcontracted	-

Parameter	Units	LOR	Sample Number: SE180508.053 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: DUP-01	SE180508.054 Soil 18 Jun 2018 DUP-02	SE180508.055 Soil 18 Jun 2018 DUP-03	SE180508.056 Material 18 Jun 2018 FCS-01
VOC's in Soil Method: AN433 Tested: 21/6/2018						
Monocyclic Aromatic Hydrocarbons						
Benzene	mg/kg	0.1	-	-	-	-
Toluene	mg/kg	0.1	-	-	-	-
Ethylbenzene	mg/kg	0.1	-	-	-	-
m/p-xylene	mg/kg	0.2	-	-	-	-
o-xylene	mg/kg	0.1	-	-	-	-
Polycyclic VOCs						
Naphthalene	mg/kg	0.1	-	-	-	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-
Totals						
Total Xylenes	mg/kg	0.3	-	-	-	-
Total BTEX	mg/kg	0.6	-	-	-	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018						
TRH C6-C10	mg/kg	25	-	-	-	-
TRH C6-C9	mg/kg	20	-	-	-	-
Surrogates						
Dibromofluoromethane (Surrogate)	%	-	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-	-
VPH F Bands						
Benzene (F0)	mg/kg	0.1	-	-	-	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25	-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.053 Soil 18 Jun 2018 DUP-01	SE180508.054 Soil 18 Jun 2018 DUP-02	SE180508.055 Soil 18 Jun 2018 DUP-03	SE180508.056 Material 18 Jun 2018 FCS-01
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 25/6/2018						
TRH C10-C14	mg/kg	20	-	-	-	-
TRH C15-C28	mg/kg	45	-	-	-	-
TRH C29-C36	mg/kg	45	-	-	-	-
TRH C37-C40	mg/kg	100	-	-	-	-
TRH C10-C36 Total	mg/kg	110	-	-	-	-
TRH C10-C40 Total (F bands)	mg/kg	210	-	-	-	-
TRH F Bands						
TRH >C10-C16	mg/kg	25	-	-	-	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	-	-	-	-
TRH >C16-C34 (F3)	mg/kg	90	-	-	-	-
TRH >C34-C40 (F4)	mg/kg	120	-	-	-	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 25/6/2018						
Naphthalene	mg/kg	0.1	-	-	<0.1	-
2-methylnaphthalene	mg/kg	0.1	-	-	<0.1	-
1-methylnaphthalene	mg/kg	0.1	-	-	<0.1	-
Acenaphthylene	mg/kg	0.1	-	-	<0.1	-
Acenaphthene	mg/kg	0.1	-	-	<0.1	-
Fluorene	mg/kg	0.1	-	-	<0.1	-
Phenanthrene	mg/kg	0.1	-	-	<0.1	-
Anthracene	mg/kg	0.1	-	-	<0.1	-
Fluoranthene	mg/kg	0.1	-	-	<0.1	-
Pyrene	mg/kg	0.1	-	-	<0.1	-
Benzo(a)anthracene	mg/kg	0.1	-	-	<0.1	-
Chrysene	mg/kg	0.1	-	-	<0.1	-
Benzo(b&j)fluoranthene	mg/kg	0.1	-	-	<0.1	-
Benzo(k)fluoranthene	mg/kg	0.1	-	-	<0.1	-
Benzo(a)pyrene	mg/kg	0.1	-	-	<0.1	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	<0.1	-
Dibenzo(ah)anthracene	mg/kg	0.1	-	-	<0.1	-
Benzo(ghi)perylene	mg/kg	0.1	-	-	<0.1	-
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	-	-	<0.2	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	-	-	<0.3	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	-	-	<0.2	-
Total PAH (18)	mg/kg	0.8	-	-	<0.8	-
Total PAH (NEPM/WHO 16)	mg/kg	0.8	-	-	<0.8	-
Surrogates						
d5-nitrobenzene (Surrogate)	%	-	-	-	**84**	-
2-fluorobiphenyl (Surrogate)	%	-	-	-	**112**	-
d14-p-terphenyl (Surrogate)	%	-	-	-	**102**	-
OC Pesticides in Soil Method: AN420 Tested: 26/6/2018						
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	-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.053 Soil 18 Jun 2018 DUP-01	SE180508.054 Soil 18 Jun 2018 DUP-02	SE180508.055 Soil 18 Jun 2018 DUP-03	SE180508.056 Material 18 Jun 2018 FCS-01
OC Pesticides in Soil Method: AN420 Tested: 26/6/2018 (continued)						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
PCBs in Soil Method: AN420 Tested: 26/6/2018						
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	-	-	-	-
Surrogates						
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 22/6/2018						
Arsenic, As	mg/kg	1	**11**	**11**	-	-
Cadmium, Cd	mg/kg	0.3	**0.3**	**0.3**	-	-
Chromium, Cr	mg/kg	0.3	**5.7**	**6.0**	-	-
Copper, Cu	mg/kg	0.5	**6.1**	**5.2**	-	-
Nickel, Ni	mg/kg	0.5	**3.0**	**2.9**	-	-
Lead, Pb	mg/kg	1	**17**	**10**	-	-
Zinc, Zn	mg/kg	2	**24**	**20**	-	-
Mercury in Soil Method: AN312 Tested: 25/6/2018						
Mercury	mg/kg	0.05	**0.97**	**1.6**	-	-

Parameter	Units	LOR	Sample Number: SE180508.053 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: DUP-01	SE180508.054 Soil 18 Jun 2018 DUP-02	SE180508.055 Soil 18 Jun 2018 DUP-03	SE180508.056 Material 18 Jun 2018 FCS-01
Moisture Content Method: AN002 Tested: 21/6/2018						
% Moisture	%w/w	0.5	**11**	**12**	**12**	-
Fibre ID in bulk materials Method: AN602 Tested: 26/6/2018						
FibreID						
Asbestos Detected	No unit	-	-	-	-	No
Fibre Identification in soil Method: AN602 Tested: 25/6/2018						
FibreID						
Asbestos Detected	No unit	-	-	-	-	-
SemiQuant						
Estimated Fibres*	%w/w	0.01	-	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018						
Sample Subcontracted*	No unit	-	-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.057 Material 18 Jun 2018 FCS-02	SE180508.058 Material 18 Jun 2018 FCS-03	SE180508.059 Material 18 Jun 2018 FCS-04
VOC's in Soil Method: AN433 Tested: 21/6/2018					
Monocyclic Aromatic Hydrocarbons					
Benzene	mg/kg	0.1	-	-	-
Toluene	mg/kg	0.1	-	-	-
Ethylbenzene	mg/kg	0.1	-	-	-
m/p-xylene	mg/kg	0.2	-	-	-
o-xylene	mg/kg	0.1	-	-	-
Polycyclic VOCs					
Naphthalene	mg/kg	0.1	-	-	-
Surrogates					
Dibromofluoromethane (Surrogate)	%	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-
Totals					
Total Xylenes	mg/kg	0.3	-	-	-
Total BTEX	mg/kg	0.6	-	-	-
Volatile Petroleum Hydrocarbons in Soil Method: AN433 Tested: 21/6/2018					
TRH C6-C10	mg/kg	25	-	-	-
TRH C6-C9	mg/kg	20	-	-	-
Surrogates					
Dibromofluoromethane (Surrogate)	%	-	-	-	-
d4-1,2-dichloroethane (Surrogate)	%	-	-	-	-
d8-toluene (Surrogate)	%	-	-	-	-
Bromofluorobenzene (Surrogate)	%	-	-	-	-
VPH F Bands					
Benzene (F0)	mg/kg	0.1	-	-	-
TRH C6-C10 minus BTEX (F1)	mg/kg	25	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name SE180508.057 Material 18 Jun 2018 FCS-02	SE180508.058 Material 18 Jun 2018 FCS-03	SE180508.059 Material 18 Jun 2018 FCS-04
TRH (Total Recoverable Hydrocarbons) in Soil Method: AN403 Tested: 25/6/2018					
TRH C10-C14	mg/kg	20	-	-	-
TRH C15-C28	mg/kg	45	-	-	-
TRH C29-C36	mg/kg	45	-	-	-
TRH C37-C40	mg/kg	100	-	-	-
TRH C10-C36 Total	mg/kg	110	-	-	-
TRH C10-C40 Total (F bands)	mg/kg	210	-	-	-
TRH F Bands					
TRH >C10-C16	mg/kg	25	-	-	-
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	-	-	-
TRH >C16-C34 (F3)	mg/kg	90	-	-	-
TRH >C34-C40 (F4)	mg/kg	120	-	-	-
PAH (Polynuclear Aromatic Hydrocarbons) in Soil Method: AN420 Tested: 25/6/2018					
Naphthalene	mg/kg	0.1	-	-	-
2-methylnaphthalene	mg/kg	0.1	-	-	-
1-methylnaphthalene	mg/kg	0.1	-	-	-
Acenaphthylene	mg/kg	0.1	-	-	-
Acenaphthene	mg/kg	0.1	-	-	-
Fluorene	mg/kg	0.1	-	-	-
Phenanthrene	mg/kg	0.1	-	-	-
Anthracene	mg/kg	0.1	-	-	-
Fluoranthene	mg/kg	0.1	-	-	-
Pyrene	mg/kg	0.1	-	-	-
Benzo(a)anthracene	mg/kg	0.1	-	-	-
Chrysene	mg/kg	0.1	-	-	-
Benzo(b&j)fluoranthene	mg/kg	0.1	-	-	-
Benzo(k)fluoranthene	mg/kg	0.1	-	-	-
Benzo(a)pyrene	mg/kg	0.1	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	-	-	-
Dibenzo(ah)anthracene	mg/kg	0.1	-	-	-
Benzo(ghi)perylene	mg/kg	0.1	-	-	-
Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	-	-	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	-	-	-
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	-	-	-
Total PAH (18)	mg/kg	0.8	-	-	-
Total PAH (NEPM/WHO 16)	mg/kg	0.8	-	-	-
Surrogates					
d5-nitrobenzene (Surrogate)	%	-	-	-	-
2-fluorobiphenyl (Surrogate)	%	-	-	-	-
d14-p-terphenyl (Surrogate)	%	-	-	-	-
OC Pesticides in Soil Method: AN420 Tested: 26/6/2018					
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	-	-	-

Parameter	Units	LOR	Sample Number: SE180508.057 Sample Matrix: Material Sample Date: 18 Jun 2018 Sample Name: FCS-02	SE180508.058 Material 18 Jun 2018 FCS-03	SE180508.059 Material 18 Jun 2018 FCS-04
OC Pesticides in Soil Method: AN420 Tested: 26/6/2018 (continued)					
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	-	-	-
Surrogates					
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-
PCBs in Soil Method: AN420 Tested: 26/6/2018					
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	-	-	-
Surrogates					
Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	-	-	-
Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES Method: AN040/AN320 Tested: 22/6/2018					
Arsenic, As	mg/kg	1	-	-	-
Cadmium, Cd	mg/kg	0.3	-	-	-
Chromium, Cr	mg/kg	0.3	-	-	-
Copper, Cu	mg/kg	0.5	-	-	-
Nickel, Ni	mg/kg	0.5	-	-	-
Lead, Pb	mg/kg	1	-	-	-
Zinc, Zn	mg/kg	2	-	-	-

Parameter	Units	LOR	Sample Number: SE180508.057 Sample Matrix: Material Sample Date: 18 Jun 2018 Sample Name: FCS-02	SE180508.058 Material 18 Jun 2018 FCS-03	SE180508.059 Material 18 Jun 2018 FCS-04
Mercury in Soil Method: AN312 Tested: 25/6/2018					
Mercury	mg/kg	0.05	-	-	-
Moisture Content Method: AN002 Tested: 22/6/2018					
% Moisture	%w/w	0.5	-	-	-
Fibre ID in bulk materials Method: AN602 Tested: 25/6/2018					
FibreID					
Asbestos Detected	No unit	-	No	Yes	Yes
Fibre Identification in soil Method: AN602 Tested: 25/6/2018					
FibreID					
Asbestos Detected	No unit	-	-	-	-
SemiQuant					
Estimated Fibres*	%w/w	0.01	-	-	-
Sample Subcontracted Method: Tested: 6/7/2018					
Sample Subcontracted*	No unit	-	-	-	-

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Mercury	LB150584	mg/kg	0.05	<0.05	0 - 2%	96%	91%
	LB150585	mg/kg	0.05	<0.05	4 - 5%	101%	
	LB150586	mg/kg	0.05	<0.05	11 - 35%	120%	125%

Moisture Content **Method: ME-(AU)-[ENV]AN002**

Parameter	QC Reference	Units	LOR	DUP %RPD
% Moisture	LB150438	%w/w	0.5	0 - 8%

OC Pesticides in Soil **Method: ME-(AU)-[ENV]AN420**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Hexachlorobenzene (HCB)	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Alpha BHC	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Lindane	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Heptachlor	LB150395	mg/kg	0.1	<0.1	0%	88%
	LB150486	mg/kg	0.1	<0.1	0%	88%
	LB150488	mg/kg	0.1	<0.1	0%	88%
Aldrin	LB150395	mg/kg	0.1	<0.1	0%	85%
	LB150486	mg/kg	0.1	<0.1	0%	85%
	LB150488	mg/kg	0.1	<0.1	0%	85%
Beta BHC	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Delta BHC	LB150395	mg/kg	0.1	<0.1	0%	87%
	LB150486	mg/kg	0.1	<0.1	0%	87%
	LB150488	mg/kg	0.1	<0.1	0%	87%
Heptachlor epoxide	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
o,p'-DDE	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Alpha Endosulfan	LB150395	mg/kg	0.2	<0.2	0%	NA
	LB150486	mg/kg	0.2	<0.2	0%	NA
	LB150488	mg/kg	0.2	<0.2	0%	NA
Gamma Chlordane	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Alpha Chlordane	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	10%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
trans-Nonachlor	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	10%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
p,p'-DDE	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Dieldrin	LB150395	mg/kg	0.2	<0.2	0%	82%
	LB150486	mg/kg	0.2	<0.2	0%	82%
	LB150488	mg/kg	0.2	<0.2	0%	82%

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

OC Pesticides in Soil Method: ME-(AU)-[ENV]AN420 (continued)

				MB	DUP %RPD	LCS %Recovery
Endrin	LB150395	mg/kg	0.2	<0.2	0%	87%
	LB150486	mg/kg	0.2	<0.2	0%	87%
	LB150488	mg/kg	0.2	<0.2	0%	87%
o,p'-DDD	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
o,p'-DDT	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Beta Endosulfan	LB150395	mg/kg	0.2	<0.2	0%	NA
	LB150486	mg/kg	0.2	<0.2	0%	NA
	LB150488	mg/kg	0.2	<0.2	0%	NA
p,p'-DDD	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
p,p'-DDT	LB150395	mg/kg	0.1	<0.1	0%	78%
	LB150486	mg/kg	0.1	<0.1	0%	78%
	LB150488	mg/kg	0.1	<0.1	0%	78%
Endosulfan sulphate	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Endrin Aldehyde	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Methoxychlor	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Endrin Ketone	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Isodrin	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Mirex	LB150395	mg/kg	0.1	<0.1	0%	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA
Total CLP OC Pesticides	LB150395	mg/kg	1	<1	0%	NA
	LB150486	mg/kg	1	<1	0%	NA
	LB150488	mg/kg	1	<1	0%	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB150395	%	-	89%	16%	80%
	LB150486	%	-	89%	0%	80%
	LB150488	%	-	89%	15%	80%

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Naphthalene	LB150395	mg/kg	0.1	<0.1	0%	100%	97%
	LB150486	mg/kg	0.1	<0.1	0%	93%	100%
	LB150488	mg/kg	0.1	<0.1	0%	107%	101%
2-methylnaphthalene	LB150395	mg/kg	0.1	<0.1	0%	NA	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA	NA
1-methylnaphthalene	LB150395	mg/kg	0.1	<0.1	0%	NA	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA	NA
Acenaphthylene	LB150395	mg/kg	0.1	<0.1	0%	106%	103%
	LB150486	mg/kg	0.1	<0.1	0%	92%	98%
	LB150488	mg/kg	0.1	<0.1	0%	117%	112%
Acenaphthene	LB150395	mg/kg	0.1	<0.1	0%	103%	96%
	LB150486	mg/kg	0.1	<0.1	0%	87%	97%
	LB150488	mg/kg	0.1	<0.1	0%	103%	97%
Fluorene	LB150395	mg/kg	0.1	<0.1	0%	NA	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA	NA
Phenanthrene	LB150395	mg/kg	0.1	<0.1	0%	100%	97%
	LB150486	mg/kg	0.1	<0.1	0%	88%	99%
	LB150488	mg/kg	0.1	<0.1	67%	101%	97%
Anthracene	LB150395	mg/kg	0.1	<0.1	0%	106%	105%
	LB150486	mg/kg	0.1	<0.1	0%	92%	100%
	LB150488	mg/kg	0.1	<0.1	0%	106%	101%
Fluoranthene	LB150395	mg/kg	0.1	<0.1	0%	100%	98%
	LB150486	mg/kg	0.1	<0.1	0%	87%	96%
	LB150488	mg/kg	0.1	<0.1	76%	99%	97%
Pyrene	LB150395	mg/kg	0.1	<0.1	0%	95%	98%
	LB150486	mg/kg	0.1	<0.1	0%	86%	94%
	LB150488	mg/kg	0.1	<0.1	74%	97%	99%
Benzo(a)anthracene	LB150395	mg/kg	0.1	<0.1	0%	NA	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA	NA
	LB150488	mg/kg	0.1	<0.1	59%	NA	NA
Chrysene	LB150395	mg/kg	0.1	<0.1	0%	NA	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA	NA
	LB150488	mg/kg	0.1	<0.1	59%	NA	NA
Benzo(b&j)fluoranthene	LB150395	mg/kg	0.1	<0.1	0%	NA	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA	NA
	LB150488	mg/kg	0.1	<0.1	43%	NA	NA
Benzo(k)fluoranthene	LB150395	mg/kg	0.1	<0.1	0%	NA	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA	NA
	LB150488	mg/kg	0.1	<0.1	18%	NA	NA
Benzo(a)pyrene	LB150395	mg/kg	0.1	<0.1	0%	111%	115%
	LB150486	mg/kg	0.1	<0.1	0%	109%	122%
	LB150488	mg/kg	0.1	<0.1	48%	118%	109%
Indeno(1,2,3-cd)pyrene	LB150395	mg/kg	0.1	<0.1	0%	NA	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA	NA
	LB150488	mg/kg	0.1	<0.1	32%	NA	NA
Dibenzo(ah)anthracene	LB150395	mg/kg	0.1	<0.1	0%	NA	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA	NA
	LB150488	mg/kg	0.1	<0.1	0%	NA	NA
Benzo(ghi)perylene	LB150395	mg/kg	0.1	<0.1	0%	NA	NA
	LB150486	mg/kg	0.1	<0.1	0%	NA	NA
	LB150488	mg/kg	0.1	<0.1	37%	NA	NA
Carcinogenic PAHs, BaP TEQ <LOR=0	LB150395	TEQ (mg/kg)	0.2	<0.2	0%	NA	NA
	LB150486	TEQ (mg/kg)	0.2	<0.2	0%	NA	NA

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

				MB	DUP %RPD	LCS %Recovery	MS %Recovery
Carcinogenic PAHs, BaP TEQ <LOR=0	LB150488	TEQ (mg/kg)	0.2	<0.2	47%	NA	NA
Carcinogenic PAHs, BaP TEQ <LOR=LOR	LB150395	TEQ (mg/kg)	0.3	<0.3	0%	NA	NA
	LB150486	TEQ (mg/kg)	0.3	<0.3	0%	NA	NA
	LB150488	TEQ (mg/kg)	0.3	<0.3	35%	NA	NA
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	LB150395	TEQ (mg/kg)	0.2	<0.2	0%	NA	NA
	LB150486	TEQ (mg/kg)	0.2	<0.2	0%	NA	NA
	LB150488	TEQ (mg/kg)	0.2	<0.2	40%	NA	NA
Total PAH (18)	LB150395	mg/kg	0.8	<0.8	0%	NA	NA
	LB150486	mg/kg	0.8	<0.8	0%	NA	NA
	LB150488	mg/kg	0.8	<0.8	65%	NA	NA
Total PAH (NEPM/WHO 16)	LB150395	mg/kg	0.8	<0.8			
	LB150486	mg/kg	0.8	<0.8			
	LB150488	mg/kg	0.8	<0.8			

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
d5-nitrobenzene (Surrogate)	LB150395	%	-	102%	0 - 7%	98%	116%
	LB150486	%	-	88%	0 - 2%	100%	78%
	LB150488	%	-	82%	16%	84%	88%
2-fluorobiphenyl (Surrogate)	LB150395	%	-	102%	8 - 13%	96%	96%
	LB150486	%	-	94%	0%	96%	86%
	LB150488	%	-	108%	12%	106%	108%
d14-p-terphenyl (Surrogate)	LB150395	%	-	118%	4 - 11%	106%	112%
	LB150486	%	-	98%	2 - 4%	98%	96%
	LB150488	%	-	104%	11%	94%	98%

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

PCBs in Soil **Method: ME-(AU)-[ENV]AN420**

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Arochlor 1016	LB150395	mg/kg	0.2	<0.2	0%	NA
	LB150486	mg/kg	0.2	<0.2	0%	NA
	LB150488	mg/kg	0.2	<0.2	0%	NA
Arochlor 1221	LB150395	mg/kg	0.2	<0.2	0%	NA
	LB150486	mg/kg	0.2	<0.2	0%	NA
	LB150488	mg/kg	0.2	<0.2	0%	NA
Arochlor 1232	LB150395	mg/kg	0.2	<0.2	0%	NA
	LB150486	mg/kg	0.2	<0.2	0%	NA
	LB150488	mg/kg	0.2	<0.2	0%	NA
Arochlor 1242	LB150395	mg/kg	0.2	<0.2	0%	NA
	LB150486	mg/kg	0.2	<0.2	0%	NA
	LB150488	mg/kg	0.2	<0.2	0%	NA
Arochlor 1248	LB150395	mg/kg	0.2	<0.2	0%	NA
	LB150486	mg/kg	0.2	<0.2	0%	NA
	LB150488	mg/kg	0.2	<0.2	0%	NA
Arochlor 1254	LB150395	mg/kg	0.2	<0.2	0%	NA
	LB150486	mg/kg	0.2	<0.2	0%	NA
	LB150488	mg/kg	0.2	<0.2	0%	NA
Arochlor 1260	LB150395	mg/kg	0.2	<0.2	0%	104%
	LB150486	mg/kg	0.2	<0.2	0%	104%
	LB150488	mg/kg	0.2	<0.2	0%	104%
Arochlor 1262	LB150395	mg/kg	0.2	<0.2	0%	NA
	LB150486	mg/kg	0.2	<0.2	0%	NA
	LB150488	mg/kg	0.2	<0.2	0%	NA
Arochlor 1268	LB150395	mg/kg	0.2	<0.2	0%	NA
	LB150486	mg/kg	0.2	<0.2	0%	NA
	LB150488	mg/kg	0.2	<0.2	0%	NA
Total PCBs (Arochlors)	LB150395	mg/kg	1	<1	0%	NA
	LB150486	mg/kg	1	<1	0%	NA
	LB150488	mg/kg	1	<1	0%	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Tetrachloro-m-xylene (TCMX) (Surrogate)	LB150395	%	-	89%	14%	83%
	LB150486	%	-	89%	9%	83%
	LB150488	%	-	89%	15%	83%

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Arsenic, As	LB150473	mg/kg	1	<1	1 - 40%	104%	63%
	LB150582	mg/kg	1	<1	0%	102%	93%
	LB150615	mg/kg	1	<1	11 - 28%	96%	90%
Cadmium, Cd	LB150473	mg/kg	0.3	<0.3	0 - 22%	105%	94%
	LB150582	mg/kg	0.3	<0.3	0 - 9%	105%	98%
	LB150615	mg/kg	0.3	<0.3	0%	103%	92%
Chromium, Cr	LB150473	mg/kg	0.3	<0.3	12 - 18%	103%	89%
	LB150582	mg/kg	0.3	<0.3	13 - 16%	112%	93%
	LB150615	mg/kg	0.3	<0.3	0 - 73%	92%	91%
Copper, Cu	LB150473	mg/kg	0.5	<0.5	2 - 5%	87%	96%
	LB150582	mg/kg	0.5	<0.5	5 - 7%	92%	101%
	LB150615	mg/kg	0.5	<0.5	35 - 58%	86%	95%
Nickel, Ni	LB150473	mg/kg	0.5	<0.5	0 - 31%	89%	96%
	LB150582	mg/kg	0.5	<0.5	0 - 8%	91%	98%
	LB150615	mg/kg	0.5	<0.5	40 - 77%	86%	87%
Lead, Pb	LB150473	mg/kg	1	<1	2 - 10%	87%	25%
	LB150582	mg/kg	1	<1	26 - 45%	85%	91%
	LB150615	mg/kg	1	<1	6 - 50%	83%	64%
Zinc, Zn	LB150473	mg/kg	2	<2.0	0 - 34%	97%	89%
	LB150582	mg/kg	2	<2.0	4%	97%	98%
	LB150615	mg/kg	2	<2.0	4 - 43%	92%	92%

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
TRH C10-C14	LB150395	mg/kg	20	<20	0%	90%	
	LB150486	mg/kg	20	<20	0%	90%	
	LB150488	mg/kg	20	<20	0%	108%	88%
TRH C15-C28	LB150395	mg/kg	45	<45	0%	85%	
	LB150486	mg/kg	45	<45	0%	85%	
	LB150488	mg/kg	45	<45	0%	95%	98%
TRH C29-C36	LB150395	mg/kg	45	<45	0%	90%	
	LB150486	mg/kg	45	<45	0%	90%	
	LB150488	mg/kg	45	<45	0%	90%	90%
TRH C37-C40	LB150395	mg/kg	100	<100	0%	NA	
	LB150486	mg/kg	100	<100	0%	NA	
	LB150488	mg/kg	100	<100	0%	NA	NA
TRH C10-C36 Total	LB150395	mg/kg	110	<110	0%	NA	
	LB150486	mg/kg	110	<110	0%	NA	
	LB150488	mg/kg	110	<110	0%	NA	NA
TRH C10-C40 Total (F bands)	LB150395	mg/kg	210	<210	0%	NA	
	LB150486	mg/kg	210	<210	0%	NA	
	LB150488	mg/kg	210	<210	0%	NA	NA

TRH F Bands

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
TRH >C10-C16	LB150395	mg/kg	25	<25	0%	88%	
	LB150486	mg/kg	25	<25	0%	88%	
	LB150488	mg/kg	25	<25	0%	103%	85%
TRH >C10-C16 - Naphthalene (F2)	LB150395	mg/kg	25	<25	0%	NA	
	LB150486	mg/kg	25	<25	0%	NA	
	LB150488	mg/kg	25	<25	0%	NA	NA
TRH >C16-C34 (F3)	LB150395	mg/kg	90	<90	0%	90%	
	LB150486	mg/kg	90	<90	0%	90%	
	LB150488	mg/kg	90	<90	0%	95%	113%
TRH >C34-C40 (F4)	LB150395	mg/kg	120	<120	0%	90%	

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

				MB	DUP %RPD	LCS %Recovery	MS %Recovery
TRH >C34-C40 (F4)	LB150486	mg/kg	120	<120	0%	90%	
	LB150488	mg/kg	120	<120	0%	115%	NA

VOC's in Soil Method: ME-(AU)-[ENV]AN433

Monocyclic Aromatic Hydrocarbons

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Benzene	LB150411	mg/kg	0.1	<0.1	0%	77%	78%
Toluene	LB150411	mg/kg	0.1	<0.1	0%	71%	73%
Ethylbenzene	LB150411	mg/kg	0.1	<0.1	0%	72%	73%
m/p-xylene	LB150411	mg/kg	0.2	<0.2	0%	86%	87%
o-xylene	LB150411	mg/kg	0.1	<0.1	0%	79%	79%

Polycyclic VOCs

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Naphthalene	LB150411	mg/kg	0.1	<0.1	0%	NA	NA

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dibromofluoromethane (Surrogate)	LB150411	%	-	95%	8 - 19%	79%	80%
d4-1,2-dichloroethane (Surrogate)	LB150411	%	-	86%	5 - 10%	87%	85%
d8-toluene (Surrogate)	LB150411	%	-	77%	1 - 12%	83%	81%
Bromofluorobenzene (Surrogate)	LB150411	%	-	71%	0 - 12%	99%	96%

Totals

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Total Xylenes	LB150411	mg/kg	0.3	<0.3	0%	NA	NA
Total BTEX	LB150411	mg/kg	0.6	<0.6	0%	NA	NA

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
TRH C6-C10	LB150411	mg/kg	25	<25	0%	85%	87%
TRH C6-C9	LB150411	mg/kg	20	<20	0%	78%	79%

Surrogates

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Dibromofluoromethane (Surrogate)	LB150411	%	-	95%	8 - 19%	79%	80%
d4-1,2-dichloroethane (Surrogate)	LB150411	%	-	86%	5 - 10%	87%	85%
d8-toluene (Surrogate)	LB150411	%	-	77%	1 - 12%	83%	81%
Bromofluorobenzene (Surrogate)	LB150411	%	-	71%	0 - 12%	99%	96%

VPH F Bands

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery
Benzene (F0)	LB150411	mg/kg	0.1	<0.1	0%	NA	NA
TRH C6-C10 minus BTEX (F1)	LB150411	mg/kg	25	<25	0%	102%	106%

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040	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.
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.
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 Petroleum Hydrocarbons (TPH) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be 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.

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
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

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
		NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calcuated 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 criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : http://www.sgs.com.au/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Sam Scully
Client	ALLIANCE GEOTECHNICAL PTY LTD
Address	10 Welder Road Seven Hills NSW 2147
Telephone	02 9675 1777 / 0400 545 805
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Email	sam@allgeo.com.au
Project	**6838 - Roseville**
Order Number	**P1392**
Samples	6

LABORATORY DETAILS

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Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE180508 R0**
Date Received	19 Jun 2018
Date Reported	06 Jul 2018

COMMENTS

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

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

Sample # 56-57: No trace asbestos fibres detected using trace analysis technique.

Asbestos analysed by approved identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin .
Phenoxy Acid Herbicides subcontracted to SGS Melbourne , 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420

SIGNATORIES

Bennet Lo
Senior Organic Chemist/Metals Chemis

Dong Liang
Metals/Inorganics Team Leader

Ly Kim Ha
Organic Section Head

Ravee Sivasubramaniam
Hygiene Team Leader

Teresa Nguyen
Organic Chemist

RESULTS

Fibre ID in bulk materials — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE180508.056	FCS-01	Other	200x200x10mm Cement Sheet Fragment	18 Jun 2018	No Asbestos Detected Organic Fibres Detected	
SE180508.057	FCS-02	Other	120x110x12mm Cement Sheet Fragment	18 Jun 2018	No Asbestos Detected Organic Fibres Detected	
SE180508.058	FCS-03	Other	100x50x4mm Cement Sheet Fragment	18 Jun 2018	Chrysotile Asbestos Detected	
SE180508.059	FCS-04	Other	150x150x5mm Cement Sheet Fragment	18 Jun 2018	Chrysotile Asbestos Detected	

ANALYTICAL REPORT

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE180508.051	TP21-0.0-0.2	Soil	132g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found Organic Fibres Detected	<0.01
SE180508.052	TP21-0.4-0.6	Soil	108g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection 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.

Sampled by the client.

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

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

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : http://www.sgs.com.au/~/media/Local/Australia/Documents/ Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

STATEMENT OF QA/QC PERFORMANCE

SE180508 R0

CLIENT DETAILS

Contact	Sam Scully
Client	ALLIANCE GEOTECHNICAL PTY LTD
Address	10 Welder Road Seven Hills NSW 2147
Telephone	02 9675 1777 / 0400 545 805
Facsimile	02 9675 1888
Email	sam@allgeo.com.au
Project	**6838 - Roseville**
Order Number	**P1392**
Samples	59

LABORATORY DETAILS

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Email	au.environmental.sydney@sgs.com
SGS Reference	**SE180508 R0**
Date Received	19 Jun 2018
Date Reported	06 Jul 2018

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document and was supplied by the Client.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Duplicate	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	2 items
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	5 items
Matrix Spike	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	2 items
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	55 Soils, 4 Materials
Date documentation received	19/6/2018	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	6.1°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

HOLDING TIME SUMMARY

SE180508 R0

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

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

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

Fibre ID in bulk materials

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
FCS-01	SE180508.056	LB150609	18 Jun 2018	19 Jun 2018	18 Jun 2019	25 Jun 2018	18 Jun 2019	26 Jun 2018
FCS-02	SE180508.057	LB150609	18 Jun 2018	19 Jun 2018	18 Jun 2019	25 Jun 2018	18 Jun 2019	26 Jun 2018
FCS-03	SE180508.058	LB150609	18 Jun 2018	19 Jun 2018	18 Jun 2019	25 Jun 2018	18 Jun 2019	26 Jun 2018
FCS-04	SE180508.059	LB150609	18 Jun 2018	19 Jun 2018	18 Jun 2019	25 Jun 2018	18 Jun 2019	26 Jun 2018

Fibre Identification in soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP21-0.0-0.2	SE180508.051	LB150595	18 Jun 2018	19 Jun 2018	18 Jun 2019	25 Jun 2018	18 Jun 2019	25 Jun 2018
TP21-0.4-0.6	SE180508.052	LB150595	18 Jun 2018	19 Jun 2018	18 Jun 2019	25 Jun 2018	18 Jun 2019	25 Jun 2018

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01-0.0-0.2	SE180508.001	LB150584	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP01-0.4-0.6	SE180508.002	LB150584	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP02-0.0-0.2	SE180508.003	LB150584	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP02-0.45-0.6	SE180508.004	LB150584	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP02-0.6-0.8	SE180508.005	LB150584	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP03-0.45-0.6	SE180508.007	LB150584	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP03-0.7-0.8	SE180508.008	LB150584	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP04-0.0-0.2	SE180508.009	LB150584	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP04-0.5-0.7	SE180508.010	LB150584	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP04-0.7-0.9	SE180508.011	LB150584	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP05-0.0-0.2	SE180508.012	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP06-0.4-0.5	SE180508.014	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP06-0.5-0.7	SE180508.015	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP07-0.7-0.9	SE180508.016	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP07-1.3-1.5	SE180508.017	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP07-2.1-2.3	SE180508.019	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP08-0.0-0.2	SE180508.020	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP08-1.2-1.4	SE180508.021	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP09-0.0-0.2	SE180508.022	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP10-0.0-0.2	SE180508.023	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP10-0.6-0.8	SE180508.024	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP11-0.0-0.2	SE180508.025	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP12-0.0-0.2	SE180508.027	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP12-0.6-0.8	SE180508.028	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP13-0.0-0.2	SE180508.029	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP13-0.6-0.8	SE180508.030	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP14-0.0-0.2	SE180508.031	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP15-0.0-0.2	SE180508.033	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP15-0.6-0.8	SE180508.034	LB150585	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP15-1.3-1.5	SE180508.035	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP15-1.7-1.9	SE180508.036	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP16-0.0-0.2	SE180508.037	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP16-0.7-0.9	SE180508.038	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP16-1.4-1.6	SE180508.039	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP17-0.0-0.2	SE180508.040	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP17-0.7-0.9	SE180508.041	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP17-1.2-1.4	SE180508.042	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP18-0.0-0.2	SE180508.043	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP18-0.3-0.5	SE180508.044	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP19-0.0-0.2	SE180508.045	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP20-0.0-0.2	SE180508.048	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP20-0.4-0.6	SE180508.049	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
TP21-0.0-0.2	SE180508.051	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
DUP-01	SE180508.053	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018
DUP-02	SE180508.054	LB150586	18 Jun 2018	19 Jun 2018	16 Jul 2018	25 Jun 2018	16 Jul 2018	26 Jun 2018

Moisture Content

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

Sample Name	Sample No.	QC Ref

HOLDING TIME SUMMARY

SE180508 R0

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

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

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

Moisture Content (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01-0.0-0.2	SE180508.001	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP01-0.4-0.6	SE180508.002	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP02-0.0-0.2	SE180508.003	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP02-0.45-0.6	SE180508.004	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP02-0.6-0.8	SE180508.005	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP03-0.0-0.2	SE180508.006	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP03-0.45-0.6	SE180508.007	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP03-0.7-0.8	SE180508.008	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP04-0.0-0.2	SE180508.009	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP04-0.5-0.7	SE180508.010	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP04-0.7-0.9	SE180508.011	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP05-0.0-0.2	SE180508.012	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP05-0.5-0.7	SE180508.013	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP06-0.4-0.5	SE180508.014	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP06-0.5-0.7	SE180508.015	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP07-0.7-0.9	SE180508.016	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP07-1.3-1.5	SE180508.017	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP07-1.8-2.0	SE180508.018	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP07-2.1-2.3	SE180508.019	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP08-0.0-0.2	SE180508.020	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP08-1.2-1.4	SE180508.021	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP09-0.0-0.2	SE180508.022	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP10-0.0-0.2	SE180508.023	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP10-0.6-0.8	SE180508.024	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP11-0.0-0.2	SE180508.025	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP11-0.5-0.6	SE180508.026	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP12-0.0-0.2	SE180508.027	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP12-0.6-0.8	SE180508.028	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP13-0.0-0.2	SE180508.029	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP13-0.6-0.8	SE180508.030	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP14-0.0-0.2	SE180508.031	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP14-0.3-0.4	SE180508.032	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP15-0.0-0.2	SE180508.033	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP15-0.6-0.8	SE180508.034	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP15-1.3-1.5	SE180508.035	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP15-1.7-1.9	SE180508.036	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP16-0.0-0.2	SE180508.037	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP16-0.7-0.9	SE180508.038	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP16-1.4-1.6	SE180508.039	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP17-0.0-0.2	SE180508.040	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP17-0.7-0.9	SE180508.041	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP17-1.2-1.4	SE180508.042	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP18-0.0-0.2	SE180508.043	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP18-0.3-0.5	SE180508.044	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP19-0.0-0.2	SE180508.045	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP19-0.3-0.5	SE180508.046	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP19-0.6-0.8	SE180508.047	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP20-0.0-0.2	SE180508.048	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP20-0.4-0.6	SE180508.049	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP20-0.6-0.8	SE180508.050	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP21-0.0-0.2	SE180508.051	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
TP21-0.4-0.6	SE180508.052	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
DUP-01	SE180508.053	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
DUP-02	SE180508.054	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018
DUP-03	SE180508.055	LB150438	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	26 Jun 2018	25 Jun 2018

OC Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01-0.0-0.2	SE180508.001	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP01-0.4-0.6	SE180508.002	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018

HOLDING TIME SUMMARY

SE180508 R0

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

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

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

OC Pesticides in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP02-0.0-0.2	SE180508.003	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP02-0.45-0.6	SE180508.004	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP02-0.6-0.8	SE180508.005	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.0-0.2	SE180508.006	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.45-0.6	SE180508.007	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.7-0.8	SE180508.008	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP04-0.0-0.2	SE180508.009	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP04-0.5-0.7	SE180508.010	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP04-0.7-0.9	SE180508.011	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP05-0.0-0.2	SE180508.012	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP05-0.5-0.7	SE180508.013	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP06-0.4-0.5	SE180508.014	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-0.7-0.9	SE180508.016	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-1.3-1.5	SE180508.017	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-1.8-2.0	SE180508.018	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-2.1-2.3	SE180508.019	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP08-0.0-0.2	SE180508.020	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP08-1.2-1.4	SE180508.021	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP09-0.0-0.2	SE180508.022	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP10-0.0-0.2	SE180508.023	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP10-0.6-0.8	SE180508.024	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP11-0.0-0.2	SE180508.025	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP11-0.5-0.6	SE180508.026	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP12-0.0-0.2	SE180508.027	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP13-0.0-0.2	SE180508.029	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP14-0.0-0.2	SE180508.031	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP14-0.3-0.4	SE180508.032	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP15-0.0-0.2	SE180508.033	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP15-0.6-0.8	SE180508.034	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP15-1.3-1.5	SE180508.035	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP16-0.0-0.2	SE180508.037	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP16-0.7-0.9	SE180508.038	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP16-1.4-1.6	SE180508.039	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP17-0.0-0.2	SE180508.040	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP17-0.7-0.9	SE180508.041	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP17-1.2-1.4	SE180508.042	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP18-0.0-0.2	SE180508.043	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP18-0.3-0.5	SE180508.044	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP19-0.0-0.2	SE180508.045	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP19-0.3-0.5	SE180508.046	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP19-0.6-0.8	SE180508.047	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP20-0.0-0.2	SE180508.048	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP20-0.4-0.6	SE180508.049	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP20-0.6-0.8	SE180508.050	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP21-0.0-0.2	SE180508.051	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP21-0.4-0.6	SE180508.052	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
DUP-03	SE180508.055	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018

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
TP01-0.0-0.2	SE180508.001	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP01-0.4-0.6	SE180508.002	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP02-0.0-0.2	SE180508.003	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP02-0.45-0.6	SE180508.004	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP02-0.6-0.8	SE180508.005	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.0-0.2	SE180508.006	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.45-0.6	SE180508.007	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.7-0.8	SE180508.008	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP04-0.0-0.2	SE180508.009	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP04-0.5-0.7	SE180508.010	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018

HOLDING TIME SUMMARY

SE180508 R0

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

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

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

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
TP04-0.7-0.9	SE180508.011	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP05-0.0-0.2	SE180508.012	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP05-0.5-0.7	SE180508.013	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP06-0.4-0.5	SE180508.014	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-0.7-0.9	SE180508.016	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-1.3-1.5	SE180508.017	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-1.8-2.0	SE180508.018	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-2.1-2.3	SE180508.019	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP08-0.0-0.2	SE180508.020	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP08-1.2-1.4	SE180508.021	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP09-0.0-0.2	SE180508.022	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP10-0.0-0.2	SE180508.023	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP10-0.6-0.8	SE180508.024	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP11-0.0-0.2	SE180508.025	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP11-0.5-0.6	SE180508.026	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP12-0.0-0.2	SE180508.027	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP13-0.0-0.2	SE180508.029	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP14-0.0-0.2	SE180508.031	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP14-0.3-0.4	SE180508.032	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP15-0.0-0.2	SE180508.033	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP15-0.6-0.8	SE180508.034	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP15-1.3-1.5	SE180508.035	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP16-0.0-0.2	SE180508.037	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP16-0.7-0.9	SE180508.038	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP16-1.4-1.6	SE180508.039	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP17-0.0-0.2	SE180508.040	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP17-0.7-0.9	SE180508.041	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP17-1.2-1.4	SE180508.042	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP18-0.0-0.2	SE180508.043	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP18-0.3-0.5	SE180508.044	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP19-0.0-0.2	SE180508.045	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP19-0.3-0.5	SE180508.046	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP19-0.6-0.8	SE180508.047	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP20-0.0-0.2	SE180508.048	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP20-0.4-0.6	SE180508.049	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP20-0.6-0.8	SE180508.050	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP21-0.0-0.2	SE180508.051	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP21-0.4-0.6	SE180508.052	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
DUP-03	SE180508.055	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018

PCBs in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01-0.0-0.2	SE180508.001	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP01-0.4-0.6	SE180508.002	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP02-0.0-0.2	SE180508.003	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP02-0.45-0.6	SE180508.004	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP02-0.6-0.8	SE180508.005	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.0-0.2	SE180508.006	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.45-0.6	SE180508.007	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.7-0.8	SE180508.008	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP04-0.0-0.2	SE180508.009	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP04-0.5-0.7	SE180508.010	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP04-0.7-0.9	SE180508.011	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP05-0.0-0.2	SE180508.012	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP05-0.5-0.7	SE180508.013	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP06-0.4-0.5	SE180508.014	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-0.7-0.9	SE180508.016	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-1.3-1.5	SE180508.017	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-1.8-2.0	SE180508.018	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-2.1-2.3	SE180508.019	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018

HOLDING TIME SUMMARY

SE180508 R0

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

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

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

PCBs in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP08-0.0-0.2	SE180508.020	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP08-1.2-1.4	SE180508.021	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP09-0.0-0.2	SE180508.022	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP10-0.0-0.2	SE180508.023	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP10-0.6-0.8	SE180508.024	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP11-0.0-0.2	SE180508.025	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP11-0.5-0.6	SE180508.026	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP12-0.0-0.2	SE180508.027	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP13-0.0-0.2	SE180508.029	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP14-0.0-0.2	SE180508.031	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP14-0.3-0.4	SE180508.032	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP15-0.0-0.2	SE180508.033	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP15-0.6-0.8	SE180508.034	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP15-1.3-1.5	SE180508.035	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP16-0.0-0.2	SE180508.037	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP16-0.7-0.9	SE180508.038	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP16-1.4-1.6	SE180508.039	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP17-0.0-0.2	SE180508.040	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP17-0.7-0.9	SE180508.041	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP17-1.2-1.4	SE180508.042	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP18-0.0-0.2	SE180508.043	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP18-0.3-0.5	SE180508.044	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP19-0.0-0.2	SE180508.045	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP19-0.3-0.5	SE180508.046	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP19-0.6-0.8	SE180508.047	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP20-0.0-0.2	SE180508.048	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP20-0.4-0.6	SE180508.049	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP20-0.6-0.8	SE180508.050	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP21-0.0-0.2	SE180508.051	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP21-0.4-0.6	SE180508.052	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
DUP-03	SE180508.055	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP01-0.0-0.2	SE180508.001	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP01-0.4-0.6	SE180508.002	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP02-0.0-0.2	SE180508.003	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP02-0.45-0.6	SE180508.004	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP02-0.6-0.8	SE180508.005	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP03-0.45-0.6	SE180508.007	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP03-0.7-0.8	SE180508.008	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP04-0.0-0.2	SE180508.009	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP04-0.5-0.7	SE180508.010	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP04-0.7-0.9	SE180508.011	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP05-0.0-0.2	SE180508.012	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP06-0.4-0.5	SE180508.014	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP06-0.5-0.7	SE180508.015	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP07-0.7-0.9	SE180508.016	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP07-1.3-1.5	SE180508.017	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP07-2.1-2.3	SE180508.019	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP08-0.0-0.2	SE180508.020	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP08-1.2-1.4	SE180508.021	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP09-0.0-0.2	SE180508.022	LB150582	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP10-0.0-0.2	SE180508.023	LB150615	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP10-0.6-0.8	SE180508.024	LB150615	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP11-0.0-0.2	SE180508.025	LB150615	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP12-0.0-0.2	SE180508.027	LB150615	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP12-0.6-0.8	SE180508.028	LB150615	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP13-0.0-0.2	SE180508.029	LB150615	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP13-0.6-0.8	SE180508.030	LB150615	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018

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
TP14-0.0-0.2	SE180508.031	LB150615	18 Jun 2018	19 Jun 2018	15 Dec 2018	25 Jun 2018	15 Dec 2018	26 Jun 2018
TP15-0.0-0.2	SE180508.033	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP15-0.6-0.8	SE180508.034	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP15-1.3-1.5	SE180508.035	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP15-1.7-1.9	SE180508.036	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP16-0.0-0.2	SE180508.037	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP16-0.7-0.9	SE180508.038	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP16-1.4-1.6	SE180508.039	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP17-0.0-0.2	SE180508.040	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP17-0.7-0.9	SE180508.041	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP17-1.2-1.4	SE180508.042	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP18-0.0-0.2	SE180508.043	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP18-0.3-0.5	SE180508.044	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP19-0.0-0.2	SE180508.045	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP20-0.0-0.2	SE180508.048	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP20-0.4-0.6	SE180508.049	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
TP21-0.0-0.2	SE180508.051	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
DUP-01	SE180508.053	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018
DUP-02	SE180508.054	LB150473	18 Jun 2018	19 Jun 2018	15 Dec 2018	22 Jun 2018	15 Dec 2018	26 Jun 2018

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
TP01-0.0-0.2	SE180508.001	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP01-0.4-0.6	SE180508.002	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP02-0.0-0.2	SE180508.003	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP02-0.45-0.6	SE180508.004	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	25 Jun 2018
TP02-0.6-0.8	SE180508.005	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.0-0.2	SE180508.006	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	25 Jun 2018
TP03-0.45-0.6	SE180508.007	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP03-0.7-0.8	SE180508.008	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP04-0.0-0.2	SE180508.009	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	25 Jun 2018
TP04-0.5-0.7	SE180508.010	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP04-0.7-0.9	SE180508.011	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP05-0.0-0.2	SE180508.012	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP05-0.5-0.7	SE180508.013	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	25 Jun 2018
TP06-0.4-0.5	SE180508.014	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-0.7-0.9	SE180508.016	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-1.3-1.5	SE180508.017	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP07-1.8-2.0	SE180508.018	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	25 Jun 2018
TP07-2.1-2.3	SE180508.019	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP08-0.0-0.2	SE180508.020	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	26 Jun 2018
TP08-1.2-1.4	SE180508.021	LB150395	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	25 Jun 2018
TP09-0.0-0.2	SE180508.022	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP10-0.0-0.2	SE180508.023	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP10-0.6-0.8	SE180508.024	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP11-0.0-0.2	SE180508.025	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP11-0.5-0.6	SE180508.026	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP12-0.0-0.2	SE180508.027	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP13-0.0-0.2	SE180508.029	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP14-0.0-0.2	SE180508.031	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP14-0.3-0.4	SE180508.032	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP15-0.0-0.2	SE180508.033	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP15-0.6-0.8	SE180508.034	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP15-1.3-1.5	SE180508.035	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP16-0.0-0.2	SE180508.037	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP16-0.7-0.9	SE180508.038	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP16-1.4-1.6	SE180508.039	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP17-0.0-0.2	SE180508.040	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP17-0.7-0.9	SE180508.041	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP17-1.2-1.4	SE180508.042	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018

HOLDING TIME SUMMARY

SE180508 R0

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

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP18-0.0-0.2	SE180508.043	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP18-0.3-0.5	SE180508.044	LB150486	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP19-0.0-0.2	SE180508.045	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP19-0.3-0.5	SE180508.046	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP19-0.6-0.8	SE180508.047	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP20-0.0-0.2	SE180508.048	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP20-0.4-0.6	SE180508.049	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP20-0.6-0.8	SE180508.050	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
TP21-0.0-0.2	SE180508.051	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	25 Jun 2018
TP21-0.4-0.6	SE180508.052	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018
DUP-03	SE180508.055	LB150488	18 Jun 2018	19 Jun 2018	02 Jul 2018	22 Jun 2018	01 Aug 2018	26 Jun 2018

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP02-0.45-0.6	SE180508.004	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	21 Jun 2018
TP03-0.0-0.2	SE180508.006	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP04-0.0-0.2	SE180508.009	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP05-0.5-0.7	SE180508.013	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP07-1.8-2.0	SE180508.018	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP08-1.2-1.4	SE180508.021	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP09-0.0-0.2	SE180508.022	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP10-0.0-0.2	SE180508.023	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP12-0.0-0.2	SE180508.027	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP13-0.0-0.2	SE180508.029	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP15-0.6-0.8	SE180508.034	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP16-1.4-1.6	SE180508.039	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP17-0.0-0.2	SE180508.040	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP18-0.3-0.5	SE180508.044	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP19-0.0-0.2	SE180508.045	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP21-0.0-0.2	SE180508.051	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018

Volatile Petroleum Hydrocarbons in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
TP02-0.45-0.6	SE180508.004	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	21 Jun 2018
TP03-0.0-0.2	SE180508.006	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP04-0.0-0.2	SE180508.009	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP05-0.5-0.7	SE180508.013	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP07-1.8-2.0	SE180508.018	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP08-1.2-1.4	SE180508.021	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP09-0.0-0.2	SE180508.022	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP10-0.0-0.2	SE180508.023	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP12-0.0-0.2	SE180508.027	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP13-0.0-0.2	SE180508.029	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP15-0.6-0.8	SE180508.034	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP16-1.4-1.6	SE180508.039	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP17-0.0-0.2	SE180508.040	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP18-0.3-0.5	SE180508.044	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP19-0.0-0.2	SE180508.045	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018
TP21-0.0-0.2	SE180508.051	LB150411	18 Jun 2018	19 Jun 2018	02 Jul 2018	21 Jun 2018	31 Jul 2018	22 Jun 2018

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP01-0.0-0.2	SE180508.001	%	60 - 130%	97
	TP02-0.6-0.8	SE180508.005	%	60 - 130%	102
	TP04-0.0-0.2	SE180508.009	%	60 - 130%	99
	TP05-0.0-0.2	SE180508.012	%	60 - 130%	103
	TP08-1.2-1.4	SE180508.021	%	60 - 130%	95
	TP09-0.0-0.2	SE180508.022	%	60 - 130%	109
	TP11-0.0-0.2	SE180508.025	%	60 - 130%	101
	TP16-0.7-0.9	SE180508.038	%	60 - 130%	100
	TP18-0.3-0.5	SE180508.044	%	60 - 130%	107
	TP21-0.0-0.2	SE180508.051	%	60 - 130%	95

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	TP01-0.0-0.2	SE180508.001	%	70 - 130%	102
	TP01-0.4-0.6	SE180508.002	%	70 - 130%	98
	TP02-0.0-0.2	SE180508.003	%	70 - 130%	96
	TP02-0.45-0.6	SE180508.004	%	70 - 130%	98
	TP02-0.6-0.8	SE180508.005	%	70 - 130%	90
	TP03-0.45-0.6	SE180508.007	%	70 - 130%	110
	TP03-0.7-0.8	SE180508.008	%	70 - 130%	100
	TP04-0.0-0.2	SE180508.009	%	70 - 130%	98
	TP04-0.5-0.7	SE180508.010	%	70 - 130%	102
	TP04-0.7-0.9	SE180508.011	%	70 - 130%	98
	TP05-0.0-0.2	SE180508.012	%	70 - 130%	104
	TP06-0.4-0.5	SE180508.014	%	70 - 130%	100
	TP07-0.7-0.9	SE180508.016	%	70 - 130%	98
	TP07-1.3-1.5	SE180508.017	%	70 - 130%	106
	TP07-2.1-2.3	SE180508.019	%	70 - 130%	92
	TP08-0.0-0.2	SE180508.020	%	70 - 130%	98
	TP08-1.2-1.4	SE180508.021	%	70 - 130%	86
	TP09-0.0-0.2	SE180508.022	%	70 - 130%	92
	TP10-0.0-0.2	SE180508.023	%	70 - 130%	96
	TP10-0.6-0.8	SE180508.024	%	70 - 130%	88
	TP11-0.0-0.2	SE180508.025	%	70 - 130%	94
	TP11-0.5-0.6	SE180508.026	%	70 - 130%	90
	TP12-0.0-0.2	SE180508.027	%	70 - 130%	96
	TP13-0.0-0.2	SE180508.029	%	70 - 130%	96
	TP14-0.0-0.2	SE180508.031	%	70 - 130%	90
	TP14-0.3-0.4	SE180508.032	%	70 - 130%	92
	TP15-0.0-0.2	SE180508.033	%	70 - 130%	86
	TP15-0.6-0.8	SE180508.034	%	70 - 130%	88
	TP15-1.3-1.5	SE180508.035	%	70 - 130%	90
	TP16-0.0-0.2	SE180508.037	%	70 - 130%	98
	TP16-0.7-0.9	SE180508.038	%	70 - 130%	94
	TP16-1.4-1.6	SE180508.039	%	70 - 130%	92
	TP17-0.0-0.2	SE180508.040	%	70 - 130%	98
	TP17-0.7-0.9	SE180508.041	%	70 - 130%	90
	TP17-1.2-1.4	SE180508.042	%	70 - 130%	82
	TP18-0.0-0.2	SE180508.043	%	70 - 130%	98
	TP18-0.3-0.5	SE180508.044	%	70 - 130%	94
	TP19-0.6-0.8	SE180508.047	%	70 - 130%	108
	TP20-0.4-0.6	SE180508.049	%	70 - 130%	104
	TP20-0.6-0.8	SE180508.050	%	70 - 130%	100
	TP21-0.4-0.6	SE180508.052	%	70 - 130%	112
	DUP-03	SE180508.055	%	70 - 130%	112
d14-p-terphenyl (Surrogate)	TP01-0.0-0.2	SE180508.001	%	70 - 130%	108
	TP01-0.4-0.6	SE180508.002	%	70 - 130%	108
	TP02-0.0-0.2	SE180508.003	%	70 - 130%	112
	TP02-0.45-0.6	SE180508.004	%	70 - 130%	106
	TP02-0.6-0.8	SE180508.005	%	70 - 130%	98
	TP03-0.45-0.6	SE180508.007	%	70 - 130%	106

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

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

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d14-p-terphenyl (Surrogate)	TP03-0.7-0.8	SE180508.008	%	70 - 130%	108
	TP04-0.0-0.2	SE180508.009	%	70 - 130%	108
	TP04-0.5-0.7	SE180508.010	%	70 - 130%	110
	TP04-0.7-0.9	SE180508.011	%	70 - 130%	108
	TP05-0.0-0.2	SE180508.012	%	70 - 130%	112
	TP06-0.4-0.5	SE180508.014	%	70 - 130%	108
	TP07-0.7-0.9	SE180508.016	%	70 - 130%	108
	TP07-1.3-1.5	SE180508.017	%	70 - 130%	116
	TP07-2.1-2.3	SE180508.019	%	70 - 130%	106
	TP08-0.0-0.2	SE180508.020	%	70 - 130%	108
	TP08-1.2-1.4	SE180508.021	%	70 - 130%	90
	TP09-0.0-0.2	SE180508.022	%	70 - 130%	106
	TP10-0.0-0.2	SE180508.023	%	70 - 130%	102
	TP10-0.6-0.8	SE180508.024	%	70 - 130%	96
	TP11-0.0-0.2	SE180508.025	%	70 - 130%	100
	TP11-0.5-0.6	SE180508.026	%	70 - 130%	104
	TP12-0.0-0.2	SE180508.027	%	70 - 130%	102
	TP13-0.0-0.2	SE180508.029	%	70 - 130%	100
	TP14-0.0-0.2	SE180508.031	%	70 - 130%	96
	TP14-0.3-0.4	SE180508.032	%	70 - 130%	98
	TP15-0.0-0.2	SE180508.033	%	70 - 130%	96
	TP15-0.6-0.8	SE180508.034	%	70 - 130%	100
	TP15-1.3-1.5	SE180508.035	%	70 - 130%	94
	TP16-0.0-0.2	SE180508.037	%	70 - 130%	100
	TP16-0.7-0.9	SE180508.038	%	70 - 130%	98
	TP16-1.4-1.6	SE180508.039	%	70 - 130%	90
	TP17-0.0-0.2	SE180508.040	%	70 - 130%	100
	TP17-0.7-0.9	SE180508.041	%	70 - 130%	98
	TP17-1.2-1.4	SE180508.042	%	70 - 130%	110
	TP18-0.0-0.2	SE180508.043	%	70 - 130%	108
	TP18-0.3-0.5	SE180508.044	%	70 - 130%	106
	TP19-0.6-0.8	SE180508.047	%	70 - 130%	98
	TP20-0.4-0.6	SE180508.049	%	70 - 130%	98
	TP20-0.6-0.8	SE180508.050	%	70 - 130%	98
	TP21-0.4-0.6	SE180508.052	%	70 - 130%	102
	DUP-03	SE180508.055	%	70 - 130%	102
d5-nitrobenzene (Surrogate)	TP01-0.0-0.2	SE180508.001	%	70 - 130%	116
	TP01-0.4-0.6	SE180508.002	%	70 - 130%	106
	TP02-0.0-0.2	SE180508.003	%	70 - 130%	94
	TP02-0.45-0.6	SE180508.004	%	70 - 130%	94
	TP02-0.6-0.8	SE180508.005	%	70 - 130%	90
	TP03-0.45-0.6	SE180508.007	%	70 - 130%	98
	TP03-0.7-0.8	SE180508.008	%	70 - 130%	110
	TP04-0.0-0.2	SE180508.009	%	70 - 130%	92
	TP04-0.5-0.7	SE180508.010	%	70 - 130%	102
	TP04-0.7-0.9	SE180508.011	%	70 - 130%	102
	TP05-0.0-0.2	SE180508.012	%	70 - 130%	102
	TP06-0.4-0.5	SE180508.014	%	70 - 130%	98
	TP07-0.7-0.9	SE180508.016	%	70 - 130%	104
	TP07-1.3-1.5	SE180508.017	%	70 - 130%	98
	TP07-2.1-2.3	SE180508.019	%	70 - 130%	106
	TP08-0.0-0.2	SE180508.020	%	70 - 130%	98
	TP08-1.2-1.4	SE180508.021	%	70 - 130%	88
	TP09-0.0-0.2	SE180508.022	%	70 - 130%	88
	TP10-0.0-0.2	SE180508.023	%	70 - 130%	90
	TP10-0.6-0.8	SE180508.024	%	70 - 130%	80
	TP11-0.0-0.2	SE180508.025	%	70 - 130%	86
	TP11-0.5-0.6	SE180508.026	%	70 - 130%	78
	TP12-0.0-0.2	SE180508.027	%	70 - 130%	90
	TP13-0.0-0.2	SE180508.029	%	70 - 130%	90
	TP14-0.0-0.2	SE180508.031	%	70 - 130%	84

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d5-nitrobenzene (Surrogate)	TP14-0.3-0.4	SE180508.032	%	70 - 130%	84
	TP15-0.0-0.2	SE180508.033	%	70 - 130%	78
	TP15-0.6-0.8	SE180508.034	%	70 - 130%	76
	TP15-1.3-1.5	SE180508.035	%	70 - 130%	82
	TP16-0.0-0.2	SE180508.037	%	70 - 130%	90
	TP16-0.7-0.9	SE180508.038	%	70 - 130%	86
	TP16-1.4-1.6	SE180508.039	%	70 - 130%	82
	TP17-0.0-0.2	SE180508.040	%	70 - 130%	86
	TP17-0.7-0.9	SE180508.041	%	70 - 130%	78
	TP17-1.2-1.4	SE180508.042	%	70 - 130%	82
	TP18-0.0-0.2	SE180508.043	%	70 - 130%	90
	TP18-0.3-0.5	SE180508.044	%	70 - 130%	86
	TP19-0.6-0.8	SE180508.047	%	70 - 130%	84
	TP20-0.4-0.6	SE180508.049	%	70 - 130%	80
	TP20-0.6-0.8	SE180508.050	%	70 - 130%	86
	TP21-0.4-0.6	SE180508.052	%	70 - 130%	92
	DUP-03	SE180508.055	%	70 - 130%	84

PCBs in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	TP03-0.45-0.6	SE180508.007	%	60 - 130%	93
	TP04-0.0-0.2	SE180508.009	%	60 - 130%	99
	TP04-0.5-0.7	SE180508.010	%	60 - 130%	113
	TP07-1.3-1.5	SE180508.017	%	60 - 130%	103
	TP10-0.0-0.2	SE180508.023	%	60 - 130%	100
	TP14-0.0-0.2	SE180508.031	%	60 - 130%	104
	TP15-0.6-0.8	SE180508.034	%	60 - 130%	108
	TP19-0.3-0.5	SE180508.046	%	60 - 130%	113

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP02-0.45-0.6	SE180508.004	%	60 - 130%	77
	TP03-0.0-0.2	SE180508.006	%	60 - 130%	79
	TP04-0.0-0.2	SE180508.009	%	60 - 130%	75
	TP05-0.5-0.7	SE180508.013	%	60 - 130%	70
	TP07-1.8-2.0	SE180508.018	%	60 - 130%	75
	TP08-1.2-1.4	SE180508.021	%	60 - 130%	76
	TP09-0.0-0.2	SE180508.022	%	60 - 130%	77
	TP10-0.0-0.2	SE180508.023	%	60 - 130%	82
	TP12-0.0-0.2	SE180508.027	%	60 - 130%	75
	TP13-0.0-0.2	SE180508.029	%	60 - 130%	72
	TP15-0.6-0.8	SE180508.034	%	60 - 130%	80
	TP16-1.4-1.6	SE180508.039	%	60 - 130%	75
	TP17-0.0-0.2	SE180508.040	%	60 - 130%	79
	TP18-0.3-0.5	SE180508.044	%	60 - 130%	76
	TP19-0.0-0.2	SE180508.045	%	60 - 130%	74
	TP21-0.0-0.2	SE180508.051	%	60 - 130%	76
d4-1,2-dichloroethane (Surrogate)	TP02-0.45-0.6	SE180508.004	%	60 - 130%	94
	TP03-0.0-0.2	SE180508.006	%	60 - 130%	96
	TP04-0.0-0.2	SE180508.009	%	60 - 130%	92
	TP05-0.5-0.7	SE180508.013	%	60 - 130%	91
	TP07-1.8-2.0	SE180508.018	%	60 - 130%	92
	TP08-1.2-1.4	SE180508.021	%	60 - 130%	95
	TP09-0.0-0.2	SE180508.022	%	60 - 130%	97
	TP10-0.0-0.2	SE180508.023	%	60 - 130%	98
	TP12-0.0-0.2	SE180508.027	%	60 - 130%	94
	TP13-0.0-0.2	SE180508.029	%	60 - 130%	89
	TP15-0.6-0.8	SE180508.034	%	60 - 130%	103
	TP16-1.4-1.6	SE180508.039	%	60 - 130%	99
	TP17-0.0-0.2	SE180508.040	%	60 - 130%	101
	TP18-0.3-0.5	SE180508.044	%	60 - 130%	95
	TP19-0.0-0.2	SE180508.045	%	60 - 130%	94

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

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

VOC's in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	TP21-0.0-0.2	SE180508.051	%	60 - 130%	96
d8-toluene (Surrogate)	TP02-0.45-0.6	SE180508.004	%	60 - 130%	84
	TP03-0.0-0.2	SE180508.006	%	60 - 130%	87
	TP04-0.0-0.2	SE180508.009	%	60 - 130%	83
	TP05-0.5-0.7	SE180508.013	%	60 - 130%	81
	TP07-1.8-2.0	SE180508.018	%	60 - 130%	83
	TP08-1.2-1.4	SE180508.021	%	60 - 130%	85
	TP09-0.0-0.2	SE180508.022	%	60 - 130%	84
	TP10-0.0-0.2	SE180508.023	%	60 - 130%	88
	TP12-0.0-0.2	SE180508.027	%	60 - 130%	85
	TP13-0.0-0.2	SE180508.029	%	60 - 130%	80
	TP15-0.6-0.8	SE180508.034	%	60 - 130%	92
	TP16-1.4-1.6	SE180508.039	%	60 - 130%	87
	TP17-0.0-0.2	SE180508.040	%	60 - 130%	86
	TP18-0.3-0.5	SE180508.044	%	60 - 130%	86
	TP19-0.0-0.2	SE180508.045	%	60 - 130%	83
	TP21-0.0-0.2	SE180508.051	%	60 - 130%	83
Dibromofluoromethane (Surrogate)	TP02-0.45-0.6	SE180508.004	%	60 - 130%	83
	TP03-0.0-0.2	SE180508.006	%	60 - 130%	98
	TP04-0.0-0.2	SE180508.009	%	60 - 130%	96
	TP05-0.5-0.7	SE180508.013	%	60 - 130%	87
	TP07-1.8-2.0	SE180508.018	%	60 - 130%	89
	TP08-1.2-1.4	SE180508.021	%	60 - 130%	105
	TP09-0.0-0.2	SE180508.022	%	60 - 130%	101
	TP10-0.0-0.2	SE180508.023	%	60 - 130%	106
	TP12-0.0-0.2	SE180508.027	%	60 - 130%	103
	TP13-0.0-0.2	SE180508.029	%	60 - 130%	86
	TP15-0.6-0.8	SE180508.034	%	60 - 130%	114
	TP16-1.4-1.6	SE180508.039	%	60 - 130%	97
	TP17-0.0-0.2	SE180508.040	%	60 - 130%	110
	TP18-0.3-0.5	SE180508.044	%	60 - 130%	92
	TP19-0.0-0.2	SE180508.045	%	60 - 130%	96
	TP21-0.0-0.2	SE180508.051	%	60 - 130%	94

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	TP02-0.45-0.6	SE180508.004	%	60 - 130%	77
	TP03-0.0-0.2	SE180508.006	%	60 - 130%	79
	TP04-0.0-0.2	SE180508.009	%	60 - 130%	75
	TP05-0.5-0.7	SE180508.013	%	60 - 130%	70
	TP07-1.8-2.0	SE180508.018	%	60 - 130%	75
	TP08-1.2-1.4	SE180508.021	%	60 - 130%	76
	TP09-0.0-0.2	SE180508.022	%	60 - 130%	77
	TP10-0.0-0.2	SE180508.023	%	60 - 130%	82
	TP12-0.0-0.2	SE180508.027	%	60 - 130%	75
	TP13-0.0-0.2	SE180508.029	%	60 - 130%	72
	TP15-0.6-0.8	SE180508.034	%	60 - 130%	80
	TP16-1.4-1.6	SE180508.039	%	60 - 130%	75
	TP17-0.0-0.2	SE180508.040	%	60 - 130%	79
	TP18-0.3-0.5	SE180508.044	%	60 - 130%	76
	TP19-0.0-0.2	SE180508.045	%	60 - 130%	74
	TP21-0.0-0.2	SE180508.051	%	60 - 130%	76
d4-1,2-dichloroethane (Surrogate)	TP02-0.45-0.6	SE180508.004	%	60 - 130%	94
	TP03-0.0-0.2	SE180508.006	%	60 - 130%	96
	TP04-0.0-0.2	SE180508.009	%	60 - 130%	92
	TP05-0.5-0.7	SE180508.013	%	60 - 130%	91
	TP07-1.8-2.0	SE180508.018	%	60 - 130%	92
	TP08-1.2-1.4	SE180508.021	%	60 - 130%	95
	TP09-0.0-0.2	SE180508.022	%	60 - 130%	97
	TP10-0.0-0.2	SE180508.023	%	60 - 130%	98
	TP12-0.0-0.2	SE180508.027	%	60 - 130%	94

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

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

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d4-1,2-dichloroethane (Surrogate)	TP13-0.0-0.2	SE180508.029	%	60 - 130%	89
	TP15-0.6-0.8	SE180508.034	%	60 - 130%	103
	TP16-1.4-1.6	SE180508.039	%	60 - 130%	99
	TP17-0.0-0.2	SE180508.040	%	60 - 130%	101
	TP18-0.3-0.5	SE180508.044	%	60 - 130%	95
	TP19-0.0-0.2	SE180508.045	%	60 - 130%	94
	TP21-0.0-0.2	SE180508.051	%	60 - 130%	96
d8-toluene (Surrogate)	TP02-0.45-0.6	SE180508.004	%	60 - 130%	84
	TP03-0.0-0.2	SE180508.006	%	60 - 130%	87
	TP04-0.0-0.2	SE180508.009	%	60 - 130%	83
	TP05-0.5-0.7	SE180508.013	%	60 - 130%	81
	TP07-1.8-2.0	SE180508.018	%	60 - 130%	83
	TP08-1.2-1.4	SE180508.021	%	60 - 130%	85
	TP09-0.0-0.2	SE180508.022	%	60 - 130%	84
	TP10-0.0-0.2	SE180508.023	%	60 - 130%	88
	TP12-0.0-0.2	SE180508.027	%	60 - 130%	85
	TP13-0.0-0.2	SE180508.029	%	60 - 130%	80
	TP15-0.6-0.8	SE180508.034	%	60 - 130%	92
	TP16-1.4-1.6	SE180508.039	%	60 - 130%	87
	TP17-0.0-0.2	SE180508.040	%	60 - 130%	86
	TP18-0.3-0.5	SE180508.044	%	60 - 130%	86
	TP19-0.0-0.2	SE180508.045	%	60 - 130%	83
	TP21-0.0-0.2	SE180508.051	%	60 - 130%	83
Dibromofluoromethane (Surrogate)	TP02-0.45-0.6	SE180508.004	%	60 - 130%	83
	TP03-0.0-0.2	SE180508.006	%	60 - 130%	98
	TP04-0.0-0.2	SE180508.009	%	60 - 130%	96
	TP05-0.5-0.7	SE180508.013	%	60 - 130%	87
	TP07-1.8-2.0	SE180508.018	%	60 - 130%	89
	TP08-1.2-1.4	SE180508.021	%	60 - 130%	105
	TP09-0.0-0.2	SE180508.022	%	60 - 130%	101
	TP10-0.0-0.2	SE180508.023	%	60 - 130%	106
	TP12-0.0-0.2	SE180508.027	%	60 - 130%	103
	TP13-0.0-0.2	SE180508.029	%	60 - 130%	86
	TP15-0.6-0.8	SE180508.034	%	60 - 130%	114
	TP16-1.4-1.6	SE180508.039	%	60 - 130%	97
	TP17-0.0-0.2	SE180508.040	%	60 - 130%	110
	TP18-0.3-0.5	SE180508.044	%	60 - 130%	92
	TP19-0.0-0.2	SE180508.045	%	60 - 130%	96
	TP21-0.0-0.2	SE180508.051	%	60 - 130%	94

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB150584.001	Mercury	mg/kg	0.05	<0.05
LB150585.001	Mercury	mg/kg	0.05	<0.05
LB150586.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB150395.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89
LB150486.001		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Alpha BHC	mg/kg	0.1	<0.1
		Lindane	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89
LB150488.001		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

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.

OC Pesticides in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB150488.001		Heptachlor epoxide	mg/kg	0.1	<0.1
		Alpha Endosulfan	mg/kg	0.2	<0.2
		Gamma Chlordane	mg/kg	0.1	<0.1
		Alpha Chlordane	mg/kg	0.1	<0.1
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		Endrin Aldehyde	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Endrin Ketone	mg/kg	0.1	<0.1
		Isodrin	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB150395.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	102
		2-fluorobiphenyl (Surrogate)	%	-	102
		d14-p-terphenyl (Surrogate)	%	-	118
LB150486.001		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)	%	-	88
		2-fluorobiphenyl (Surrogate)	%	-	94
		d14-p-terphenyl (Surrogate)	%	-	98
LB150488.001		Naphthalene	mg/kg	0.1	<0.1

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB150488.001		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)	%	-	82
		2-fluorobiphenyl (Surrogate)	%	-	108
		d14-p-terphenyl (Surrogate)	%	-	104

PCBs in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB150395.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89
LB150486.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89
LB150488.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	89

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

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

Sample Number	Parameter	Units	LOR	Result
LB150473.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	Copper, Cu	mg/kg	0.5	<0.5

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

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

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

Sample Number	Parameter	Units	LOR	Result
LB150473.001	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0
LB150582.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	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
LB150615.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.3	<0.3
	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
LB150395.001	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
LB150486.001	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
LB150488.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB150411.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene	mg/kg	0.1	<0.1
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	95
		d4-1,2-dichloroethane (Surrogate)	%	-	86
		d8-toluene (Surrogate)	%	-	77
		Bromofluorobenzene (Surrogate)	%	-	71
	Totals	Total BTEX	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB150411.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	Dibromofluoromethane (Surrogate)	%	-	95
		d4-1,2-dichloroethane (Surrogate)	%	-	86
		d8-toluene (Surrogate)	%	-	77

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

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

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

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

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180504.001	LB150586.022	Mercury	mg/kg	0.05	0.15	0.17	61	11
SE180508.001	LB150584.014	Mercury	mg/kg	0.05	0.58	0.58	39	0
SE180508.011	LB150584.024	Mercury	mg/kg	0.05	0.05	<0.05	172	2
SE180508.023	LB150585.014	Mercury	mg/kg	0.05	1.6	1.5	33	4
SE180508.034	LB150585.024	Mercury	mg/kg	0.05	0.11	0.11	75	5
SE180508.044	LB150586.014	Mercury	mg/kg	0.05	0.41	0.29	44	35

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.010	LB150438.011	% Moisture	%w/w	0.5	21	24	35	14
SE180508.020	LB150438.022	% Moisture	%w/w	0.5	10	10	40	0
SE180508.030	LB150438.033	% Moisture	%w/w	0.5	5.4	5.1	49	6
SE180508.040	LB150438.044	% Moisture	%w/w	0.5	12	11	39	8
SE180508.050	LB150438.055	% Moisture	%w/w	0.5	8.7	8.5	42	3
SE180508.055	LB150438.061	% Moisture	%w/w	0.5	12	10	39	13

OC Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.021	LB150395.025		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.17	30	16
SE180508.022	LB150486.029		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	186	0
			Alpha Chlordane	mg/kg	0.1	0.1	0.1	105	10
			trans-Nonachlor	mg/kg	0.1	0.2	0.2	75	10
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0

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

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

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

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

OC Pesticides in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.022	LB150486.029		Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30	0
SE180600.003	LB150488.025		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin Ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.16	30	15

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.020	LB150395.027	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		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

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

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

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

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

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.020	LB150395.027		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	30	0
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	8
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.6	30	4
SE180508.021	LB150395.025		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	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	7
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	30	13
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	11
SE180508.022	LB150486.029		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	0
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
SE180508.027	LB150486.028		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0

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

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

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.027	LB150486.028		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	<0.3	<0.3	134	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	<0.2	<0.2	175	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.4	30	2
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	2
SE180600.003	LB150488.025		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	0.2	<0.1	110	67
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	0.5	0.2	59	76 ⑨
			Pyrene	mg/kg	0.1	0.5	0.2	59	74 ⑨
			Benzo(a)anthracene	mg/kg	0.1	0.2	0.1	84	59
			Chrysene	mg/kg	0.1	0.2	0.1	89	59
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.3	0.2	69	43
			Benzo(k)fluoranthene	mg/kg	0.1	0.1	<0.1	135	18
			Benzo(a)pyrene	mg/kg	0.1	0.3	0.2	78	48
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.2	0.1	95	32
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	0.2	0.1	104	37
			Carcinogenic PAHs, BaP TEQ <LOR=0	mg/kg	0.2	0.3	0.2	81	47
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	mg/kg	0.3	0.4	0.3	89	35
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	mg/kg	0.2	0.4	0.3	70	40
			Total PAH (18)	mg/kg	0.8	2.6	1.4	70	65
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.4	30	16
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	12
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.4	30	11

PCBs in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.017	LB150395.026	Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
		Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0

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

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

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

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

PCBs in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.017	LB150395.026		Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	14
SE180508.023	LB150486.026		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	9
SE180600.003	LB150488.025		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	0	30	15

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 %
SE180504.001	LB150473.024	Arsenic, As	mg/kg	1	4	5	52	40
		Cadmium, Cd	mg/kg	0.3	0.5	0.7	79	22
		Chromium, Cr	mg/kg	0.3	11	9.2	35	18
		Copper, Cu	mg/kg	0.5	79	75	31	5
		Nickel, Ni	mg/kg	0.5	10	14	34	31
		Lead, Pb	mg/kg	1	2000	2200	30	10
		Zinc, Zn	mg/kg	2	600	840	30	34 ②
SE180508.011	LB150582.014	Arsenic, As	mg/kg	1	<1	<1	200	0
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.3	7.4	6.5	37	13
		Copper, Cu	mg/kg	0.5	1.0	1.1	77	7
		Nickel, Ni	mg/kg	0.5	<0.5	<0.5	200	0
		Lead, Pb	mg/kg	1	4	7	48	45
		Zinc, Zn	mg/kg	2	4.1	4.3	77	4
SE180508.022	LB150582.024	Arsenic, As	mg/kg	1	<1	<1	200	0
		Cadmium, Cd	mg/kg	0.3	0.5	0.5	87	9
		Chromium, Cr	mg/kg	0.3	2.0	2.3	53	16
		Copper, Cu	mg/kg	0.5	3.1	3.2	46	5
		Nickel, Ni	mg/kg	0.5	0.8	0.9	87	8
		Lead, Pb	mg/kg	1	4	5	54	26
		Zinc, Zn	mg/kg	2	8.1	7.8	55	4
SE180508.042	LB150473.014	Arsenic, As	mg/kg	1	1	1	99	1
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.3	3.3	2.9	46	12
		Copper, Cu	mg/kg	0.5	2.9	2.9	47	2
		Nickel, Ni	mg/kg	0.5	<0.5	<0.5	200	0
		Lead, Pb	mg/kg	1	8	7	43	2
		Zinc, Zn	mg/kg	2	<2.0	<2.0	200	0
SE180675.001	LB150615.014	Arsenic, As	mg/kg	1	<1	1	132	28
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.3	5.4	12	36	73 ②
		Copper, Cu	mg/kg	0.5	3.5	6.3	40	58 ②
		Nickel, Ni	mg/kg	0.5	1.3	3.0	53	77 ②
		Lead, Pb	mg/kg	1	9	15	38	50 ②

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

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

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

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

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 %
SE180675.001	LB150615.014		Zinc, Zn	mg/kg	2	12	18	43	43 ②
SE180675.005	LB150615.019		Arsenic, As	mg/kg	1	1	1	122	11
			Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
			Chromium, Cr	mg/kg	0.3	7.0	6.9	37	0
			Copper, Cu	mg/kg	0.5	4.6	3.2	43	35
			Nickel, Ni	mg/kg	0.5	0.8	1.2	80	40
			Lead, Pb	mg/kg	1	16	15	36	6
			Zinc, Zn	mg/kg	2	8.0	8.3	54	4

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.021	LB150395.025		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE180508.022	LB150486.026		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE180508.027	LB150486.027		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE180580.002	LB150488.026		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE180600.003	LB150488.025		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

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

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

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

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

VOC's in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.029	LB150411.014	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	Dibromofluoromethane (Surrogate)	mg/kg	-	4.3	5.2	50	19
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.5	5.0	50	10
			d8-toluene (Surrogate)	mg/kg	-	4.0	4.5	50	12
			Bromofluorobenzene (Surrogate)	mg/kg	-	3.6	4.0	50	12
		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
SE180548.001	LB150411.025	Monocyclic	Benzene	mg/kg	0.1	<0.1	0.03	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	0.01	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	0.01	200	0
			m/p-xylene	mg/kg	0.2	<0.2	0	200	0
			o-xylene	mg/kg	0.1	<0.1	0	200	0
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	0	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.6	4.92	50	8
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.3	4.57	50	5
			d8-toluene (Surrogate)	mg/kg	-	4.2	4.2	50	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	3.6	3.59	50	0
		Totals	Total Xylenes	mg/kg	0.3	<0.3	0	200	0
			Total BTEX	mg/kg	0.6	<0.6	0.05	200	0

Volatile Petroleum Hydrocarbons in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE180508.029	LB150411.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.3	5.2	30	19
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.5	5.0	30	10
			d8-toluene (Surrogate)	mg/kg	-	4.0	4.5	30	12
			Bromofluorobenzene (Surrogate)	mg/kg	-	3.6	4.0	30	12
		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
SE180548.001	LB150411.025		TRH C6-C10	mg/kg	25	<25	0	200	0
			TRH C6-C9	mg/kg	20	<20	0	200	0
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.6	4.92	30	8
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.3	4.57	30	5
			d8-toluene (Surrogate)	mg/kg	-	4.2	4.2	30	1
			Bromofluorobenzene (Surrogate)	mg/kg	-	3.6	3.59	30	0
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	0.03	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	-0.05	200	0

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB150584.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	96
LB150585.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	101
LB150586.002	Mercury	mg/kg	0.05	0.24	0.2	70 - 130	120

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB150395.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	88
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	85
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	87
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	82
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	87
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	78
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.15	40 - 130	80
LB150486.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	88
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	85
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	87
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	82
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	87
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	78
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.15	40 - 130	80
LB150488.002		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	88
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	85
		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	87
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	82
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	87
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	78
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.12	0.15	40 - 130	80

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB150395.002		Naphthalene	mg/kg	0.1	4.0	4	60 - 140	100
		Acenaphthylene	mg/kg	0.1	4.2	4	60 - 140	106
		Acenaphthene	mg/kg	0.1	4.1	4	60 - 140	103
		Phenanthrene	mg/kg	0.1	4.0	4	60 - 140	100
		Anthracene	mg/kg	0.1	4.2	4	60 - 140	106
		Fluoranthene	mg/kg	0.1	4.0	4	60 - 140	100
		Pyrene	mg/kg	0.1	3.8	4	60 - 140	95
		Benzo(a)pyrene	mg/kg	0.1	4.5	4	60 - 140	111
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	98
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	106
LB150486.002		Naphthalene	mg/kg	0.1	3.7	4	60 - 140	93
		Acenaphthylene	mg/kg	0.1	3.7	4	60 - 140	92
		Acenaphthene	mg/kg	0.1	3.5	4	60 - 140	87
		Phenanthrene	mg/kg	0.1	3.5	4	60 - 140	88
		Anthracene	mg/kg	0.1	3.7	4	60 - 140	92
		Fluoranthene	mg/kg	0.1	3.5	4	60 - 140	87
		Pyrene	mg/kg	0.1	3.4	4	60 - 140	86
		Benzo(a)pyrene	mg/kg	0.1	4.4	4	60 - 140	109
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	100
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	98
LB150488.002		Naphthalene	mg/kg	0.1	4.3	4	60 - 140	107
		Acenaphthylene	mg/kg	0.1	4.7	4	60 - 140	117
		Acenaphthene	mg/kg	0.1	4.1	4	60 - 140	103
		Phenanthrene	mg/kg	0.1	4.0	4	60 - 140	101
		Anthracene	mg/kg	0.1	4.3	4	60 - 140	106
		Fluoranthene	mg/kg	0.1	4.0	4	60 - 140	99
		Pyrene	mg/kg	0.1	3.9	4	60 - 140	97
		Benzo(a)pyrene	mg/kg	0.1	4.7	4	60 - 140	118
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	84
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	106

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.

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB150488.002	Surrogates	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB150395.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	104
LB150486.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	104
LB150488.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	104

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB150473.002	Arsenic, As	mg/kg	1	350	336.32	79 - 120	104
	Cadmium, Cd	mg/kg	0.3	440	416.6	69 - 131	105
	Chromium, Cr	mg/kg	0.3	36	35.2	80 - 120	103
	Copper, Cu	mg/kg	0.5	320	370.46	80 - 120	87
	Nickel, Ni	mg/kg	0.5	190	210.88	79 - 120	89
	Lead, Pb	mg/kg	1	94	107.87	79 - 120	87
	Zinc, Zn	mg/kg	2	290	301.27	80 - 121	97
LB150582.002	Arsenic, As	mg/kg	1	340	336.32	79 - 120	102
	Cadmium, Cd	mg/kg	0.3	440	416.6	69 - 131	105
	Chromium, Cr	mg/kg	0.3	39	35.2	80 - 120	112
	Copper, Cu	mg/kg	0.5	340	370.46	80 - 120	92
	Nickel, Ni	mg/kg	0.5	190	210.88	79 - 120	91
	Lead, Pb	mg/kg	1	92	107.87	79 - 120	85
	Zinc, Zn	mg/kg	2	290	301.27	80 - 121	97
LB150615.002	Arsenic, As	mg/kg	1	320	336.32	79 - 120	96
	Cadmium, Cd	mg/kg	0.3	430	416.6	69 - 131	103
	Chromium, Cr	mg/kg	0.3	32	35.2	80 - 120	92
	Copper, Cu	mg/kg	0.5	320	370.46	80 - 120	86
	Nickel, Ni	mg/kg	0.5	180	210.88	79 - 120	86
	Lead, Pb	mg/kg	1	89	107.87	79 - 120	83
	Zinc, Zn	mg/kg	2	280	301.27	80 - 121	92

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB150395.002		TRH C10-C14	mg/kg	20	36	40	60 - 140	90
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	85
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	90
	TRH F Bands	TRH >C10-C16	mg/kg	25	35	40	60 - 140	88
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	90
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90
LB150486.002		TRH C10-C14	mg/kg	20	36	40	60 - 140	90
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	85
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	90
	TRH F Bands	TRH >C10-C16	mg/kg	25	35	40	60 - 140	88
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	90
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	90
LB150488.002		TRH C10-C14	mg/kg	20	43	40	60 - 140	108
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	95
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	90
	TRH F Bands	TRH >C10-C16	mg/kg	25	41	40	60 - 140	103
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	95
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	115

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB150411.002	Monocyclic	Benzene	mg/kg	0.1	2.2	2.9	60 - 140	77
	Aromatic	Toluene	mg/kg	0.1	2.1	2.9	60 - 140	71
		Ethylbenzene	mg/kg	0.1	2.1	2.9	60 - 140	72
		m/p-xylene	mg/kg	0.2	5.0	5.8	60 - 140	86
		o-xylene	mg/kg	0.1	2.3	2.9	60 - 140	79
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.9	5	60 - 140	79
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.3	5	60 - 140	87
		d8-toluene (Surrogate)	mg/kg	-	4.1	5	60 - 140	83

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

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

VOC's in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB150411.002	Surrogates	Bromofluorobenzene (Surrogate)	mg/kg	-	5.0	5	60 - 140	99

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB150411.002		TRH C6-C10	mg/kg	25	<25	24.65	60 - 140	85
		TRH C6-C9	mg/kg	20	<20	23.2	60 - 140	78
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.9	5	60 - 140	79
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.3	5	60 - 140	87
		d8-toluene (Surrogate)	mg/kg	-	4.1	5	60 - 140	83
		Bromofluorobenzene (Surrogate)	mg/kg	-	5.0	5	60 - 140	99
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	7.25	60 - 140	102

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

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

Mercury in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE180503.026	LB150584.004	Mercury	mg/kg	0.05	0.19	<0.05	0.2	91
SE180508.035	LB150586.004	Mercury	mg/kg	0.05	0.37	0.12	0.2	125

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE180508.001	LB150395.026		Naphthalene	mg/kg	0.1	3.9	<0.1	4	97
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.1	<0.1	4	103
			Acenaphthene	mg/kg	0.1	3.9	<0.1	4	96
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	3.9	<0.1	4	97
			Anthracene	mg/kg	0.1	4.2	<0.1	4	105
			Fluoranthene	mg/kg	0.1	3.9	<0.1	4	98
			Pyrene	mg/kg	0.1	3.9	<0.1	4	98
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.6	<0.1	4	115
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.6	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.7	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.7	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	32	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.6	-	116
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	96
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.6	0.5	-	112
SE180508.026	LB150486.027		Naphthalene	mg/kg	0.1	4.0	<0.1	4	100
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	3.9	<0.1	4	98
			Acenaphthene	mg/kg	0.1	3.9	<0.1	4	97
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.0	<0.1	4	99
			Anthracene	mg/kg	0.1	4.0	<0.1	4	100
			Fluoranthene	mg/kg	0.1	3.9	<0.1	4	96
			Pyrene	mg/kg	0.1	3.8	<0.1	4	94
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.9	<0.1	4	122
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.9	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	5.0	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	5.0	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	32	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	-	78
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	-	86
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	96
SE180508.055	LB150488.026		Naphthalene	mg/kg	0.1	4.0	<0.1	4	101
			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	4.5	<0.1	4	112
			Acenaphthene	mg/kg	0.1	3.9	<0.1	4	97

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE180508.055	LB150488.026		Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	3.9	<0.1	4	97
			Anthracene	mg/kg	0.1	4.1	<0.1	4	101
			Fluoranthene	mg/kg	0.1	3.9	<0.1	4	97
			Pyrene	mg/kg	0.1	4.0	<0.1	4	99
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	4.4	<0.1	4	109
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	4.4	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	4.5	<0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	4.5	<0.2	-	-
			Total PAH (18)	mg/kg	0.8	33	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	-	88
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.6	-	108
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	98

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

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE180508.001	LB150582.004	Arsenic, As	mg/kg	1	58	11	50	93
		Cadmium, Cd	mg/kg	0.3	50	0.5	50	98
		Chromium, Cr	mg/kg	0.3	57	11	50	93
		Copper, Cu	mg/kg	0.5	58	7.8	50	101
		Nickel, Ni	mg/kg	0.5	52	3.2	50	98
		Lead, Pb	mg/kg	1	63	17	50	91
		Zinc, Zn	mg/kg	2	69	20	50	98
SE180508.033	LB150473.004	Arsenic, As	mg/kg	1	64	33	50	63 ④
		Cadmium, Cd	mg/kg	0.3	48	0.9	50	94
		Chromium, Cr	mg/kg	0.3	53	8.5	50	89
		Copper, Cu	mg/kg	0.5	54	6.1	50	96
		Nickel, Ni	mg/kg	0.5	50	1.7	50	96
		Lead, Pb	mg/kg	1	78	66	50	25 ④
		Zinc, Zn	mg/kg	2	89	44	50	89
SE180707.001	LB150615.004	Arsenic, As	mg/kg	1	45	<3	50	90
		Cadmium, Cd	mg/kg	0.3	46	<0.3	50	92
		Chromium, Cr	mg/kg	0.3	48	2.8	50	91
		Copper, Cu	mg/kg	0.5	50	2.6	50	95
		Nickel, Ni	mg/kg	0.5	44	0.8	50	87
		Lead, Pb	mg/kg	1	57	25	50	64 ④
		Zinc, Zn	mg/kg	2	61	15	50	92

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE180508.051	LB150488.027		TRH C10-C14	mg/kg	20	35	<20	40	88
			TRH C15-C28	mg/kg	45	<45	<45	40	98
			TRH C29-C36	mg/kg	45	<45	<45	40	90
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	34	<25	40	85
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	34	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	113
			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

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

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

VOC's in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE180508.004	LB150411.004	Monocyclic	Benzene	mg/kg	0.1	2.3	<0.1	2.9	78
		Aromatic	Toluene	mg/kg	0.1	2.1	<0.1	2.9	73
			Ethylbenzene	mg/kg	0.1	2.1	<0.1	2.9	73
			m/p-xylene	mg/kg	0.2	5.1	<0.2	5.8	87
			o-xylene	mg/kg	0.1	2.3	<0.1	2.9	79
		Polycyclic	Naphthalene	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.0	4.1	-	80
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.2	4.7	-	85
			d8-toluene (Surrogate)	mg/kg	-	4.0	4.2	-	81
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.8	3.8	-	96
		Totals	Total Xylenes	mg/kg	0.3	7.4	<0.3	-	-
			Total BTEX	mg/kg	0.6	14	<0.6	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE180508.004	LB150411.004		TRH C6-C10	mg/kg	25	<25	<25	24.65	87
			TRH C6-C9	mg/kg	20	<20	<20	23.2	79
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.0	4.1	-	80
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.2	4.7	-	85
			d8-toluene (Surrogate)	mg/kg	-	4.0	4.2	-	81
			Bromofluorobenzene (Surrogate)	mg/kg	-	4.8	3.8	-	96
		VPH F	Benzene (F0)	mg/kg	0.1	2.3	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	7.25	106

MATRIX SPIKE DUPLICATES

SE180508 R0

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

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

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

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

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

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	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 Analytical Report comments for further information.

ANALYTICAL REPORT

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Huong Crawford	Manager	Adam Atkinson
Client	SGS EHS SYDNEY	Laboratory	SGS Melbourne EH&S
Address	Unit 16, 33 Maddox Street Alexandria NSW 2015	Address	10/585 Blackburn Road Notting Hill Victoria 3168
Telephone	02 8594 0400	Telephone	+61395743200
Facsimile	02 8594 0499	Facsimile	+61395743399
Email	au.environmental.sydney@sgs.com	Email	Au.SampleReceipt.Melbourne@sgs.com
Project	(Not specified)	SGS Reference	**ME307212 R0**
Order Number	**SE180508**	Date Received	03 Jul 2018
Samples	3	Date Reported	06 Jul 2018

COMMENTS

Whilst SGS laboratories conform to ISO:17025 standards, results of analysis in this report fall outside of the current scope of NATA accreditation .

SIGNATORIES

Adam Atkinson
Australian Chemistry Manager

Parameter	Units	LOR	Sample Number: ME307212.001 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP02-0.0-0.2	Sample Number: ME307212.002 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP08-0.0-0.2	Sample Number: ME307212.003 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP21-0.0-0.2
Moisture Content Method: AN002 Tested: 3/7/2018					
% Moisture	%w/w	1	**12.6**	**10.6**	**8.5**
Herbicides in soil MA-84.SL.01 Method: MA84 Tested: 3/7/2018					
Acifluorfen	mg/kg	0.5	<0.5	<0.5	<0.5
Bentazon	mg/kg	0.5	<0.5	<0.5	<0.5
Chloramben	mg/kg	0.5	<0.5	<0.5	<0.5
24-D	mg/kg	0.5	<0.5	<0.5	<0.5
24-DB	mg/kg	0.5	<0.5	<0.5	<0.5
Dicamba	mg/kg	0.5	<0.5	<0.5	<0.5
3,5-Dichlorobenzoic acid	mg/kg	0.5	<0.5	<0.5	<0.5
Dichloroprop	mg/kg	0.5	<0.5	<0.5	<0.5
Dinoseb	mg/kg	0.5	<0.5	<0.5	<0.5
MCPA	mg/kg	0.5	<0.5	<0.5	<0.5
MCPP	mg/kg	0.5	<0.5	<0.5	<0.5
4-Nitrophenol	mg/kg	0.5	<0.5	<0.5	<0.5
Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	<0.5
Picloram	mg/kg	0.5	<0.5	<0.5	<0.5
245-T	mg/kg	0.5	<0.5	<0.5	<0.5
245-TP	mg/kg	0.5	<0.5	<0.5	<0.5

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Herbicides in soil MA-84.SL.01 Method: MA84

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery	MS %Recovery	MSD %RPD
Acifluorfen	LB021124	mg/kg	0.5	<0.5	0%			
Bentazon	LB021124	mg/kg	0.5	<0.5	0%			
Chloramben	LB021124	mg/kg	0.5	<0.5	0%			
24-D	LB021124	mg/kg	0.5	<0.5	0%	81%	3%	17%
24-DB	LB021124	mg/kg	0.5	<0.5	0%			
Dicamba	LB021124	mg/kg	0.5	<0.5	0%	79%	1%	14%
3,5-Dichlorobenzoic acid	LB021124	mg/kg	0.5	<0.5	0%			
Dichloroprop	LB021124	mg/kg	0.5	<0.5	0%			
Dinoseb	LB021124	mg/kg	0.5	<0.5	0%			
MCPA	LB021124	mg/kg	0.5	<0.5	0%	82%	4%	10%
MCPP	LB021124	mg/kg	0.5	<0.5	0%			
4-Nitrophenol	LB021124	mg/kg	0.5	<0.5	0%			
Pentachlorophenol	LB021124	mg/kg	0.5	<0.5	0%			
Picloram	LB021124	mg/kg	0.5	<0.5	0%			
245-T	LB021124	mg/kg	0.5	<0.5	0%			
245-TP	LB021124	mg/kg	0.5	<0.5	0%			

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

Parameter	QC Reference	Units	LOR	DUP %RPD
% Moisture	LB021125	%w/w	1	8%

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
MA84	This method is intended for the determination of chlorinated herbicide compounds by high performance liquid chromatography (HPLC) using Mass Spectrometry Detector. Soil samples are extracted with dichloromethane and tumbled for 4 hours, then solvent exchange to acetonitrile and filtered through 0.45 µm filter disc. The extract is injected into a HPLC and detected by mass spectrometry detector using selective ion monitoring.

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
		NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calcuated 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 criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : http://www.sgs.com.au/~/media/Local/Australia/Documents/ Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

SAMPLE RECEIPT ADVICE

SE180508

CLIENT DETAILS

Contact	Sam Scully
Client	ALLIANCE GEOTECHNICAL PTY LTD
Address	10 Welder Road Seven Hills NSW 2147
Telephone	02 9675 1777 / 0400 545 805
Facsimile	02 9675 1888
Email	sam@allgeo.com.au
Project	**6838 - Roseville**
Order Number	**P1392**
Samples	59

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 19/6/2018
Report Due	Tue 26/6/2018
SGS Reference	**SE180508**

SUBMISSION DETAILS

This is to confirm that 59 samples were received on Tuesday 19/6/2018. Results are expected to be ready by COB Tuesday 26/6/2018. Please quote SGS reference SE180508 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	55 Soils, 4 Materials
Date documentation received	19/6/2018	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	6.1°C	Sufficient sample for analysis	Yes
Turnaround time requested	Standard		

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

COMMENTS

Phenoxy Acid Herbicides subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420, results may be delayed.
8 Soils on hold.

SAMPLE RECEIPT ADVICE

SE180508

CLIENT DETAILS

Client ALLIANCE GEOTECHNICAL PTY LTD

Project 6838 - Roseville

SUMMARY OF ANALYSIS

No.	Sample ID	OC 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	TP01-0.0-0.2	29	26	-	7	-	-	-
002	TP01-0.4-0.6	-	26	-	7	-	-	-
003	TP02-0.0-0.2	-	26	-	7	-	-	-
004	TP02-0.45-0.6	-	26	-	7	10	12	8
005	TP02-0.6-0.8	29	26	-	7	-	-	-
006	TP03-0.0-0.2	-	-	-	-	10	12	8
007	TP03-0.45-0.6	-	26	11	7	-	-	-
008	TP03-0.7-0.8	-	26	-	7	-	-	-
009	TP04-0.0-0.2	29	26	11	7	10	12	8
010	TP04-0.5-0.7	-	26	11	7	-	-	-
011	TP04-0.7-0.9	-	26	-	7	-	-	-
012	TP05-0.0-0.2	29	26	-	7	-	-	-
013	TP05-0.5-0.7	-	-	-	-	10	12	8
014	TP06-0.4-0.5	-	26	-	7	-	-	-
015	TP06-0.5-0.7	-	-	-	7	-	-	-
016	TP07-0.7-0.9	-	26	-	7	-	-	-
017	TP07-1.3-1.5	-	26	11	7	-	-	-
018	TP07-1.8-2.0	-	-	-	-	10	12	8
019	TP07-2.1-2.3	-	26	-	7	-	-	-
020	TP08-0.0-0.2	-	26	-	7	-	-	-
021	TP08-1.2-1.4	29	26	-	7	10	12	8
022	TP09-0.0-0.2	29	26	-	7	10	12	8
023	TP10-0.0-0.2	-	26	11	7	10	12	8
024	TP10-0.6-0.8	-	26	-	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

SE180508

CLIENT DETAILS

Client ALLIANCE GEOTECHNICAL PTY LTD

Project 6838 - Roseville

SUMMARY OF ANALYSIS

No.	Sample ID	OC 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	TP11-0.0-0.2	29	26	-	7	-	-	-
026	TP11-0.5-0.6	-	26	-	-	-	-	-
027	TP12-0.0-0.2	-	26	-	7	10	12	8
028	TP12-0.6-0.8	-	-	-	7	-	-	-
029	TP13-0.0-0.2	-	26	-	7	10	12	8
030	TP13-0.6-0.8	-	-	-	7	-	-	-
031	TP14-0.0-0.2	-	26	11	7	-	-	-
032	TP14-0.3-0.4	-	26	-	-	-	-	-
033	TP15-0.0-0.2	-	26	-	7	-	-	-
034	TP15-0.6-0.8	-	26	11	7	10	12	8
035	TP15-1.3-1.5	-	26	-	7	-	-	-
036	TP15-1.7-1.9	-	-	-	7	-	-	-
037	TP16-0.0-0.2	-	26	-	7	-	-	-
038	TP16-0.7-0.9	29	26	-	7	-	-	-
039	TP16-1.4-1.6	-	26	-	7	10	12	8
040	TP17-0.0-0.2	-	26	-	7	10	12	8
041	TP17-0.7-0.9	-	26	-	7	-	-	-
042	TP17-1.2-1.4	-	26	-	7	-	-	-
043	TP18-0.0-0.2	-	26	-	7	-	-	-
044	TP18-0.3-0.5	29	26	-	7	10	12	8
045	TP19-0.0-0.2	-	-	-	7	10	12	8
046	TP19-0.3-0.5	-	-	11	-	-	-	-
047	TP19-0.6-0.8	-	26	-	-	-	-	-
048	TP20-0.0-0.2	-	-	-	7	-	-	-

CONTINUED OVERLEAF

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SAMPLE RECEIPT ADVICE

SE180508

CLIENT DETAILS

Client ALLIANCE GEOTECHNICAL PTY LTD

Project 6838 - Roseville

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
049	TP20-0.4-0.6	-	26	7	-	-	-
050	TP20-0.6-0.8	-	26	-	-	-	-
051	TP21-0.0-0.2	29	-	7	10	12	8
052	TP21-0.4-0.6	-	26	-	-	-	-
053	DUP-01	-	-	7	-	-	-
054	DUP-02	-	-	7	-	-	-
055	DUP-03	-	26	-	-	-	-

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE180508

CLIENT DETAILS

Client ALLIANCE GEOTECHNICAL PTY LTD

Project 6838 - Roseville

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	Moisture Content	Sample Subcontracted
001	TP01-0.0-0.2	1	1	-
002	TP01-0.4-0.6	1	1	-
003	TP02-0.0-0.2	1	1	1
004	TP02-0.45-0.6	1	1	-
005	TP02-0.6-0.8	1	1	-
006	TP03-0.0-0.2	-	1	-
007	TP03-0.45-0.6	1	1	-
008	TP03-0.7-0.8	1	1	-
009	TP04-0.0-0.2	1	1	-
010	TP04-0.5-0.7	1	1	-
011	TP04-0.7-0.9	1	1	-
012	TP05-0.0-0.2	1	1	-
013	TP05-0.5-0.7	-	1	-
014	TP06-0.4-0.5	1	1	-
015	TP06-0.5-0.7	1	1	-
016	TP07-0.7-0.9	1	1	-
017	TP07-1.3-1.5	1	1	-
018	TP07-1.8-2.0	-	1	-
019	TP07-2.1-2.3	1	1	-
020	TP08-0.0-0.2	1	1	1
021	TP08-1.2-1.4	1	1	-
022	TP09-0.0-0.2	1	1	-
023	TP10-0.0-0.2	1	1	-
024	TP10-0.6-0.8	1	1	-

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE180508

CLIENT DETAILS

Client ALLIANCE GEOTECHNICAL PTY LTD

Project 6838 - Roseville

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	Moisture Content
025	TP11-0.0-0.2	1	1
026	TP11-0.5-0.6	-	1
027	TP12-0.0-0.2	1	1
028	TP12-0.6-0.8	1	1
029	TP13-0.0-0.2	1	1
030	TP13-0.6-0.8	1	1
031	TP14-0.0-0.2	1	1
032	TP14-0.3-0.4	-	1
033	TP15-0.0-0.2	1	1
034	TP15-0.6-0.8	1	1
035	TP15-1.3-1.5	1	1
036	TP15-1.7-1.9	1	1
037	TP16-0.0-0.2	1	1
038	TP16-0.7-0.9	1	1
039	TP16-1.4-1.6	1	1
040	TP17-0.0-0.2	1	1
041	TP17-0.7-0.9	1	1
042	TP17-1.2-1.4	1	1
043	TP18-0.0-0.2	1	1
044	TP18-0.3-0.5	1	1
045	TP19-0.0-0.2	1	1
046	TP19-0.3-0.5	-	1
047	TP19-0.6-0.8	-	1
048	TP20-0.0-0.2	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

SE180508

CLIENT DETAILS

Client ALLIANCE GEOTECHNICAL PTY LTD

Project 6838 - Roseville

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre ID in bulk materials	Fibre Identification in soil	Mercury in Soil	Moisture Content	Sample Subcontracted
049	TP20-0.4-0.6	-	-	1	1	-
050	TP20-0.6-0.8	-	-	-	1	-
051	TP21-0.0-0.2	-	2	1	1	1
052	TP21-0.4-0.6	-	2	-	1	-
053	DUP-01	-	-	1	1	-
054	DUP-02	-	-	1	1	-
055	DUP-03	-	-	-	1	-
056	FCS-01	1	-	-	-	-
057	FCS-02	1	-	-	-	-
058	FCS-03	1	-	-	-	-
059	FCS-04	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 .

SGS

CHAIN OF CUSTODY & ANALYSIS REQUEST

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 – Roseville
Address:	10 Welder Road,	Purchase Order No:	~~N/A~~ SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:	Sam Scully	Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / nHfox	Chromium Suite	Metals	PAH	OCP/~~OPP~~	VOC's	TRH/BTEX	PCB	Phenoxy Acid Herbicides	Asbestos (0.001)	Asbestos ID	BTEX		
TP01-0.0-0.2	18-6-18	1		X	ICE	1					X	X	X									
TP01-0.4-0.6		2				1					X	X										
TP02-0.0-0.2		3				1					X	X					X					
TP02-0.45-0.6		4				1					X	X			X							
TP02-0.6-0.8		5				1					X	X	X									
TP03-0.0-0.2		6				1									X							
TP03-0.45-0.6		7				1					X	X				X						
TP03-0.7-0.8		8				1					X	X										
TP04-0.0-0.2		9				1					X	X	X		X							

SGS EHS Alexandria Laboratory

SE180508 COC

Received: 19–Jun–2018

Relinquished By: Sam Scully	Date/Time: 19-6-18	Received By:	Date/Time 19/06/18 @ 2:50
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: Yes/ No	Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments:		

CHAIN OF CUSTODY & ANALYSIS REQUEST

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 - Roseville
Address:	10 Welder Road,	Purchase Order No:	~~N/A~~ SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:	SAM Scully	Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / nHfox	Chromium Suite	Metals	PAH	OCP/~~OPP~~	VOC's	TRH/BTEX	PCB	Heavy Metal Herbicides	Asbestos (0.001)	Asbestos ID	BTEX		
TP04-0.5-0.7	18-6-18	10		X	ICE	1					X	X				X						
TP04-0.7-0.9	↓	11		↓	↓	1					X	X	X									
TP05-0.0-0.2		12				1					X	X	X									
TP05-0.5-0.7		13				1									X							
TP05-0.8-1.0						1																HOLD
TP06-0.0-0.2						1																HOLD
TP06-0.4-0.5		14				1					X	X										
TP06-0.5-0.7		15				1					X											
TP07-0.0-0.2	↓			↓	↓	1																HOLD

Relinquished By: SAM SCULLY	Date/Time: 19-6-18	Received By:	Date/Time 19/06/18 @ 2.50
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: Yes/ No	Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments:		

CHAIN OF CUSTODY & ANALYSIS REQUEST

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name: Alliance Geotechnical
Address: 10 Welder Road, Seven Hills NSW
Contact Name: SAM Scully

Project Name/No: 6838 - Roseville
Purchase Order No: ~~N/A~~ SGS P1392 Envirolab P1393
Results Required By: 5 day TAT
Telephone: 1800 288 188
Facsimile: N/A
Email Results: enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / nHfox	Chromium Suite	Metals	PAH	OCP/~~OPP~~	VOC's	TRH/BTEX	PCB	Phenoxy. Acid Herbicides	Asbestos (0.001)	Asbestos ID	BTEX		
TP07-0.7-0.9	18-6-18	16		X	ICE	1					X	X										
TP07-1.3-1.5		17				1					X	X				X						
TP07-1.8-2.0		18				1									X							
TP07-2.1-2.3		19				1					X	X										
TP08-0.0-0.2		20				1					X	X					X					
TP08-0.7-0.9		21				1					X	X	X		X							
TP08-1.2-1.4						1																
TP09-0.0-0.2		22				1					X	X	X		X							
TP09-0.7-0.9						1																

Relinquished By: SAM SCULLY
Date/Time: 19-6-18
Received By: S. Bailey
Date/Time: 19/06/18 @ 2:50 (Hold)

Relinquished By:
Date/Time:
Received By:
Date/Time

Samples Intact: (Yes) No
Temperature: Ambient / (Chilled)
Sample Cooler Sealed: Yes/ No
Laboratory Quotation No:

Comments:

SGS

CHAIN OF COUSTODY & ANALYSIS REQUEST

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 – Roseville
Address:	10 Welder Road,	Purchase Order No:	~~NA~~ SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:	SAM SCULLY	Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / pHfox	Chromium Suite	Metals	PAH	OCP/OPP	VOC's	TRH/BTEX	PCB	Phenoxy Acid Herbicides	Asbestos (0.001)	Asbestos ID	BTEX		
TP10-0.0-0.2	18-6-18	23		X	ICE	1					X	X			X	X						
TP10-0.6-0.8	↓	24		↓	↓	1					X	X										
TP11-0.0-0.2		25				1					X	X	X									
TP11-0.5-0.6		26				1						X										
TP12-0.0-0.2		27				1					X	X			X							
TP12-0.6-0.8		28				1					X											
TP13-0.0-0.2		29				1					X	X			X							
TP13-0.6-0.8		30				1					X											
TP14-0.0-0.2		31				1					X	X				X						

Relinquished By: SAM SCULLY	Date/Time: 19-6-18	Received By: [signature]	Date/Time 19/06/18 @ 2:50
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: Yes / No (Yes circled)	Temperature: Ambient / Chilled (Chilled circled)	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments:		

SGS

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

CHAIN OF CUSTODY & ANALYSIS REQUEST

Company Name:	Alliance Geotechnical	Project Name/No:	6838 – Roseville
Address:	10 Welder Road,	Purchase Order No:	SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:	Sam Scully	Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / pHfox	Chromium Suite	Metals	PAH	OCP/OPP	VOC's	TRH/BTEX	PCB	Phenoxy acid Herbicides	Asbestos (0.001)	Asbestos ID	BTEX		
TP14-0.3-0.4	18-6-18	32		X	Ice	1						X										
TP15-0.0-0.2	↓	33		↓	↓	1					X	X										
TP15-0.6-0.8	↓	34		↓	↓	1					X	X			X	X						
TP15-1.3-1.5	↓	35		↓	↓	1					X	X										
TP15-1.7-1.9	↓	36		↓	↓	1					X											
TP16-0.0-0.2	↓	37		↓	↓	1					X	X										
TP16-0.7-0.9	↓	38		↓	↓	1					X	X	X									
TP16-1.4-1.6	↓	39		↓	↓	1					X	X			X							
TP17-0.0-0.2	↓	40		↓	↓	1					X	X			X							

Relinquished By: Sam Scully	Date/Time: 19-6-18	Received By: [signature]	Date/Time 19/06/18 @ 2:50
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: (Yes)/ No	Temperature: Ambient / (Chilled)	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments:		

SGS

CHAIN OF CUSTODY & ANALYSIS REQUEST

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 - Roseville
Address:	10 Welder Road,	Purchase Order No:	~~N/A~~ SGS P1392 Soil only P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:	Sam Scully	Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / nHfox	Chromium Suite	Metals	PAH	OCP/OPP	VOC's	TPH/BTEX	PCB	Heavy Acid Herbicides	Asbestos (0.001)	Asbestos ID	BTEX		
TP17-0.7-0.9	18-6-18	41		X	ICE	1					X	X										
TP17-1.2-1.4		42				1					X	X										
TP18-0.0-0.2		43				1					X	X										
TP18-0.3-0.5		44				1					X	X	X		X							
TP18-0.6-0.8						1																HOLD
TP19-0.0-0.2		45				1					X				X							
TP19-0.3-0.5		46				1										X						
TP19-0.6-0.8		47				1						X										
TP20-0.0-0.2	↓	48		↓	↓	1					X											

Relinquished By:	Sam Scully	Received By:	Date/Time 19/06/18 @ 2:50
Relinquished By:	Date/Time: 19-6-18	Received By:	Date/Time
Samples Intact: (Yes) No	Temperature: Ambient / (Chilled)	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments:		

CHAIN OF CUSTODY & ANALYSIS REQUEST

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 - Roseville
Address:	10 Welder Road,	Purchase Order No:	~~N/A~~ SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:	SAM SCULLY	Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / nHfox	Chromium Suite	Metals	PAH	OCP/OPP		TRH/BTEX	PCB	Phenols, Lead, Pesticides	Asbestos (0.001)	Asbestos ID	BTEX		
TP20-0.4-0.6	18-6-18	49		X	ICE	1					X	X										
TP20-0.6-0.8		50				1						X										
TP21-0.0-0.2		51				2					X		X		X		X		X			
TP21-0.4-0.6		52				2						X							X			
DUP-01		53				1					X											
DUP-1A						1					X											SEND TO EUROFINS
DUP-02		54				1					X											
DUP-2A						1					X											SEND TO EUROFINS
DUP-03		55				1						X										

Relinquished By: SAM SCULLY	Date/Time: 19-6-18	Received By:	Date/Time 19/06/18 @ 2:55
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: Yes/ No	Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments:		

CHAIN OF CUSTODY & ANALYSIS REQUEST

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 - Roseville
Address:	10 Welder Road,	Purchase Order No:	~~N/A~~ SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 Day TAT
		Telephone:	1800 288 188
Contact Name:		Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / nHfox	Chromium Suite	Metals	PAH	OCP/~~OPP~~	TPH/BTEX	PCB	Heavy And Herbicides	Asbestos (0.001)	Asbestos ID	BTEX			
DUP-3A	18-6-18			X	ICE	1						X										SEND TO CULGONS
DUP-04	↓			X	↓	1																HOLD
DUP-4A				X		1																HOLD
FCS-01		56	FRAGMENT															X				
FCS-02		57	FRAGMENT															X				
FCS-03		58	FRAGMENT															X				
FCS-04	↓	59	FRAGMENT															X				

Relinquished By: Sam Scully	Date/Time: 19/06/18	Received By:	Date/Time 19/06/18 @ 2:55
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: Yes/ No	Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments:		

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Sam Scully	Manager	Huong Crawford
Client	ALLIANCE GEOTECHNICAL PTY LTD	Laboratory	SGS Alexandria Environmental
Address	10 Welder Road Seven Hills NSW 2147	Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	02 9675 1777 / 0400 545 805	Telephone	+61 2 8594 0400
Facsimile	02 9675 1888	Facsimile	+61 2 8594 0499
Email	sam@allgeo.com.au	Email	au.environmental.sydney@sgs.com
Project	**6838 Roseville**	SGS Reference	**SE180509 R0**
Order Number	**SGS P1392**	Date Received	19 Jun 2018
Samples	26	Date Reported	25 Jun 2018

COMMENTS

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

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

Asbestos analysed by approved identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin .

SIGNATORIES

S. Ravensubra.

Ravee Sivasubramaniam
Hygiene Team Leader

Parameter	Units	LOR	Sample Number: SE180509.001 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP01_0.0-0.4	SE180509.002 Soil 18 Jun 2018 TP02_0.0-0.6	SE180509.003 Soil 18 Jun 2018 TP03_0.0-0.7	SE180509.004 Soil 18 Jun 2018 TP04_0.0-0.7
Fibre Identification in soil Method: AN602 Tested: 21/6/2018						
FibreID						
Asbestos Detected	No unit	-	No	No	No	No
SemiQuant						
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Gravimetric Determination of Asbestos in Soil Method: AN605 Tested: 21/6/2018						
Total Sample Weight*	g	1	**1105**	**1025**	**857**	**1114**
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180509.005 Soil 18 Jun 2018 TP05_0.0-0.8	SE180509.006 Soil 18 Jun 2018 TP06_0.0-0.5	SE180509.007 Soil 18 Jun 2018 TP07_0.0-1.0	SE180509.008 Soil 18 Jun 2018 TP07_1.0-2.0
Fibre Identification in soil Method: AN602 Tested: 21/6/2018							
FibreID							
Asbestos Detected	No unit	-		No	No	No	No
SemiQuant							
Estimated Fibres*	%w/w	0.01		<0.01	<0.01	<0.01	<0.01
Gravimetric Determination of Asbestos in Soil Method: AN605 Tested: 21/6/2018							
Total Sample Weight*	g	1		**1120**	**917**	**1086**	**719**
ACM in >7mm Sample*	g	0.01		<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001		<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01		<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001		<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001		<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001		<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number: SE180509.009 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP07_2.0-2.1	SE180509.010 Soil 18 Jun 2018 TP08_0.0-1.0	SE180509.011 Soil 18 Jun 2018 TP08_1.0-1.2	SE180509.012 Soil 18 Jun 2018 TP09_0.0-0.7
Fibre Identification in soil Method: AN602 Tested: 21/6/2018						
FibreID						
Asbestos Detected	No unit	-	No	No	No	No
SemiQuant						
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Gravimetric Determination of Asbestos in Soil Method: AN605 Tested: 21/6/2018						
Total Sample Weight*	g	1	**794**	**1092**	**1003**	**1088**
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180509.013 Soil 18 Jun 2018 TP10_0.0-0.6	SE180509.014 Soil 18 Jun 2018 TP11_0.0-0.5	SE180509.015 Soil 18 Jun 2018 TP12_0.0-0.6	SE180509.016 Soil 18 Jun 2018 TP13_0.0-0.6
Fibre Identification in soil Method: AN602 Tested: 21/6/2018							
FibreID							
Asbestos Detected	No unit	-		No	No	No	No
SemiQuant							
Estimated Fibres*	%w/w	0.01		<0.01	<0.01	<0.01	<0.01
Gravimetric Determination of Asbestos in Soil Method: AN605 Tested: 21/6/2018							
Total Sample Weight*	g	1		**1146**	**879**	**838**	**877**
ACM in >7mm Sample*	g	0.01		<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001		<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01		<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001		<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001		<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001		<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number Sample Matrix Sample Date Sample Name	SE180509.017 Soil 18 Jun 2018 TP14_0.0-0.3	SE180509.018 Soil 18 Jun 2018 TP15_0.0-1.0	SE180509.019 Soil 18 Jun 2018 TP15_1.0-1.7	SE180509.020 Soil 18 Jun 2018 TP16_0.0-1.0
Fibre Identification in soil Method: AN602 Tested: 21/6/2018							
FibreID							
Asbestos Detected	No unit	-		No	No	No	No
SemiQuant							
Estimated Fibres*	%w/w	0.01		<0.01	<0.01	<0.01	<0.01
Gravimetric Determination of Asbestos in Soil Method: AN605 Tested: 21/6/2018							
Total Sample Weight*	g	1		**1103**	**1133**	**1111**	**911**
ACM in >7mm Sample*	g	0.01		<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001		<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01		<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001		<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001		<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001		<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-		-	-	-	-

Parameter	Units	LOR	Sample Number: SE180509.021 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP16_1.0-1.7	SE180509.022 Soil 18 Jun 2018 TP17_0.0-1.0	SE180509.023 Soil 18 Jun 2018 TP17_1.0-1.2	SE180509.024 Soil 18 Jun 2018 TP18_0.0-0.6
Fibre Identification in soil Method: AN602 Tested: 21/6/2018						
FibreID						
Asbestos Detected	No unit	-	No	No	No	No
SemiQuant						
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Gravimetric Determination of Asbestos in Soil Method: AN605 Tested: 21/6/2018						
Total Sample Weight*	g	1	**1176**	**940**	**673**	**980**
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-

Parameter	Units	LOR	Sample Number: SE180509.025 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP19_0.0-0.6	Sample Number: SE180509.026 Sample Matrix: Soil Sample Date: 18 Jun 2018 Sample Name: TP20_0.0-0.6
Fibre Identification in soil Method: AN602 Tested: 21/6/2018				
FibreID				
Asbestos Detected	No unit	-	No	No
SemiQuant				
Estimated Fibres*	%w/w	0.01	<0.01	<0.01
Gravimetric Determination of Asbestos in Soil Method: AN605 Tested: 21/6/2018				
Total Sample Weight*	g	1	**1054**	**972**
ACM in >7mm Sample*	g	0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-

QC SUMMARY

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage*. Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

No QC samples were reported for this job.

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection 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.
AN605	This technique gravimetrically determines the mass of Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free fibres which are only observed by standard trace analysis as per AN 602.
AN605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009.

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
		NVL	Not Validated

Samples analysed as received.
Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calcuated 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 criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : http://www.sgs.com.au/~/media/Local/Australia/Documents/ Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

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Project	**6838 Roseville**
Order Number	**SGS P1392**
Samples	26

LABORATORY DETAILS

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SGS Reference	**SE180509 R0**
Date Received	19 Jun 2018
Date Reported	25 Jun 2018

COMMENTS

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

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

Asbestos analysed by approved identifiers Ravee Sivasubramaniam and Yusuf Kuthpudin .

SIGNATORIES

S. Ravensubra.

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*
SE180509.001	TP01_0.0-0.4	Soil	1105g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.002	TP02_0.0-0.6	Soil	1025g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.003	TP03_0.0-0.7	Soil	857g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.004	TP04_0.0-0.7	Soil	1114g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.005	TP05_0.0-0.8	Soil	1120g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.006	TP06_0.0-0.5	Soil	917g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.007	TP07_0.0-1.0	Soil	1086g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.008	TP07_1.0-2.0	Soil	719g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.009	TP07_2.0-2.1	Soil	794g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.010	TP08_0.0-1.0	Soil	1092g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.011	TP08_1.0-1.2	Soil	1003g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.012	TP09_0.0-0.7	Soil	1088g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.013	TP10_0.0-0.6	Soil	1146g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.014	TP11_0.0-0.5	Soil	879g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.015	TP12_0.0-0.6	Soil	838g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.016	TP13_0.0-0.6	Soil	877g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.017	TP14_0.0-0.3	Soil	1103g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found Organic Fibres Detected	<0.01
SE180509.018	TP15_0.0-1.0	Soil	1133g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.019	TP15_1.0-1.7	Soil	1111g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.020	TP16_0.0-1.0	Soil	911g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found Organic Fibres Detected	<0.01
SE180509.021	TP16_1.0-1.7	Soil	1176g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.022	TP17_0.0-1.0	Soil	940g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.023	TP17_1.0-1.2	Soil	673g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.024	TP18_0.0-0.6	Soil	980g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.025	TP19_0.0-0.6	Soil	1054g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01
SE180509.026	TP20_0.0-0.6	Soil	972g Sand,Soil,Rocks	18 Jun 2018	No Asbestos Found	<0.01

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 21/6/2018

PARAMETER	UOM	LOR	TP01_0.0-0.4 SOIL - 18/6/2018 SE180509.001	TP02_0.0-0.6 SOIL - 18/6/2018 SE180509.002	TP03_0.0-0.7 SOIL - 18/6/2018 SE180509.003	TP04_0.0-0.7 SOIL - 18/6/2018 SE180509.004	TP05_0.0-0.8 SOIL - 18/6/2018 SE180509.005
Total Sample Weight*	g	1	**1105**	**1025**	**857**	**1114**	**1120**
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP06_0.0-0.5 SOIL - 18/6/2018 SE180509.006	TP07_0.0-1.0 SOIL - 18/6/2018 SE180509.007	TP07_1.0-2.0 SOIL - 18/6/2018 SE180509.008	TP07_2.0-2.1 SOIL - 18/6/2018 SE180509.009	TP08_0.0-1.0 SOIL - 18/6/2018 SE180509.010
Total Sample Weight*	g	1	**917**	**1086**	**719**	**794**	**1092**
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP08_1.0-1.2 SOIL - 18/6/2018 SE180509.011	TP09_0.0-0.7 SOIL - 18/6/2018 SE180509.012	TP10_0.0-0.6 SOIL - 18/6/2018 SE180509.013	TP11_0.0-0.5 SOIL - 18/6/2018 SE180509.014	TP12_0.0-0.6 SOIL - 18/6/2018 SE180509.015
Total Sample Weight*	g	1	**1003**	**1088**	**1146**	**879**	**838**
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP13_0.0-0.6 SOIL - 18/6/2018 SE180509.016	TP14_0.0-0.3 SOIL - 18/6/2018 SE180509.017	TP15_0.0-1.0 SOIL - 18/6/2018 SE180509.018	TP15_1.0-1.7 SOIL - 18/6/2018 SE180509.019	TP16_0.0-1.0 SOIL - 18/6/2018 SE180509.020
Total Sample Weight*	g	1	**877**	**1103**	**1133**	**1111**	**911**
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 21/6/2018 (continued)

PARAMETER	UOM	LOR	TP16_1.0-1.7 SOIL - 18/6/2018 SE180509.021	TP17_0.0-1.0 SOIL - 18/6/2018 SE180509.022	TP17_1.0-1.2 SOIL - 18/6/2018 SE180509.023	TP18_0.0-0.6 SOIL - 18/6/2018 SE180509.024	TP19_0.0-0.6 SOIL - 18/6/2018 SE180509.025
Total Sample Weight*	g	1	**1176**	**940**	**673**	**980**	**1054**
ACM in >7mm Sample*	g	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	-	-	-	-	-

PARAMETER	UOM	LOR	TP20_0.0-0.6 SOIL - 18/6/2018 SE180509.026
Total Sample Weight*	g	1	**972**
ACM in >7mm Sample*	g	0.01	<0.01
AF/FA in >2mm to <7mm Sample*	g	0.0001	<0.0001
AF/FA in <2mm Sample*	g	0.0001	<0.0001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001
Fibre Type*	No unit	-	-

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection 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.
AN605	This technique gravimetrically determines the mass of Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free fibres which are only observed by standard trace analysis as per AN 602.
AN605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009.

FOOTNOTES

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

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

Sampled by the client.

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

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

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: http://www.sgs.com.au/~/media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf

SAMPLE RECEIPT ADVICE

SE180509

CLIENT DETAILS

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Address	10 Welder Road Seven Hills NSW 2147
Telephone	02 9675 1777 / 0400 545 805
Facsimile	02 9675 1888
Email	sam@allgeo.com.au
Project	**6838 Roseville**
Order Number	**SGS P1392**
Samples	26

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 19/6/2018
Report Due	Tue 26/6/2018
SGS Reference	**SE180509**

SUBMISSION DETAILS

This is to confirm that 26 samples were received on Tuesday 19/6/2018. Results are expected to be ready by COB Tuesday 26/6/2018. Please quote SGS reference SE180509 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	Client	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	26 Soil
Date documentation received	19/6/2018	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.3°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

SAMPLE RECEIPT ADVICE

SE180509

CLIENT DETAILS

Client ALLIANCE GEOTECHNICAL PTY LTD

Project 6838 Roseville

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil
001	TP01_0.0-0.4	2	9
002	TP02_0.0-0.6	2	9
003	TP03_0.0-0.7	2	9
004	TP04_0.0-0.7	2	9
005	TP05_0.0-0.8	2	9
006	TP06_0.0-0.5	2	9
007	TP07_0.0-1.0	2	9
008	TP07_1.0-2.0	2	9
009	TP07_2.0-2.1	2	9
010	TP08_0.0-1.0	2	9
011	TP08_1.0-1.2	2	9
012	TP09_0.0-0.7	2	9
013	TP10_0.0-0.6	2	9
014	TP11_0.0-0.5	2	9
015	TP12_0.0-0.6	2	9
016	TP13_0.0-0.6	2	9
017	TP14_0.0-0.3	2	9
018	TP15_0.0-1.0	2	9
019	TP15_1.0-1.7	2	9
020	TP16_0.0-1.0	2	9
021	TP16_1.0-1.7	2	9
022	TP17_0.0-1.0	2	9
023	TP17_1.0-1.2	2	9
024	TP18_0.0-0.6	2	9

CONTINUED OVERLEAF

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

SAMPLE RECEIPT ADVICE

SE180509

CLIENT DETAILS

Client ALLIANCE GEOTECHNICAL PTY LTD

Project 6838 Roseville

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil
025	TP19_0.0-0.6	2	9
026	TP20_0.0-0.6	2	9

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 .

SGS

CHAIN OF CUSTODY & ANALYSIS REQUEST

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 – Roseville
Address:	10 Welder Road,	Purchase Order No:	~~N/A~~ SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:	SAM SCULLY	Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / pHfox	Chromium Suite	Metals	PAH	OCP/OPP	TPH/BTEX	PCB	Phenoxy Acid Herbicides	Asbestos (0.001)	Asbestos ID	BTEX			
TP01-0.0-0.4	18-6-18			X		1											X					
TP02-0.0-0.6	↓			↓		1											X					
TP03-0.0-0.7	↓			↓		1											X					
TP04-0.0-0.7	↓			↓		1											X					
TP05-0.0-0.8	↓			↓		1											X					
TP06-0.0-0.5	↓			↓		1											X					
TP07-0.0-1.0	↓			↓		1											X					
TP07-1.0-2.0	↓			↓		1											X					
TP07-2.0-2.1	↓			↓		1											X					

SGS EHS Alexandria Laboratory

SE180509 COC
Received: 19–Jun–2018

Relinquished By: SAM SCULLY	Date/Time: 19-6-18	Received By: Nessc	Date/Time 19/6/18 2:50
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: (Yes)/ No	Temperature: Ambient / (Chilled)	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments:		

CHAIN OF CUSTODY & ANALYSIS REQUEST

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 - Roseville
Address:	10 Welder Road,	Purchase Order No:	~~N/A~~ SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:	SAM Scully	Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / nHfox	Chromium Suite	Metals	PAH	OCP/~~OPP~~	TRH/BTEX	PCB	Heavy Metal Heavies	Asbestos (0.001)	Asbestos ID	BTEX			
TP08-0.0-1.0	18-6-18			X		1											X					
TP08-1.0-1.2						1											X					
TP09-0.0-0.7						1											X					
TP10-0.0-0.6						1											X					
TP11-0.0-0.5						1											X					
TP12-0.0-0.6						1											X					
TP13-0.0-0.6						1											X					
TP14-0.0-0.3						1											X					
TP15-0.0-1.0						1											X					

Relinquished By: SAM Scully	Date/Time: 19-6-18	Received By: Nessa	Date/Time 19/6/18 2.50
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: Yes/ No	Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments:		

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 11 of 11

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 - Roseville
Address:	10 Welder Road,	Purchase Order No:	~~N/A~~ SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:	SAM SCULLY	Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / nHfox	Chromium Suite	Metals	PAH	OCP/OPP	TRH/BTEX	PCB	Phenols and Herbicides	Asbestos (0.001)	Asbestos ID	BTEX				
TP15-1.0-1.7	18-6-18			X		1											X						
TP16-0.2-1.0	18/6/18			↓		1											X						
TP16-1.0-1.7	↓					1											X						
TP17-0.0-1.0						1											X						
TP17-1.0-1.2						1											X						
TP18-0.0-0.6						1											X						
TP19-0.0-0.6						1											X						
TP20-0.0-0.6						1											X						
	↓																						

Relinquished By: SAM SCULLY	Date/Time: 19-6-18	Received By: Nessa	Date/Time 19/6/18 2:50
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: (Yes) / No	Temperature: Ambient / (Chilled)	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No:
	Comments:		

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30 years Testing For Life 1987–2017
Celebrating 30 years Testing and Protecting Human Health

Certificate of Analysis

Alliance Geotechnical
10 Welder Road
Seven Hills
NSW 2147

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sam Scully**

Report **603821-S**
Project name ROSEVILLE
Project ID 6838
Received Date Jun 20, 2018

Client Sample ID			**DUP-1A**	**DUP-2A**	**DUP-3A**
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S18-Jn22346**	**S18-Jn22347**	**S18-Jn22348**
Date Sampled			**Jun 18, 2018**	**Jun 18, 2018**	**Jun 18, 2018**
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	99
p-Terphenyl-d14 (surr.)	1	%	-	-	97
Heavy Metals					
Arsenic	2	mg/kg	13	9.7	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-
Chromium	5	mg/kg	8.1	7.2	-
Copper	5	mg/kg	6.8	5.8	-
Lead	5	mg/kg	21	11	-
Mercury	0.1	mg/kg	1.1	1.2	-
Nickel	5	mg/kg	< 5	< 5	-
Zinc	5	mg/kg	32	24	-
% Moisture	1	%	11	12	12

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Polycyclic Aromatic Hydrocarbons	Sydney	Jun 25, 2018	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jun 25, 2018	28 Day
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Jun 20, 2018	14 Day
- Method: LTM-GEN-7080 Moisture			

ABN– 50 005 085 521
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web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name:	Alliance Geotechnical	**Order No.:**	P1393	**Received:**	Jun 20, 2018 2:00 PM
Address:	10 Welder Road Seven Hills NSW 2147	**Report #:**	603821	**Due:**	Jun 27, 2018
		Phone:	1800 288 188	**Priority:**	5 Day
		Fax:	02 9675 1888	**Contact Name:**	Sam Scully
Project Name:	ROSEVILLE				
Project ID:	6838				

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	DUP-1A	Jun 18, 2018		Soil	S18-Jn22346		X	X
2	DUP-2A	Jun 18, 2018		Soil	S18-Jn22347		X	X
3	DUP-3A	Jun 18, 2018		Soil	S18-Jn22348	X		X
Test Counts						1	2	3

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	84			70-130	Pass	
Acenaphthylene	%	87			70-130	Pass	
Anthracene	%	90			70-130	Pass	
Benz(a)anthracene	%	89			70-130	Pass	
Benzo(a)pyrene	%	87			70-130	Pass	
Benzo(b&j)fluoranthene	%	91			70-130	Pass	
Benzo(g.h.i)perylene	%	94			70-130	Pass	
Benzo(k)fluoranthene	%	86			70-130	Pass	
Chrysene	%	87			70-130	Pass	
Dibenz(a.h)anthracene	%	93			70-130	Pass	
Fluoranthene	%	87			70-130	Pass	
Fluorene	%	86			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	92			70-130	Pass	
Naphthalene	%	88			70-130	Pass	
Phenanthrene	%	90			70-130	Pass	
Pyrene	%	87			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	103			70-130	Pass	
Cadmium	%	105			70-130	Pass	
Chromium	%	106			70-130	Pass	
Copper	%	106			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Lead			%	105			70-130	Pass	
Mercury			%	104			70-130	Pass	
Nickel			%	106			70-130	Pass	
Zinc			%	107			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S18-Jn25759	NCP	%	106			70-130	Pass	
Cadmium	S18-Jn25759	NCP	%	101			70-130	Pass	
Chromium	S18-Jn25759	NCP	%	101			70-130	Pass	
Copper	S18-Jn25759	NCP	%	108			70-130	Pass	
Lead	S18-Jn25759	NCP	%	101			70-130	Pass	
Mercury	S18-Jn25759	NCP	%	101			70-130	Pass	
Nickel	S18-Jn25759	NCP	%	102			70-130	Pass	
Zinc	S18-Jn25759	NCP	%	107			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S18-Jn22389	NCP	%	97			70-130	Pass	
Acenaphthylene	S18-Jn22389	NCP	%	99			70-130	Pass	
Anthracene	S18-Jn22389	NCP	%	100			70-130	Pass	
Benz(a)anthracene	S18-Jn22389	NCP	%	100			70-130	Pass	
Benzo(a)pyrene	S18-Jn22389	NCP	%	97			70-130	Pass	
Benzo(b&j)fluoranthene	S18-Jn22389	NCP	%	97			70-130	Pass	
Benzo(g.h.i)perylene	S18-Jn22389	NCP	%	105			70-130	Pass	
Benzo(k)fluoranthene	S18-Jn22389	NCP	%	96			70-130	Pass	
Chrysene	S18-Jn22389	NCP	%	95			70-130	Pass	
Dibenz(a.h)anthracene	S18-Jn22389	NCP	%	105			70-130	Pass	
Fluoranthene	S18-Jn22389	NCP	%	95			70-130	Pass	
Fluorene	S18-Jn22389	NCP	%	97			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S18-Jn22389	NCP	%	104			70-130	Pass	
Naphthalene	S18-Jn22389	NCP	%	98			70-130	Pass	
Phenanthrene	S18-Jn22389	NCP	%	99			70-130	Pass	
Pyrene	S18-Jn22389	NCP	%	94			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S18-Jn25758	NCP	mg/kg	11	10	4.0	30%	Pass	
Cadmium	S18-Jn25758	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S18-Jn25758	NCP	mg/kg	5.3	5.4	1.0	30%	Pass	
Copper	S18-Jn25758	NCP	mg/kg	13	11	12	30%	Pass	
Lead	S18-Jn25758	NCP	mg/kg	26	22	16	30%	Pass	
Mercury	S18-Jn25758	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S18-Jn24287	NCP	mg/kg	27	29	5.0	30%	Pass	
Zinc	S18-Jn25758	NCP	mg/kg	29	26	13	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S18-Ja19165	NCP	%	7.3	6.7	9.0	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Benzo(a)pyrene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S18-Jn27820	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Nibha Vaidya Analytical Services Manager

Glenn Jackson

National Operations Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

eurofins | mgt

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e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: Alliance Geotechnical
Address: 10 Welder Road
Seven Hills
NSW 2147

Project Name: ROSEVILLE
Project ID: 6838

Order No.: P1393
Report #: 603821
Phone: 1800 288 188
Fax: 02 9675 1888

Received: Jun 20, 2018 2:00 PM
Due: Jun 27, 2018
Priority: 5 Day
Contact Name: Sam Scully

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals M8	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	DUP-1A	Jun 18, 2018		Soil	S18-Jn22346		X	X
2	DUP-2A	Jun 18, 2018		Soil	S18-Jn22347		X	X
3	DUP-3A	Jun 18, 2018		Soil	S18-Jn22348	X		X
Test Counts						1	2	3

Melbourne
3-5 Kingston Town Close
Oakleigh Vic 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**Alliance Geotechnical**
Contact name:	Sam Scully
Project name:	ROSEVILLE
Project ID:	6838
COC number:	Not provided
Turn around time:	5 Day
Date/Time received:	Jun 20, 2018 2:00 PM
Eurofins | mgt reference:	**603821**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Nibha Vaidya on Phone : +61 (2) 9900 8400 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Sam Scully - sam@allgeo.com.au.

SGS

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 7 of 11

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
Facsimile No: (02) 85940499
Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 - Roseville
Address:	10 Welder Road,	Purchase Order No:	~~N/A~~ SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:	Sam Scully	Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / pHfox	Chromium Suite	Metals	PAH	OCP/OPP		TRH/BTEX	PCB	Phenols	Asbestos (0.001)	Asbestos ID	BTEX		
TP20-0.4-0.6	18-6-18			X	ice	1					X	X										
TP20-0.6-0.8	18-6-18			X	ice	1						X										
TP21-0.0-0.2	18-6-18			X	ice	2					X		X		X		X		X			
TP21-0.4-0.6	18-6-18			X	ice	2						X							X			
DUP-01	18-6-18			X	ice	1					X											
DUP-1A	18-6-18			X	ice	1					X											SEND TO EUROFINS
DUP-02	18-6-18			X	ice	1					X											
DUP-2A	18-6-18			X	ice	1					X											SEND TO EUROFINS
DUP-03	18-6-18			X	ice	1						X										

Relinquished By: Sam Scully	Date/Time: 19-6-18	Received By: Elvis D	Date/Time 20/6/18 2:00PM
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: Yes/ No	Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No: 603821
	Comments:		13.56°C

CHAIN OF CUSTODY & ANALYSIS REQUEST

Page 8 of 11

SGS Environmental Services
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Telephone No: (02) 85940400
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Email: au.samplereceipt.sydney@sgs.com

Company Name:	Alliance Geotechnical	Project Name/No:	6838 - Roseville
Address:	10 Welder Road,	Purchase Order No:	~~N/A~~ SGS P1392 Eurofins P1393
	Seven Hills NSW	Results Required By:	5 day TAT
		Telephone:	1800 288 188
Contact Name:		Facsimile:	N/A
		Email Results:	enviro@allgeo.com.au

Client Sample ID	Date Sampled	Lab Sample ID	WATER	SOIL	PRESERVATIVE	NO OF CONTAINERS	ENM Suite (no FM)	Asbestos I.D	Field Screen – pHf / nHfox	Chromium Suite	Metals	PAH	OCP/OPP	TPH/BTEX	PCB	Heavy Acid Leachates	Asbestos (a.c.m)	Asbestos ID	BTEX				
DUP-3A	18-6-18			X	ICE	1						X											SEND TO ULTRANS
DUP-04	↓			X	↓	1																	HOLD
DUP-4A				X		1																	HOLD
FCS-01			FRAGMENT															X					
FCS-02			FRAGMENT															X					
FCS-03			FRAGMENT															X					
FCS-04	↓		FRAGMENT															X					

Relinquished By: Sam Scully	Date/Time: 19/06/18	Received By: Elvis D	Date/Time 20/6/18 2:00pm
Relinquished By:	Date/Time:	Received By:	Date/Time
Samples Intact: Yes/ No	Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/ No	Laboratory Quotation No: EQ03821
	Comments:		13.5°C